THE POPULATION PROSPECTS OF CZECHIA AND SLOVAKIA UNTIL 2060

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Abstract
The article compares the aggregated estimates and results of two current national population forecasts to the year 2060 that were produced in 2012 for Slovakia and in 2018 for Czechia. It comments in detail on the basic irregularities in the age-sex structure that have formed over the past one hundred years and their expected transformation in the next more than forty years and on the future development of the initial age-sex structure of the population. Special attention is devoted to the demographic ageing process, its probable future development, and its specific features and internal differentiation. The results of both forecasts point to considerable population inertia and age-structures with 'a long memory'. Nevertheless, a near quarter-century of low fertility, much lower in Slovakia than in Czechia, a less optimistic outlook for future fertility and migration development, and the somewhat higher mortality intensity among the population in Slovakia will very likely lead in the near future to depopulation and accelerated ageing of the population. The different revolutionary paths of the two countries, naturally the demographic ones, contribute to the differences in the pace and parameters of the culmination of the ageing process.

Keywords: population, forecast, ageing, Czechia, Slovakia

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INTRODUCTION

The past one hundred years have been a time of turbulent population developments in Czechia and Slovakia, but this has not been only due to fundamental changes in the pattern of demographic reproduction. We need also recall the two world wars and the population losses for which they were directly or indirectly responsible. The First World War, as well as causing a temporary slump in population growth, marked the end of a relatively regular age-sex structure of the population. The gouges it produced in the structure, and the subsequent protrusions that offset them, were visible for the rest of the 20th century. Further irregularities of the age-sex structure followed in response to the reproductively slim 1930s, the surge in total fertility in the early 1940s, the ensuing 'baby boom' after the end of the Second World War that lasted until the mid-1950s in the Czech lands and as late as the mid-1960s in Slovakia, the low birth rate in the second half of the 1960s, the high birth rates in Slovakia in the 1970s and 1980s and in the Czech lands in the 1970s, and the marked decrease in the overall fertility levels in the 1990s and at the start of the new millennium, followed by a rise at the turn of the first and second decades to compensate for that decrease. All these irregularities together represented a transition

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from a genuine age pyramid to a structure that looks like a bushy tree of life with an irregular crown.

For demographic forecast the disruption of the age-sex structure's regular pattern meant the end of the possibility of using any other, simpler methods and approaches than the methods appropriate to the cohort-component model of population growth. That possibility was, however, only a hypothetical one, because the history of population forecasting on the territory of what are now Czechia and Slovakia only really began to develop with the first population census after the Second World War, which was conducted in Czechoslovakia in 1950 (*Kučera*, 1967). Earlier attempts at forecasting by Weirich (*Weirich*, 1937) and Robek and Schmidt (*Schmidt*, 1939) were more in the way of mathematical exercises than actual forecasts. Although the turn of 2017 and 2018 marked 65 years since the first fully-fledged population forecasts were produced for Czechoslovakia, which also included separate forecasts for the two now separate successor states, and although the conditions connected with information and technology have changed dramatically in that time, the basic methodology of population forecasting has remained the same. The approach demographic forecasting takes to population reproduction is to regard it as an internally structured process that is divided into three or four basic components of development. The number of components depends on what approach is applied to migration, whether only net migration and its structure are projected, or whether the numbers of immigrants and emigration intensities by sex and age are worked with separately.

In the period before the end of the demographic revolution the individual components of population reproduction were relatively stable and when changes occurred they tended to follow regular patterns of development, unless they were temporarily disrupted by war, epidemics, or crop failures. However, after the completion of the demographic revolution and the transition to new low birth and death rates, the changes that were observed in the death and birth rates were significant and this time irregular. Most of the fluctuations in the birth rate were due to fluctuations in fertility. The mortality rate also changed unpredictably. For example, there was a very dramatic decline in mortality in the Czech lands in the second half of the 1940s and most of the 1950s (*FSÚ*, 1982), which was followed by almost three decades of stagnation. This occurred at a time when in the majority of advanced and even less developed countries mortality was continuing to decline intensively. The setting off on the current steady course towards a further, relatively dynamic decline occurred only in the second half of the 1980s. Migration, which until the country's borders opened did not play as significant a reproductive role as natural change, began to change dynamically from the start of the 1990s and became a component with a comparable impact on reproduction. In Slovakia the situation was similar.

Owing to the naturally low level of stability of migration over time, the conditions for making population forecasts were further complicated by a change in the definition of migration and migrants, as foreign nationals with long-term residency status also came to be included among emigrants and immigrants. As a result of this change in definition, migration processes, which out of all the processes of population reproduction are the ones most sensitive to any changes that may occur in a wide array of conditions and are therefore also the most difficult to forecast, acquired a position of decisive importance in population development in both Czechia and Slovakia.

The most recent population forecasts for Czechia and Slovakia were subject to the same conditions described above. The forecast for Slovakia was developed by the Institute of Informatics and Statistics (INFOSTAT at the Demographic Research Centre in Bratislava) and published in 2013 (*Bleha – Šprocha – Vaňo*, 2013). The forecast for Czechia was produced at the Faculty of Sciences, Charles University, in the spring of 2018 (by authors Burcin and Kučera) in connection with this article and its results are published here for the first time.

Both forecasts presented here were estimated using the classic cohort-component projection model. The approach to estimating the model's parameters, however, differed slightly for each. In both cases fertility was forecast primarily for individual generations of women and then the age-specific fertility rates for individual generations were converted to analogical cross-sectional rates representing the particular parameters of the projection model. Mortality was forecast straight away in a transversal

perspective, both owing to the considerable stability of the structures and the trends of its sex- and age-specific intensities, and also owing to the much greater demands placed on data availability by a generational analysis of mortality than is required for an analogical analysis of fertility. Migration was estimated similarly to mortality, that is, in a transversal perspective only. In the case of the forecasts for Slovakia, the authors worked solely with net migration rates and their distribution by sex and age, while in the Czech case migration parameters were inserted in the model in the form of forecasted numbers of immigrants and emigration rates by sex and age. The total numbers of emigrants and immigrants were estimated in the first years of the forecast with an accuracy to the thousands of people and in the following years with an accuracy to only the tens of thousands. The authors of the population forecast for Czechia thereby sought to draw attention to the very high uncertainty attached to estimating migration. In both overall forecasts, the forecast time step was set at one year and the results are available at a level of detail that corresponds to one-year age groups.

PROJECTED TRENDS IN INDIVIDUAL POPULATION PROCESSES

Given that the analyses of the individual components of population change in both countries are published side by side in the same issue of the journal, we shall leave aside the standard, and in the context of presenting the results compulsory, analyses of individual components,

Tab. 1a: Expected levels of fertility, mortality and migration, 2017–2060, Slovakia

Year	Fertility (Total fertility rate)			Mortality (Life expectancy at birth in years)						Migration (Net migration)		
				Men			Women					
	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
2017	1.47	1.51	1.51	73.15	73.27	73.42	79.97	80.18	80.35	3,997	6,001	7,251
2020	1.48	1.52	1.55	73.70	73.91	74.15	80.31	80.65	80.92	5,505	8,999	11,001
2025	1.48	1.54	1.59	74.66	75.02	75.43	80.92	81.48	81.95	8,005	12,009	16,999
2030	1.49	1.55	1.63	75.69	76.21	76.83	81.57	82.42	83.14	8,503	13,003	18,012
2040	1.50	1.58	1.72	77.92	78.86	80.02	82.79	84.24	85.53	8,503	13,003	18,012
2050	1.51	1.61	1.81	79.78	81.13	82.86	83.71	85.71	87.52	8,503	13,003	18,012
2060	1.52	1.64	1.89	80.94	82.55	84.69	84.35	86.77	89.03	8,503	13,003	18,012

Source: Authors' calculations.

Tab. 1b: Expected levels of fertility, mortality and migration, 2017–2060, Czechia

Year	Fertility (Total fertility rate)			Mortality (Life expectancy at birth in years)						Migration (Net migration)		
				Men			Women					
	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
2017	1.66	1.67	1.69	76.05	76.08	76.12	81.75	81.78	81.82	27,000	28,000	30,000
2020	1.67	1.72	1.76	76.09	76.78	77.23	81.76	82.37	82.76	23,000	30,000	37,000
2025	1.65	1.74	1.81	76.88	77.89	78.57	82.40	83.29	83.88	20,000	30,000	40,000
2030	1.64	1.75	1.83	77.62	78.93	79.80	82.95	84.08	84.86	20,000	30,000	40,000
2040	1.64	1.78	1.88	78.94	80.73	81.86	83.86	85.51	86.57	20,000	30,000	40,000
2050	1.64	1.79	1.92	80.13	82.36	83.61	84.69	86.81	88.04	20,000	30,000	40,000
2060	1.65	1.80	1.95	81.13	83.73	85.25	85.43	87.93	89.42	20,000	30,000	40,000

Source: Authors' calculations.

and we shall focus only on projected trends (tab. 1a and 1b) and the basic results of both forecasts.

The forecast for women's fertility in both countries is not wholly comparable, as the projected future trends are based primarily on the trend in fertility in Czechia after 2013, when the total fertility in Czechia developed dynamically, partly as a result of compensation for postponed fertility during the economic recession in 2008–2013 and preceding years. By contrast, total fertility in Slovakia before 2013, when the Slovak forecast was created, remained at very low levels and its increase was extremely slow.

The trend in mortality was very similar in both countries. Life expectancy at birth rose steadily and continuously over the long term and there is no evidence that this pronounced trend will come to an end. Both countries have a number of structural reserves resulting from international comparisons with advanced countries that are still considerably further ahead in the development of mortality.

Estimating the future trend in migration, or rather creating a rough outline of this trend, is a task that traditionally lies somewhere in between science and divining the future from a crystal ball. The trend in migration is crucially influenced by the economic situation and particularly labour market conditions at a given point in time, by the legislation regulating migration and asylum policy and how strictly that legislation is applied, and by the situation in neighbouring countries and in the countries that are either the target or the source of migration flows. These factors are very volatile and within the space of just weeks or months they can change dramatically. Together with them the volume and structure of migration flows also usually change. The variability of migration parameters is therefore usually temporally limited to just several years, within which time frame a certain target level of net migration is reached, in the case of Slovakia, or, in the case of Czechia, a certain target level of immigration and emigration is reached. In subsequent years, the migration levels are then taken to be constant. At the same time, the sex and age structure of net migration or the volume of immigration and the intensity of emigration by sex and age are considered to be constant for the entire forecast period. Migration forecasts are thus also methodologically different from the individual forecasts for fertility and mortality put together within the frame of the forecasts that are being compared here.

THE RESULTS OF THE FORECASTS

Both forecasts presented here were produced as classic, deterministic population forecasts. The resultant prospective estimates for the numerical size and the sex and age structure of the population of each of the two countries comprise three scenarios of future development: the medium, high and low variants, where the medium variant represents the most likely trajectory the observed trend will take. The high and low variants then mark out the realistic frame within which future development should unfold in relation to the degree of uncertainty of the results given by the medium variant. Future development should remain within these frames, that is, it is relatively unlikely that it will extend beyond the area bordered by the low and high variants.

The medium variants of both forecasts were estimated by applying the forecast model parameters that correspond to the medium variants of the expected trends in all the components of population reproduction (fertility, mortality, immigration and emigration, i.e. net migration) to the initial age-sex structure of the population. The threshold of the forecast was 31 December 2017 in the case of Czechia and 31 December 2011 in the case of Slovakia. The estimate of the size and structure of the population of Czechia at the end of 2017 was based on provisional numbers of events for the year 2017 disaggregated by sex and age groups and the latest final age structure known at the time the forecast was calculated (as of 31 December 2016). Provisional data of official statistics were used for variant estimates of the numbers of events and, consequently, the values of the analytical indicators relating to the estimated population of Czechia and its age-sex structure in 2017.

The high and low variants of the overall forecasts are analogically based on a combination of corresponding variants of the individual forecasts. In the case of Slovakia, they are based on the same age-sex structure of the population as the medium variant; in the case of Czechia they are based on a corresponding variant of the estimated initial structure. Below, with just some noted exceptions, we will present only the results that correspond to the medium variant of the forecasts.

The common starting point for presenting the forecast results was the year 2016, and it was to that year that the latest known definitive age-sex structure of the population based on the official population balance by the Czech Statistical Office was applied; in the case of Slovakia it was the age-sex structure at the end of the third year of the given population forecast.

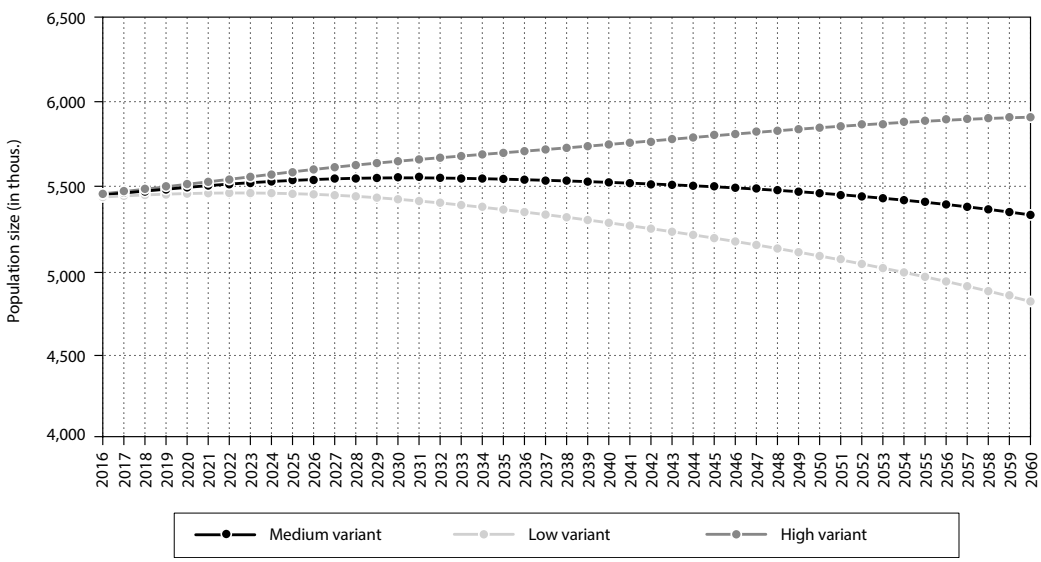
THE DEVELOPMENT OF POPULATION SIZE

Although the initial age-sex structures of both populations and the forecasts of their further population development are largely similar, we can see at first glance that the development of total population size in Czechia and Slovakia will very likely differ significantly over the entire forecast period. The trends of this development will also likely differ.

Despite the expected higher positive net migration rate and significant decrease in mortality, there is according to the medium variant of the forecast enough reproduction potential in the population to ensure growth in Slovakia for just ten to twelve years because of long-term low fertility in the recent history. However, given the development of the total fertility rate and net migration from 2012 to 2017, both of which were even less favourable than the pessimistic estimates of the low variant, this potential has now been exhausted and Slovakia is probably standing on the brink of depopulation. According to the medium variant, which currently looks quite optimistic, but which from the perspective of the entire forecast period must still be regarded as the most likely scenario of future development, the population size of Slovakia should increase by approximately one hundred thousand people in total between 2016 and 2030, before returning by 2050 to its level at the end of 2016 and then should continue its relatively dynamic decrease (Figure 1a).

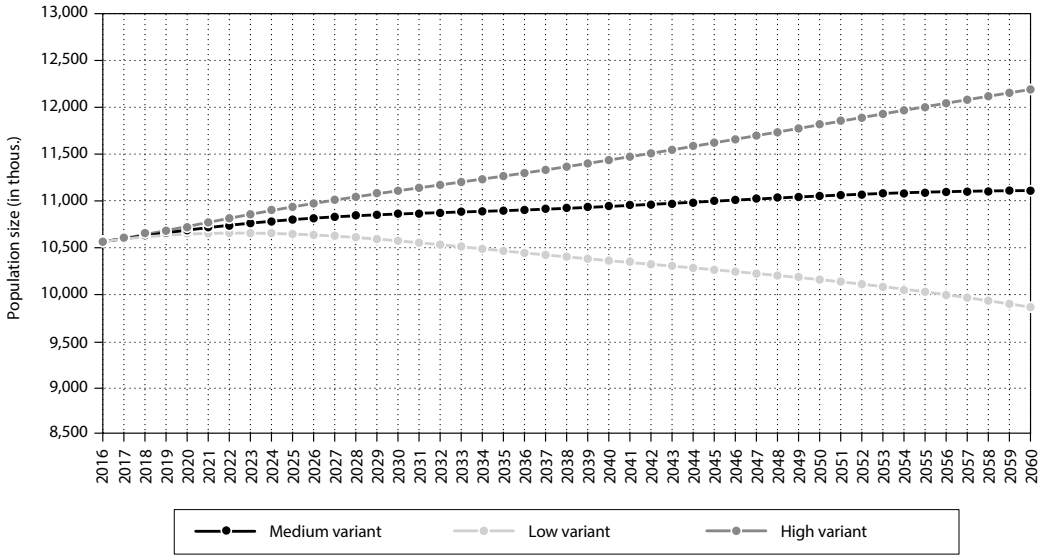
By contrast, the population of Czechia currently has higher reproduction potential, owing to the significantly higher current fertility rate (approximately 0.25 children per woman) and to its more favourable outlook, higher net migration rate in relation to total population size, and better mortality conditions, both real and expected. Consequently, its overall reproduction potential throughout the observed period from 2016 to 2060 should correspond to expanded reproduction and lead to continuous population growth.

Figure 1a: Expected development of the total population size, 2016–2060, Slovakia



Source: Authors' calculations.

Figure 1b: Expected development of the total population size, 2016–2060, Czechia



Source: Authors' calculations.

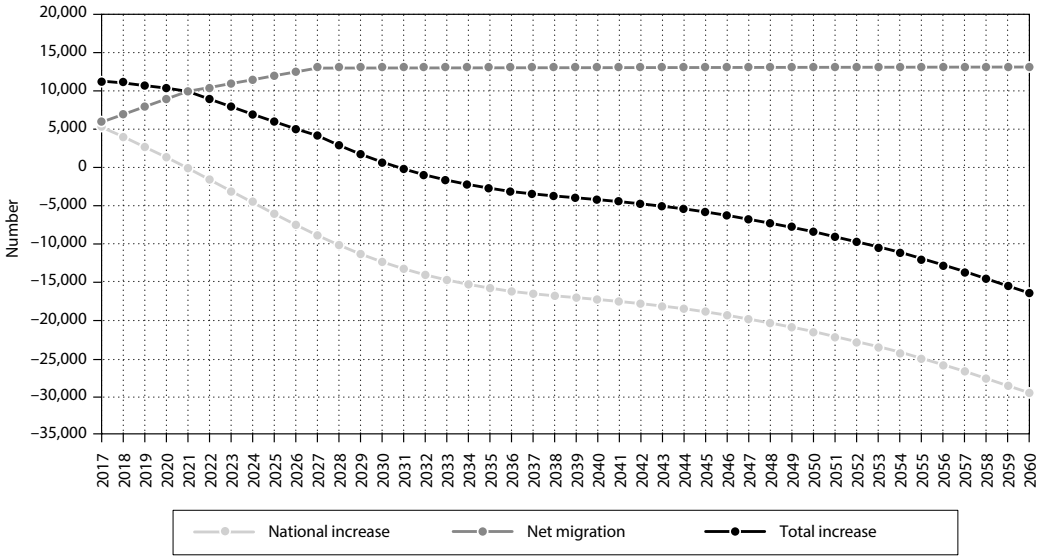
In the span of the next 25 years it is possible to realistically expect that the number of inhabitants of Czechia will reach 11 million and before reaching the end of the forecast period it will probably exceed that number by another one hundred thousand people (Figure 1b).

Although the two forecasts were created in different time periods and are almost wholly independent of each other, the deviations of the extreme (high and low) variants from the medium scenario are almost identical, the only difference being that the medium variant of the Slovak forecast is slightly more 'pessimistic' because it is closer to the low variant. The population size in Slovakia in 2060 projected in the low variant amounts to 91% of the projected medium variant, and the high variant amounts to 111% of the projected medium variant. The Czech Republic's medium variant can be regarded as 'more optimistic', because it on the contrary deviates more in the direction of the projected high variant. The population size of Czechia projected in its low variant equals 89% of the medium variant, while the high variant equals 110% of the medium variant. We can interpret this as a natural sign of the key role played by the subject in demographic forecasting. Even the most objectively constructed forecast is not free from the influence of the environment, moods, and expectations in which they are created. The Slovak forecast was created in the conditions of a relatively long-lasting recession, while the forecast for Czechia was created in a period of (economic) boom and general, albeit cautious, optimism in society, which may be one of the main causes of the medium variant's deviation in the direction of the low and the high variants, respectively.

For current population development in economically advanced countries, among which Slovakia and Czechia indisputably figure, migration represents without question the most important reproductive process. Migration and especially its immigration component determine the direction of population development overall in most of these countries. The expected dominant role of migration in determining the basic character of reproduction is illustrated in Figure 2a and especially in Figure 2b.

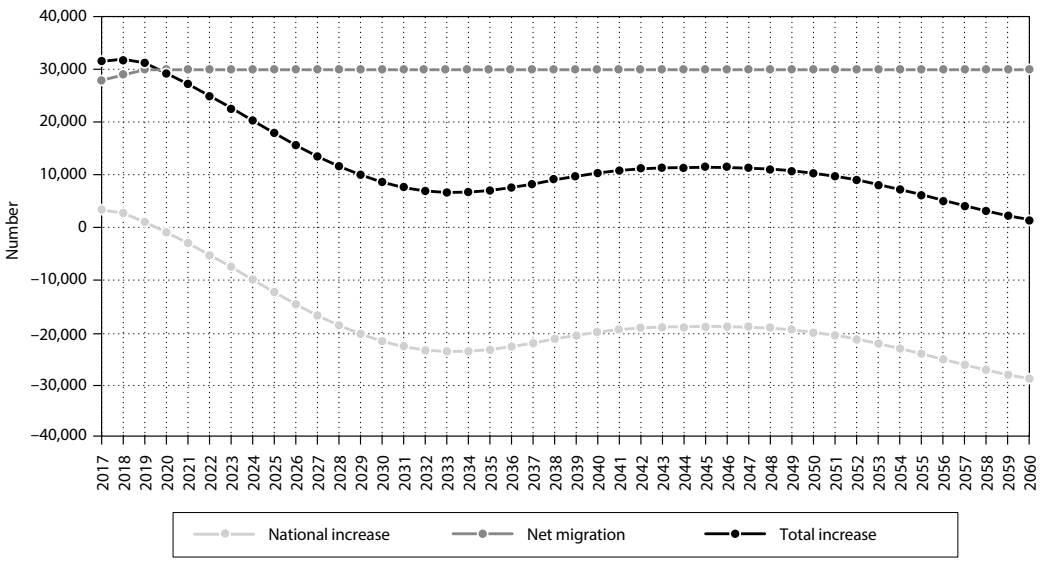
In both countries migration is also the only source of population growth that can be rapidly mobilised. Fertility and especially mortality exhibit much more inertia in their development and it is not easy to mobilise them towards the optimisation of population development. Population development is not currently so much about the development of the population size as it is about the development of age-sex and other population structures.

Figure 2a: Expected development of the population balance, 2017–2060, Slovakia, medium variant



Source: Authors' calculations.

Figure 2b: Expected development of the population balance, 2017–2060, Czechia, medium variant

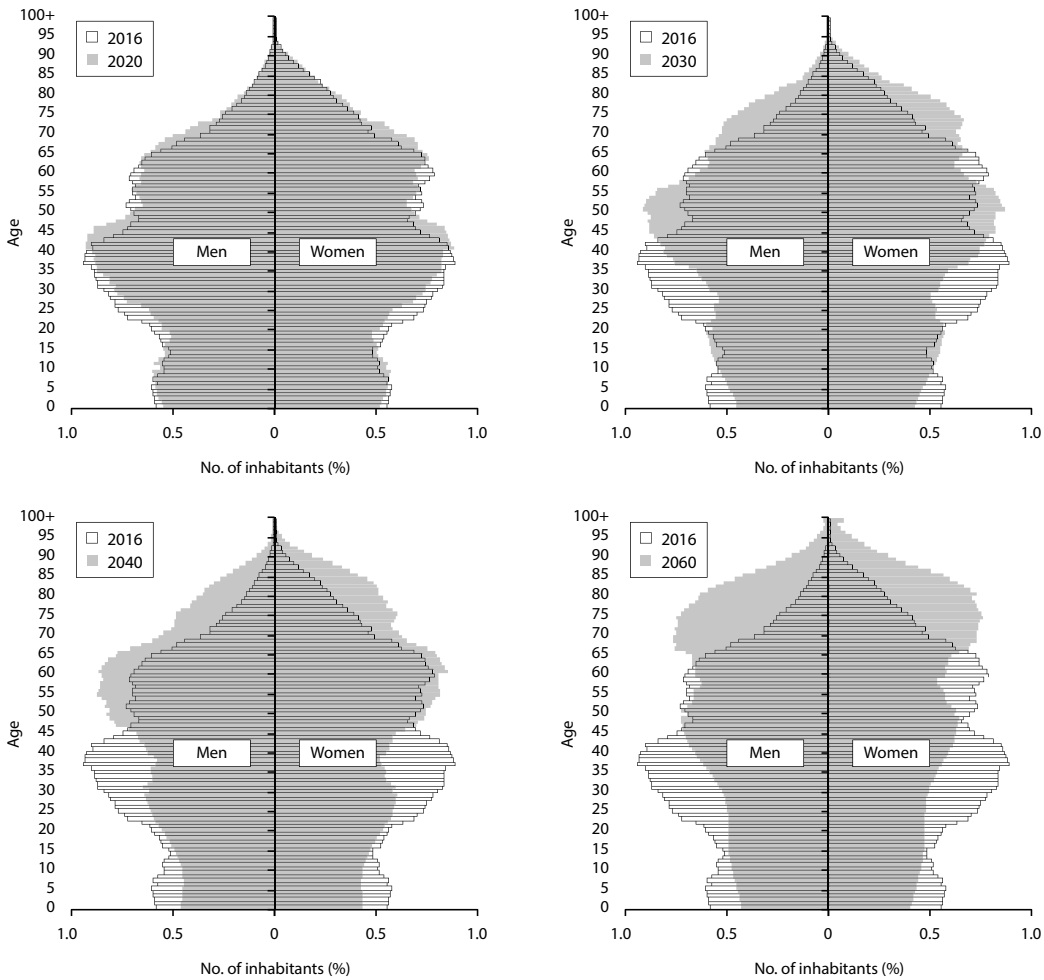


Source: Authors' calculations.

THE TRANSFORMATION OF THE AGE-SEX STRUCTURE AND THE COURSE OF DEMOGRAPHIC AGEING

The future development of the age-sex structure of the populations in the Czechia and Slovakia in both the short- and middle-term perspectives, that is, over the course of the next 25 and 30 years, will to a large degree be influenced by the threshold age-sex structure in each country (at the end of 2016 and 2011, respectively), by irregularities in the age-sex structure, and to a significant extent also by the expected scale and timing of migration and the specific age-sex structures of the basic migration flows, and in Slovakia by the timing, scope, and structure of net migration. The irregularities in the age-sex structures of the Czech and Slovak populations at the start of the period that have a determining effect include the relatively large number of persons born between 1940 and 1956 or 1965, respectively, the largest cohorts born in the 1970s and the 1980s, and, conversely, those linked to the extremely small numbers of births in the second half of the 1990s and at the start of the new century. These irregularities

Figure 3a: Expected age-sex structure in the years 2020, 2030, 2040, 2060, Slovakia, medium variant

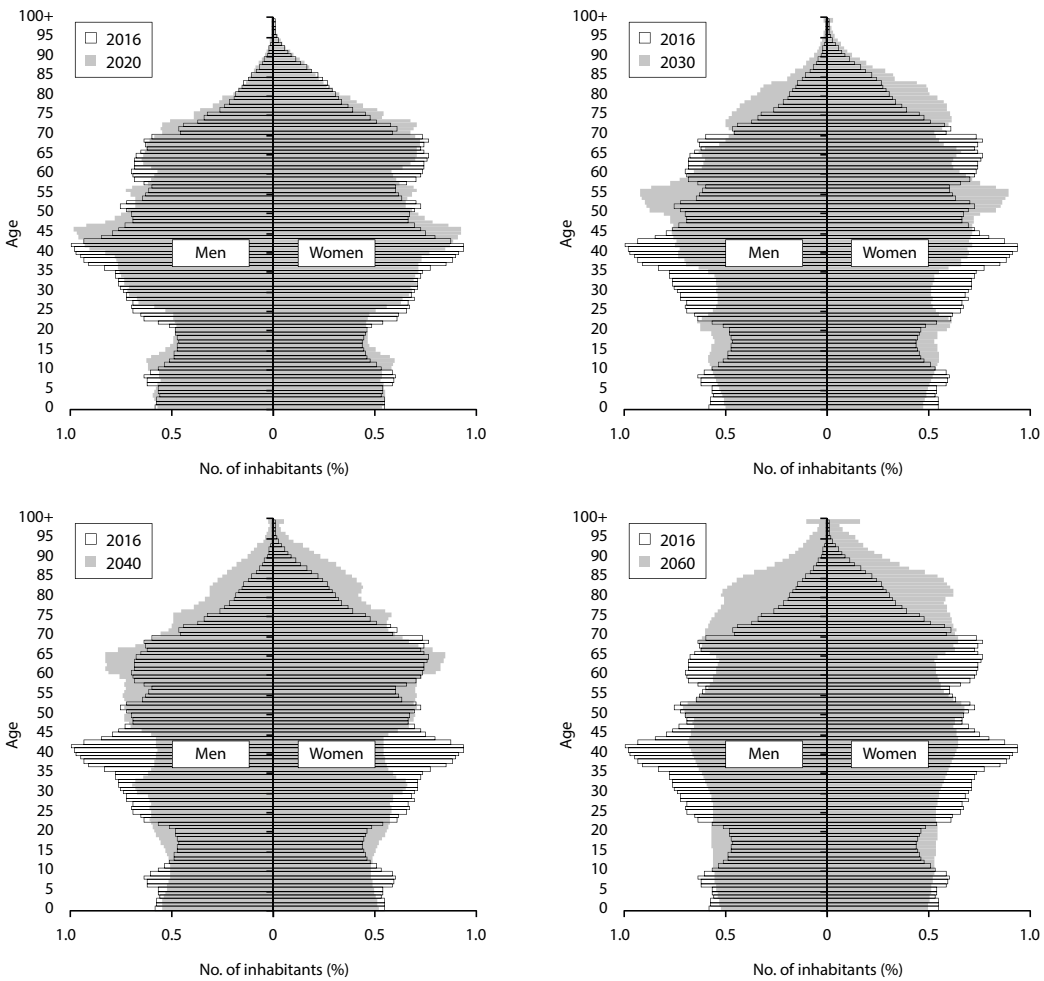


Source: Authors' calculations.

characterise both observed populations, but in Slovakia the differences between the main maximums and minimums in the distribution of men and women by age are somewhat less pronounced. Nevertheless, the deformations observed in the age-sex structure of the Slovak population are more robust and more stable over time (Figures 3a and 3b).

The transformation of the age structure of the Slovak population should predominantly be influenced by existing irregularities in the age-sex structure and the natural offsetting of these irregularities as individual cohorts die over time. Weaker migration will contribute only to a very limited extent towards smoothing out the protrusions caused by these aberrations in the age-sex structure, and chiefly only in the lower age groups. The ageing of the population will almost certainly be the most pronounced process in the future development of the age-sex structure of the Slovak population. This ageing process will occur from the top of the age-sex structure throughout the entire forecast period as a result of the permanent increase in the number of seniors (people aged 65 and over)

Figure 3b: Expected age-sex structure in the years 2020, 2030, 2040, 2060, Czechia, medium variant



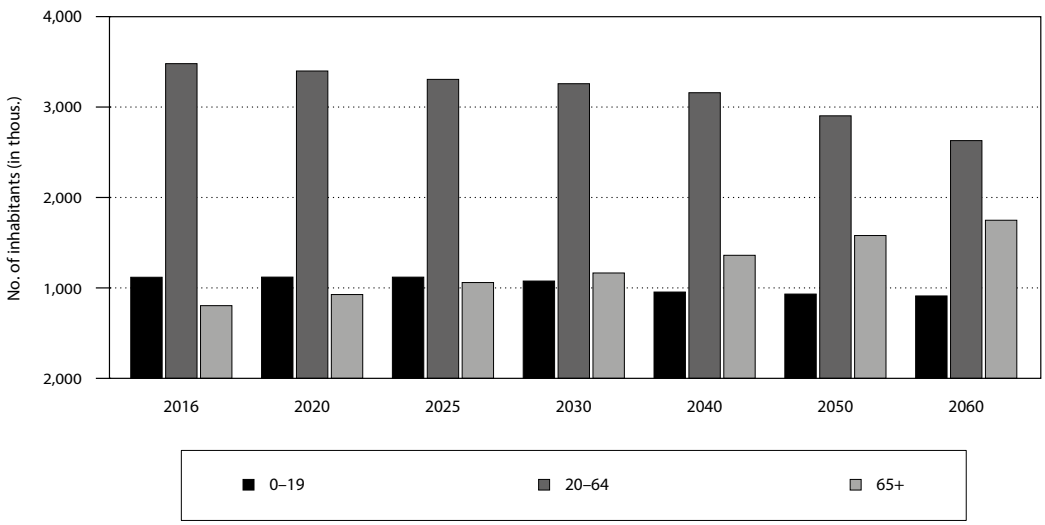
Source: Authors' calculations.

and from the bottom the age structure for a large part of the forecast period as a result of the decrease in the size of the child component in the population.

In the current age distribution of the Czech population there is a greater frequency of small irregularities than what we see in the age structure of the Slovak population, which leads to more frequent and to some degree also less pronounced fluctuations in the number of people in individual age groups. At the same time, however, these protrusions are also offset by the larger extent of migration in relation to population size. The protrusions and irregularities are mainly offset when they pass through the segment of the age structure that lies between the 20th and 30th year of life, where the intensity of migration is generally the highest. The most distinct protrusion, formed by the cohorts born in the 1970s, cannot, however, be offset by ordinary migration. First, this is an extremely pronounced maximum and second the people who comprise it are today on average more than 40 years of age, which is an age when migration mobility is already relatively low. Moreover, Czechia has long-term positive net migration and in order to numerically reinforce subsequent generations in a corresponding way there would have to be far more immigrants than the number that are currently entering the country. Therefore, this, the most pronounced protrusion can under the ordinary conditions of population development only disappear as a result of the dying out process of the generations concerned.

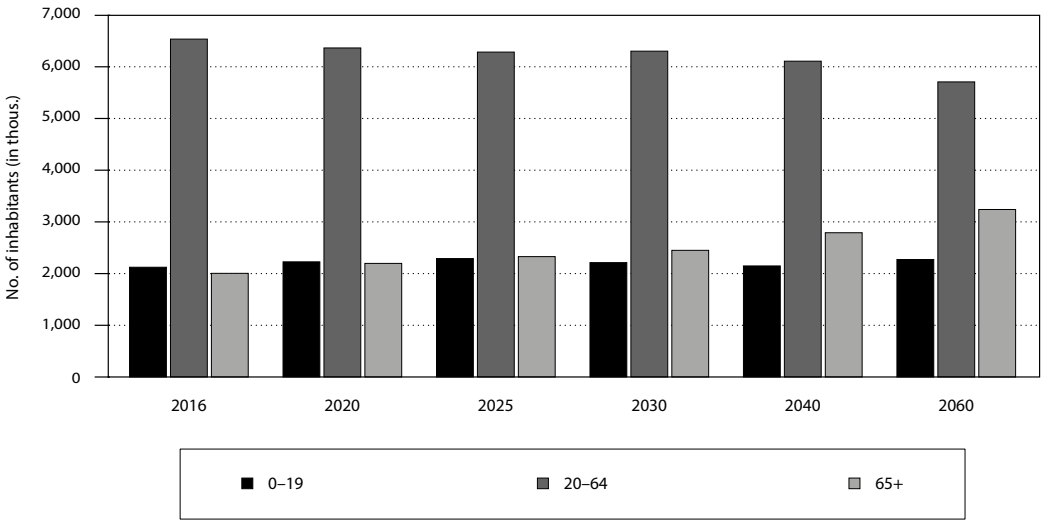
The development of the number of inhabitants in individual age groups (Figures 4a and 4b) will mainly be marked by the aforementioned irregularities that were present in the threshold age-sex structure. The total number of children and adolescents up to the age of 19 (pre-productive age) will be crucially influenced by not just the number of children already born and the cumulative effect of their participation in the migration process but primarily by the development of fertility, which is itself determined by the development of the number of women of reproductive age (15–49 years), their distribution by age, the total fertility rate, and the distribution of fertility intensity by age. As a result of all the interaction between all these factors we expect that the number of children and adolescents in Czechia will continue to grow until approximately the middle of the next decade, after which it will decline for at least two decades, and at the end

Figure 4a: Expected breakdown of the population into basic age groups, 2017–2060 (selected years), Slovakia, medium variant



Source: Authors' calculations.

Figure 4b: Expected breakdown of the population into basic age groups, 2017–2060 (selected years), Czechia, medium variant



Source: Authors' calculations.

of the forecast period it will grow again to a level roughly equal to 107% of the initial size of this age group (from 2.11 mil. to 2.25 mil. people). This component of the population should alternatingly amount to between roughly 19% and 21% of the population. In Slovakia the most likely scenario appears to be a continued slight increase in the number of people in the 0–19 age group, which at the start of the next decade will be replaced by a lasting decline in both the absolute size of this age group and the share of the population it represents. In the forecast horizon (to the year 2060) the numerical size of this age group should decrease to a level equal to 82% of its numerical size in the initial year (from 1.13 mil. to 0.92 mil. people) amidst the simultaneous decrease in the share of the total population it represents from almost 21% to just slightly above 17%.

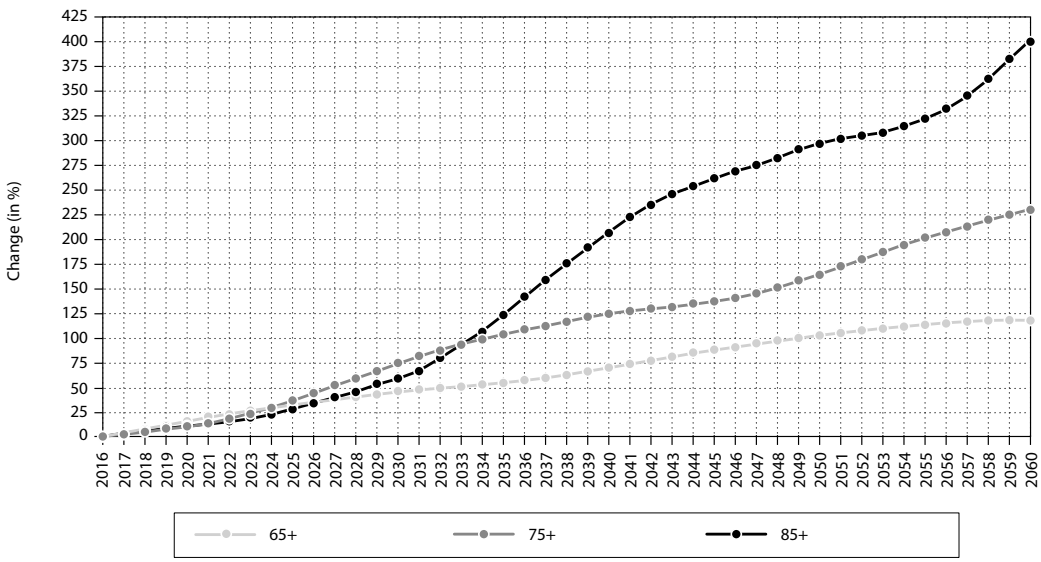
The expected development of the size of the population of productive age (20–64 years) will be marked by the difference in the numerical size of the cohorts that enter this category at one end and exit at the other end, and the development of the net migration rate in this age segment. In Czechia the size of the population of productive age will most likely decrease over the course of the forecast period to 87% of the size of this population at the forecast´s threshold, which expressed in numerical figures is a decrease from 6.48 mil. to 5.66 mil. people. Analogically there would also be a decrease in the proportional size of this category within the total population, from 61% to 51%. In Slovakia this development will be even more pronounced. The most likely scenario there is that the number of people of productive age will decrease from 3.52 mil. in 2016 to 2.66 mil. by the end of the forecast period in 2060. Expressed in relative terms this would mean a decrease in the share of the population represented by the productive component from more than 64% to 50%. These dramatic changes, which will largely occur during the last third of the forecast period, will in both countries be caused by the largest birth cohorts born in the 1970s or in the 1970s and 1980s crossing the upper age limit of the productive age category (65 years) and their replacement by the distinctly smaller cohorts born between 2018 and 2024 in Czechia and 2018 and 2030 in Slovakia. Under these conditions the ageing of the populations of Czechia and Slovakia will be very pronounced and will be so throughout the entire forecast period.

The development of the number of seniors, or more precisely its dynamics of this development, which is one of the basis characteristics of demographic ageing, can be realistically expected to give rise to one of the basic differences between the populations of Czechia and Slovakia. In Slovakia the number of people aged 65 and over should increase between 2016 and 2060 by 118% from 0.812 million to 1.767 million while the size of the population will decrease by 1% from the initial size of the population in 2016. In Czechia the analogical increase should amount to 'just' 62%, from the initial 1.989 mil. to 3.224 mil., but this is expected to occur amidst a simultaneous increase in the total population size of approximately 5%.

The differences between the expected ageing trends of the two populations will over the next approximately forty years also reflect, albeit indirectly, the different course the demographic revolution took in each country. In Slovakia, the demographic revolution began later and occurred within a relatively short time interval. The onset of population ageing in Slovakia was therefore somewhat delayed, but the course of the process was then all the more intensive and the share of the seniors in the Slovak population will almost certainly reach a significantly higher maximum than in the case of the Czech population. If seniors accounted for just under 15% of the population in Slovakia at the end of 2016, in Czechia the figure was 19%. If the medium forecast scenario were to play out, however, this share would in both countries draw even sometime around the year 2040 at 25%, and in 2060 it would reach 33% of the Slovak population and 29% of the Czech population. The share of seniors in the Czech population should peak between 2055 and 2060 at around 30%, while in Slovakia the peak will likely occur after the year 2060 and at a much higher level – depending mainly on the development of fertility. It could even be greater than 35%.

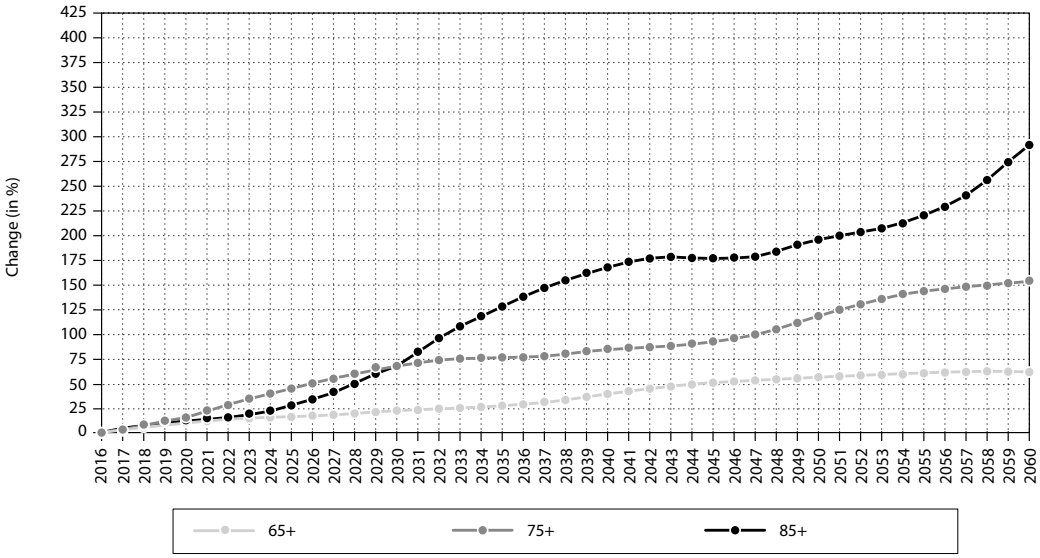
The expected development of the mean age of the population also illustrates the significantly different dynamics of population ageing (in the two countries) over the course of the forecast period. The mean age of the population in Slovakia according to the medium forecast scenario should rise from the initial age of 40.3 years to 49.2 years, which is almost a full nine years. In Czechia the expected change in the mean age

Figure 5a: Expected development of the relative change in the number of seniors by selected age groups, 2017–2060, Slovakia, medium variant



Source: Authors' calculations.

Figure 5b: Expected development of the relative change in the number of seniors by selected age groups, 2017–2060, Czechia, medium variant



Source: Authors' calculations.

of the population should be only half of that, and we can expect it to increase between 2016 and 2060 by 4.5 years from 42.0 to 46.5 years of age.

The ageing process, measured as the change in the number or proportion of seniors in the population, will exhibit marked internal differentiation, primarily caused by irregularities in the initial age-sex structure and specific features in the distribution of the current and very likely also the future growth in life expectancy at birth. It is because the determining increases in life expectancy at birth will primarily occur among the highest ages. Given that the main irregularities in the initial age-sex structure are very similar in both populations and the structural changes occurring within the frame of the future development of mortality should also be similar, it can be expected that the aforementioned internal structure, or rather the differentiation of the relative growth in the number of seniors in the Slovak and Czech populations by age, will exhibit similar developmental characteristics (Figs. 5a and 5b).

If the number of people aged 65 and over in Czechia and Slovakia increases, as described above, by 62% and 118%, respectively, then the number of people aged 75 and over will over the same period grow increase by two-and-a-half times the initial number and three times the initial number, respectively, and the oldest inhabitants aged 85 and over will be, respectively, four time and five times the initial number in the threshold year. The estimates for the last two age groups are very robust, because the seniors that will make up these categories in 2060 are currently over the age of 30 and 40, respectively, so they are already beyond the age of the highest migration activity. Their future numbers will therefore be determined almost exclusively by mortality, which out of all the components of population development is the one that can be predicted the most reliably.

CONCLUSION

One hundred years is one very long human life. In terms of past demographic development, however, it represents only a middle-term retrospective period. Middle-term because the current age structure

is clearly marked by the direct and indirect traces of a large part of what has occurred in a given population's reproduction over the past century. By comparing the results of analyses and forecasts of population development in Slovakia and Czechia it is possible to assess how their shared history is reflected and will continue to be reflected in the population development of the two countries. It is almost certain that the traces of their shared path and fundamental changes in the social, economic, political, and, ultimately also, cultural areas will appear not only in the age structure but also in the reproductive behaviour of the population for the next several decades. The strength of the effect of this shared path, which was not shared for very long, is demonstrated by the degree to which two populations that were reproductively very different at the start grew more alike. This is probably best expressed by the similarity of the initial age structures in the forecasts described above. The similarity was so strong that it will continue to be visibly reflected and reproduced in future development, even despite the relatively distinct parameters of reproduction that were used in the forecasts.

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