

DEMOGRAPHIC TRENDS AND PATTERNS IN CZECHIA AND SLOVAKIA DURING THE SOCIALIST ERA^{*)}

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Abstract

During the socialist era, marriage was contracted early and became more frequent. Children were born to younger parents and at short intervals. The proportion of childless women was low, as was the percentage of extramarital births. A higher risk of death for adults and the elderly was observed particularly among men in the period 1965–1975. Slovak demographic patterns became more similar to Czech patterns.

Keywords: fertility, mortality, nuptiality, divorce rate, age structure, socialist period, Czechia, Slovakia

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INTRODUCTION

Demographic development in Czechoslovakia after Second World War can basically be divided into two main epochs. The first lasted until the start of the 1990s and the second followed from that date. The second of these two periods has been characterised by new and historically unprecedented demographic trends. However, in this contribution we address demographic trends in the first period and do so separately for the Czech and Slovak Republics as parts of the former Czechoslovakia (dissolved on 1 January 1993). Since then, demographic statistics have been maintained separately for each of the two historical territories. It is possible to study demographic development across the territory of the current Czech and Slovak Republics well into the past.

At the end of the Second World War an agreement among the allied victors at the Potsdam Conference led to the transfer of the German population out

of Central Europe. Czechoslovakia completed this transfer in 1946, and the first post-war census in 1950 provided precise data on the new population base of Czechoslovakia and on the population on the territory of the current Czech and Slovak Republics (Srb, 1998). The following demographic statistics and analyses are based on these data.

Shortly after the end of the Second World War, Europe was divided into two geopolitical blocs (Monnier *et al.*, 1992), referred to as the ‘East’ and the ‘West’, but until the 1960s the demographic trends in each of these geopolitical units differed very little and represented more a continuation of the demographic situation that had existed before the war or were a reflection of the specific cultural climate of each individual country, and the demographic development in the Czech and Slovak Republics was in this respect no exception. Later, from the mid-1960s, Europe began to diverge demographically. In one part (the ‘West’),

*) The socialist era includes the period from the Communist coup d’état in February 1948 to the Velvet Revolution in 1989 when Czechoslovakia was ruled by the Communist Party.

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fertility, nuptiality, and mortality indicators fell, and demographic structures were qualitatively transformed, while in the second part (the 'East'), nuptiality and fertility patterns (higher intensity, younger age) established after the war persisted and mortality conditions deteriorated. During that period the regime of demographic behaviour in the Czech Republic resembled that typical of other European communist countries at the time, and patterns in Slovakia began to resemble more those in the Czech Republic.

This paper mainly addresses the trends and patterns of the most important demographic processes (fertility and mortality), comparing Czechia and Slovakia during the socialist period. Nuptiality, the divorce rate, and abortions are considered contextual factors and for this reason are discussed only briefly. International migration played only a minimal role in population development during the socialist era and is therefore of marginal interest here.

FERTILITY TRENDS UNTIL THE START OF THE 1990S

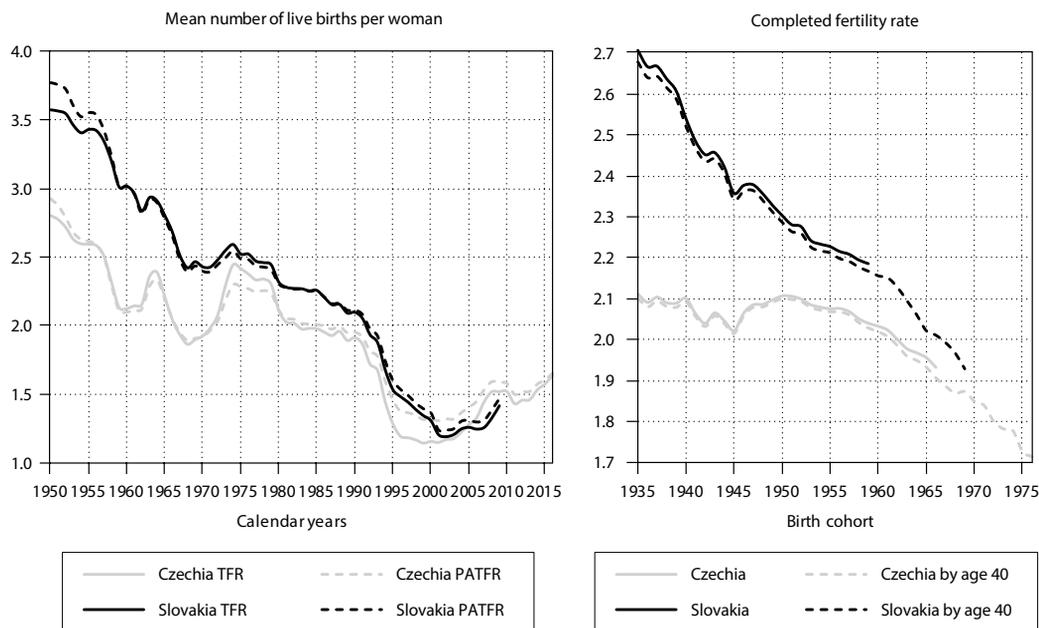
The Second World War had an impact on value systems, and after the war social differences played only a minor role in family formation in Europe and in the former Czechoslovakia (Monnier, 2006). Therefore, in the 1950s and 1960s more people than before had families. The nature of fertility also changed, as the proportion of families with a larger number of children decreased in favour of families with fewer children. On the other hand, there was also a decrease in childlessness (Rychtaříková, 1993; 1994). With regard to fertility, the development in Czechia²⁾ was somewhat specific. Unlike the majority of European countries, where, after the Second World War, the fertility rate grew consistently over the long term (at least up to the middle of the 1960s), making up for the limiting effects of the war on the birth rate and as a positive reaction to post-war economic development (described as the 'Trente glorieuses', i.e. the thirty glorious years), on the territory of what is today the Czech Republic the post-war increase in fertility was not very high and did not last that long. The reason

is that during the war, up to and including the year 1944, the number of children born on the territory of the Protectorate of Bohemia and Moravia (1939–1945: the Protectorate had 63% of the territory and 67% of the population of the former Czech lands) grew, so there was no need to compensate for a prior low fertility rate (Kučera, 1994). During the Second World War, between 1939 and 1945, Slovakia declared itself an independent state; however, what are now the southern and eastern territories of Slovakia had at that time been ceded to Hungary in 1938. Birth rates in the Slovak inland and in the borderlands taken by Hungary showed similar trends to those in the Protectorate of Bohemia and Moravia, i.e. a fertility increase until 1944 (Šprocha *et al.*, 2016a). After the war, in the 1950s and 1960s, fertility development on the territory of the Czech and Slovak Republics was affected by unfavourable trends in the economy, a difficult housing situation, a lack of available services, and an insufficient network of pre-school facilities, while the employment rate among women was very high, particularly in Czechia. The decline in fertility was also probably accelerated as a result of the passing of an abortion law, effective 1 January 1958, allowing women to terminate a pregnancy not just for health reasons but also for reasons worthy of 'special consideration'. Slovakia, which had experienced historically higher fertility rates, showed a declining and more convergent trend towards Czechia. A weak and short baby-boom was there soon followed by a fertility decline that lasted until the end of the 1960s (Figure 1). During the socialist period, Slovakia, unlike Czechia, was mainly oriented towards developing heavy industry and less towards investing in housing conditions, while religion also played a more significant role in fertility in Slovakia (Šprocha *et al.*, 2016b).

Both cross-sectional indicators, total fertility rate (TFR) and parity- and age-adjusted total fertility rate (PATFR drawn from fertility tables by age and birth order) displayed almost the same values except at the beginning of the period under study and in the 1970s, when important family measures were adopted (Figure 1). The local upturn of the TFR in 1963, more visible in Czechia, was the result of promises to improve family

2) The terms Czechia or the Czech Republic and Slovakia or the Slovak Republic are alternative names for these two countries and have been in official use since the decision of the UN since 17 May 2016. <https://unterm.un.org/UNTERM/Display/record/UNHQ/NA/4275087d-4018-4082-899d-95f37efeda65>.

Figure 1: Trends in total and completed fertility levels over time in Czechia and Slovakia



Source: Human Fertility Database.

conditions voiced at the 12th Congress of the Communist Party (Kučera, 1968). In addition, the originally rather liberal abortion act became more restrictive from 1 January 1963 (Koubek, 1981). The objectives established at the Congress of the Communist Party were not fulfilled, and the economic situation in Czechoslovakia actually deteriorated, resulting in a continuous fertility decline. Family measures were adopted by the government later, in the 1970s, along with measures to increase housing construction and create a more comprehensive network of preschool facilities. This contributed to a rather unexpected increase in the total fertility rate, peaking in 1974 at 2.43 in Czechia and reaching 2.59 in Slovakia. The biggest influence on the rise in Czech fertility in 1973–1979 came from the generations of women born in 1948–1952, who were at the age of peak fertility at that time, though Czech birth cohorts exhibited a higher completed fertility rate than their older counterparts, i.e. cohorts born during the Second World War. By contrast, the higher cohort fertility rate in Slovakia did not

seem to be affected too much by new family measures. However, from a cross-sectional perspective, the effect of pro-family measures was to some extent noticeable even here (Figure 1).

The effect of family measures weakened later on because they were not proportionally amplified. Nevertheless, up to the generation of women born in 1960, the demographic regime in the Czech Republic was dominated by very stable replacement-level fertility, with the completed fertility rate of the birth cohorts 1930–1960 at a level of 2.0–2.1 live born children per woman. The family behaviour of the younger Slovak generations was becoming more like that of their Czech counterparts. The mean age of mothers at first childbearing remained young, at around 22–23 years of age in both countries.

The diversity in cohort fertility according to parity (completed fertility rates by birth order) and concentration (Gini coefficient) is presented in Table 1. Compared to Czechia, Slovakia had a higher proportion of childless women (1–CFR1) combined with a high proportion of women with many children (CFR3,

Tab. 1: Cohort fertility and concentration indicators in Czechia and Slovakia

Czechia							
Cohort	CFR	CFR1	CFR2	CFR3	CFR4	MAC1	GINI coef.
1935	2.113	0.926	0.739	0.288	0.092	22.74	0.291
1940	2.102	0.939	0.760	0.272	0.079	22.49	0.267
1945	2.022	0.917	0.755	0.253	0.063	22.56	0.268
1950	2.108	0.940	0.805	0.271	0.063	22.57	0.237
1955	2.076	0.941	0.801	0.251	0.058	22.37	0.232
1960	2.033	0.938	0.784	0.229	0.055	22.38	0.237
Slovakia							
1935	2.708	0.906	0.810	0.481	0.235	22.51	0.321
1940	2.541	0.907	0.809	0.443	0.193	22.35	0.313
1945	2.357	0.883	0.788	0.405	0.155	22.61	0.319
1950	2.303	0.903	0.793	0.383	0.132	22.85	0.298
1955	2.226	0.905	0.790	0.344	0.114	22.83	0.291
1960	2.174	0.903	0.769	0.320	0.107	22.66	0.298

Source: Human Fertility Database; author's calculations.

Note: CFR completed fertility rate, CFR1 completed fertility rate for birth order 1, MAC1 mean age of mothers at first childbearing.

CFR4). Subsequently, the Gini coefficient³⁾ was higher in Slovakia than in Czechia, indicating greater differences between family sizes. In Czechia, the decreasing Gini coefficient coincided with a relatively stable completed fertility rate (CFR) across cohorts 1935–1960. Parity distribution was characterised by a very high proportion of women with two children and a low rate of childlessness.

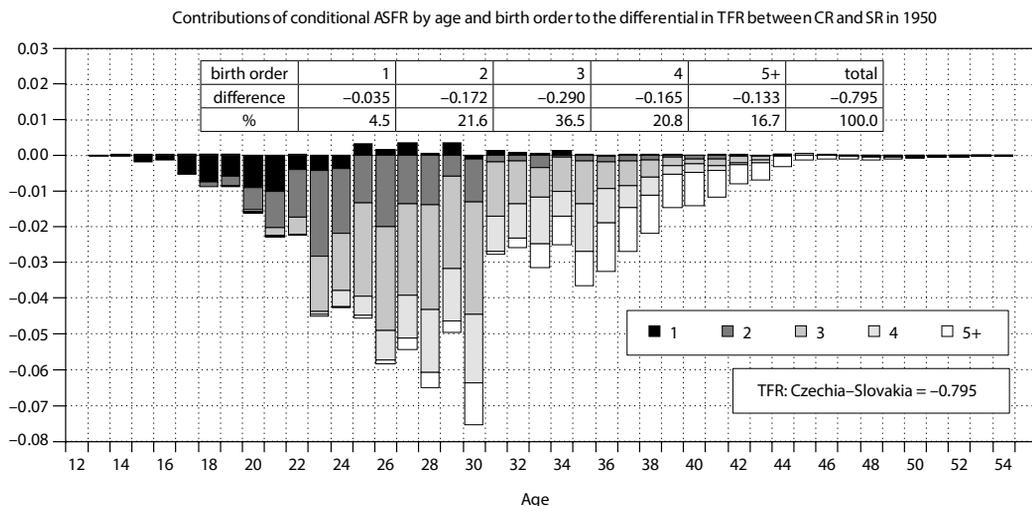
In order to address in detail the difference in the total fertility rate that is due to the impact of age and birth order between the Czech and Slovak Republics, the decomposition method based on the algorithm of stepwise replacement (*Andreev et al.*, 2012) was used for three selected years: 1950 (the beginning of the period studied), 1975 (the period of the impact of family measures), and 1985 (fertility stabilisation at the end of the period under study).

The decomposition of the difference in the TFR between Czechia and Slovakia (–0.795) in 1950 (Figure 2) showed that the lower TFR in Czechia was mostly due to the gap in higher birth orders, (birth order 3 = 36.5%; birth order 2 = 21.6%; birth order 4 = 20.8%, and birth order 5+ = 16.7%). The ages from 23 to 30 years contributed the most to the fertility disadvantage of Czechia (Figure 2).

In the mid-1970s, Czech fertility remained lower (but the difference from Slovakia was smaller than in 1950); however, a change occurred in the Czech structure by birth order compared to that in Slovakia (Figure 3). The share of first-born children was larger in Czechia and together with lower childlessness moderated the fertility gap between the two countries. Third-order births still continued to give rise to a higher total fertility level in Slovakia than in Czechia.

3) The Gini coefficient was estimated from the distributions of women with completed fertility according to the number of children they had. The data come from current civil registration on fertility by birth order and age of mother (Human Fertility Database). The calculation of the Gini coefficient is based on the cumulative share of children as a function of the cumulative share of women (shares of the female population by number of live-born children) were estimated as differences between subsequent completed fertility rates by birth order: e.g. $F_1 = CFR1 - CFR2$ represents the proportion of women with only one child). Gini coefficient equals $G = 1 - \sum[(FF_{i+1} - FF_i) * (\Phi\Phi_{i+1} + \Phi\Phi_i)]$ for birth order $i = 0, 1, \dots$ FF and $\Phi\Phi$ are cumulative relative distributions (see *Shkolnikov et al.*, 2014). The results fit those published in *Shkolnikov et al.*, 2007.

Figure 2: Decomposition of the difference in the TFR between Czechia and Slovakia in 1950

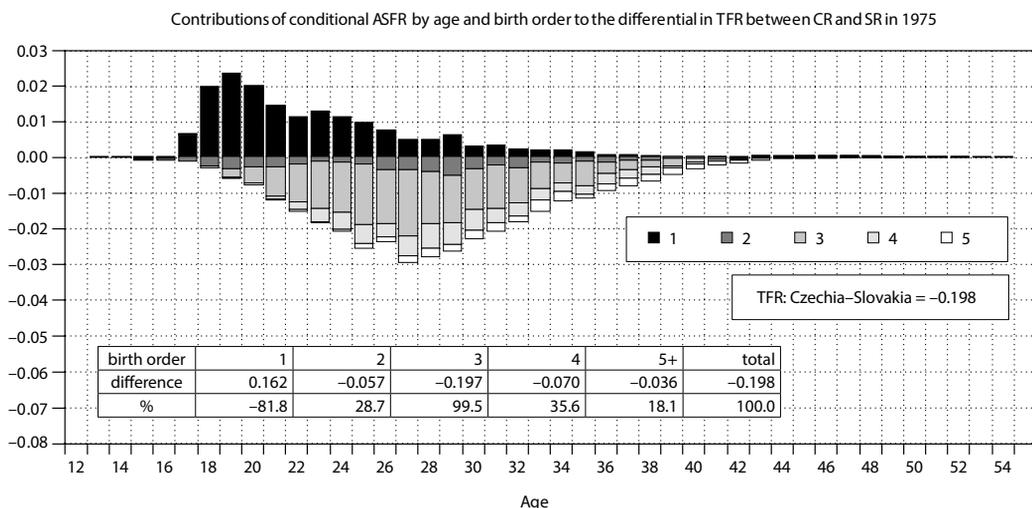


Source: Human Fertility Database; author's calculations.

Unlike most Western and Northern European countries, the model of two or three child families was stable, with no significant change in fertility characteristics in former Czechoslovakia in the 1980s (*Rychtaříková, 1994, Monnier, 2006*). This pattern likely reflected

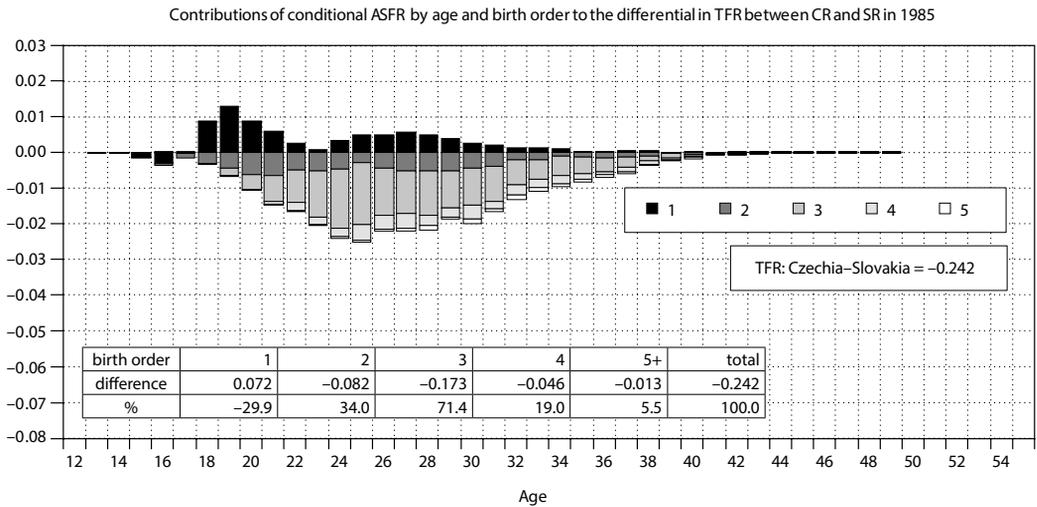
a certain societal inertia. The Czech-Slovak fertility divide maintained the same stabilised structural pattern, with more frequent third-order births in Slovakia (Figure 4), where there was a long-term slow fertility decline (Figure 1).

Figure 3: Decomposition of the difference in the TFR between Czechia and Slovakia in 1975



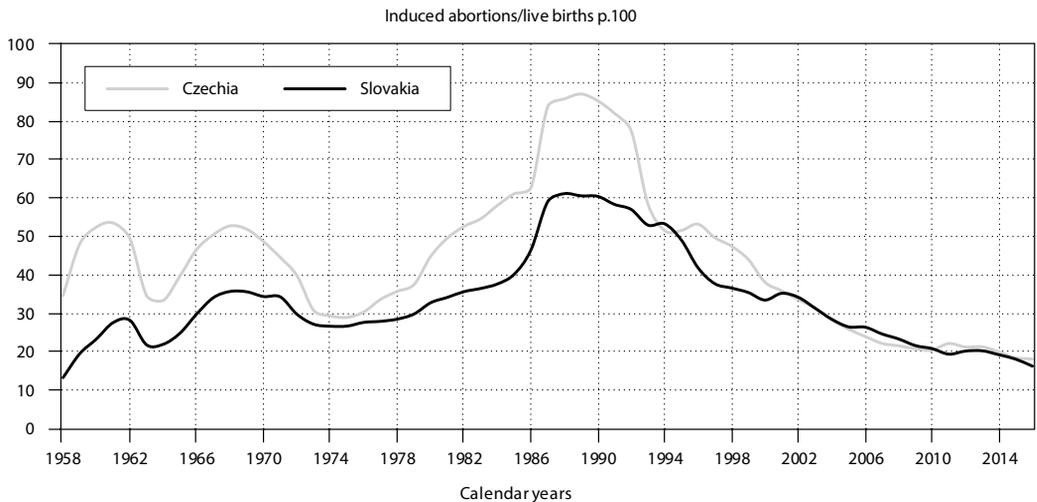
Source: Human Fertility Database; author's calculations.

Figure 4: Decomposition of the difference in the TFR between Czechia and Slovakia in 1985



Source: Human Fertility Database; author's calculations.

Figure 5: Trends in the induced abortion ratio in Czechia and Slovakia since 1958



Source: Demografická ročenka 2016, VDC.

The high value ascribed to marriage and parenthood in Czechoslovakia up to the start of the 1990s is evident, among other things, from the small percentage of children born outside marriage in the period after the Second World War. Up to and through the year 1989, the percentage of extramarital children was

never more than 8% of all live-born children (1989: Czechia 7.9%; Slovakia 7.2%) (*Pohyb obyvatelstva v České a Slovenské Federativní republice 1989, část I, FSÚ*).

Up to the 1990s, pregnant women tended to opt for either marriage or abortion. Consequently, the frequency of premarital conception (children born in marriage

but conceived before the wedding) grew over time (1989: Czechia 54%; Slovakia 51%) (*Pohyb obyvatelstva v České a Slovenské Federativní republice v roce 1989, část I, FSÚ*). Induced abortion was another option for a pregnant unmarried woman.

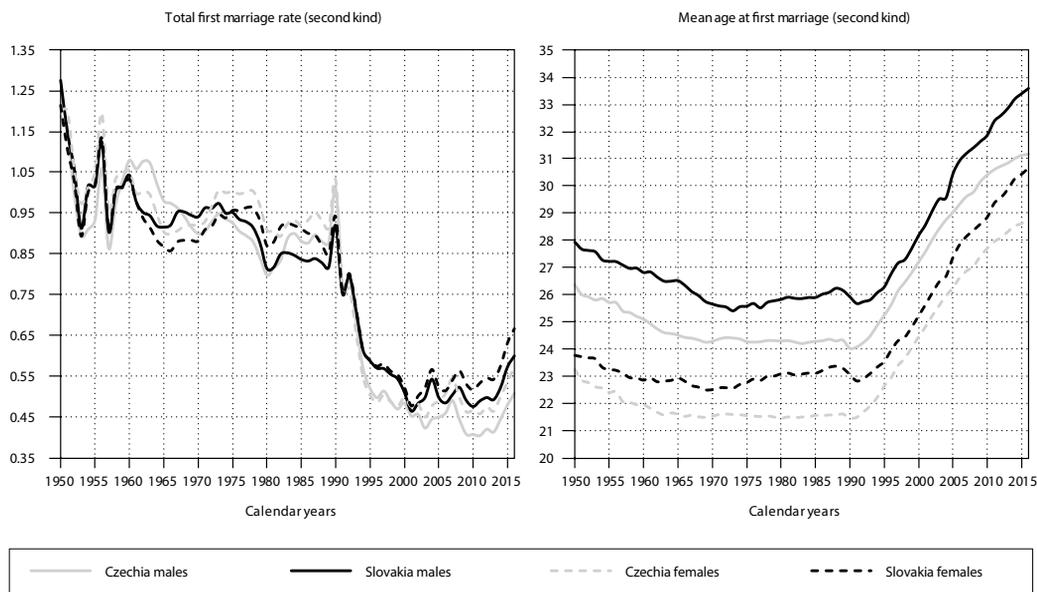
The induced abortion ratio (the number of induced abortions per 100 live births) fluctuated after 1958 in connection with legislative changes or regulations, and when the practice of allowing induced abortions was made stricter this was usually reflected in an increase in the number of live births and vice versa (Figure 5). This is especially evident in relation to the government regulation issued in 1962, when members of the local abortion committees, initially made up of professionals, were replaced with laymen, or in 1973–1979, when ordinance no. 71/1973 was issued, which added to the reasons worthy of consideration for allowing an induced abortion that a woman was over the age of 40 or had at least three live children or was an unmarried woman in difficult circumstances, and so on (*Koubek, 1981*). In practice,

at that time there were very few induced abortions among married women with no children or with just one child. Nevertheless, the initially strict adherence to these limitations became more relaxed over time. A major change in legislation occurred with the introduction of a law that came into effect on 1 January 1987, which abolished the committees whose function had been to grant permission to have an induced abortion. This change was reflected in an increase in the induced abortion ratio, which then peaked at 86 induced abortions per 100 live births in 1989 in Czechia and at 60 in Slovakia (Figure 5).

FAMILY FORMATION AND DISSOLUTION

The period from the end of the Second World War to the start of the 1970s is regarded as the era of the nuclear family. Families were formed on the basis of marriage, and children came into the world within a marriage. Throughout Europe, the age at which people married fell, and almost everyone did marry. These

Figure 6: Trends in primo-nuptiality levels and timing in Czechia and Slovakia since 1950



Source: Pohyb obyvatelstva 1950–2005, Demografická ročenka 2006–2016; VDC; author's calculations.

years are for this reason referred to as the period of early and frequent marriage. After 1970 in a number of advanced countries common-law marriage/consensual unions began to be of increasing significance as an alternative, albeit less common, type of family, and a plurality of family forms spread (Monnier, 2006).

The marriage trend among single (first-time married) people in the Czech and Slovak Republics can be broken down into several stages of development (Figure 6), two of which stand out as especially significant. The first and the main stage is the period from the end of the Second World War to the start of the 1990s, and the second stage begins with the end of the first.

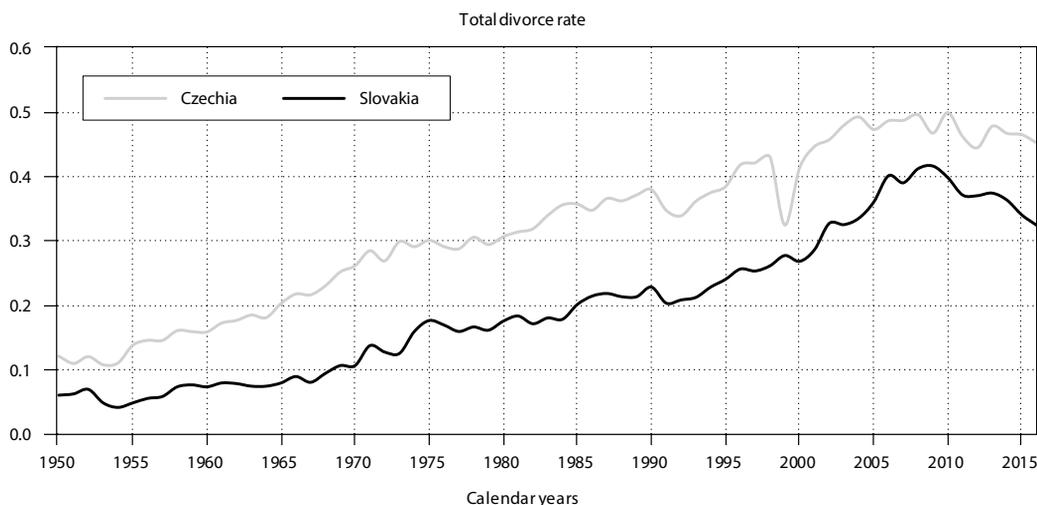
Until the start of the 1960s, the total reduced first marriage rate (the percentage of people who had married at least once in their life by the age of 50; calculated from the age distribution of marriages among single people and the number of people at a given age irrespective of marital status – rates of the second kind) often surpassed 100% in the Czech and Slovak Republics, which reflected an important decrease in the mean age at first marriage (Figure 6). Between 1960 and 1970, the total first marriage reduced rate decreased for both sexes from 100% to a 'normal' 90% in both countries (Figure 6). In 1970 the average age at the time of first marriage was 21.5 years for women and 24.3 years for men; the indicator of first-marriage intensity (i.e. the percentage of men and women who marry at least once in their life) reached 90% among men and 92% among women in Czechia. In Slovakia the age at first marriage was slightly older for men and women (Figure 6) but the quantum effects (total first marriage rate) were similar. The situation changed in connection with the gradual introduction of new pro-population policies at the turn of the 1960s and 1970s. Favourable state loans for young newlyweds helped to further increase an already high first-marriage rate. Growth in all forms of housing – state, private, and cooperative – made it possible for people to obtain their own housing more quickly (Rychtaříková, 1995). The periods of maximum nuptiality for single men and women are also the periods in which the age at first marriage was very young (24–25 for men, 21–22 for women). The year 1989 was the last year that socialist Czechoslovakia existed, but it was also a year when nuptiality still exhibited 'traditional' features (frequent

and early marriage). From a longitudinal perspective, the Czech and Slovak proportion of ever-married persons born after 1933 was higher among women than among men (Rychtaříková, 1993). The completed first marriage rate was lower for Slovak females than their Czech counterparts (birth cohort 1950 TFMR: Czech males 90%, females 95%; Slovak males 90%, females 92%; mean age at first marriage: Czech males 24.1, females 21.6; Slovak males 24.3, females 22.1). The mean age at first marriage calculated for each birth cohort declined until the 1940 birth cohort among females and the 1945 birth cohort among males. The trend in first-marriage intensity by cohort, compared with cross-sectional fluctuations, was stable during the socialist era.

In 1919 a law was introduced that allowed all citizens of then Czechoslovakia to terminate their marriage during the spouses' lifetime and to do so in two ways: cessation of marriage, which corresponds in meaning to divorce today, and divorce from bed and board, in which case the former spouses are legally separated and do not live together, but they are still officially married, so neither spouse can marry anyone else. This two-track system was abolished after the Second World War, and since 1950 there has been only one way of terminating a marriage in Czechoslovakia during the life of the spouses and that is divorce (Tutterová *et al.*, 1989). Throughout the socialist period, the legislation regulating divorce somewhat changed and it became easy to divorce, but not to the extent that divorce by mutual consent was allowed. The divorce rate was always higher in Czechia than in Slovakia (Figure 7), but the linear increase pattern was similar. The higher level of religiosity in Slovakia could explain this difference.

Unlike the majority of Western European countries, in Czechoslovakia (primarily in Czechia) the labour-market participation of women was very high during the socialist era, and this meant that women had a certain degree of economic independence, and they were also able to have other contacts at their workplace (Kučera, 1968). Conflicts in the family were exacerbated by housing problems and the difficulties of caring for children in the family, as women were also working full time and doing all this without the availability of necessary services, pre-school facilities for children, or an adequately supplied market. The family budget was often tight, and families could not get by without

Figure 7: Divorce rate trends in Czechia and Slovakia since 1950



Source: Pohyb obyvatelstva 1950–2005, Demografická ročenka 2006–2016; VDC; author's calculations.

the income of women. In 1989, 37% of marriages in Czechia and 21% in Slovakia ended in divorce (Figure 7).

MORTALITY

Three stages of post-war mortality development can be distinguished in Czechoslovakia. The first stage ends in the middle of the 1960s, the second runs from the mid-1960s to the end of the 1980s, and the third starts at the end of the 1980s, just before the Velvet Revolution (Figure 8).

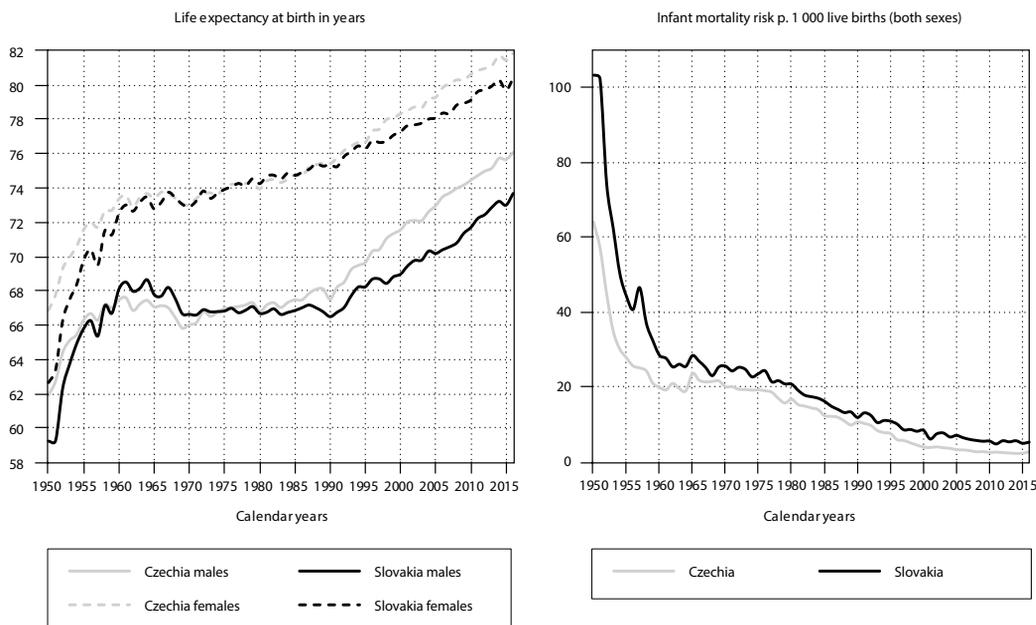
The first stage was characterised by a sharp decline in the infant mortality risk (Figure 8). During this period there was a notable fall in the post-neonatal mortality rate (the number of infants who die between the age of 28 and 364 completed days per 1000 live-born children), which was primarily the result of a decline in mortality from infectious and communicable diseases. In the 1950s paediatric health care was integrated (health care for mothers and children was recognised as a specific field of care), a system of mother and children's centres was gradually established, the percentage of deliveries in hospitals increased, and vaccinations began to be centrally managed (Štembera, 2004). The fall in infant mortality risk (the number of infants that die within their first year of life per 1000

live-born children) thus accounted for more than 50% of the increase in life expectancy at birth.

The second stage (from the middle of the 1960s to the end of the 1980s) was a period when Czechoslovakia belonged not just politically but also demographically to the Eastern bloc, as the mortality conditions in the country deteriorated owing to excess mortality in middle age and older age categories (Figure 9) and to circulatory diseases (Rychtaříková *et al.*, 1988). Among men, life expectancy at birth even fell, and among women it stagnated (Figure 9). The rise in infant mortality indicators in 1965 reflected an administrative shift and had to do with the transition to a new definition of live-born and stillborn children and miscarriage (Figure 8).

The health-care system suffered from chronic under-investment in new medicines and technologies aimed at disease prevention and treatment. Egalitarianism worked against the use of modern medical approaches, such as identifying risk groups in the population. Nevertheless, even the public's life style (smoking, alcoholism, an unhealthy diet, individuals' neglect of their personal health) added to the deterioration of mortality conditions. A substantial delay in progress set in at that time.

Figure 8: Trends in all-cause and infant mortality since 1950



Source: Human Mortality Database.

The first survival improvement was seen in infant mortality risk, which began to decrease at the end of the 1970s, partly in connection with the import of new neonatal medical technology and care targeting high-risk pregnancies and newborns. Later, towards the end of the 1980s, life expectancy began to rise, mainly due to improvements in adult and older age mortality. This consequently led to the start of the third stage of mortality development in both countries.

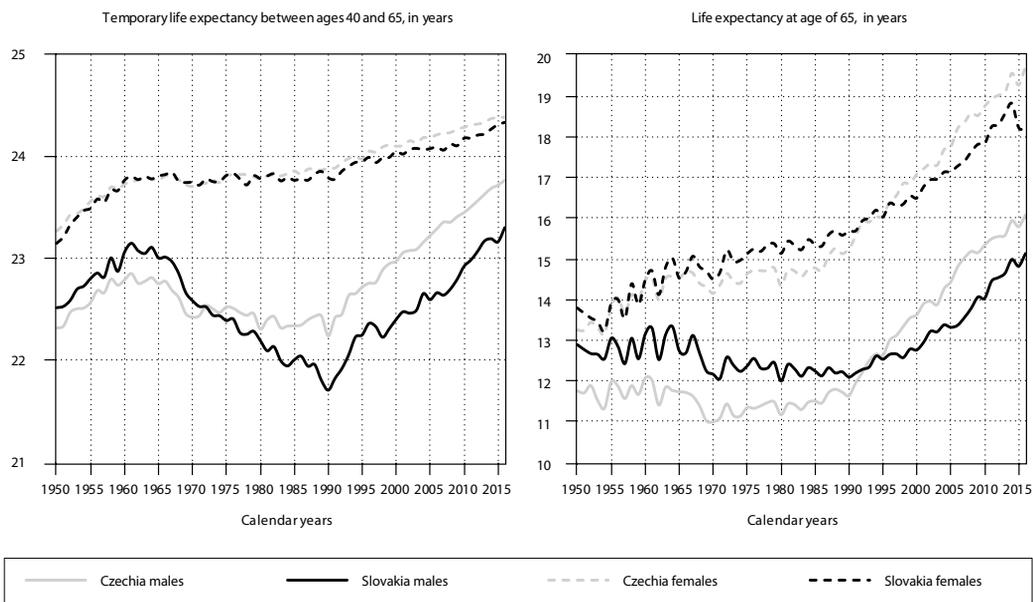
The Gini coefficient⁴⁾ decreased over time in both countries and for both sexes (Table 2). A decreasing trend in Gini coefficients generally coincides with a long-term decline in mortality (Shkolnikov *et al.*, 2003). Despite the fluctuations in life expectancy at birth (especially when the years 1965 and 1985

are compared in both countries), the inequality in the length of life diminished. This result can be explained by the permanent decline in the infant mortality rate, which decreased at varying speeds over time. The coefficient was higher in Slovakia and among men in both countries, in connection with the higher infant mortality rate.

All changes in the mortality age structure depend on cause-of-death trends. Decomposition of the difference between two life expectancies (Andreev *et al.*, 2012) was used to identify the differences between Czechia and Slovakia resulting from the contributions of age and cause to this life expectancy differential. In conformity with the stages of mortality change described above, three years were selected: 1950 (the start of the period, 6th revision), 1965

4) The Gini coefficient is considered to be an indicator of inequality and also a measure of the rectangularisation of survival curves in human populations. It is defined as the area between the diagonal and the Lorenz curve, divided by the whole area below the diagonal (equal to 1/2). The greater the deviation of the Lorenz curve from the diagonal, the greater the degree of inequality in age at death. When everyone dies at the same age the Lorenz curve is an exact diagonal (Shkolnikov *et al.*, 2003, Shkolnikov *et al.*, 2014).

Figure 9: Trends in adult and old age survival since 1950



Source: Human Mortality Database; author's calculations.

Tab. 2: Gini coefficients of age inequality at death in Czechia and Slovakia over time

	Males			Females		
	1950	1965	1985	1950	1965	1985
Czechia	0.198	0.139	0.125	0.169	0.111	0.098
Slovakia	0.248	0.147	0.139	0.224	0.118	0.104

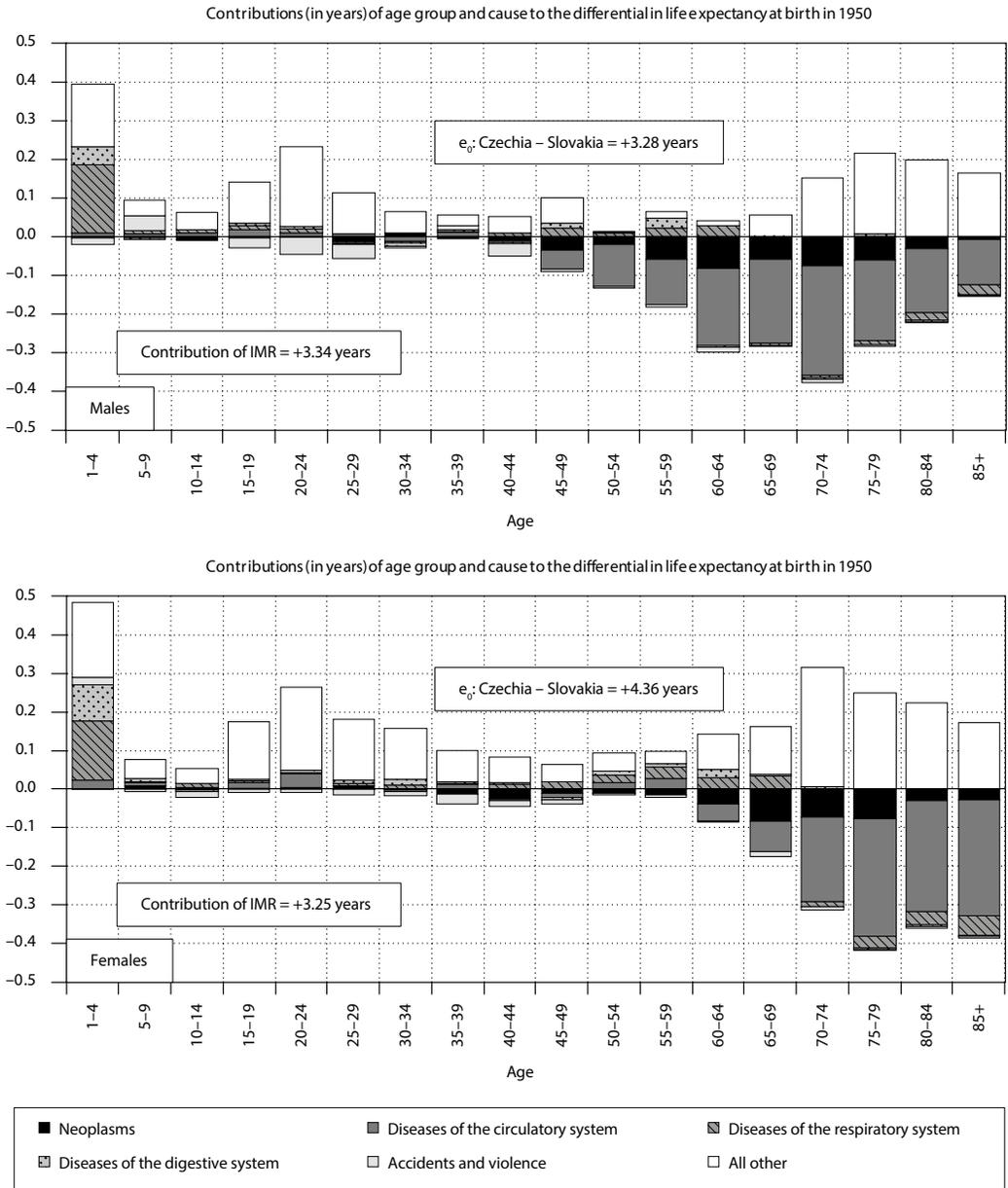
Source: Human Mortality Database; author's calculations.

Tab. 3: ICD coding for selected broad groups of medical causes of death

Cause	1950	1965	1985
	6th revision	7th revision	9th revision
Malignant neoplasms	140–205	140–205	140–208
Diseases of the circulatory system	400–468	400–468	390–459
Diseases of the respiratory system	470–527	470–527	460–519
Diseases of the digestive system	530–587	530–587	520–579
Accidents and violence	E800–E999	E800–E999	E800–E999
All other			

Source: WHO ICD revisions.

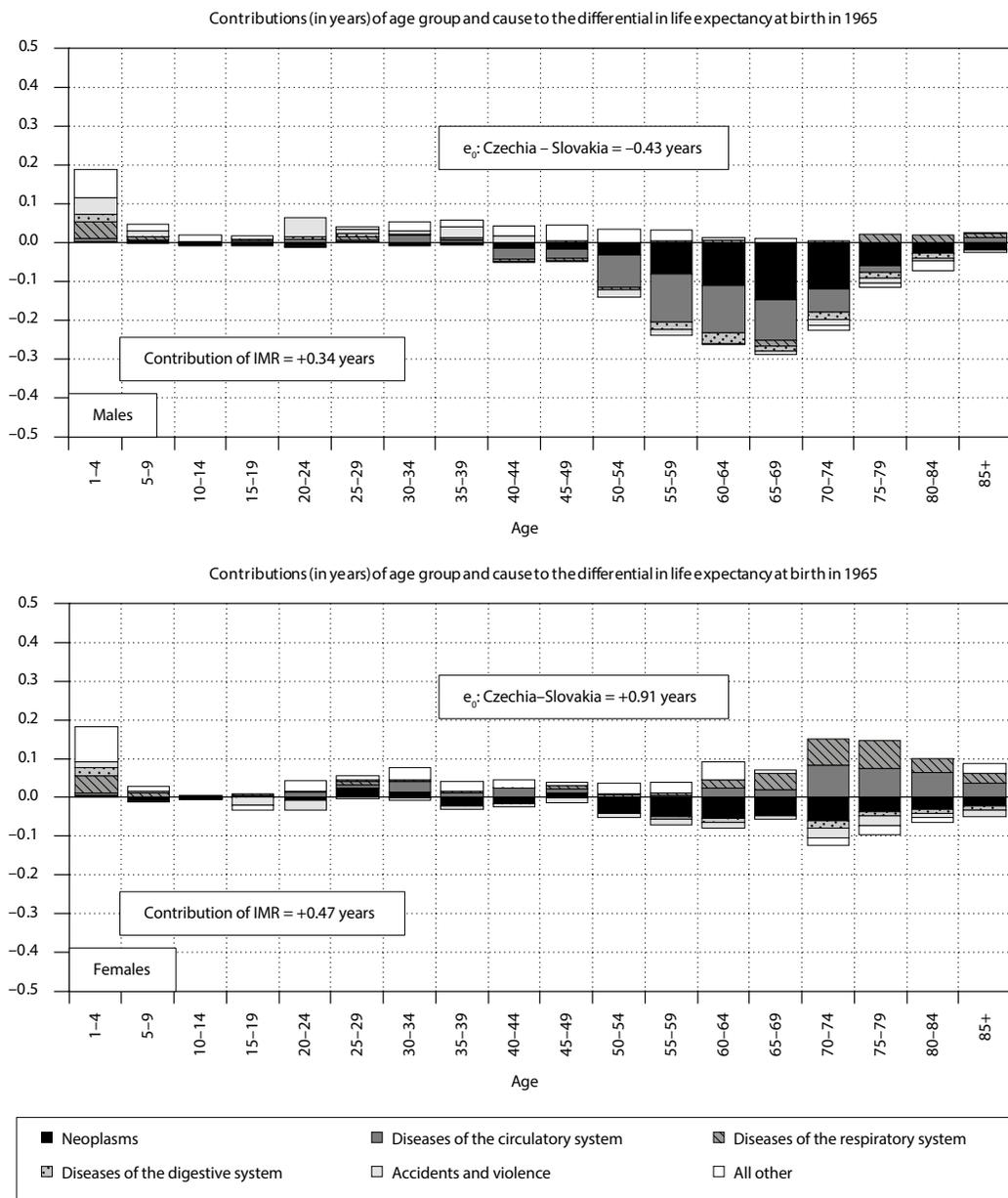
Figure 10: Six cause-of-death groups contributions by age to the differential in life expectancy at birth between the Czech and Slovak Republics in 1950



Note: The contribution of the infant mortality rate (IMR) is greater than the contribution of other age groups. The structure of medical causes of death for children under one year is also different compared to other age groups; therefore, the value of only the all-cause contribution of the IMR is written separately in the figure.

Source: Human Mortality Database, Pohyb obyvatelstva 1950; author's calculations.

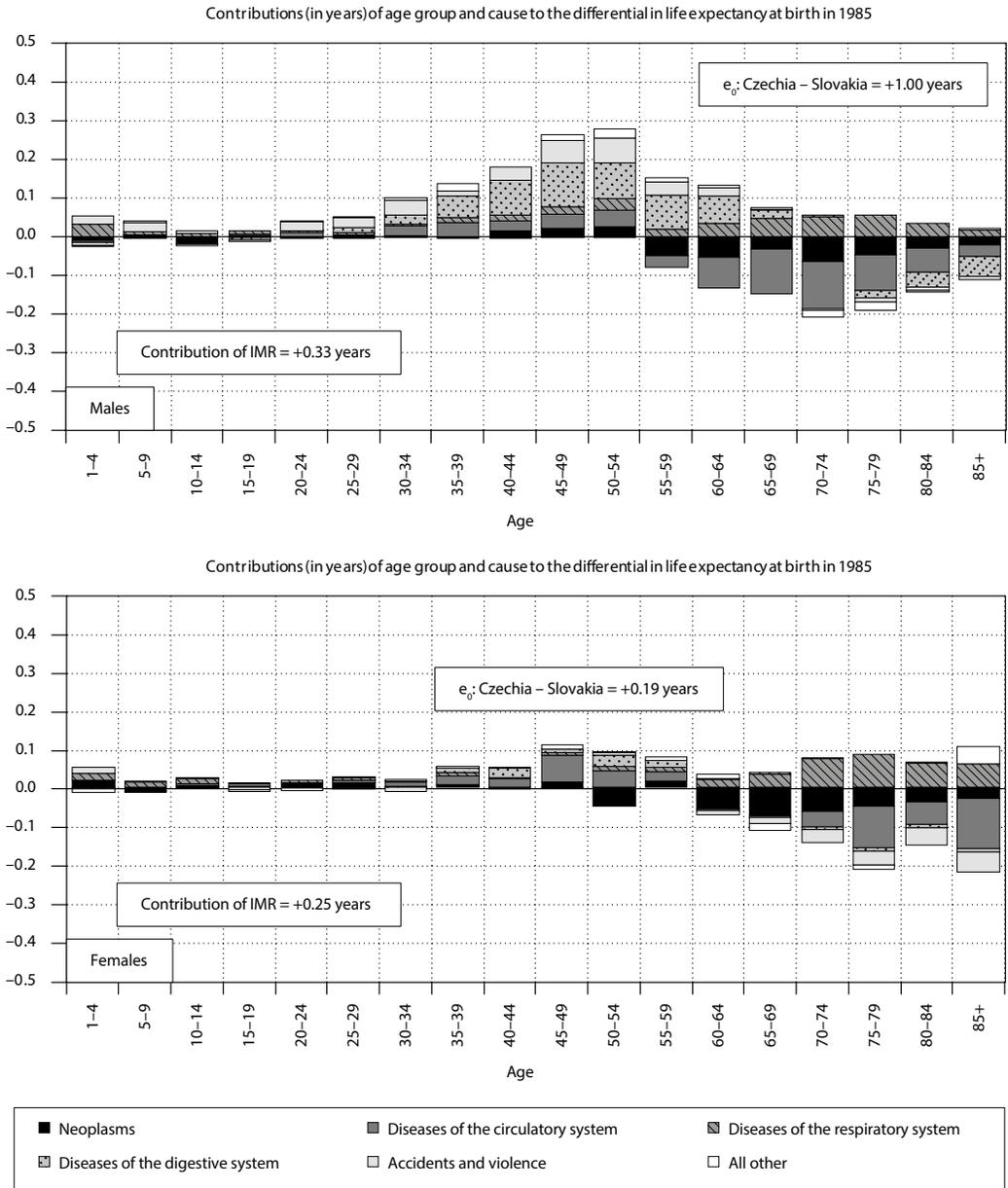
Figure 11: Six cause-of-death groups contributions by age to the differential in life expectancy at birth between the Czech and Slovak Republics in 1965



Note: The contribution of the infant mortality rate (IMR) is greater than the contribution of other age groups. The structure of medical causes of death for children under one year is also different compared to other age groups; therefore, the value of only the all-cause contribution of the IMR is written separately in the figure.

Source: Human Mortality Database, Pohyb obyvatelstva 1965; author's calculations.

Figure 12: Six cause-of-death groups contributions by age to the differential in life expectancy at birth between the Czech and Slovak Republics in 1985



Note: The contribution of the infant mortality rate (IMR) is greater than the contribution of other age groups. The structure of medical causes of death for children under one year is also different compared to other age groups; therefore, the value of only the all-cause contribution of the IMR is written separately in the figure.

Source: Human Mortality Database, Pohyb obyvateľstva 1985; author's calculations.

(the deterioration period, 7th revision), and 1985 (the end of the period, 9th revision).

Noncommunicable diseases such as cardiovascular diseases and cancer account for the majority of deaths in low-mortality countries. With the ageing of the population, the risk of these diseases is rising. Diseases of the respiratory and digestive systems are the frequent causes of death among children and older people (Vallin, 2013).

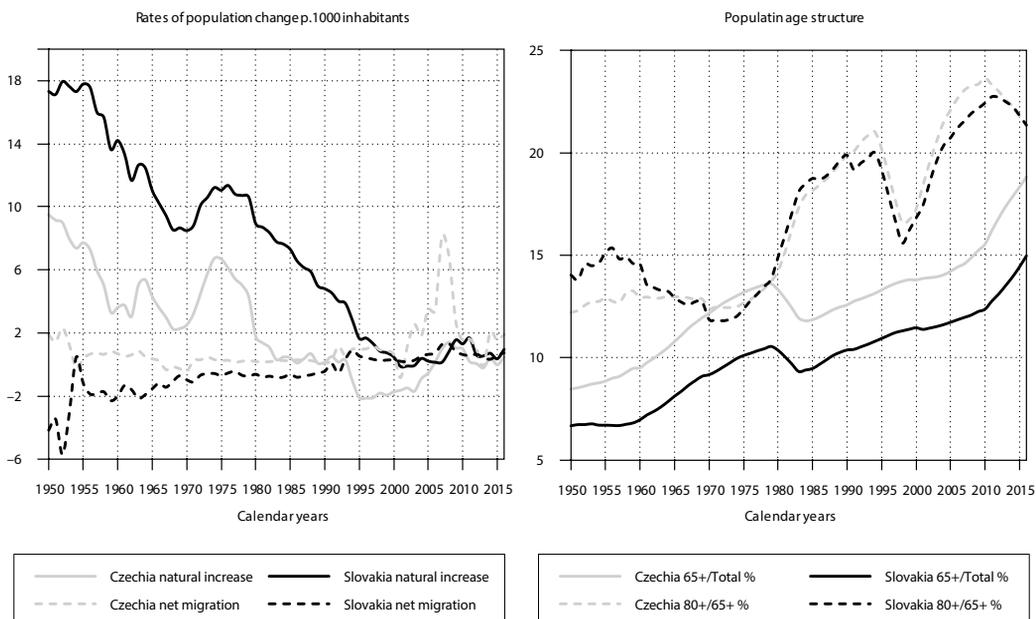
Mortality from other causes formed the main difference between the two countries in 1950 (Figure 10). However, the longer life expectancy at birth in Czechia is primarily due to a lower infant mortality rate. The advantage of Czech males and females consists also in lower mortality from other causes of death, while Slovakia benefits from lower mortality from circulatory diseases and malignant neoplasms at older age.

In the mid-1960s the gap between both countries vanished and Czech males even saw their mortality advantage over their Slovak counterparts decrease (Figure 11). Again, the lower

infant mortality rate in Czechia counterbalanced the worse mortality situation of Czech adult and older males and contributed to the advantage of Czech over Slovak females. The shorter life expectancy at birth among Czech males was mainly due to higher mortality among adult and older-age males from all the causes studied. Mortality from circulatory diseases and diseases of the respiratory system was lower among Czech women than Slovak women.

In 1985, the mortality patterns by age and cause differ from the previous models (Figure 12). Life expectancy at birth was longer for both sexes in Czechia than Slovakia and the lower infant mortality rate continued to contribute there to an increase in life expectancy. Male mortality in younger and adult age from almost all causes is lower in Czechia, but the situation reverses in older age in favour of Slovak males. Czech and Slovak females experience almost the same survival, and in Czechia this is mainly due to the lower infant mortality rate.

Figure 13: The dynamics of population change and demographic ageing parameters



Source: Pohyb obyvatelstva 1950–2005, Demografická ročenka 2006–2016; VDC; author's calculations.

POPULATION AGE STRUCTURE AND DEMOGRAPHIC AGEING

Throughout the post-war period the territory of the Czech Republic mainly enjoyed natural increases (the difference between the number of live births and deaths) in the size of the population and low net migration (the difference between the number of immigrants and the number of emigrants). Migration never played an important role in the population dynamics of former Czechoslovakia (Figure 13).

The dynamics of demographic development, and especially the long-term decline in the fertility rate and reduced mortality at an older age, have ultimately contributed to demographic ageing (an increasing percentage of people over the age of 65). On the whole it can be said that the age structure of the Czech and Slovak populations is steadily ageing and both ageing indicators (the share of the population aged 65+, and 80+/65+) are rising over time (Figure 13). There is an interesting occurrence that can be observed in the age structure in the second half of the 1970s, when the percentage of children (0–14 years) and the percentage of seniors (65+) in the population rose simultaneously, so that the age structure simultaneously aged and grew younger. In the 1980s, the ageing trend (the percentage of the population aged 65+) was temporarily reversed as a result of an increase in the child segment of population originated from an increase in live births that occurred in the 1970s. By contrast, the rise in the proportion of people aged 80+ among those aged 65+ reflects the

weight of the numerous cohorts born before the First World War compared to the decline in live births during the First World War and who would have been aged 65–69 in the 1980s.

CONCLUSION

During the socialist era and especially since the 1960s, a historically earlier model of family behaviour dominated in Czechoslovakia. Marriage was contracted early and became frequent. Children were born within marriage to younger parents and at short intervals. Procreative behaviour in each of the 1930–1960 birth cohorts was at the level of simple reproduction in Czechia. In Slovakia, the completed fertility rate continued to decline so that the two republics converged. The proportion of childless women was below ten percent and the proportion of children born out of wedlock was less than eight percent. Both proportions were low by European standards. The Czech Republic ranked among countries with a fairly high divorce rate. Until the early 1960s, infant mortality risk decreased rapidly in both countries due to particularly active maternity and welfare policies. Later on, the reduction in infant mortality was slower. An increased risk of death among adults and the elderly was observed mainly between the calendar years of 1965 and 1975. The disadvantages of Czech mortality compared to Slovak mortality were a higher risk of death at older age and from circulatory diseases. This was, however, counterbalanced by the lower infant mortality rate in Czechia.

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