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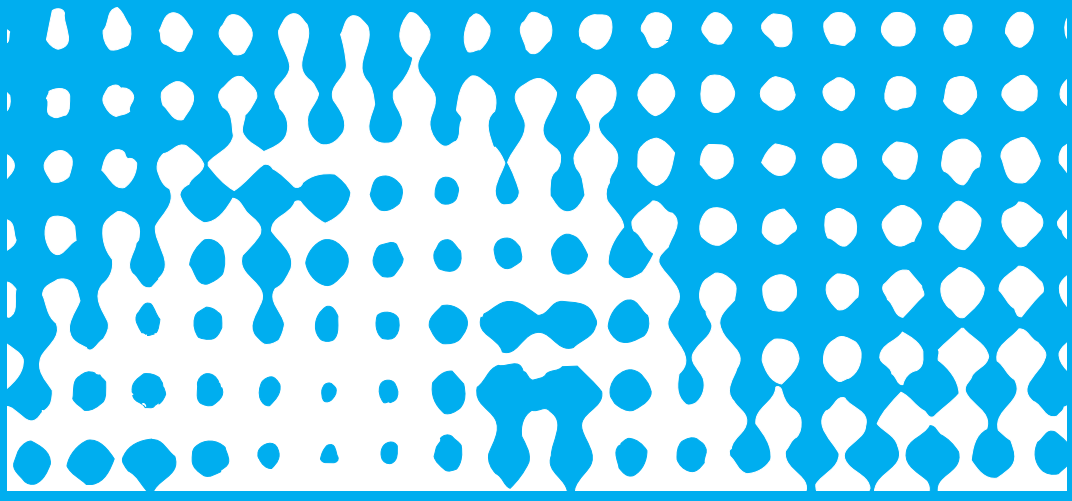

Czech Demography, 2009, Vol. 3

In 2007 the Czech Statistical Office began publishing the electronic journal **Czech Demography (Vol. 1)** in English. The contents of the journal comprises a selection of articles, reviews, and surveys from the Czech print journal *Demography – Review for Population Research*. Volume 3 of the electronic journal is being published now in 2009.

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CZECH DEMOGRAPHY

2009 • VOL. 3

POPULATION DEVELOPMENT IN THE CZECH REPUBLIC IN 2007*)

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Abstract: This article describes the demographic situation in the Czech Republic in 2007 and evaluates it in the context of recent development. The study analyses the causes and structures of the population growth, increase in fertility and nuptiality, stagnation of abortion rate and divorce rate. Changes in the mortality statistics by causes of death are also discussed. The analysis is based on data processed by the Czech Statistical Office.

The demographic situation in the Czech Republic followed from development in the previous year. A positive natural increase was recorded again, and there was a continued increase in the number of births, marriages, immigrants and the total population size (Tab.1).

The natural increase in the population reached almost ten thousand, which was seven times more than in 2006. This was the biggest difference between the number of live births and the number of deaths in the past 25 years. The last time a bigger difference was recorded was in 1982. Net migration was also at a record level in 2007: registered international migration added 83.9 thousand more people to the Czech Republic, almost as much as in the previous three years combined, and the number of both immigrants and emigrants changed substantially. In sum this meant an increase in population size by 93.9 thousand people in 2007, bringing the total population to 10 381.1 thousand. The size of the population in the Czech Republic has been increasing uninterruptedly for five years.

In 2007 there were 114.6 thousand live births, which was 8.8 thousand more than in 2006. That was the biggest inter-year increase since fertility first began rising after years of steep decline in the 1990s. The increase in the number of births is the secondary population wave of children of women born in the 1970s, who on the whole have been starting a family later than women in preceding generations did. One-half of the increase comprised second-order births, which were most often born to women aged 29–32. However, women born at the start of the 1980s are also beginning to reach peak reproductive age.

The number of deaths in 2007 remained around the level of 2006, with just a few hundred more deaths. This stagnation is due to the slight decline in mortality and to the fact that people currently around the age of high mortality are from numerically small cohorts. In 2007

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Table 1 Population change, 2000–2007

Indicator	2000	2001	2002	2003	2004	2005	2006	2007
	Numbers							
Live births	90910	90715	92786	93685	97664	102211	105831	114632
Deaths	109001	107755	108243	111288	107177	107938	104441	104636
Infant deaths	373	360	385	365	366	347	352	360
Marriages	55321	52374	52732	48943	51447	51829	52860	57157
Divorces	29704	31586	31758	32824	33060	31288	31415	31129
Abortions, total	47370	45057	43743	42304	41324	40023	39959	40917
induced abortions	34623	32528	31142	29298	27574	26453	25352	25414
therapeutic	6472	6019	5606	5385	4597	4678	4779	4789
Immigrants	7802	12918	44679	60015	53453	60294	68183	104445
Emigrants	1263	21469	32389	34226	34818	24065	33463	20500
Natural increase	–18091	–17040	–15457	–17603	–9513	–5727	1390	9996
Net migration	6539	–8551	12290	25789	18635	36229	34720	83945
Total increase	–11552	–25591	–3167	8186	9122	30502	36110	93941
Population (1 July)	10272503	10287482	10189423	10201651	10206923	10234092	10266646	10322689
	Per 1,000 population							
Live births	8.8	8.8	9.1	9.2	9.6	10.0	10.3	11.1
Deaths	10.6	10.5	10.6	10.9	10.5	10.5	10.2	10.1
Marriages	5.4	5.1	5.2	4.8	5.0	5.1	5.1	5.5
Divorces	2.9	3.1	3.1	3.2	3.2	3.1	3.1	3.0
Abortions, total	4.6	4.4	4.3	4.1	4.0	3.9	3.9	4.0
induced abortions	3.4	3.2	3.1	2.9	2.7	2.6	2.5	2.5
Immigrants	0.8	1.3	4.4	5.9	5.2	5.9	6.6	10.1
Emigrants	0.1	2.1	3.2	3.4	3.4	2.4	3.3	2.0
Natural increase	–1.8	–1.7	–1.5	–1.7	–0.9	–0.6	0.1	1.0
Net migration	0.6	–0.8	1.2	2.5	1.8	3.5	3.4	8.1
Total increase	–1.1	–2.5	–0.3	0.8	0.9	3.0	3.5	9.1

there were more deaths of children during the first year of life, but this occurred amidst higher fertility.

In 2007 there were 57.2 thousand marriages, which is 4.3 thousand more than the previous year. The number of marriages taking place each year has been increasing since it reached a low in 2003, when there were fewer than fifty thousand. The increase in 2007, the largest inter-year increase in the past four years, was mainly caused by the large number of marriages that took place in July, when 10.8 thousand couples married, which is 3.5 thousand more than in 2006. July 7, 2007 was a date with three 'lucky' sevens, and moreover fell on a Saturday, by far the most popular day in the week for weddings, and that date saw a record number of 4.4 thousand marriages take place. The characteristics of the group of couples who married that day were not unusual in any way. On average they were just slightly younger; there was a smaller share of university-educated people among them; and slightly more often it was the first marriage for the spouses. However, their differences from other couples that married in 2007 were small, and just slightly more significant among women. The belief that the number seven is lucky thus seems to cut across the population spectrum. There were 0.3 thousand fewer divorces in 2007 than in 2006.

After a seventeen-year decline (the development between 2005 and 2006 can be described as stagnation) the total number of abortions took the opposite turn in 2007. However, the increase was caused by an increase in miscarriages, while the number of induced abortions rose only very slightly, remaining almost exactly at the same level as in the previous year (25.4

thousand). Nevertheless, between 2005 and 2006 a decline in induced abortions was recorded, while the number of abortions overall remained almost unchanged.

Population size and structure by age and marital status

Despite the growth of the population due to natural increase in 2007 the numerical increase in the size of the population in the Czech Republic (by 93.9 thousand) was mainly the result of international migration (89.4%). The number of foreign nationals living in the Czech Republic has been increasing in the long term and in recent years more intensively, and not just because foreigners with certain types of long-term residence status have begun to be included in demographic statistics (since 2001). By the end of 2007, according to data from the Headquarters of the Foreign and Border Police at the Ministry of the Interior, there were 392.1 thousand foreigners legally residing in the Czech Republic. They accounted for 3.8% of the population of the Czech Republic. Ukrainians make up the largest group of foreigners residing in the Czech Republic, accounting for almost two-thirds of all foreigners (Tab. 2).

Table 2 Foreigners by citizenship [10 most frequent in given year, 2000 and 2007 (31 Dec)]

2000				2007			
Citizenship	Number	Share in population of foreigners (%)	Share in population of the CR (%)	Citizenship	Number	Share in population of foreigners (%)	Share in population of the CR (%)
Ukraine	50 212	24.99	0.49	Ukraine	126 526	32.27	1.22
Slovakia	44 265	22.03	0.43	Slovakia	67 880	17.31	0.65
Vietnam	23 556	11.72	0.23	Vietnam	50 955	13.00	0.49
Poland	17 050	8.48	0.17	Russia	23 301	5.94	0.22
Russia	12 964	6.45	0.13	Poland	20 607	5.26	0.20
Germany	4 968	2.47	0.05	Germany	15 701	4.00	0.15
Bulgaria	4 018	2.00	0.04	Moldova	7 972	2.03	0.08
Yugoslavia	3 680	1.83	0.04	Mongolia	5 967	1.52	0.06
China	3 551	1.77	0.03	Bulgaria	5 024	1.28	0.05
United States	3 238	1.61	0.03	China	4 760	1.21	0.05
Total	200 951	100.00	1.96	Total	392 087	100.00	3.78

Source: Directorate of Foreign Police, Ministry of Interior of the CR.

Not even a continued increase in the number of births in 2007 (natality has been rising since 2002) halted the decline in the number and share of children aged 15 and under in the population (Tab. 3). From 2006 to 2007 the size of the population group aged 0–14 decreased by 2.6 thousand and as a share of the population it shrank even more substantially, owing to an increase both in the number of people aged 15–65 and over the age of 65. As a result, while in 2006 the two groups grew even, or, more precisely, there were just slightly more people in the 65 and over age group than in the 15 and under age group, by 2007 there were 35.9 thousand more people in the post-productive age group. In the coming years this difference will probably continue to grow, as the large cohorts born in the wartime and post-war years will begin to reach the age of 65. In the next three years roughly 116–121 thousand people will reach the age of 65 each year, and, for example, in the next seven years the number of people reaching the age of 65 will be around 134–145 thousand. Even if the birth rate were to increase slightly more or at least remain at its current level, it could not reverse the inauspicious ratio between the two groups. The number of people aged 15–64 also grew, but the increase was just 66.1 thousand. Thus they continued to make up the same share of the population as in the previous two years – 71.2%. The dependency ratio also remained at the same level.

Table 3 Age distribution characteristics, 2000–2007 (31 Dec)

Age group/Indicator	2000	2001	2002	2003	2004	2005	2006	2007
	Population, thousands							
Total	10 267	10 206	10 203	10 211	10 221	10 251	10 287	10 381
0–14	1 664	1 622	1 590	1 554	1 527	1 501	1 480	1 477
15–64	7 179	7 170	7 196	7 234	7 259	7 293	7 325	7 391
65+	1 423	1 415	1 418	1 423	1 435	1 456	1 482	1 513
– 85+	119	106	98	90	94	102	113	125
	Structure (%)							
0–14	16.2	15.9	15.6	15.2	15.0	14.6	14.4	14.2
15–64	69.9	70.2	70.5	70.9	71.0	71.2	71.2	71.2
65+	13.9	13.9	13.9	13.9	14.0	14.2	14.4	14.6
– 85+	1.2	1.0	1.0	0.9	0.9	1.0	1.1	1.2
	Synthetic indicators							
Index of ageing[1)]	85.5	87.2	89.2	91.6	94.0	97.0	100.2	102.4
Total dependency ratio[2)]	43.0	42.3	41.8	41.2	40.8	40.6	40.4	40.4
Mean age	38.8	39.0	39.3	39.5	39.8	40.0	40.2	40.3
Median age	37.6	37.9	38.2	38.5	38.7	38.9	39.1	39.1

Note: [1)] Number of persons aged 65+ per 100 children aged 0–14.
[2)] Number of children aged 0–14 and number of persons aged 65+ per 100 persons aged 15–64.

In 2007 the population structure by marital status continued to follow the same trends of past years: the number of singles and divorcees increased, while the number of married people decreased, and the number and share of widows and widowers remained roughly the same, decreasing just very slightly. Owing to the decline in nuptiality, which was moreover connected with the trend of postponing marriage to a later age, the share of married women aged 15 and over in the population fell below fifty per cent, but just very slightly below (Tab. 4). In this age group the share of married men was 53.3%. More than one-half of women and three-quarters of men aged 25–29 were single, and a high share of singles – 42.4% – was also observed among men aged 30–34. The largest share of divorcees was among men aged 40–54 and women aged 40–49. Overall the share of widows and widowers in the population aged 15 and over was five times higher among women, but in the older age group (85+) it was 'just' twice as high. Since 2000 this ratio decreased most in the 55–59 and the 60–64 age groups.

Nuptiality

Although in 2007 the number of marriages increased and there was a slight increase in nuptiality intensity – largely owing to the higher number of marriages in July and specifically on July 7 (the total inter-year increase was 4.3 thousand, while in July that increase was 3.5 thousand; in the other months there were sometimes more and sometimes fewer marriages) – in recent years nuptiality appears to have stabilised. This is especially the case of first-time marriages, i.e. marriages of singles. The nuptiality intensity of single men calculated from nuptiality tables has hovered around 63% and 64% in the past four years and around 70% and 71% for women (Tab. 5). Also, the average age at the start of first marriage has in recent years been rising at a slower pace. Between 2004 and 2007 it increased by seven tenths of a year for men and six tenths for women, while, for instance, over the previous four years (2000–2003) the increase had been twice that.

The increase in the number of marriages that took place between 2006 and 2007 occurred among singles and people who were not marrying for the first time. Around 40% of the total inter-year increase stemmed from people marrying for the second time or more. Owing to the high divorce rate and the lower marriage of divorcees, the number of divorcees and thus people

Table 4 Population distribution by sex, marital status and age groups (%), 2000 and 2007 (31 Dec)

Age group	2000	2007	2000	2007	2000	2007	2000	2007
	Males							
	Single		Married		Divorced		Widowed	
15–19	99.8	100.0	0.2	0.0	0.0	0.0	0.0	0.0
20–24	90.3	96.9	9.2	3.0	0.5	0.2	0.0	0.0
25–29	53.2	75.8	42.3	22.1	4.5	2.1	0.0	0.0
30–34	23.1	42.4	66.0	49.8	10.8	7.7	0.1	0.1
35–39	14.2	21.8	72.2	63.1	13.4	14.9	0.2	0.2
40–44	11.1	14.1	73.7	66.5	14.7	19.0	0.5	0.4
45–49	8.8	11.0	75.2	68.6	15.1	19.6	0.9	0.7
50–54	6.6	8.8	78.0	71.2	13.8	18.6	1.6	1.3
55–59	5.2	6.6	81.0	75.1	11.2	15.9	2.6	2.4
60–64	4.2	4.7	83.3	78.7	8.1	12.4	4.4	4.2
65–69	3.6	3.7	83.0	80.7	6.0	8.9	7.4	6.7
70–74	3.3	3.1	79.8	80.0	4.7	6.1	12.2	10.9
75–79	3.3	2.7	74.2	75.1	3.7	4.6	18.8	17.5
80–84	2.7	2.7	67.1	66.2	3.0	3.4	27.2	27.7
85+	4.6	2.7	59.2	54.4	0.8	2.1	35.5	40.8
15+	**30.2**	**33.8**	**58.7**	**53.2**	**8.5**	**10.2**	**2.6**	**2.8**
	Females							
	Single		Married		Divorced		Widowed	
15–19	99.1	99.6	0.9	0.4	0.0	0.0	0.0	0.0
20–24	76.1	90.2	22.5	9.2	1.3	0.6	0.0	0.0
25–29	31.5	57.0	60.8	38.7	7.4	4.2	0.3	0.1
30–34	10.8	25.5	74.9	62.6	13.7	11.4	0.7	0.4
35–39	6.0	11.0	76.9	68.6	15.8	19.4	1.3	1.0
40–44	4.4	6.3	76.3	69.3	16.9	22.5	2.5	1.9
45–49	3.6	4.5	75.2	70.3	17.1	21.7	4.1	3.5
50–54	3.2	3.6	74.0	70.5	15.3	19.9	7.5	6.1
55–59	2.9	3.0	70.7	69.0	13.0	17.2	13.4	10.7
60–64	2.6	2.8	64.5	64.8	10.0	14.3	22.9	18.1
65–69	2.4	2.5	53.7	56.4	8.7	11.0	35.3	30.1
70–74	2.7	2.2	39.6	44.4	7.7	8.8	50.0	44.6
75–79	3.2	2.2	25.3	29.9	6.8	7.7	64.7	60.1
80–84	3.1	2.7	14.3	16.7	5.4	6.8	77.2	73.7
85+	4.5	2.9	8.3	8.6	3.0	4.9	84.1	83.6
15+	**20.7**	**23.9**	**54.5**	**50.0**	**10.2**	**12.2**	**14.6**	**13.9**

eligible to marry has been increasing faster than singles. In the last two years the nuptiality rate of divorcees increased and did so relatively more than the increase among singles. Based on data from 2007, 47.8% of men and 46.5% of women would marry again. For 2006 the figures were 44.3% and 43.1%, respectively. The average amount of time between divorce and remarriage is currently around 7.5 years (Tab. 6). The distribution of the nuptiality intensity of divorcees is the same for men and women, and it holds for both that the intensity of remarriage generally decreases as the amount of time since the divorce grows longer. The highest intensity is within the first year after the legal termination of the previous marriage. Almost one-quarter of all marriages of divorcees occur within a year of their previous divorce. In 58.4% of cases in 2007 a divorced man married a woman with the same marital status, and in 38.5% of cases he married a single woman. This structure has changed little over recent years. The age difference between spouses tends to be greater in marriages of divorcees than marriages of singles. Also,

Table 5 Nuptiality indicators (based on nuptiality tables, 2000–2007)

Indicator	2000	2001	2002	2003	2004	2005	2006	2007
Proportion of singles at age	Males							
25	79.3	82.7	84.9	87.8	88.9	90.1	91.0	91.3
30	51.8	55.8	57.9	62.8	63.3	64.7	66.2	66.2
35	38.8	42.5	43.3	47.5	47.1	48.1	48.8	48.0
40	33.7	37.2	37.4	41.4	40.4	41.6	41.4	40.2
45	31.6	35.1	35.0	38.7	37.8	38.5	38.6	37.0
50	30.5	34.0	33.8	37.5	36.4	37.2	37.1	35.5
Total first marriage rate (%)	**69.5**	**66.0**	**66.2**	**62.5**	**63.6**	**62.8**	**62.9**	**64.5**
Mean age at first marriage	28.8	29.2	29.7	30.2	30.5	30.7	31.0	31.1
Proportion of singles at age	Females							
25	62.3	66.6	69.4	73.9	75.3	76.7	78.2	78.3
30	38.2	41.2	42.7	47.2	47.3	48.7	49.3	48.6
35	30.7	32.7	33.3	37.4	36.4	37.1	37.3	36.3
40	27.7	29.6	29.8	33.9	32.9	33.1	33.1	31.9
45	26.4	28.3	28.3	32.2	31.1	31.8	31.3	30.0
50	25.6	27.5	27.6	31.3	30.2	30.9	30.3	28.9
Total first marriage rate (%)	**74.4**	**72.5**	**72.4**	**68.7**	**69.8**	**69.1**	**69.7**	**71.1**
Mean age at first marriage	26.4	26.9	27.2	27.7	28.0	28.1	28.4	28.5

Table 6 Nuptiality of divorced indicators, 2000–2007

Sex	2000	2001	2002	2003	2004	2005	2006	2007
	Proportion of divorced people to enter into a new marriage (%)							
Males	44.7	43.2	43.4	40.4	41.8	41.7	44.3	47.8
Females	44.1	41.8	42.2	39.1	40.8	40.7	43.1	46.5
	Average time between divorce and other marriage (years)							
Males	6.1	6.0	6.3	6.5	6.7	7.0	7.1	7.3
Females	6.1	6.2	6.4	6.7	7.0	7.3	7.6	7.5

Note.: The data in this table, in particular the data relating to the time elapsed between divorce and next marriage, differs slightly from previous data in the Czech Statistical Office's publication 'Population Development in the Czech Republic in…'). In this table the calculation is based on a more detailed categorisation of data enabled by working with a set of individual sentences.

among marriages of women divorcees there are more cases where the woman is older than the man: 34.2% in 2007, compared to 20.9% in marriages of people overall, without distinguishing by marital status, and compared to 17.8% of marriages where both spouses were single. Conversely, in 2007, 78.6% of divorced men who remarried married a younger woman.

Divorce

Since 2007 the Czech Statistical Office has been using the Ministry of Justice's new system of data collection on divorces. The data are collected in electronic format as individual records and record only those divorces that are granted and not all divorce proceedings, which was the case in the past, when data were collected from paper notifications of divorce. Given that the share of divorce petitions that are granted rose to almost ninety per cent in 2006 and that the subject of interest of demographic statistics is divorces, there has been basically no change. Another novelty was the introduction of a new item of data, 'effective date'; the duration of the marriage is now determined more precisely on this basis. However, divorces that had become effective before that year were also included in the divorces listed for 2007. The exact amount was 7.2% of the total, which is not a negligible figure. These were divorce proceedings that were delayed owing to appeal or some other reason.

Table 7 Divorce rate indicators, 2000–2007

Indicator	2000	2001	2002	2003	2004	2005	2006	2007
Total divorce rate	0.41	0.45	0.46	0.48	0.49	0.47	0.49	0.49
Mean duration of marriage (years)	11.0	11.3	11.5	11.8	11.9	12.2	12.0	12.3
Proportion of first divorced (%) – males	80.3	80.6	80.5	80.9	80.5	80.1	80.0	80.0
– females	81.2	81.5	81.4	81.0	81.0	80.9	80.8	80.6
Divorced marriages without dependent children	10 637	11 037	11 346	12 119	12 255	12 078	12 412	12 721
Divorced marriages with dependent children	19 067	20 549	20 412	20 705	20 805	19 210	19 003	18 408
Total number of dependent children of divorced marriages	28 215	30 385	30 260	30 927	31 008	28 732	28 117	27 546

The development of divorce intensity in 2007 showed that it has stabilised at a level slightly below the rate of fifty per cent of marriages terminating in divorce. For the past five years the total divorce rate has ranged between 48% and 49% (Tab. 7). Between 2006 and 2007 the average duration of marriage increased by two-tenths of a year, although between 2005 and 2006 it had decreased slightly. It appears that the average duration of marriages terminating in divorce has stabilised at twelve years. The distribution of the divorce rate by marriage duration has not changed much either. Compared to the 1990s and the very start of the new century the interval of the highest divorce rate grew slightly, and there was also an increase in the divorce rate after a long period of marriage. The maximum divorce rate at present occurs after two to six years of marriage, while ten to fifteen years ago the highest divorce rate was concentrated in the period of two to four years of marriage.

What also remained unchanged in 2007 is the fact that most often, in two-thirds of cases, it is women who file for divorce (65.8% in 2007) and that one-fifth of people divorce more than once. The structure of divorce by order is almost identical for men and women, so, for instance, it is not true that one gender has a higher share of 'chronic divorcees'. Out of the total number of divorces registered in 2007, for 80.0% of men and 80.6% of women it was the first divorce, for 17.5% and 17.2%, respectively, it was the second, and for 2.5% and 2.2%, respectively, it was the third divorce or higher. The new method of data collection became apparent in a slight shift in the structure of divorces by cause of divorce, and 'different characters, views and interests' became more common. In 2007 this was the cause of 66.0% of men's divorces and 64.5% of women's divorces, while in 2006 the corresponding figures were 54.6% and 52.8%. The main reason is that if both spouses agree to divorce (the divorce is uncontested) then no fault is determined by the court (and thus none is listed), and until 2006 these divorces were artificially assigned to the categories 'different characters, views and interests' and 'other causes', while in 2007 they were assigned just to the first-cited category. Nevertheless, in 2007 'other causes' was still the second most frequently cited cause: 18.3% and 19.8%, respectively. The third most common cause among men in 2007, like in 2006 and other previous years, was 'infidelity', while among women it was 'the court found no fault'. Generally among men the court finds no fault on their side to a smaller degree: e.g. 2.7% compared to 9.7% for women in 2007.

In conformity with the trend in preceding years in 2007 the share of divorced couples with dependent children decreased: 59.1% in 2007 compared to 64.2% in 2000. The average number of dependent children in divorced marriages with dependent children remained unchanged throughout the observed period – 1.5 children. In 2007, 27.5 thousand dependent children experienced the divorce of their parents.

Fertility

In the past three years more than one hundred thousand children have been born each year, and each year more children have been born than the previous year (102.2 thousand, 105.8

thousand, and 114.6 thousand). The rising fertility that followed the sharp decline in the first half of the 1990s began three years earlier. The recent increase in the number of births stemmed mainly from the fact that women born in the large birth cohorts of the 1970s ceased postponing the start of a family to a later age and moreover were also often already expanding their families. Exactly fifty per cent of all live-born children in 2007 were had by women born in 1974–1979. Almost one-third of the children were had by younger women born in 1980 or later. With respect to first-order children, the share of such children born to these two groups of women was almost equal: 45.9% vs. 46.5%. In the case of second-order children the shares were 58.6% and 21.9%. On average almost 1.5 children are 'already' being born per woman in the generation from 1974 (which was the biggest cohort in the 1970s), but given the age of this cohort in 2007, at the time they gave birth (age 32 or 33), and considering the trend of postponing reproductive life to a later age it is realistic to expect that their completed fertility rate will be higher. The same applies to women born in subsequent years. For example, women born in 1979, who when they gave birth in 2007 were aged 27 and 28, had

Table 8 Fertility indicators, 2000–2007

Indicator	2000	2001	2002	2003	2004	2005	2006	2007
Total fertility rate	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4
– first birth	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7
– second birth	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
– third and higher-order birth	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Probability of having 1st child	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7
Probability of having 2nd child after the 1st child	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8
Probability of having 3rd child after the 2nd child	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Mean age of mothers	27.2	27.5	27.8	28.1	28.3	28.6	28.9	29.1
Mean age of mothers at 1st birth	24.9	25.3	25.6	25.9	26.3	26.6	26.9	27.1
Mean age of mothers at 2nd birth	28.1	28.4	28.7	29.0	29.3	29.6	29.9	30.1
Mean age of mothers at 3rd and higher-order birth	31.7	32.0	32.3	32.4	32.6	32.8	33.0	33.1
Premarital conception (%)	41.6	39.5	37.6	33.6	32.2	31.7	30.1	30.4
Net reproduction rate	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7

Figure 1 Total fertility rate, 1990–2007

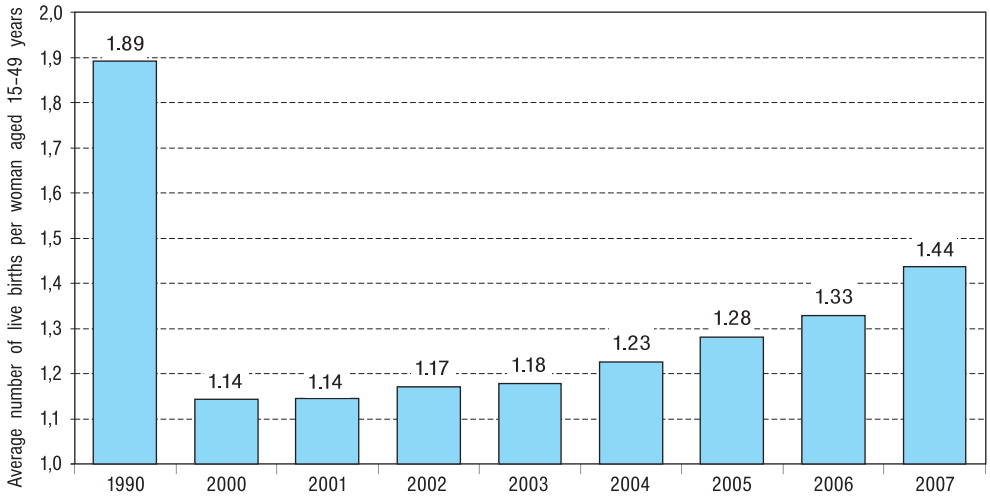
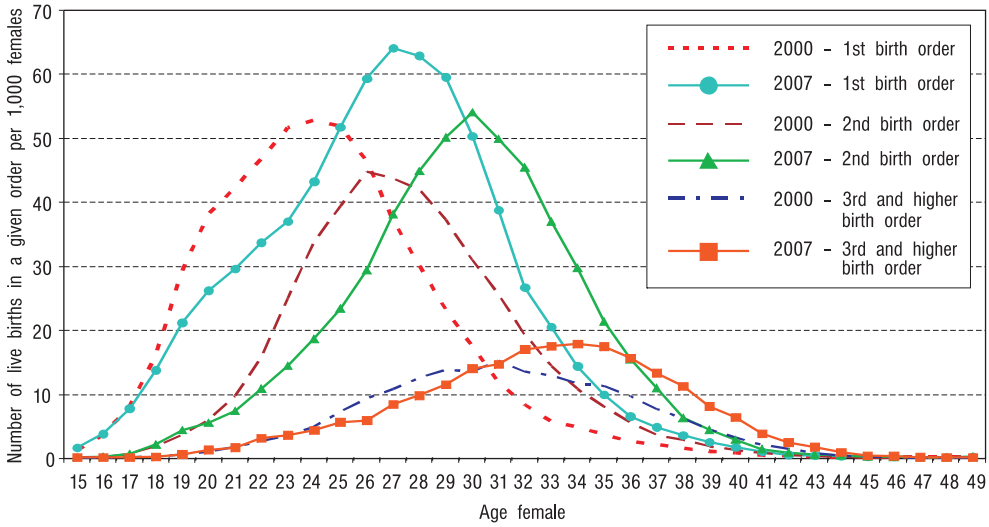


Figure 2 Total fertility rates by birth order, 2000 and 2007



on average 0.7 children. The one child per woman limit has thus far only been surpassed by women born in 1977 and earlier.

Total fertility rate in 2007 rose considerably – from 1.33 in 2006 to 1.44 (Fig. 1). The last time the figure was this high was in 1994. Despite this accelerated increase in fertility, in a long-term perspective the fertility rate is low and insufficient to ensure simple reproduction. The net reproduction rate, which expresses the number of live daughters born per woman that would live to the same age as their mother at the time of the daughter's birth was 0.70, which means that if the current fertility rate and mortality rate of women aged 15–49 is maintained (and given the low rate no big change is to be expected) only seventy per cent of the total number of the generation would reproduce. A further increase in the average age of mothers at birth to age 29.1 and to age 27.1 at first birth in 2007, demonstrates the continuing postponement of reproduction and the start of reproduction to a later age.

While between 2002 and 2006 (since 2002 fertility began to increase more markedly) total first-order fertility rate increased the most (but higher-order fertility also increased), in 2007 the biggest increase occurred in the case of total third– and second-order fertility rate, by 15% and 11% respectively (Tab. 8). Total first-order fertility rate increased by 5%, the theoretical childlessness rate if the fertility rate of 2007 and its age distribution remains unchanged in the coming years decreased to 30.6% (Fig. 2). However, other women will also probably stop postponing having children to a later age and this share will decrease further. How much, however, is still difficult to estimate, though it can be expected that the share of childless women will be higher than it was in the past. And the reason for this will probably not be only voluntary childlessness, but also a rise in childlessness owing to infertility.

In 2007, 34.5% of all live-born children were extramarital, and the year before that the share was exactly one-third (Tab. 9). Among first-order births the share of extramarital children was as high as 43.9%. The share of second-order extramarital births was the lowest of the birth orders – 24.0% in 2007. In the case of third-order births the figure was 28.4% and in the case of fourth-order or higher it was 39.9%. Also, among first-order children born in a marriage, 30.4% were born within eight months of the wedding and, but for some exceptions, must therefore have been conceived before the wedding. The majority of first-order children

are still born within the first year of the wedding: 41.5% in 2007, but 52.0% in 2000, and 67.1% in 1990. However, the average interval between the wedding and the birth of the first child to these couples has increased since the second half of the 1990s to 2.1 years in 2007 (from 1.2 years in 1994), and this is the case even when children born into a marriage but probably conceived before the wedding are not taken into account. This could mean that there is an increasing share of people for whom marriage is the next step in a partnership and is associated with starting a family, or it could mean that there is an increasing share of people for whom marriage does signify the start of family life but compared to the past are taking longer to conceive a child. Generally, in the past several years there have been more extramarital conceptions of first-order children. However, the subsequent behaviour of the parents has changed: while it used to be that the parents often married before child was born and just a

Table 9 Live births by legitimacy and birth order, 2000–2007

Birth order	2000	2001	2002	2003	2004	2005	2006	2007
	Live births, total							
1.	43 904	43 337	44 745	45 363	48 066	49 930	51 823	54 050
2.	33 873	34 216	34 448	34 823	35 669	37 993	39 038	43 400
3.	9 143	9 244	9 531	9 561	9 862	10 271	10 712	12 529
4.+	3 990	3 918	4 062	3 938	4 067	4 017	4 258	4 653
Total	90 910	90 715	92 786	93 685	97 664	102 211	105 831	114 632
	Structure (%)							
1.	48.3	47.8	48.2	48.4	49.2	48.9	49.0	47.1
2.	37.3	37.7	37.1	37.2	36.5	37.2	36.9	37.9
3.	10.0	10.2	10.3	10.2	10.1	10.0	10.1	10.9
4.+	4.4	4.3	4.4	4.2	4.2	3.9	4.0	4.1
	Live births inside marriage							
1.	32 209	30 873	30 919	29 282	29 615	29 962	30 287	30 333
2.	29 127	29 026	28 621	28 262	28 672	30 079	30 237	32 999
3.	7 067	7 002	7 125	6 964	7 069	7 296	7 573	8 966
4.+	2 715	2 538	2 662	2 464	2 469	2 465	2 475	2 797
Total	71 118	69 439	69 327	66 972	67 825	69 802	70 572	75 095
	Structure (%)							
1.	45.3	44.4	44.6	43.7	43.7	42.9	42.9	40.4
2.	41.0	41.8	41.3	42.2	42.3	43.1	42.9	44.0
3.	9.9	10.1	10.3	10.4	10.4	10.5	10.7	11.9
4.+	3.8	3.7	3.8	3.7	3.6	3.5	3.5	3.7
Total of all children	**78.2**	**76.5**	**74.7**	**71.5**	**69.4**	**68.3**	**66.7**	**65.5**
	Live births outside marriage							
1.	11 695	12 464	13 826	16 081	18 451	19 968	21 536	23 717
2.	4 746	5 190	5 826	6 561	6 997	7 914	8 801	10 401
3.	2 076	2 242	2 406	2 597	2 793	2 975	3 139	3 563
4.+	1 275	1 380	1 401	1 474	1 598	1 552	1 783	1 856
Total	19 792	21 276	23 459	26 713	29 839	32 409	35 259	39 537
	Structure (%)							
1.	59.1	58.6	58.9	60.2	61.8	61.6	61.1	60.0
2.	24.0	24.4	24.8	24.6	23.4	24.4	25.0	26.3
3.	10.5	10.5	10.3	9.7	9.4	9.2	8.9	9.0
4.+	6.4	6.5	6.0	5.5	5.4	4.8	5.0	4.7
Total of all children	**21.8**	**23.5**	**25.3**	**28.5**	**30.6**	**31.7**	**33.3**	**34.5**

Table 10 Fertility rates by age and marital status (per 1,000 women), 2000 and 2007

Age	All females		Single females		Married females		Divorced females	
	2000	2007	2000	2007	2000	2007	2000	2007
20	44.9	32.7	20.6	25.4	314.8	294.3	140.5	150.9
21	53.5	38.3	20.4	27.6	252.0	237.3	80.8	95.9
22	65.0	47.3	20.7	30.4	217.8	231.2	90.4	127.3
23	79.9	54.7	23.4	32.5	199.2	204.6	69.7	89.0
24	91.3	65.9	24.2	33.9	182.1	205.4	63.0	103.7
25	98.2	80.4	28.0	38.6	162.5	203.8	60.9	82.5
26	100.2	94.3	30.0	44.6	146.3	193.9	52.9	83.0
27	91.4	110.4	31.9	52.0	120.9	195.5	54.7	83.8
28	84.3	117.3	34.3	56.7	105.3	185.3	46.8	82.3
29	74.0	120.9	36.7	64.6	87.2	170.3	46.0	77.9
30	61.7	118.1	33.9	68.9	70.4	153.1	40.6	76.8
31	52.4	103.1	35.0	70.1	57.6	124.6	37.8	62.4
32	40.8	88.8	31.3	66.1	43.7	102.6	32.0	59.4
33	32.7	74.7	28.8	64.1	33.9	82.2	28.6	52.6
34	27.0	61.6	25.5	57.0	28.2	65.8	21.5	48.9
35	22.7	48.4	21.3	51.1	23.0	49.5	21.1	42.2
36	17.5	37.3	19.1	39.9	17.2	37.1	18.1	36.7
37	13.1	28.8	16.2	34.2	12.3	28.3	15.7	27.6
38	10.3	20.7	12.4	23.2	9.4	19.8	13.2	23.0
39	7.1	14.7	10.0	13.8	6.3	14.5	9.2	15.3

small percentage of children had unmarried parents at the time of their birth, at present the connection has reversed, and more of these children at the time of their birth have parents who did not get married once the woman became pregnant.

Since 2007 the Czech Statistical Office has collected data on fathers in the case of extramarital as well as marital births. Out of the total number of 39.5 thousand live-born extramarital children, in 72.0% of cases information was given on the father, and in 28.0% of cases this information was missing. The lower the level of education of the mother, the higher the share of extramarital births and the higher the share of cases lacking information about the father: 82.3% of births to women with basic education were extramarital births and in one-half of these cases information on the father is missing. This statistics on the presence/absence of information on the father of children born to unmarried women raises the question of whether in those cases where the information was not provided the child is going to be raised by the mother alone. If this simplified hypothesis were true, that would mean that the share of children born to a two-parent, functional family would increase to 90.3%.

The decrease in the number of married women in the first half of the 1990s had a big effect on the number of marital births. The effect of the decline in marital fertility was much smaller. In the past three years marital fertility has grown, but while fifteen years ago ninety per cent of total fertility rate fell to married women, in 2007 it was only two-thirds. The total fertility rate of single women in 2007 was not even half that of married women, but compared to the situation in previous years it had increased appreciably (Tab. 10). The fertility of divorced women has also increased since the end of the 1990s.

Abortion

In 2007 the number of abortions, and specifically the number of induced abortions, ceased to decrease. The number of miscarriages continued to increase at the same time as fertility and the related number of planned pregnancies also increased. The rising age of pregnant women has also had an effect on the increase in the number of miscarriages. In 2007 there were 14.1

Table 11 Abortion rate indicators, 2000–2007

Indicators	2000	2001	2002	2003	2004	2005	2006	2007
Total abortion rate	0.63	0.60	0.58	0.56	0.55	0.53	0.53	0.54
Total induced abortion rate	0.47	0.44	0.42	0.39	0.37	0.35	0.34	0.34
Total spontaneous abortion rate	0.15	0.14	0.15	0.15	0.16	0.16	0.17	0.18
Average age								
– at abortion	29.6	29.6	29.6	29.7	29.8	29.8	30.0	29.9
– at induced abortion	29.8	29.7	29.7	29.7	29.8	29.6	29.7	29.6
– at spontaneous abortion	28.9	29.1	29.2	29.7	29.9	30.0	30.4	30.4
Per 100 abortions								
– induced abortions	73.1	72.2	71.2	69.3	66.7	66.1	63.4	62.1
– spontaneous abortions	23.9	24.7	25.7	27.6	30.0	30.6	33.3	34.5
Per 100 live births								
– abortions	52.0	49.5	47.0	45.0	42.2	39.0	37.7	35.6
– induced abortions	38.0	35.8	33.5	31.2	28.2	25.8	23.9	22.1
– spontaneous abortions	12.4	12.2	12.1	12.4	12.7	11.9	12.6	12.3
Per 100 pregnancies								
– abortions	34.2	33.1	32.0	31.0	29.7	28.1	27.4	26.3
– induced abortions	25.0	23.9	22.8	21.5	19.8	18.6	17.4	16.3
– spontaneous abortions	8.2	8.2	8.2	8.6	8.9	8.6	9.1	9.0
Therapeutic abortions								
– number	6 472	6 019	5 606	5 385	4 597	4 678	4 779	4 789
– per cent	18.7	18.5	18.0	18.4	16.7	17.7	18.9	18.8
Termination of ectopic pregnancy	1 432	1 411	1 321	1 288	1 339	1 324	1 278	1 401

thousand miscarriages recorded. The termination of ectopic pregnancies was also higher in 2007 than in 2006 (1.4 thousand compared to 1.3 thousand). Despite the increase in the number of these two categories of abortions, induced abortion continues to account for the major share of all abortions. However, health reasons are cited in less than twenty per cent (18.8% in 2007) of cases (Tab. 11). Leaving aside the speculation that the health reasons are cited as the motivation for some induced abortions to avoid the fee for performing an abortion, which might be suggested by the jump (roughly doubling) that has occurred in the share of induced abortions for health reasons since 1992 – the year a fee was introduced for performing abortions for other than health reasons – it could be said that currently one-half of all abortions (20.6 thousand in 2007) are performed solely for personal reasons. Nevertheless, in the late 1980s and the early 1990s, for instance, this applied to more than eighty per cent of all abortions. However, based on the data available for demographic statistics, it is not possible to distinguish whether it was the health of the mother or the health of the foetus that was at issue, and in the case of miscarriages it is not always possible to determine the cause. The majority of miscarriages are however caused by a genetic defect of the foetus. Given the rising age of mothers (and fathers) at the time of conception it is possible to assume an increase in both categories of reasons, both due to foetal defects, which occur more often as women grow older, and also due to problems associated with the woman's health. In addition, diagnostic technology has made it possible now to reveal some serious defects in time, and a woman can thus also choose to have an abortion[1)]. On the other hand, the system of monitoring the health of pregnant women probably makes it possible to avoid or reduce some health complications.

The stagnation in the number of induced abortions in 2007 at the level of 2006 (25.4 thou-

[1)] Over time the share of induced abortions after the 1st trimester (around the 16th week of pregnancy it is standard practice to carry out tests for genetic defects, in the case of positive results a genetic ultrasound of the foetus can be conducted in the 20th–22nd week; from the 13th week induced abortions can only be carried out for health reasons).

sand), with just a negligible difference in the size of the sample of women of reproductive age in each year (and given that the age-specific abortion rates at a similar level across the age span the effect of the difference in the structure by age is small), was also evident in the stagnation of the total induced abortion rate at a level of 0.34 abortions per woman of reproductive age. After the sharp fall in the intensity of induced abortion in the first half of the 1990s the decrease in subsequent years occurred more gradually and in the new century it even slowed slightly. Subsequent development will indicate whether the potential decline in the traditionally high rate of induced abortion in the Czech Republic has already been exhausted and a certain portion of women will continue to regard induced abortion as a solution to an unwanted pregnancy (which they are enabled to do by the liberal abortion legislation) instead of preventing pregnancy by using modern, reliable birth control methods (but which they have to pay for and not always for a negligible price), or whether the data from 2007 only confirm that the process in slowing. The trend in miscarriages in the past decades was the opposite of that of induced abortions. Were the age-specific intensity of miscarriages to remain the same as in 2007 then there would be 0.18 miscarriages per woman of reproductive age. This figure is almost half that of the induced abortion rate. But at ages 28–29, which is the age at which miscarriage intensity is highest, the curves for the age-specific intensity of miscarriages and of induced abortions are very similar (Fig. 3). But while the distribution of miscarriage rates by age – with a clear maximum within a narrow age interval – essential parallels the distribution of fertility, the different distribution applies in the case of induced abortion. It was also different in the past, before the sharp decline in the 1990s, but not as much. Although the age interval in which abortion rates are high has typically always been wider, the maximum being less pronounced, today the same high rate of abortion applies to the wide age interval of ages 20–36, that is, for half of the entire reproductive age. At the start and end of reproductive life the intensity of induced abortion is lower.

Figure 3 Induced and spontaneous abortion rates by age (per 1,000 women), 2000 and 2007

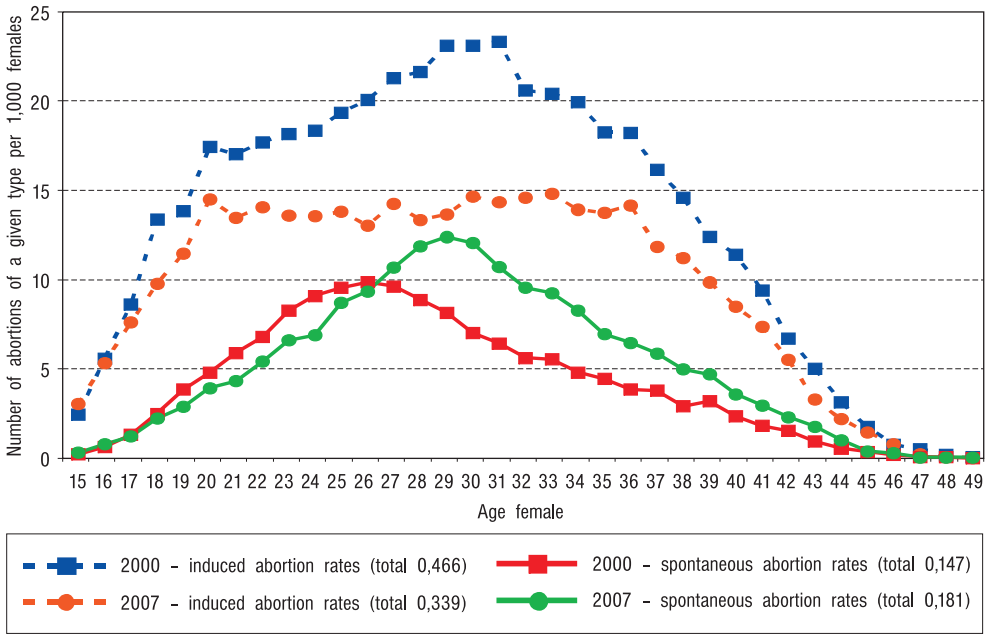


Table 12 Induced abortion rates by age and marital status (per 1,000 women), 2000 and 2007

Age group	All females		Single females		Married females		Divorced females	
	2000	2007	2000	2007	2000	2007	2000	2007
15–19	8.9	7.6	8.7	7.3	32.0	x	x	x
20–24	17.8	13.9	16.2	12.9	21.0	20.1	42.4	46.2
25–29	21.0	13.7	18.3	12.3	20.6	14.0	34.5	25.2
30–34	21.5	14.5	19.7	14.2	20.4	13.3	28.5	20.1
35–39	16.1	12.3	14.1	12.6	15.3	11.2	20.5	15.4
40–44	6.9	5.4	5.8	5.6	6.6	4.8	8.5	7.1
45–49	0.7	0.6	0.6	0.7	0.7	0.4	0.6	0.8

Table 13 Structure of induced abortions by marital status of woman and number of previous induced abortions (%), 2000 and 2007

Number of previous induced abortions	All females		Single females		Married females		Divorced females	
	2000	2007	2000	2007	2000	2007	2000	2007
0	54.3	60.9	72.3	71.5	48.6	56.9	33.4	38.9
1	26.3	23.6	18.8	18.9	29.5	26.0	31.7	31.9
2	11.9	9.6	5.7	6.0	13.6	10.9	20.3	17.1
3+	7.5	5.9	3.2	3.6	8.3	6.2	14.6	12.1

At present induced abortions account for more than sixty per cent of all abortions. With regard to the marital status of women, in 2007 for the first time married women did not account for the largest number of abortions. Owing to the effect of the decreasing share of married women in the population and the more pronounced reduction in the intensity of induced abortion in recent years their share has gradually decreased and in 2007 single women formed the largest group of women undergoing an induced abortion. However, the difference was only one percentage point: 43.3% of induced abortions in 2007 fell to women who had never been married and 42.2% to married women. Also, the induced abortion rate of married and single women is today almost the same from age 25 (Tab. 12). In 2007 divorced women had 12.9% of all induced abortions, but in their case the total induced abortion rate is higher than that of single and married women.

In 2007 the difference between the number of women undergoing their first (and today in most cases also their last) abortion and the number of women who have had repeated abortions has increased. The highest percentage of second or higher abortions out of all induced abortions conducted in 2007 was among divorced women (Tab. 13). Among 61.2% of divorced women who underwent an abortion in 2007 it was at least the second abortion in their life. The high share of repeated abortions was also still observed among married (43.1%) and widowed women. However, the number of abortions that widows had is in the hundreds; for instance, in 2007 there were 309. Given that the number is so small, the figure fluctuates from year to year. For this reason data are not presented on the abortion rates of widows.

When the order of abortion and the number of children the given woman already has are combined it is indeed found that for some women who have already had the number of chil-

Table 14 Structure of induced abortions by marital status of woman and number of live births (%), 2000 and 2007

Number of live births	All females		Single females		Married females		Divorced females	
	2000	2007	2000	2007	2000	2007	2000	2007
0	24.0	28.0	65.2	56.4	3.6	6.7	3.6	3.7
1	25.1	26.1	22.3	25.7	24.8	24.9	34.1	30.8
2	38.3	33.1	8.5	12.2	55.0	50.7	44.4	45.6
3+	12.6	12.8	4.0	5.7	16.6	17.7	17.9	19.9

dren they want abortion is used to regulate fertility, and this occurs repeatedly. Out of all the abortions to women with three or more children in 2007 almost two-thirds of the women were having a repeated abortion and more than fifty per cent were having their third or higher abortion. Among women with two children around one-half of them were having their first abortion and one-half were having at least their second abortion. Conversely, among childless women who had an abortion in 2007, for the clear majority it was their first abortion. Among childless women who had an abortion in 2007 for 14% it was their second or third or even more (Tab. 14).

Mortality

The year 2007 was also positive from the perspective of the overall mortality trend. Although the increase in life expectancy at birth was not very large, as it was in 2006 and in some previous years, male and female life expectancy at birth increased by more than two-tenths of a year, which on average was more than in 2002–2003 and 2005 (Tab. 15). There was clearly a further decrease in mortality intensity in older and old age: among men over the age of 65, among women over the age of 60, and among middle-aged men, specifically in the 40–55 age interval. This improvement contributed most to the overall increase in life expectancy (Tab. 16). A worsening of mortality intensity among young men aged 18–39 had the opposite effect. However, compared to 2000, the reference year, but for some exceptions (when the age units are taken into consideration; moreover, these are ages at which the number of deaths is very low) it is possible to observe a lower mortality rate across the age structure. In 2007 infant mortality also decreased, to 3.1 per mille, and this was owing to a decline in neonatal mortality.

In 2007 the reduction in total male and female mortality was primarily caused by the decrease in mortality from cardiovascular diseases. Diseases in this group are cited as underlying cause of death in at least one-half of all deaths in a given year, and in 2007 it was exactly 50.1%. Among men the share was lower, at 44.7%, and among women 55.7%. It is therefore logical that every reduction in mortality from this illness has a significant impact on the total increase in life expectancy. In 2007 mortality from the second-largest cause-of-death category, neoplasms, also decreased, down from 2006 by 3% among men and by 5% among women. A smaller decrease was observed for diseases of the respiratory and digestive systems, but mortality from injuries and poisonings and from the other causes listed the opposite was true.

Mortality statistics by cause of death in 2007 (and later) were probably influenced by the work of the European Commission grant project 'Transition Facility Multi-Beneficiary Programme for Statistical Integration' in 2004, which was conducted in 2006–2007, and its subproject on 'The Improvement of Cause-of-Death Statistics'. These activities were aimed at improving the quality of these statistical data, both input and output. In the latter case was to improve the coding procedures of the uderlying cause of death, in particular by eliminating procedures that do not comply with the rules of the World Health Organisation. However, distinguishing the effect of the efforts to improve quality and harmonise coding from mortality itself would require a detailed analysis beyond the scope of this article. Moreover, it would be necessary to evaluate data over a longer time period than just one year in order to truly reveal whether some deeply ingrained incorrect procedures have or have not been successfully eradicated. Neoplasms could be such a case. An examination of the accuracy of coding the underlying cause of death was made at the start of the project and revealed a preference for citing neoplasms as cause of death in cases where the physician had also listed other 'serious' diseases in the sequence of causes leading to death on the Death Certificate. The order of causes listed is decisive in such a case, but that was not always respected in the selection procedure. When the success of the project was then evaluated, it was found that this practice has only slightly altered. Nevertheless, the standardised mortality rates for 2007 were lower for

Table 15 Mortality indicators, 2000–2007

Indicator	2000	2001	2002	2003	2004	2005	2006	2007
Male life expectancy at age – 0	**71.6**	**72.1**	**72.1**	**72.0**	**72.5**	**72.9**	**73.4**	**73.7**
– 45	28.9	29.3	29.3	29.2	29.6	29.9	30.4	30.6
– 65	13.7	13.9	13.9	13.8	14.2	14.4	14.8	15.0
– 80	6.1	6.2	6.0	5.9	6.1	6.1	6.4	6.6
Female life expectancy at age – 0	**78.3**	**78.4**	**78.5**	**78.5**	**79.0**	**79.1**	**79.7**	**79.9**
– 45	34.6	34.6	34.8	34.7	35.2	35.2	35.7	35.9
– 65	17.1	17.1	17.2	17.1	17.5	17.6	18.0	18.2
– 80	7.1	7.0	6.9	6.9	7.1	7.1	7.4	7.5
Difference in life expectancy at birth between females and males	6.7	6.3	6.5	6.5	6.5	6.2	6.2	6.2
Infant mortality rate	**4.1**	**4.0**	**4.1**	**3.9**	**3.7**	**3.4**	**3.3**	**3.1**
Neonatal mortality rate	2.5	2.3	2.7	2.4	2.3	2.0	2.3	2.1
Perinatal mortality rate	4.5	4.3	4.5	4.3	4.0	3.9	4.2	4.0

Note: Perinatal mortality rate = stillbirths and deaths at completed age 0–6 days per 1,000 live births.

Table 16 Contributions of age groups to difference between life expectancies at birth, 2000 and 2007

Age group	Between years 2007 and 2000				Females – Males			
	Males		Females		2000	2007	2000	2007
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
0	0.07	3.2	0.08	5.1	0.08	1.2	0.09	1.5
1–4	0.02	0.8	0.02	1.6	0.01	0.2	0.02	0.4
5–9	0.03	1.3	0.02	1.2	0.02	0.3	0.01	0.1
10–14	0.02	1.0	0.02	1.6	0.01	0.2	0.02	0.3
15–19	0.03	1.6	0.03	1.7	0.10	1.5	0.10	1.6
20–24	0.02	0.9	0.03	2.1	0.19	2.8	0.20	3.2
25–29	0.00	0.1	0.02	1.3	0.16	2.4	0.18	2.9
30–34	0.04	2.0	0.02	1.5	0.17	2.5	0.15	2.4
35–39	0.03	1.7	0.01	0.8	0.20	3.0	0.19	3.0
40–44	0.13	6.2	0.02	1.3	0.30	4.4	0.19	3.0
45–49	0.19	9.4	0.09	5.9	0.44	6.5	0.33	5.3
50–54	0.18	8.8	0.08	5.1	0.61	9.1	0.52	8.3
55–59	0.14	7.0	0.08	5.3	0.77	11.5	0.74	11.9
60–64	0.17	8.3	0.07	4.7	0.93	13.9	0.88	14.1
65–69	0.28	14.1	0.19	12.4	0.92	13.7	0.83	13.3
70–74	0.27	13.1	0.27	17.4	0.80	11.9	0.79	12.7
75–79	0.24	11.7	0.27	17.4	0.58	8.7	0.58	9.3
80–84	0.13	6.4	0.17	10.7	0.32	4.8	0.33	5.4
85+	0.05	2.3	0.05	3.0	0.10	1.5	0.09	1.4
Total	**2.02**	**100.0**	**1.55**	**100.0**	**6.70**	**100.0**	**6.23**	**100.0**

both men and women than in 2006, which corresponds to the trend in some previous years, but it can be assumed that better coding to a small degree also contributed to the decrease. Where evidence of this effect was clear, for instance, was in the rate of mortality from chronic ischemic heart disease (Tab. 17). Thanks to the project, the share of deceased from atherosclerosis decreased – to below five per cent, when in some previous years it was around as much as ten per cent. However, compared to countries with automated cause-of-death coding (and in countries without it) it is still a very high share. The decline in mortality from cerebrovascular diseases has the same cause as the decline in mortality from atherosclerosis as it suffered from the incorrect practice of being overvalued in situations where the physician list-

Table 17 Standardised death rates by selected causes of death (per 100,000), 2000–2007

Causes of death	2000	2001	2002	2003	2004	2005	2006	2007
	Males							
Neoplasms	326.7	317.5	323.3	321.1	315.2	296.8	286.8	277.5
Malignant neoplasm of lung (C34)	89.9	85.6	83.9	80.8	81.8	77.1	73.6	71.0
Malignant neoplasm of rectum and colon (C18–C21)	52.1	50.8	51.8	51.6	50.7	46.6	45.4	40.6
Diseases of the circulatory system	576.9	567.6	560.6	568.5	530.9	508.1	477.8	453.7
Hypertension (I10–I12)	11.5	10.9	10.7	10.4	14.0	12.3	10.5	17.9
Myocardial infarction (I21–I23)	135.1	126.0	113.1	106.1	91.3	81.3	72.7	69.3
Chronic ischemic heart disease (I25)	118.8	123.8	127.0	130.0	126.9	146.9	147.3	166.2
Heart failure (I50)	11.7	11.5	13.5	13.4	11.9	20.5	25.6	14.6
Cerebrovascular diseases (I60–I69)	156.5	148.6	144.7	148.0	127.2	123.0	113.4	91.6
Atherosclerosis (I70)	92.9	96.0	99.5	107.5	109.1	76.2	56.8	41.4
Diseases of the respiratory system	56.9	55.6	55.6	59.7	55.4	65.9	60.3	59.4
Diseases of the digestive system	48.5	50.7	50.3	50.8	50.4	52.4	50.2	49.5
Injury and poisoning	93.0	90.4	91.4	96.3	89.0	82.8	77.6	78.0
Transport accidents (V00–V99)	22.2	20.8	20.5	20.7	18.3	17.9	15.5	17.4
Suicides (X60–X89)	24.9	24.9	23.3	26.2	24.3	23.8	21.1	20.8
Other causes	59.6	61.7	65.1	68.5	65.7	70.7	71.5	73.1
Diabetes (E10–E14)	12.4	10.1	11.0	12.4	11.2	11.9	12.1	19.3
Total	1161.6	1143.6	1146.3	1164.9	1106.6	1076.7	1024.1	991.2
	Females							
Neoplasms	178.7	179.3	175.3	177.5	173.0	166.2	164.9	157.0
Malignant neoplasm of lung (C34)	18.1	19.1	18.1	18.8	18.6	18.7	19.7	19.1
Malignant neoplasm of rectum and colon (C18–C21)	25.3	25.4	24.6	26.4	24.6	22.3	21.3	19.5
Diseases of the circulatory system	379.0	381.7	379.5	384.4	356.9	351.1	318.2	306.8
Hypertension (I10–I12)	7.7	8.1	8.3	9.3	10.5	10.2	8.2	14.5
Myocardial infarction (I21–I23)	60.0	56.9	52.4	48.1	41.6	37.2	34.4	32.1
Chronic ischemic heart disease (I25)	75.8	77.5	80.1	83.6	80.1	99.3	93.1	112.0
Heart failure (I50)	7.0	7.6	9.4	8.9	8.0	13.5	15.6	8.2
Cerebrovascular diseases (I60–I69)	121.9	122.5	119.5	120.6	100.7	99.2	90.8	73.1
Atherosclerosis (I70)	74.0	75.9	78.2	78.9	82.1	58.8	40.5	30.9
Diseases of the respiratory system	29.1	26.6	27.2	30.9	25.5	33.5	30.3	29.3
Diseases of the digestive system	25.4	25.8	26.0	27.5	25.7	26.8	26.0	25.5
Injury and poisoning	34.2	33.8	32.8	35.4	34.0	29.3	25.4	26.1
Transport accidents (V00–V99)	7.0	6.7	6.9	6.4	5.8	5.5	4.5	5.1
Suicides (X60–X89)	5.8	5.4	5.3	5.8	4.7	4.8	4.2	3.6
Other causes	44.2	44.9	45.1	48.0	46.7	50.3	48.5	50.6
Diabetes (E10–E14)	10.1	9.0	9.0	10.1	8.9	9.7	9.4	15.2
Total	690.5	692.2	685.9	703.6	661.9	657.2	613.2	595.4

ed chronic heart disease in the sequence of diseases that led directly to death. Between 2006 and 2007 the standardised rates decreased by twenty per cent for both men and women – such a dramatic decrease was not even recorded during the period of rapid improvement of mortality conditions in the 1990s. Other causes of death whose mortality in 2007 differs significantly from previous years is diabetes mellitus, heart failure, and hypertension. In the last case this mainly involved an increase in mortality from primary (essential) hypertension (code I10 according to ICD-10). In the past this diagnosis was practically 'banned' from being selected as the underlying cause of death.

Table 18 Net migration by citizenship (10 highest in given year), 2000 and 2007

2000			2007		
Citizenship	Number	Per cent	Citizenship	Number	Per cent
Czech Republic	2 473	37.8	Ukraine	30 902	36.8
Ukraine	1 102	16.9	Slovakia	13 129	15.6
Slovakia	917	14.0	Vietnam	11 281	13.4
Russia	394	6.0	Russia	5 765	6.9
Vietnam	279	4.3	Mongolia	2 879	3.4
Germany	126	1.9	Moldova	2 455	2.9
Bulgaria	100	1.5	Poland	2 233	2.7
Belarus	93	1.4	Germany	1 731	2.1
Kazakhstan	83	1.3	Belarus	983	1.2
United States	79	1.2	United States	867	1.0
Total	6 539	100.0	Total	83 945	100.0

A new feature of death statistics maintained by the Czech Statistical Office since 2007 is observe the locations where death took place. In 2007, 18.1% of deaths were recorded in the home environment, 60.5% in a hospital, 8.5% in a medical institution, 4.7% in a social institution (senior citizens' home), 1.9% on the street (in a public place), and 6.3% elsewhere.

International Migration

Active net migration was absolutely the highest in the history of the Czech Republic in 2007. According to data from the Foreign and Border Police Headquarters of the Ministry of the Interior, it amounted to 83.9 thousand persons. There was also a record volume of migration. Ukrainians accounted for the 36.8% of the increase in foreign migration, Slovaks accounted for 15.6%, and the third-largest group, like in 2006, was made up of Vietnamese, making up 13.4% of the total population increase from foreign migration. The following places were also occupied by citizens of states to the East of the Czech Republic. The only Western countries in the top ten states with the highest positive migration balance in the Czech Republic in 2007 were (again) Germany and the United States (Tab. 18).

Official net migration of citizens of the Czech Republic, which was slightly negative in 2007 (–142), will probably not correspond to reality in 2007 either, owing to the underestimation of the number of emigrants by those who left the country without cancelling their permanent residence.

Internal Migration

In 2007, 255.7 thousand changes of registered residence were recorded within the country, which was the largest number since the start of the 1990s. But the share of foreigners in the total volume of internal migration also increased (Tab. 19). It exceeded ten per cent for the first time in 2006, and in 2007 it was as much as seventeen per cent, while they accounted for 3.1% and 3.8%, respectively, of the population. However, in 2007 (and in 2006) there was also an increase in the number of changes of residence by Czech citizens. A rough comparison of the share of changes of residence by foreigners in the volume of internal migration and their share in the population points to the higher intensity of internal migration of foreigners in the Czech Republic, but foreigners have a significantly different – younger – age structure compared to the domestic population, and that is usually associated with a higher migration rate. When the effect of the age structure is eliminated the much higher mobility of foreigners is confirmed. It is approximately 3.5 times higher. However, it is impossible to overlook the fact that not all moves by Czech citizens are accompanied by an officially recorded change of residence.

Table 19 Structure of volume of internal migration, 2000–2007

Volume of migration	2000	2001	2002	2003	2004	2005	2006	2007
Total	199 716	204 622	223 103	211 487	216 831	213 688	225 241	255 690
Between regions	57 333	62 593	70 921	67 146	67 679	75 669	81 358	98 403
Between districts within the region	32 592	33 706	37 227	36 089	37 311	41 414	43 700	47 745
Between municipalities within the district	109 791	108 323	114 955	108 252	111 841	96 605	100 183	109 542
Between regions – per cent of total	28.7	30.6	31.8	31.7	31.2	35.4	36.1	38.5
Between districts within the region – per cent of total	16.3	16.5	16.7	17.1	17.2	19.4	19.4	18.7
Between municipalities within the district – per cent of total	55.0	52.9	51.5	51.2	51.6	45.2	44.5	42.8
People with Czech citizenship	199 129	198 635	213 220	201 187	205 106	195 755	202 268	212 934
People with foreign citizenship	587*)	5 987	9 883	10 300	11 725	17 933	22 973	42 756
People with Czech citizenship – per cent of total	99.7	97.1	95.6	95.1	94.6	91.6	89.8	83.3
People with foreign citizenship – per cent of total	0.3*)	2.9	4.4	4.9	5.4	8.4	10.2	16.7

Note: *) In 2000, in the case of foreigners only changes in permanent residence were recorded.

The biggest number of changes of residence among foreigners in 2007, like in 2006, was recorded among Ukrainians: 23.1 thousand changed their place of residence. They most often moved to the capital city. Assuming that each one changed residence only once, that would mean that 18.3% of Ukrainians residing in the Czech Republic in 2007 moved within the country. In the case of Mongolian and Moldovan citizens the figures were even higher: 28.9% and 27.0%, respectively. However, they account for a much smaller share in the total volume of internal migration of foreigners.

In 2007 significantly large migration flows from big cities to their hinterlands continued. In 2007 the districts of Prague-West and Prague-East followed by Brno-Rural had the largest population increases from internal migration. However, the migration exchange also occurred in the opposite direction. For example, in 2007 the population of Prague grew most owing to an influx of people whose previous residence had been Prague-West, Prague-East and Mělník. The capital city of Prague was the territorial unit that grew most from internal migration with an increase of 24.2 thousand. However, almost one-half of the increase was caused by the migration of foreign nationals. The district in second place was Prague-East, which gained 7.6 thousand inhabitants from internal migration, while the districts of Brno-Rural and Prague-West also gained 7.0 thousand.

Conclusion

Seventeen years have passed since 1989. After a period of dramatic changes, the demographic behaviour of the Czech population has settled, and what had seemed unimaginable in the previous several decades became a regular part of contemporary life. And that is also the way it is viewed. Today's generation of young people (and not just them) consider it normal that they are going to have on average fewer children than their parents and grandparents or that it is possible to live with a partner without entering a formal union and with no negative reaction from those around them they will also be able to have a child (children) in that situation. Birth control is taken as a given by a significant portion of the population of reproductive age, as are widely applied advances in medical science, and the fact that the population of the Czech Republic is slowly becoming more diverse in terms of the number of foreign nationals residing in the country.

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FIFTY YEARS OF POPULATION DEVELOPMENT IN THE CZECH REPUBLIC*)

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Abstract: The study comprehensively summarises analyses of the population development of the Czech Republic that were continually published in the journal *Demografie* over the past almost fifty years. At first, these were long-term analyses of the course of individual demographic processes. From 1990 on, more thorough assessments of population development in individual years have been appearing. They have been written by demographers from the statistics office.

Looking back at the articles, summaries, reports and other writings published in the fifty volumes of *Demografie* provides a good opportunity not just to remember the first generation of the journal's authors but also to take stock and evaluate. After the decades of secrecy surrounding all demographic data except the rate of infant mortality, some space opened up in the late 1950s to publish analyses of population development. Now is a good time to look back at and reflect on how much the authors were willing just to passively watch and comment on population development and how much they were able to contribute in some way through their analyses and conclusions to 'adjusting' the course of individual demographic processes. On this occasion it is necessary to note that there are two figures mainly responsible for the renaissance of Czech demography: *František Fajfr* and *Vladimír Srb*. They promoted an active pro-natal population policy that contributed to the advancement of all of society. The evaluation of population development always occupied a prominent place on the pages of *Demografie*. Evaluations always drew on long time series in order to more emphatically distinguish short-term fluctuations from long-term trends or multi-year cycles. One of the objectives of these evaluations was to provide demographers and others, especially journalists, interested in demography with accurate information on population development. This worked better in the past than at present and the now often distorted interpretations of demographic information.

In my opinion we can divide the entire fifty years and its several generations into three periods: the first ends around 1969, the second covers the period of normalisation up until 1989, and the third arrives with the rebirth of a free society (albeit with long-term 'difficulties') and all its positive and negative consequences. My assessments and opinions will be largely subjective, based on life-long, personal contacts with *Fajfr, Srb, Vojta, Vobornik*, and *Ullmann* and others, and for some my views will probably be questionable and even provocative. As one of the last demographic 'actors' alive, I was of course also influenced by this period. But that is part of the intention of this paper on an unbelievable half century of *Demografie*.

1945–1969

This period began with the wartime and post-war rise in nuptiality and fertility that after years of reproductive depression was sparked by young people's efforts to start a family in order to avoid (especially women) being sent to Germany. The high, compensatory fertility

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Table 1 Characteristics of population development in the Czech Republic in 1950–2007

Indicator		Period (average of years)								Year					
		1950–1954	1955–1959	1960–1964	1965–1969	1970–1974	1975–1979	1980–1984	1985–1989	1990	1995	2000	2005	2006	2007
Marriages		81 221	70 943	77 233	86 666	95 078	92 029	78 981	81 757	90 953	54 956	55 321	51 829	52 860	57 157
– per 1000 inhabitants		8.9	7.5	8.0	8.8	9.6	9.0	7.7	7.9	8.8	5.3	5.4	5.1	5.1	5.5
Total nuptiality rate[1)]	Males	99.0	.	97.4	95.8	96.9	97.8	96.2	95.7	91.1	73.3	69.6	62.8	62.9	64.5
	Females	98.7	.	95.9	94.7	94.5	93.2	89.6	89.6	96.2	80.0	74.5	69.1	69.7	71.1
Average age of single	Males	25.8	.	24.3	24.3	24.4	24.5	24.7	24.6	24.0	26.7	28.9	30.7	30.9	31.1
	Females	22.4	.	21.3	21.7	21.6	21.4	21.7	21.8	21.4	24.6	26.5	28.1	28.4	28.5
Divorces		10 535	12 872	14 039	18 036	23 553	26 080	28 496	30 623	32 055	31 135	29 704	31 288	31 415	31 129
– per 1000 inhabitants		1.16	1.35	1.45	1.83	2.38	2.56	2.76	2.96	3.09	3.01	2.89	3.1	3.1	3.0
– per 1000 marriages		4.65	5.45	5.83	7.24	9.27	9.98	10.97	11.86	12.4	12.4	12.2	13.5	13.7	.
Total divorce rate		.	.	21.1	.	33.3	.	38.5	.	38.0	38.4	41.2	47.0	49.0	49.0
Live births		179 001	150 911	139 343	141 530	168 334	182 386	142 870	132 236	130 564	96 097	90 910	102 211	105 831	114 632
– per 1000 inhabitants		19.6	15.9	14.4	14.4	17.0	17.9	13.8	12.8	12.6	9.3	8.8	10.0	10.3	11.1
Total fertility rate		2.71	2.40	2.19	1.96	2.16	2.35	2.00	1.92	1.89	1.28	1.14	1.28	1.33	1.40
Net reproduction rate		1.24	1.12	1.04	0.92	1.02	1.12	0.95	0.92	0.91	0.61	0.55	0.6	0.6	0.7
Live births outside marriage		10 290	8 336	6 565	7 503	8 140	8 497	9 073	9 881	11 167	14 947	19 792	32 409	35 259	39 537
– per cent		5.7	5.5	4.7	5.3	4.8	4.7	6.4	7.5	8.6	15.6	21.8	31.7	33.3	34.5
Mothers' average age		27.1	26.2	25.4	25.2	25.1	25.0	24.6	24.7	24.8	25.8	27.2	28.6	28.9	29.1
Abortions		.	45 162	79 741	85 317	83 180	80 689	91 216	113 474	121 802	60 114	45 938	40 023	39 959	40 917
	Induced	.	55 474[5)]	66 327	68 195	63 698	60 385	73 921	98 011	107 131	49 531	34 623	26 453	25 352	25 414
	Spontaneous[4)]	.	.	13 414	17 122	19 482	20 304	17 295	15 463	14 671	10 583	11 315	13 570	14 607	15 403
Per 100 births	Total[4)]	.	53.7	56.7	59.9	49.1	44.0	63.5	85.4	94.7	62.4	50.4	37.8	36.4	.
	Induced	.	40.6	43.6	47.8	37.6	32.9	51.5	73.8	83.4	51.4	38.0	25.8	23.9	22.1
	Spontaneous[4)]	.	13.1	13.1	12.1	11.5	11.1	12.0	11.6	11.3	11.0	12.4	12.0	12.5	.
Deaths		100 412	95 274	99 053	111 141	123 231	126 169	132 674	128 982	129 166	117 913	109 001	107 938	104 441	104 636
– per 1000 inhabitants		11.0	10.0	10.3	11.3	12.5	12.4	12.9	12.5	12.5	11.4	10.6	10.5	10.2	10.1
Infant mortality		46.8	25.1	19.8	22.1	19.7	18.1	15.2	11.6	10.8	7.7	4.1	3.4	3.3	3.1
Live expectancy[7)]	Males age 0	62.16	.	67.55	.	66.12	.	67.14	67.82	67.58	69.72	71.65	72.9	73.4	73.7
	Males age 60	14.96	.	15.12	.	14.09	.	14.38	14.59	14.58	15.89	17.02	14.4	14.8	15.0
	Females age 0	66.97	.	73.41	.	73.01	.	74.25	75.03	75.36	76.63	78.35	79.1	79.7	79.9
	Females age 60	16.87	.	18.34	.	17.95	.	18.38	18.81	19.08	20.04	21.21	17.6	18.0	18.2
Natural increase		78 589	55 637	40 290	30 389	45 103	56 217	10 196	3 254	1 398	–21 816	–18 091	–5 727	1 390	9 996
– per 1000 inhabitants		8.6	5.9	4.1	3.1	4.5	5.5	0.9	0.3	0.1	– 2.1	– 1.8	– 0.6	0.1	1.0

Note:

[1)] Calculation of nuptiality tables for single persons.

[2)] Calculation of nuptiality tables for single persons for the period 1949–1950.

[3)] Total divorce rate, 1960–1961, 1970–1971 and 1980–1981.

[4)] Including an unidentified type of abortion, exclusive of ectopic pregnancy.

[5)] Average years 1958–1959.

[6)] Since 1965, a return to international definitions.

[7)] Life expectancy according to mortality tables 1949–1951, 1960–1961 and 1970, for years 2005–2007 aged 65.

rate, mainly among the Czech population, including re-emigrants, peaked in 1947 and was followed by a period of decline, not just as a result of the deteriorative age structure of the reproductively active, young population, but above all in reaction to the political coup in 1948 and the social consequences of that event (emigration, political trials, the imprisonment of tens of thousands of mostly young and educated people). This considerably disrupted the population situation. For the part of the population unaffected by this event (and especially for the enthusiastic supporters of socialism) life continued without any postponement of marriage, but with a decrease in the average number of children in the family. Young families with children suffered another blow with the introduction of currency reform, the end of rationing, and the 'liberation' of prices: what a family with three children could have survived on earlier was in 1953 insufficient to support a family with two children (data calculated but never published by the State Statistical Office). This was the first negative intervention affecting the future of the family, and it was soon followed by the legalisation of abortion – adopted more as a social measure than as a substitute for underdeveloped contraceptives, mainly owing to the inability to raise the low living standard dating from the time of the war.

Settling the border regions, however, demanded an increase in the population size, and this was all the more so given that economic development, though industriously planned, was being hindered by a decreasing labour force and the stagnation of work productivity and by the stagnation of technological development. Continuous arms production and preparations for potential war negatively impacted the life prospects for many families, and the model of the (maximum) two-child family was formed out of this situation in which people had to taken on the responsibility of raising children in uncertain times. Demographic surveys have confirmed the reality of this situation.

Between 1950 and 1957 total fertility fell from 2.8 to 2.5, and then decline further to 2.1 (1959–1962), and after rising again briefly (in 1963–1964: in response to the promised extension of maternity leave) it fell again after 1967 to below 2.0. The pressure all women to work full time, while there was no corresponding infrastructure in place (sufficient capacity nurseries, preschools, school clubs, etc.), meant that women tended to have their children immediately after marrying, usually in quick succession, and before the age of 25. Demographic surveys and detailed analyses of the conditions and course of the reproductive process identified a way out of the reproductive marasmus, but allegedly there were a lack of resources available to make any changes; what was really apparent, though, was that there was a lack of will to make them. The efforts made by some members of the State Population Committee were in vain, and they had no power to assert positive change against the powerful planners of 'bright tomorrows' in the distance future.

The number of children planned before marrying would have decreased to an average of 2.1 children; over 90% of women planned the future size of their family, but roughly two-thirds of them wanted just two children. In reality they tended to have even fewer. After the rapid decline in mortality in the first post-war years there ensued a long period of stagnation, mainly because of the shortage of financial resources, but also owing to the development and production of 'domestic' health technology and medicines when it was impossible to obtain imports from Western countries. Life expectancy – which in 1949–1951 was 62 for men and just below 67 for women – long remained below 66 for men and it was only in 1975 that it permanently surpassed 67. Female mortality decreased more favourably: life expectancy was over 70 in 1954, but until 1976 it remained below 74. This occurred alongside a very favourable decline in infant mortality from 60 per thousand until 1950 to around 20 per thousand in 1959–1969, and the mortality of children aged 15 and under also decreased. According to life tables, in 1949–1951 only 91 200 boys and 92 900 girls lived to the age of 15. In 1970 the figures were 96 900 and 97 700, respectively. These were the only real successes of the integrated health system, given that the life expectancy of 20-year-old remained at 48.4 years for

around two decades and the life expectancy of women increased by just under three years to reach 54.8. To little avail demographers drew attention to and made comparisons with Western countries: indicators of the population's consumption were more significant than improvements to health care and the way of life (e.g. the annual consumption of meat and meat products increased between 1950 and 1970 from 49 kg to 77 kg and sugar from 27 to 39 kg, but the consumption of fruits and vegetables decreased). The ideological and authoritarian objectives of socialism were at that time simply much stronger than the interest in the living conditions of the population and especially young families (e.g. the stagnation of housing construction until the end of the 1960s, unfulfilled promises to solve the housing problem primarily affected young people). On top of this, in the late 1950s some Marxists questioned the very existence of the family in socialist and communist society. The net rate of reproduction decreased in 1967–1969 to a level below 0.9. The first prognoses of population development still showed continued population growth and slow ageing. A warning prognosis based on the situation at end of the 1960s was never published.

The amount of the child allowance remained relatively low during this period. While it was increased in 1957–1968, this only applied to low-income families (even by that time the child allowance had turned into a social benefit for the poor). At the ministerial level, it was not until 1969 that an inter-departmental working committee prepared an analysis of the population and social situation and some possible prognoses, together with proposals for changes ('An Integrated Concept for the Socioeconomic Programme of Active Support for Families with Children') for the government, but the only result of several years of activity by this committee was a substantial increase in the child allowance for second and third children. The problems of Czechoslovak society at that time shifted to an entirely different area.

Between 1950 and 1970 the size of the population grew by around 900 000, but that only slightly compensated for the post-war decline (another cause of this relatively small growth was the mostly illegal emigration, which between 1948 and 1969 is estimated to have involved 450 000 people). While the number of children aged 15 and under decreased only slightly, as a share of the population they decreased from 24% to 21%. By contrast, the number of people over the age of 60 grew from 1.1 million to 1.8 million and as a share of the population grew from just under 13% to more than 18%. Even with the high mortality rate of the older population, the first stage of demographic ageing in the Czech population began when the numerically strong cohorts born around the turn of the century reached the age of 60; this was somewhat mitigated by the active net migration of young people from Slovakia, 160 000 of whom migrated to the Czech part of the country.

On the whole, this was a period of unsuccessful attempts to change the population situation for the better. Population development was supported by words, but almost not at all by deeds.

1970–1989

The well-known political events of 1968–1970 triggered by the invasion of Warsaw Pact troops led to considerable differentiation within Czech society. They led to the emergence of an entirely new social situation, even in terms of reproduction (in Bohemia/Bohemia and Moravia alone more than 300 000 members of the defeated wing of the Czechoslovak Communist Party were expelled – many of them also lost their jobs, as did roughly an equal number of non-party members). Distrust in the new party leadership and in the state led people to shut themselves off within the circle of family and friends, and more people began spending time at country homes or cottages where people who were being politically persecuted were better able to do 'as they pleased' without supervision.

The forced reduction of social activities was one unquantifiable source of the rise in fertility, which began in 1970 (total fertility 1.96) and peaked in 1974–1975 (total fertility 2.45). The

substantial increase in the number of births was due in part to the increase in the number of women of peak fertility age (20–29) from 780 000 in 1970 to 837 000 in 1975, but especially to the better conditions created for families with children. In 1968 the child allowance was increased, paid maternity leave was extended, and gradually the effect of the increased construction of cooperative housing began to be felt. Although the data indicate that in 1980 there was a shortage of more than 150 000 flats, in 1991, the shortage was still 110 000–120 000. There was an increase in the intensity of second-order and third-order births previously postponed. According to my calculations based on the results of the 1980 census, at the time of the demographic wave in 1971–1979, 180 000–200 000 more children were born into marriages than would have been expected in the late 1960s (roughly 5000-10 000 first-order, 120 000–130 000 second-order, and 55 000–60 000 third-order children).

A much larger generation of children was born in the 1970s than before. They are often, erroneously, referred to as 'Husák's children' [after the president – translator's note] – as though it had been the objective of the political leadership at that time to increase fertility. In reality, it was a matter of people having the second and third children that they had postponed having in the late 1960s, and it was basically made possible by the psychological impact of social measures that were introduced in order to subdue the restlessness in society after August 1968. So it was not about a 'gift' from Husák, it was rather the sly realisation that when young people are trying to start a family and look after children they will be too preoccupied to recall the trauma of the recent past and the destruction of any hope for better living conditions for themselves and their children. Essentially this was successful: young people withdrew into the circle of families and friends, and this certainly had a calming effect on society.

Indirectly this provided confirmation of the fact that significantly altering the material conditions of families with children has a positive impact that is reflected mainly in compensatory (and then partly also in anticipatory) second-order and third-order births. However, this may only last for several years, because for the next generation of women trying to plan a family the adopted measures will be taken as a given. What also became apparent was the singular nature of the 'baby boom' in the 1970s, owing to the singular nature of the circumstances behind it.

Until the end of the 1980s nuptiality intensity remained high, and according to contemporary nuptiality tables for singles more than 90% of men and 96% of women married by the age of 30, and the average marrying age was around 24.5 years for men and 21.7 years for women. The average number of children young couples planned to have also remained steady at around 2.0 children. Consensual unions and lone motherhood were at that time a rare substitute for legal unions. The intensity of divorce did not grow until the late 1980s.

In the years when fertility increased, the number of abortions decreased substantially, falling from the previous 90 000 to 72 000 in 1970 and to 56 000 in 1975–1976; it then rose again, reaching as high as 108 000 in 1988–1990: this meant 28 – less than 30 – and then again 82 abortions for every 100 births in those years. But these abortions were occurring after family plans were completed, and after rising prices, or more precisely the decrease in subsidies for children's shoes and clothing, dealt a hard blow to the living standard of families. The previous pro-natal effect turned into an anti-natal effect; the increase of the child allowance was inadequate, and the situation in society became hopeless.

The trend in mortality remained negative until the late 1980s and lagged increasingly behind Western European countries. Male life expectancy grew between 1970 and 1990 by just 1.4 years and female life expectancy by 3.0 years; infant mortality, falling from 20 per thousand to 11 per thousand, no longer had the same weight in reducing the mortality rate as before. The differences between male and female mortality intensity continued to grow until 1990, so that the gap in life expectancy was more than eight years, and the share of those who died at a very old age grew only slowly. As a result increasingly more widowers than widow-

ers survived in the elderly population. In 1970 there were 68 000 widowers and 300 000 widows; in 1991, however, the figures were 74 000 widowers and 367 000 widows, i.e. five times as many widows as widowers. Demographers tried in vain to draw attention to the inauspiciously high mortality rate, especially in international comparison – the last time was after a conference on demography in 1988.

Despite the pronounced increase in fertility, the increase in the population during the intercensus period between 1970 and 1991 decreased to just 500 000. The number of children aged 15 and under increased by just 80 000 and as a share of the population they remained at just 21%. The population over the age of 60 grew by just 40 000 and their share of the population decreased to just under 18%; this was partly caused by the fact that in 1991 the older generation included the numerically small cohorts born during the period of the First World War. More than 100 000 people emigrated – mostly illegally – from the Czech Republic (Czechoslovakia/the Bohemian and Moravian parts of Czechoslovakia) at that time.

In this period of social stagnation, demographic development was generally positive, considering the favourable increase in fertility and thus also in the number of births, and even though total fertility decreased again from the mid-1980s to 1.9 children (part of the initial rise were the children that had previously been postponed in the late 1960s). On the other hand, the mortality trend was very negative: in France and Sweden in 1970 life expectancy was two years higher than Czech life expectancy, but twenty years later it was five years higher.

1990–2008

This last period, spanning almost two decades, is in every respect absolutely incomparable to all the previous ones, including the early years of the First Czechoslovak Republic. For the first time, the conditions existed in which people could decide freely about their own lives, regardless of their social standing, income or property (that of course later gradually changed), whether that meant decisions about their own personal development, their education or qualifications, or decisions about family behaviour, which had an impact on demographic reproduction, especially among young people who were just 'starting out' in the early 1990s. The previously uniform way of life – the only possible life course (leaving aside emigration) was a relatively short period of education with few options, followed by marriage at a young age and then the birth of (usually two) children in quick succession – was replaced by a broad range of opportunities in life. Opportunities expanded for education, differentiated by duration, type, and location (even abroad); the borders opened up allowing travel abroad (for work, experiences, and fun); the occupational structure widened substantially and with it wage differentiation; and the conditions for big and small business took shape. Modern health technology and more effective medicines began to be imported. People became ever more aware of the importance of maintaining their health, and they gradually began to take better care of themselves (though here there is differentiation by education). Mortality began decreasing faster than ever before, especially among middle-aged and older men. Good health and higher education started to be seen as essential 'capital' in life, and intergenerational differences grew considerably: unparalleled opportunities for the young, protection for the middle generation, inertia and increased risks for the elderly. The response to this among young people especially is very apparent in data on population development.

First of all, nuptiality intensity decreased, because marriage at a young age, especially before the age of 25, lost its previous appeal. The total first-time marriage rate of singles fell from the previously high rate of 96–97% for women and 90% for men to 80% and 73%, respectively, in 1995, and in 2003–2007 it stagnated at 69% and 63%, respectively. The average marrying age of singles gradually rose to over 31 years for men and over 28 years for women. According to nuptiality tables, at the age of 30, 49% of women and 66% of men were still single (previously the figures were around 30% and 40%, respectively), and 30% of

women and 37% of men were permanently single at the age of 50. These figures strongly undermine the findings of studies claiming that marriage still represents an important life value. It is apparent that just a small part of the marriage deficit is compensated by consensual unions. For roughly one-third of single men and women, living life in one marriage has become something of a relic and a yoke on the exercise of personal freedom and the pursuit of personal interests, a career and opportunities for self-fulfilment; there is no need to marry to have a sex life, and better contraceptives and the option of terminating an unwanted pregnancy are available options. It is obvious what kind of impact the decrease in nuptiality and the postponement of marriage to a later age have on the subsequent intensity of reproduction. Even the marriage of divorcees has decreased.

Some people (myself included) assumed that a decrease in nuptiality intensity and a rise in the marrying age (so that people would be marrying at a more mature age) would have a positive impact on reducing the divorce rate. On the contrary: the divorce rate has risen by almost half, so that now almost every second marriage ends in divorce, usually between the fourth and sixth year of marriage – on average only around one year later than twenty years ago.

The most significant change in demographic behaviour was the sharp decrease in the number of births owing to the decrease in the fertility of younger women and thus also in total fertility: from 131 000 in 1990, which represented a total fertility rate of 1.89, to just under 90 000 in 1999 (total fertility 1.13), followed by more stagnation and then a subsequent rise to 106 000 in 2006 (total fertility 1.33) and then to 115 000 in 2007 (total fertility 1.44). The decrease in the number of births was primarily due to the decrease in the number of married women, less so to the decrease in their fertility (119 000 in 1990, 81 000 in 1995, 67 000 in 2003, and, following a rise, 75 000 in 2007). Conversely, the number and especially the share of extramarital births increased (in 1990 there were just 11 000 extramarital births, representing 8.6% of all births; between 2001 and 2004 the number rose from 20 000 to 30 000, and in 2007 to almost 40 000, which accounted for 34.5% of all live-born children). An unascertainable number of these are children of women in a consensual union; similarly, it is impossible to assess the real 'fluctuation' between a mother in a consensual union and a lone mother trying to ensure that she and her child (children) are provided for.

Since the share of young women who marry continues to decline, the entire increase in the number of children born in a marriage in recent years has been caused by an increase in their fertility, mainly by an increase in the number of second- and third-order children born. The numerically strong cohorts of women born in the 1970s have passed the age of 30 and if they want to have a child (children) they evidently see this age as the last chance to have the rest of their children; that is why in recent years the fertility of married women aged 30–35 has relatively increased the most, evidently as a result of the births of second- and third-order children.

The relatively sharp increase in the number of extra-marital births – in absolute figures by one-half – over just seven years was mainly caused by the decline in nuptiality intensity and the postponement of the marrying age: even with a small increase in the fertility of unmarried women the substantial increase in the number of children they had was simply the result of an enormous increase in the number of potential mothers. The increase in their fertility clearly applies across the age span right up to age 38, and even to second- and third-order births. On the other hand, there was a decrease in the share of marital births following pre-marital conception – clearly there is less and less pressure to get married due to pregnancy.

Much of what is now a decade-long rise in fertility is certainly compensatory, but in my view this trend will only last a few years longer, until the strong cohorts of women born in the 1970s complete the size of their families, whether they do so in legal unions, consensual unions, or as lone mothers. As smaller birth cohorts reach peak reproductive age and more stable birth/natality shedules ensue, fertility will again decline, and in my opinion total fertility

will be no more than 1.50 children per woman, so the Czech Republic will continue to rank with the countries that have an insufficient rate of reproduction and weakening reproductive potential in the future (the net reproduction rate in 2007 was 0.70; so without an increase in active net migration the number of potential mothers will fall by almost one-third within one generation).

At the same time the number of abortions decreased considerably, from 110 000 in 1988 (the maximum) to 50 000 in 1995 and to 25 000 in 2006–2007 (the total induced abortion rate was 1.51, 0.68, and 0.34 in the respective years: 16% of the total terminated pregnancies). However, the more widespread use of reliable contraceptive methods is still accompanied by the view on the part of some women that abortion is an 'ex post' contraceptive method: that is why one-half of all abortions are among married women with two children and 60% among women with two or more children. The mirror effect of fertility intensity and the induced abortion rate, wherein the planned and more frequent birth of children leads to a decline in the rejection of (another) pregnancy, has thus again be confirmed.

Between 1990 and 2007 male life expectancy at birth rose by 6.1 years to 73.7 years and female life expectancy rose by 4.5 years to 79.9 years, so the previously large gap between men and women grew slightly smaller, though it is still 6.2 years. The average life expectancy at age 65 increased by 3.4 years for men and 3.0 years for women (calculated figure 15.0 for men and 18.2 years for women). To compare, in Sweden in 2004 the figures for men were 78.4 or 17.4 years and for women 82.7 or 20.6 years. There is no way within a single generation to make up for the large 'debt' incurred by forty years of stagnation. Infant mortality has remained at a level just over 3 per thousand and perinatal mortality at 4 per thousand. Deaths of children under the age of 1 account for just 0.3% of all deaths.

The decline in mortality intensity was influenced most by the decrease in the number of deaths from circulatory diseases and less from neoplasms (these two cause-of-death groups combined accounted for 74% of total male and 78% of total female mortality in 2007). According to a study by Burcin, since 1990 the standardised rate of avoidable mortality and its share of the total mortality of people aged 75 and under has been decreasing faster, but avoidable mortality nonetheless remains high (it still accounts for 51–52% of all deaths). It is the main reason why the Czech Republic continues to lag behind advanced countries in life expectancy.

After many years of natural population decreases in the Czech Republic (1994–2005) in 2006 there was a small increase, and in 2007 there was a natural increase of 10 000 people. The increase from migration in 2005 was more than 30 000, and in 2007 it was 87 000 (31 000 – 37% from Ukraine, 13 000 – 16% from Slovakia, 11 000 – 13% from Vietnam, and so on). The registration of the foreign migration of Czech citizens is unreliable.

As of the end of 2007 the Czech Republic had a population of just under 10.3 million, roughly the same number as in 1991 and just 1.4 million more than in 1950. Of the total, 392 000 were foreigners, making up 4% of the population. Several tens of thousands more foreigners were residing in the Czech Republic illegally.

The age structure of the population has changed as a result of substantial changes to the reproductive regime: while in 1990 children aged 15 and under made up 21% of the population, by the end of 2007 the figure was just 14.2%. Conversely, the share of the population aged 65 and older grew from 12.6% to 14.6% (in absolute figures from 1.3 million to 1.5 million). Since 2006 older people have outnumbered children in the population and in the future this trend will accelerate as the numerically large cohorts born during the Second World War and especially in the years immediately after the war start to reach the age of 65. The Czech Republic does not yet rank among the countries in Europe with the oldest population, but according to prognoses up to the year 2030 it should continue to approach them: at that time it is predicted that one-quarter of the population will be over the age of 65.

Table 2 Population of the Czech Republic by characteristics age groups, 1950–2007

Age group	Census					Balance	Census	Balance		
	1950	1961	1970	1980	1991	1995	2001	2005	2006	2007
	Numbers of persons (thousands)									
0–14	2 138	2 429	2 082	2 412	2 164	1 893	1 655	1 501	1 480	1 477
15–59	5 645	5 718	5 926	6 136	6 300	6 571	6 688	6 695	6 684	6 707
60+	1 107	1 418	1 795	1 729	1 837	1 857	1 884	2 055	2 123	2 197
65+	735	912	1 190	1 373	1 302	1 372	1 411	1 456	1 482	1 513
Not identified	6	7	5	15	1	–	3	–	–	–
Total	8 896	9 572	9 808	10 292	10 302	10 321	10 230	10 251	10 287	10 381
	Structure (%)									
0–14	24.0	25.4	21.2	23.5	21.0	18.3	16.2	14.6	14.4	14.2
15–59	63.5	59.8	60.5	59.7	61.2	63.7	65.4	65.4	65.0	64.6
60+	12.5	14.8	18.3	16.8	17.8	18.0	18.4	20.0	20.6	21.2
65+	8.3	9.5	12.1	13.4	12.6	13.3	13.8	14.2	14.4	14.6
	Ageing index (65+ per 100 children aged 0–14)									
Relation	34.4	37.5	57.2	56.9	60.2	72.5	85.4	97.0	100.2	102.4

Note.: Balance as of 31 December of the given year; since 2001 the data include foreigners with certain types of long-term residence.

Rising life expectancy, the changing age structure, and the predicted stagnation of fertility well below the simple reproduction rate of already numerically weak birth cohorts will lead to continuing demographic ageing. Based on the middle variant of population projections formulated by the Czech Statistical Office in 2004, with a gradual increase in total fertility to 1.6 children per woman and an annual net migration of 25 000, by 2020 the population size should begin to decline, with a decrease in the number of births below 90 000 annually and with growing numbers of seniors. The share of people aged 65 and over could by 2020 reach 20% and by 2050 could exceed 30%.

All this will be the logical outcome of trends that began at the start of the 1990s with the sharp fall in fertility and the slight decrease in mortality. The expected increase in immigration will only have a slight slowing effect on the population decreases and demographic ageing in the Czech Republic.

Conclusion

The third period in the stretch of fifty years examined above ushered in unprecedented conditions for individuals to make free decisions, but also brought about an increased risk of making errors and mistakes, along with the restriction or loss of some of the social security enjoyed previously (unemployment; an unstable family policy and even attempts to cut back on or even question the very existence of family policy as undesirable 'social engineering'). To date this remains a period of considerable flux, and that certainly has an impact on the decisions young people make about their way of life (marriage, cohabitation, singles) and about how many children they have. These decisions are sometimes made in situations that are very different the situations people are in when they are later caring for and raising children and providing for them materially. If the final outcome of population development in a give period is shaped by the age structure as the foundation for the development of the population in the future (including the population climate), then from the perspective of family formation and the birth of children the current period must be seen as very unsuccessful or, in my view, even risky.

The interests of young people and the general emphasis society places on self-fulfilment and success will, without the requisite moral perspective, lead to a significant decrease in

people's willingness to accept responsibility: short-term interests will override long-term values in life. This is apparent not just from the demographic prognosis for the Czech Republic (accelerated ageing) but especially from the analysis of their effects. With a continued low fertility rate (a maximum total fertility of 1.5 children, a net reproduction rate of 0.70) first the number of children and then grandchildren will decrease in the Czech population. The share of children raised by both parents will also continue to decrease (in 2007 there were 36 000 extramarital births and 26 000 minors from divorced marriages, so that more than one-half of a generation of children living in deteriorating social and learning conditions). As people continue to live longer but with limitations on their standard of living and even with a reduction or loss of independence, weakening family ties within a generation and especially between generations will likely mean that even in the case of older seniors well provided the main problem for an increasing part of the population at the end of their lives will be isolation. Friendships formed in the attractive period of youth, especially among singles living in a 'mamahome' (growing up just with a mother), will grow weaker with time and in old age will only partly be capable of taking the place of the reduced family ties. Rising education levels will lead to a rise in demands but not however to a rise in skills or above all willingness to help others. One day in a society where civic interest is marginal will there be enough willing caregivers around when there can be little increase in the 'productivity' of their work?

The discussion about raising the retirement age has gone on needlessly long, while elsewhere the discussion has turned to the focus, scope, and forms of family policy: this is what could at least slightly mitigate the effects of the impending reproductive trends and help those who want to have children as part of their self-fulfilment and the continuation of their own life.

In my opinion these are the main social issues that for seniors and young people have long constituted the 'rules of the game', and they exist beyond election terms, require responsible statistical study, and are of only limited use to an active electoral programme.

In its age structure every generation passes on something to the next generation, figuratively speaking a kind of partly constructed home. It must unfortunately be acknowledged that the generation of parents today – and the generation of grandparents is also partly to blame – with its far fewer children is leaving the house in a barely inhabitable state, with enormously high demographic debts. Every society in which a low reproductive rate unleashes population ageing will necessarily grow poorer – initially mostly morally, but later increasingly materially so. In this regard we have to see the period since 1989 as one of lost opportunities to take population development in the Czech Republic to a higher level.

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Twenty years ago *Demografie* began publishing annual analyses of population development in the Czech Republic, in each case in relation to the previous several years of demographic processes. Over time they were written by different demographers from the statistical office and the content was standardised to focus on synthetic indicators. More detailed analyses of population development in the Czech Republic have also been prepared by members of the Department of Demography and Geodemography at the Faculty of Science, Charles University.

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NEW METHODS OF DEMOGRAPHIC ANALYSIS[*)]

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Abstract: Unlike traditional demography that examines individual demographic processes in an isolated way, a new paradigm is appearing. It does not focus on the assessment of a certain phenomenon in its pure form, but on the entire life span consisting of demographic events and the time lived in a certain state. The event under observation largely depends on the previous experience and also influences the rest of an individual's life. In this connection, a number of new methodological techniques have been developed.

The methods used in demography evolved in the context of the advancement of demography as a science, in interaction with other scientific fields, and in connection with the new opportunities that were presented by data sources and computer technology. Clearly no method is entirely new, but rather draws on and furthers some previous method. In the 1980s, the increasingly widespread availability of computers triggered the emergence of new ideas and the advancement of more sophisticated methodological tools, which were also able to draw on better data sources. We begin this article by describing traditional demographic life tables and outline some of the new methods used in contemporary analysis. The text does not set out to present a systematic and exhaustive outline of existing methods but instead identifies some of the new ways of analysing demographic processes.

The life table: a basic tool of traditional demographic analysis

In Czech demography the 'life table' is the term used to describe every type of demographic table of quantified demographic processes that occur in time (the mortality table, the nuptiality table of singles, the table of marriage dissolution, the fertility table by parity, etc.). The life table is the basic methodological tool of traditional demographic analysis and it is still used today. The first life table is usually considered to be the mortality table that was created by *John Graunt* in 1662; this year is also regarded as the inception of demography as a science. The concept of a mortality table is based on describing a series of attritions in relation to age. As time passed the idea of the mortality table was mathematically developed and applied to other demographic (nuptiality, fertility, divorce rate, etc.) and non-demographic (life expectancy of cars or other equipment, etc.) processes.

The life table is based on the principle of an exposed population reduced by those people who experienced the event under observation. It is thus based on so-called decrement rule. The exposed population is defined solely on the basis of some initial event (for example, people born in the same calendar year, marriages concluded within the same year, births in a given birth-order) and all the individuals in it are exposed to the risk of undergoing the event

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under observation. We distinguish two types of life tables: single-decrement tables and multiple-decrement tables. The estimated values of the probability (risk) function of single-decrement table are based on the assumption that the individuals that did not undergo the studied event but left the exposed population for some other (intervening) reason than that of the observed phenomenon (so-called censored observation) would undergo the observed phenomenon in the same way (with the same intensity) as the others. Both phenomena, the observed and the intervening ones, are regarded as 'independent' and this type of analysis is called the study of a phenomenon in its 'pure' state (the phenomenon's probability is estimated as though the intervening events were absent). A multi-decrement table is based on the assumption that both phenomena, observed and intervening, are mutually incompatible and at the given time interval only one or the other of them can occur, so the probability of the observed event occurring and the probability of the intervening event(s) occurring are both estimated. Both types of demographic tables (single-decrement and multi-decrement) are well illustrated in nuptiality tables of singles, where in single-decrement tables it is assumed that those who have died would have had the same marriage rate as surviving singles, and so the nuptiality of singles whose death prevented them from ever marrying are still calculated into the estimate of the first marriage probability. The table population is reduced only by table marriages. In the case of multi-decrement tables (for example, double-decrement) at the given age interval the probability of first marriage is estimated along with the probability of dying single. Here the table population is reduced not just by table marriages but also by table deaths. The traditional methods of demographic analysis described in many textbooks are primarily linked to two names: *Louis Henry* (1972) and *Roland Pressat* (1961, 1983).

The basic paradigm of traditional demographic analysis is to define the studied population in such a way that it is as homogeneous as possible in its characteristics (so it is not just the initial event they have in common, for instance, their year of birth, but other characteristics too, such as being single and/or living in a particular region). In this way it is possible to ensure a solid comparison of individual population groups. The exposed population at the outset has a defined set of homogeneous characteristics, but these change somewhat over time, because selective departures of individuals from the exposed population can lead to a change in the structure of characteristics of this population. For example, in an analysis of mortality by age, as people grow older, (healthier) individuals with exceptional longevity account for a larger proportion of the surviving population, and they may have different average characteristics than the original (initial) population. Classic demographic methods are thus unable to capture this unobserved heterogeneity. Another hypothesis of traditional demography, one that is challenged today, is the hypothesis of independence. The occurrence (intensity) of the observed event (for example, the birth of a child) is not entirely independent of previous life experience. Also, the study of individual (isolated) phenomena in just their 'pure' form, independent of other phenomena occurring at the given interval, to some extent constitutes a problem. The assumption that those who, because of some other event, left the exposed population would behave in the same way as those who remained in the population is a debatable one, as both sub-populations can behave differently (those who die younger tend to be less likely to marry owing to their poorer health). In real life the principle of mutual exclusivity does not always apply either (i.e. it is not always true that only one event or another can occur), as is the case of mortality from a given cause (death by one cause rules out death by another). For example, entry into marriage and living in a cohabitation cannot be regarded as two incompatible events (i.e. in practice only one or the other occurs). In practice we know that an interaction between the two is possible, as many marriages take place after couples have cohabited. The 'shortcomings' of traditional demographic analysis can be summed up as follows: they overlook the problem of the heterogeneity of the population, previous experience, and the interaction of demographic phenomena, as they study individual processes in

isolation (*Courgeau et al*. 1997). These problems of classic demography are to some extent addressed by differential analysis, which does define sub-groups as homogeneously as possible (by education, marital status, place of residence, and so on). However, the problem here is still the ever decreasing size of the population groups.

Traditionally, the study of demographic issues has relied, with some exceptions, on aggregate data, and the methods used evolved in the context of available data sources. Most often data were derived from standard vital statistics records and censuses. As soon as one type of aggregate data was chosen, it was used for the entire analytical problem, because that enabled the use of the same class of methods and thus ensured the compatibility of the results (*Courgeau et al*. 1998). The values of classic demographic indicators, rates, and probabilities were compared between different populations and groups. The differentiation of demographic indicators by the defined sub-groups was also presented in relation to other characteristics which were assumed capable of influencing demographic parameters. For example, the higher intensity of emigration out of a given region was explained by the high rate of unemployment in that region. However, the findings based on these relations between indicators calculated from aggregate data can be distorted. This type of error is called an 'ecological fallacy'. A higher rate of unemployment need not mean that it is the unemployed who are emigrating from the given region (the probability of emigrating can be the same or the opposite for unemployed and employed). That a correlation between phenomena measured at the aggregate level need not be the same as it is in a calculation based on individual measurements is a problem that was first identified by the American statistician *W. Robinson* (1950), who, based on data from the 1930 census in the United States, showed that the correlation coefficient between the fact of being black and the fact of being illiterate was 0.95 at the aggregate level (the correlation between the proportion of blacks and the proportion of illiterate in individual states), while the correlation coefficient calculated on the basis of individual records was 0.2. This study clearly demonstrated that results obtained at the aggregate level cannot be automatically projected into individual behaviour. When the within-group variability of a given variable is greater than its between-group variability it is possible to arrive at erroneous conclusions.

The new paradigm of demographic analysis

An understanding of these problems led to the spread and popularisation of analysis based on measurements for individuals and not just on aggregate data. This approach also constituted support for and the advancement of sample surveys that specifically relate to the life course (the 'life line') of an individual, that is, they capture the sequence of events that an individual goes through in life, also recording the individual's personal characteristics and how they may change over time. The development of sample surveying in demography and with it the formation of new data sources then also led to a boom of new methods. The focal point of interest became not the event (an isolated phenomenon) but individual biography, i.e. a person's individual record. Thanks to these new opportunities for research a new paradigm of demographic study was also born (*Courgeau et al*. 1997). Unlike traditional methods, the new paradigm has the following distinct principles: it is no longer the evaluation of an isolated phenomenon in its pure form that is at the centre of interest, but rather the reality of how the given (observed) event influences the rest of an individual's life. For example, to what extent does marriage influence the subsequent professional career or migration or the birth of a child? In what way do the specific characteristics of an individual influence his/her behaviour, how do these characteristics change during his/her life, and how do his/her decisions change? This type of analysis is more demanding, because it studies the life course (life line), which is complicated. An event that occurs at a given time interval is also dependent on previous life events/experiences (traditional demography was based on the hypothesis that demographic phenomena are independent of each other) and on the social conditions in which

the life course of the individual had taken shape up until the time of the observed event. The new paradigm involves identifying the relationships between the complex individual behaviour of an individual, which is dependent on time, and the characteristics of that individual. But the characteristics of an individual may be constant (place of birth) or variable over time (employment, education, etc.). The analysis is based on the interaction of various demographic phenomena in the observed populations, which is not homogeneous in terms of its characteristics.

Nevertheless, even analyses based on data on individuals that describe sequences of life events and the characteristics of individuals can still suffer from another type of error: 'atomic error'. What this signifies is that a study based on data on individuals disregards the contexts (surroundings, society, institutions) in which life events take place. The data on individuals that are usually acquired record in great detail the context of the family (parents, siblings). For this reason analyses are evolving towards multilevel modelling, which combines individual analysis with contextual analysis, which can then be described using aggregate data. Multilevel modelling draws on hierarchically structured data (individual, household, region), wherein individuals can belong to more than one group. The parameters at the micro-level are a function of the contextual variables at the higher levels. This approach eliminates both types of error, ecological fallacy and atomic error. Multilevel modelling is also regarded as the connecting link between micro- and macro-analysis (*Courgeau et al*. 1998). However, even micro-level modelling is not an absolute solution and like every method it also has certain limitations. The drawbacks to this approach lie mainly with the task of correctly defining the context. The problem is whether the context is real or whether it just reflects the average of individuals' characteristics (*Hank* 2002). In the latter case we speak of 'contextual fallacy'. A correctly defined context expresses the rate of influence of the environment (peers, elders, etc.) on an individual's decisions, the degree of social control, available infrastructure (e.g. decisions about whether or not to have a child can also depend on the availability of preschool facilities or after-school care) etc.

Sometimes demographic processes do not proceed sequentially, and instead many of them can occur simultaneously and are therefore correlated. For example, marital fertility is correlated with the formation and the end of a union (a woman is simultaneously exposed to the risk of conception and the end of a partnership). The trajectories of the two processes (dissolution of a marriage/union and marital fertility) interact. Unions that are less stable usually have fewer children than those unions that consciously or unconsciously are not heading towards divorce. Remarriages also often lead to the birth of another child, and therefore women who marry more than once usually have more children. In this regard a new class of models emerged for multiple simultaneous processes (multi-process modelling), which have a multi-dimensional risk function (*Lillard* 1993; *Leone et al*. 2007). Because these are very specific models, it was necessary to develop special software for them, which is today freely available on the web (aML) and is intended for multilevel and multi-process modelling.

Event history analysis

There is a series of methods used to analyse the history of events that were originally developed out of traditional life tables and their defining principle was gradually elaborated in the context of new findings and new technological possibilities. This gave rise to the creation of a series of new and more complex models based on the concept of regression analysis. The methods were developed independently within the framework of various scientific fields, and therefore they are referred to with different terms: in epidemiology it is survival analysis, in the technological sciences it is failure time analysis or reliability analysis. It is also possible to find other terms: life-time models, transition-rate models, response-time models, event history models, duration models, or hazard models (*Vermunt-Moors*).

Event history analysis involves studying the qualitative changes (events) that occur at a certain time point (*Allison* 1984). This is different from those tasks in which the focal point is to examine continuous quantitative changes. The event/change signifies an important turning point between what was before and what is after. Because these changes occur at certain time points, in order to study them and their explanatory variables/factors it is necessary to use longitudinal data (event history data). To this end the data on individuals (or a collective) that are used cover what in demography is called the 'life line', i.e. events, the period of time that has elapsed between individual events, and the characteristics of the studied units. The characteristics (explanatory variables) can be constant over time (place of birth) or they can change (income). The purpose of analysing an event is thus to explain why some individuals are exposed to a higher risk of undergoing the studied event than others are. Unlike the data used in classic multidimensional statistical problems, there are two basic problems with the data used in event history analysis, and they were mentioned in the first section of this paper. The data may be censored (not everyone undergoes the studied event: for example, not everyone marries; or the datum is no longer available owing to the occurrence of another competing event than the studied one: for example, the death of an individual in the case of nuptiality analyses). The second problem is that the data may contain explanatory variables that change over time (income). The models may vary according to whether the period before the event is continuous or discrete, whether the studied event can be recurring (births) or not (birth in a given birth order), and whether the event is singular (wedding) or has mutually exclusive variants (e.g. death from one causes rules out death from another). Special regression models that were developed for this kind of problem are based on the idea (equation) of explaining the risk of undergoing the observed event at a particular time interval (explained variable) with the aid of certain characteristics (explanatory variables). This is the context in which we should understand the subtitle of the classic work by *P. Allison* (1984) 'Regression for Longitudinal Event Data'. Regression moreover makes it possible to include not just explanatory variables but also a random element that can deal with the problem of unobserved heterogeneity.

The models used in event analysis can essentially be divided into three large groups: a) non-parametric, b) semi-parametric, and c) parametric. Non-parametric models are actually simple models used in classic demography (life tables), and when necessary are further specified by other variables (the principle of differential demographic analysis). In these models the hazard function is empirical (calculated from the distribution of data) and no assumptions are made about the type of the probability distribution on which the survival times are based, just as specifications about sub-populations and groups are based on empirical data. It is possible to test the differences in the table functions of two or more sub-populations, usually by using non-parametric tests. In standard computer programs these types of problems are referred to as Life tables (SPSS: Survival/life tables; SAS: LIFETEST) or Kaplan-Meier (SPSS: Survival/Kaplan-Meier; SAS LIFETEST). In semi-parametric models the hazard function is also calculated from empirical data (assumptions are not made about its type in relation to time). The explanatory variables have to meet certain preconditions. A typical example of a semi-parametric model used on demographic problems is the Cox proportional hazards regression. This means that, for instance, the mortality risk of singles is a multiple of the mortality risk of married people (it is proportional). In the Cox regression model the explanatory variables can be constant or variable over time and numerical or nominal. Cox regression forms part of a number of statistical packages: for example, SPSS: Survival/Cox regression; Cox regression/Time-Dependent Covariate, or the SAS PHREG. The third group of models are parametric models, which are based on certain assumptions that relating to the type of the probability distribution of survival time and to the explanatory variables. The most frequently models are the exponential, gamma, the Weibull or the Gompertz function (SAS: LIFEREG).

As the preceding discussion indicates, more complex models for event history analysis emphasise the differentiation of risk in the context of time and the explanatory variables, while in classic life tables the focal point is the distribution of time (life duration). Another direction in which the idea of life tables can be developed and extended is multi-state demography, the objective of which is to capture the distribution of states and the average time spent in individual states. This method is based on the theory of Markov processes, which are based on the assumption that the probability of a change in state (the occurrence of a given event) is not dependent on the course of preceding states.

Multistate demography

In life people move from one state to another at specific time intervals – going from the state of being single to that of being married, from the state of being married to that of being divorced, and sometimes they get married again. Traditional decrement life tables fail to capture the dynamics of this change of states (in this case marital status), as they are essentially single-state (a change in state/event can only happen once). Often these simple, traditional demographic models are based on the assumption of a closed population. The main shortcoming in the traditional approach is that no reverse flow is possible, which is particularly a problem for the construction of tables of the economic activity of women using the so-called Sullivan method (i.e. by multiplying the stationary population Lx by the share of economically active women), as that state changes several times in life owing to maternity. Similarly, people may move several times, or move back to the same region. Only one state is final/irreversible (absorbing), and that is to be dead. In this respect multistate demography opened up new opportunities because it allows for both increment and decrement life tables. This allows an individual to be included back in the table population by (re-)undergoing the same event. Multi-state life tables then led to the development of multi-state projections. Most studies of this type were done in the 1970s and 1980s (*Rogers* 1975, 1995; *Hoem et al*. 1976). In the Czech Republic the problem of reverse flows with regard to economic activity has been dealt with by *Roubíček* (1970) and a summary of methods was prepared by *Koschin* (1992).

Multistate life tables represent a dynamically integrated system. They can share one radix (at the outset everyone is single or economically inactive) or to be multiradix (being born in the city, the countryside, or in various regions). From a structural perspective they can be divided into two types according to whether we are observing demographic changes by states at their defined start (e.g. we observe separately the attrition of regional populations defined by place of birth, i.e. before moving to another region, we divide the given table population into indigenous and those from (an)other region(s)), or whether we are interested in the behaviour of a table population in a given state and at a given time interval regardless of some phenomenon in the past, by place of residence (e.g. the table population of a given region is reduced by emigrants and increased by immigrants regardless of what region they are from). In both cases the 'incoming' population adopts the demographic behaviour of the indigenous population. Alongside calculating the intensities (risks) of transition, these tables also show the amount of time spent in individual states. For example, it is possible to calculate how long the given population spends in a state of being single, married, divorced, and widowed. Multistate tables have been applied, for instance, in the analysis of regional mortality (multi-regional life tables), they have been used in the study of the dynamics of economic activity (working life tables), or to calculate the amount of time spent in various different family states or in cohabitation, and they can also be applied to children according to the state of their parents. They can be applied to the problem of changes in health status, and so on. In connection with household analyses and projections, special software (LIPRO) was developed that can generally be used to calculate multistate tables and projections.

Decomposition methods

Decomposition methods are about breaking down the value of the difference between two indicators into specific underlying elements. These techniques have been used in demography since the 1980s (*Vaupel et al*. 2003). The principle of decomposition is that the difference in value between two indicators is divided – broken down – into several effects or components. The difference between two indicators can be a difference of time, countries, sex, and so on. The earliest decomposition methods were linked to standardisation ideas and *E. Kitagawa* (1955) wrote the pioneering work on this subject. In her work the difference between two crude rates was broken down into three components (the effect of the change of structure, the effect of the change in intensity, and the interaction between the two effects). This theme was elaborated further in a work by *Das Gupta* (1978, 1993). The second of these two publications especially constitutes a summary handbook of different types of decomposition, with model examples and their relevant Fortran programs. Another example of decomposition involves methods of decomposition of the difference between two life tables, usually the difference between two life expectancies at birth. This method of decomposition is based on calculating the contribution of individual age groups to the overall difference between two life expectancies at birth. Independently of each other the same approach was proposed by *Andrejev* (1982) and *Pressat* (1985). J. Pollard (1982, 1988) also proposed a method of decomposition of the difference between two life expectancies at birth, using two dimensions – one based on age and one based on cause of death. *Arriaga* (1984) took this problem to a deeper level and defined so-called temporary life expectancy as the average number of years lived at a given age interval and proposed a decomposition with three components: the direct effect (measuring the change in mortality intensity in the given age interval), the indirect effect (measuring the change in the number of additional years as a result of the change in mortality, i.e. the change in mortality and the change in survivors). A summary study of decomposition differences between two life expectancies at birth is found in a publication by *Ponnapillo* (2005). The significance of the change in the infant mortality rate for life expectancy is examined in a historical look at the Czech Lands presented in the publication by *Rychtaříková* (1980).

Decomposition techniques were used abundantly in the 1980s and 1990s in demographic practice, particularly in the analysis of mortality by age and eventually in combination with causes of death. Use of these methods experienced a boom recently, when decomposition methods were applied in wider practice to other demographic processes, for example, fertility (*Andrejev et al*. 2002). A new element of the decomposition of mortality is the addition of another process – the quality of the state of health measured as life expectancy in a certain health state category (health expectancy). The difference between two life expectancies at birth is then broken down into that part stemming from the difference in health state and that part that relates to different mortality. Another step is then the addition of another dimension – mortality causes and morbidity causes (*Nusselder et al*. 2004).

Age-Period-Cohort Models

APC (age-period-cohort) models are a typically demographic group of models that represent the three axes of the Lexis diagram (*Wilmoth* 2006). The central idea is the decomposition of the variability of demographic intensity indicators into three dimensions: age (generally duration), calendar time (period), and cohorts (the period of the initial event). A particular age, period, and cohort do not in themselves express causal effects, but are just proxies of specific social and biological conditions/situations. The effect of wars or epidemics can in a given period have a direct impact on the mortality rate of the population (period effect), but it can also, in the case of the child population, select resistant individuals (cohort effect) who will live longer when they are older. Nevertheless, it is possible also to consider the opposite effect of wars and similar calamities, where hardship in early childhood can damage a child's

health, so that later on the mortality rate of that sub-population may, conversely, be higher. The cohort effect is also documented in *Easterlin's* well-know theory based on conditions in the United States, where less numerous birth cohorts allegedly had better labour market conditions, which led to their full employment and easy opportunities for starting a family, while the post-war baby-boomer generation, growing up in relative surplus and with great aspirations, had a difficult situation in the labour market and therefore more complicated conditions for having children.

Even though at a theoretical level APC models look like an interesting tool of demographic analysis, they have prompted discussions relating not just to their theoretical framework but also and especially to their mathematical identification. The problem is estimating the model's parameters, where the explained variable is the intensity indicator (usually in some transformed form, most often a logit) and the explanatory variables are age, period, cohort, and there are only two independent variables, because period = cohort + age.

Conclusion

This article outlined just some of the latest methods in demography, but like the references to literature the outline itself is not exhaustive. There are of course all sorts of other models that pick up and elaborate on the older ones. For example, the stable population model was expanded by the concept of quasi– and semi-stable population (*Pichat* 1994), model life tables or models of fertility and nuptiality have been advanced and are summarily described in a UN publication (*Indirect Techniques* 1983). The translation equations expressing the relationship between cross-sectional and cohort indicators remain today the subject of discussion (*Calot* 1992; *Bongaarts et al*. 1998; *Keilman* 2006).

Demographic study does not limit itself just to methods developed for the specific needs of its field, but instead it successfully applies other techniques used in related fields. These include, for instance, other types of regression models, factor analysis, correspondence analysis, or cluster analysis. We can even find publications devoted to causal modelling (*Wunsch* 1988) or qualitative research (interdisciplinary method based on a large amount of information on a small number of individuals and used to create a holistic picture of the problem under investigation). These trends to some degree are connected to the widening thematic focus of demography and its increasing interdisciplinary nature, which engenders not just interaction between scientific fields but also methods. New methods introduce and open up previously unimagined possibilities, and this is also made possible by ever better and richer data bases and more powerful computers. On the other hand, more complicated methods and approaches make bigger demands on their being employed correctly.

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THE CURRENT 'BABY BOOM' IN THE CZECH REPUBLIC AND FAMILY POLICY[1)]

JIŘINA KOCOURKOVÁ[*)]

Abstract: In the past four years, the Czech Republic experienced a rapid surge in the birth rate as well as total fertility from the level called extremely low to 1.44 children per woman. The author analyses the context of the recent development of reproductive behaviour, connected with a change in the character of family policy in the Czech Republic after 1990. She outlines the measures adopted within family policy since 2000 and examines their influence on the change in the population climate in the Czech Republic. She uses a normative approach which stresses the vital harmony between the preferences of the public and adopted measures.

The effect of family policy on fertility continues to be an important subject of research. In fact, since the 1990s, as the differences between the fertility rates of European states have grown, and as some states have persistently experienced an extremely low (lowest-low) fertility rate, there has been a substantial increase in the number of studies focusing on the links between family policy measures and individual behaviour. The results of so-called micro-level studies have produced the more consistent findings and give evidence that a state's pro-natalist measures have an impact on fertility (*Neyer and Anderson* 2007). It is important to remember that this kind of research suffers from a number of methodological drawbacks, and one, for example, is the method used to conceptualise family policy. However, it is impossible within the scope of one short article to cover this problem in its full breadth. This article is based on the so-called normative approach, according to which patterns of family behaviour can be influenced by policy measures adopted by the state. The potential effect of these measures then primarily stems from the extent to which the adopted measures correspond to public expectations and to what extent people are willing to adapt their behaviour to the behavioural norm advanced by the state. At the same time, it is necessary to take into account that within the framework of a given family policy individual measures operate in conjunction with other, already existing or newly introduced measures. This article refers only to the most important changes that have occurred since the 1990s, which primarily involved changes affecting the financial support designated for families with children and the provision of child day-care.

Trends in fertility and the conditions for fertility since 2000

In the past four years there has been a substantial increase in the number of live-born children in the Czech Republic, often described by the media as a 'baby boom' (Fig. 1). Fertility began rising in 2002, but since 2005 the annual number of live-born children has clearly accelerated (*Šťastlerová* 2008). According to the most recent information from the Czech Statis-

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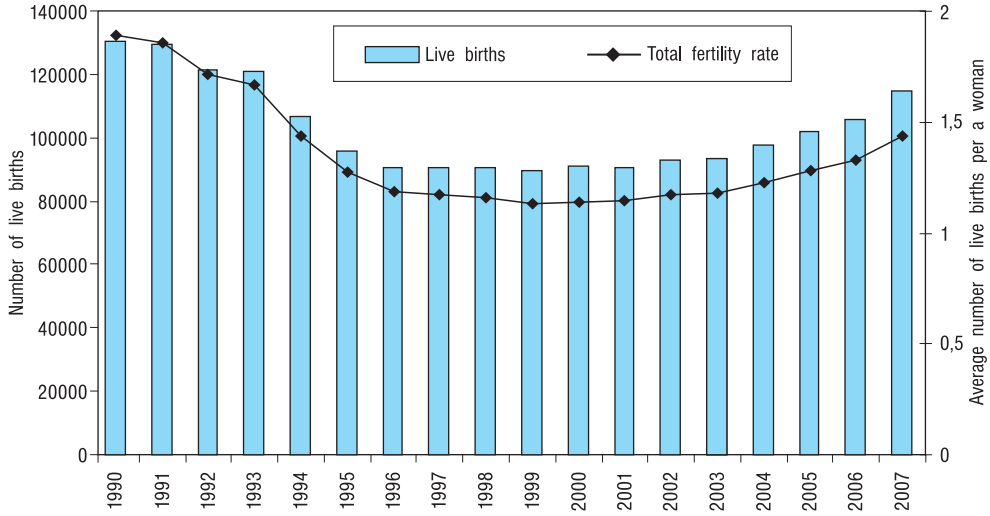
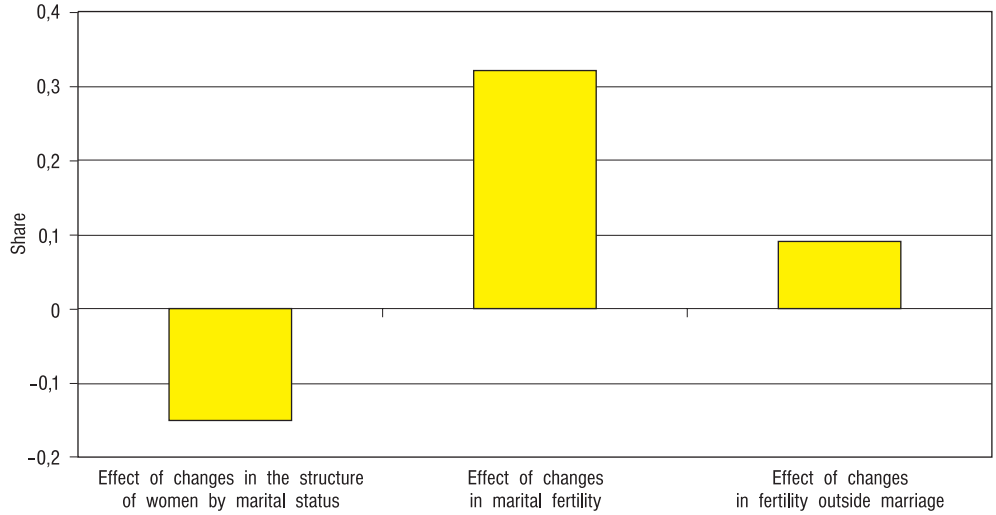
Figure 1 Development of live births and of the total fertility rate



tical Office, more children were born in the first quarter of 2008 than during the same period in 2007, yet the inter-year change was not as pronounced as it was at the start of the year 2007. So in 2008 it is possible to expect decelerated growth and in the next two years a halt to growth. An eventual decrease in the annual numbers of live-born children will be unavoidable because the number of women of reproductive age, in particular women aged 25–34, is gradually decreasing. Therefore, this recent increase is genuinely a population wave, the main cause of which, however, is not that women born in the large population cohorts in the 1970s are having children. Indirect standardisation showed that in 2007 only 1530 more children would have been born than in reality were the specific fertility measures of women from 2007 applied to the age structure of women in 2003. The generation of women born in the population wave of the 1970s were already reaching the age of highest fertility at the end of the 1990s. However, the larger number of women of reproductive age only became apparent in increased fertility intensity in the past four years. The effect of changes in the number of women of reproductive age as a result of the population wave of the 1970s will be more apparent in the near future, when the annual numbers of live-born children will decrease, even if total fertility rate remained unchanged. Nevertheless, the speed of the decrease in the number of live-born children will depend on the trend in total fertility rate.

For an entire decade total fertility rate in the Czech Republic was at level called lowest-low fertility, and for this reason the increase to 1.44 children per woman in 2007 warrants attention. Nevertheless, it still has not reached the level of 1.5 children per woman, which some demographers describe as critical in order to maintain the population balance (*Lutz and Skirbekk* 2005). The decomposition method indicates that the increase in total fertility rate by 0.26 between 2003 and 2007 was mostly influenced by the increase in marital fertility (Fig. 2). The trend in the structure of women by marital status worked against any increase in total fertility rate. The reproductive behaviour of the population in the Czech Republic changed dramatically compared to the start of the 1990s. The so-called timing effect is sometimes mentioned in this regard, where in total fertility rate remains at a low level owing to the shift in women's fertility to a later age (*Sobotka* 2003; *Rabušic* 2006). It is expected that fertility will return to a higher level on its own following an increase in the fertility intensity of older women. The

Figure 2 Contribution of three components to the increase in total fertility rate in the Czech Republic, 2003–2007



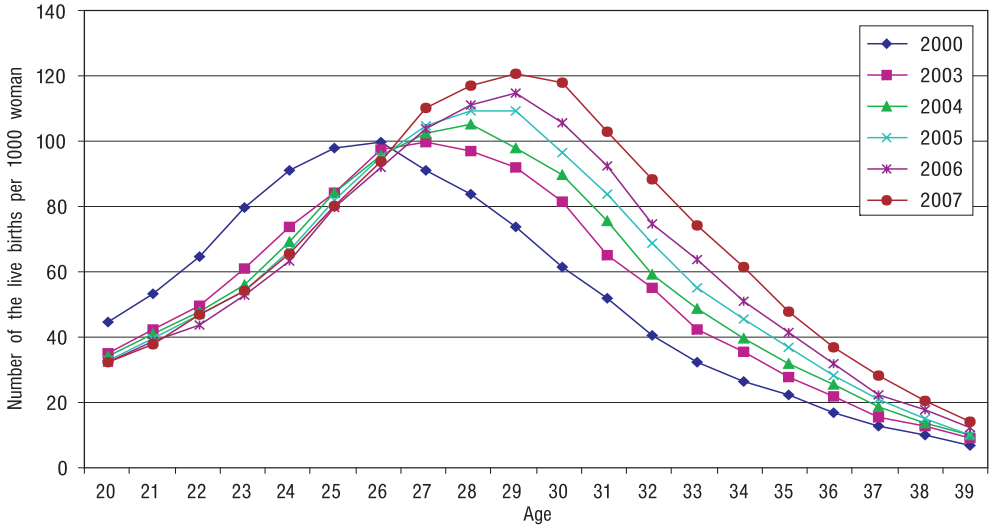
Note: The decomposition method is based on the following relationship: TFR = $\Sigma f_x^m \cdot p_x^m + \Sigma f_x^n \cdot (1 - p_x^m)$ where f_x^m is marital fertility rate, f_x^n nonmarital fertility rate, and p_x^m proportion of married women.

compensational effect of the shift in fertility to a later age in the Czech Republic can be seen in the fact that since 2004 the fertility intensity of older women aged 33–37 has increased. These are women who were born in the first half of the 1970s, who had thus far been postponing having, in most cases, a second child, probably owing to unfavourable conditions. Higher fertility intensity has also been recorded since 2004 among younger women aged 28–30. The generation of women born in the second half of the 1970s is already showing higher fertility intensity (aged 25–29) than women born in the first half of the 1970s did at that age.

The recent increase in total fertility rate can thus be regarded as a result of the coincidence of two phenomena: the delayed compensation effect, and the emergence of a new regime of reproductive behaviour. Until 2003, the fertility curve, i.e. the distribution of fertility rates by age, was only moving towards a later age (Fig. 3). The increase in the fertility intensity of women around the age of 30, which has been apparent since 2004, is a distinct indicator of the formation of a new model, the so-called model of delayed fertility. In the period between 1990 and 2007 the peak of the fertility curve shifted by eight years to reach the age of 29. While women in the generation born in the first half of the 1970s can be regarded as the initiators of the changes in reproductive behaviour, women born in the second half of the 1970s are already behaving according to the new reproductive regime.

The question arises of whether we would be recording a similar increase in fertility intensity if in 2001–2005 the Czech Republic had not adopted a set of measures designed to support families with children as part of its family policy. The possible effect of these measures coincides strikingly in timing with the recent revival of the fertility rates of women in the Czech Republic. There are two points that can be mentioned that indicate a change in the population climate. First, the onset of compensation for the extremely low fertility recorded in the second half of the 1990s could have been expected around five years earlier, when women born in the population wave of the first half of the 1970s were reaching the age of 25–29. Second, it is found that when the right conditions are created for starting a family there are many women who probably have no intention of postponing motherhood until after they reach the age of 30. Of course, it is necessary to assess the improvement of living con-

Figure 3 Women's age-specific fertility rates



ditions for families in the Czech Republic in a wider context than merely the adoption of new family policy measures. The creation of a more favourable population climate has also been significantly influenced by recent economic growth[2)] and the development of housing policy measures and greater access to mortgage credit. This confirms the first hypothesis that without improving the conditions for starting a family it is not very likely that total fertility rate would have risen beyond 1.5 children per woman on its own (*Rychtaříková* 1999, 2000; *Kučera* 2001, 2002; *Sirovátka* 2003; *Kocourková* 2006b).

Family policy in the Czech Republic before and after 2000

Since the start of the 1990s Czech society has undergone a dramatic transformation that has affected many areas related to the living conditions of families with children and the factors that impact starting a family. Yet, until almost the end of the 1990s, Czech politicians paid little attention to family policy. Change only occurred once the Social Democratic Party (ČSSD) formed the government, in which the Minister of Labour and Social Affairs, *Vladimír Špidla*, initially tried to resurrect some measures that had existed earlier, such as universal benefits. Only later were proposals for new measures put forth. From a political perspective the course of development of support for families over the past fifteen years can be described as unstable and primarily oriented towards strengthening financial support for low-income families with children. Most measures were adopted as asystemic steps[3)], usually as the outcome of the often disparate approaches of the three main political parties – the Civic Democratic Party (ODS), the Social Democratic Party, and the Christian Democrats-Czech People's Party (KDU-ČSL). In the 1990s the discussions in expert circles focused on the very need for a family policy and were eventually replaced by debates about the character of family policy in the Czech Republic (cf. *Kuchařová* 2007). On the whole it is only in 2001–2006 that we can

[2)] After overcoming economic decline in 1997–1998 the economy of the Czech Republic began to grow continuously (Jahoda and Kofroň 2008). GDP has grown at an increasing pace since 2003 and in 2005 reached 6.1%. Wage trends responded to economic growth, as in the given period both nominal and real wages grew.
[3)] Many measures were not adopted as government initiatives but as MP initiatives.

begin to speak of any advancement of measures designed to support families with children, especially from the perspective of expanding opportunities for individual solutions. When ODS returned to office the primary objective was to cut back on state budget spending, and in 2008 that primarily affected benefits intended for families with children: the child allowance, the birth allowance, and the parental allowance.

Although the fertility rate fell sharply during the first half of the 1990s, the key period in its later development came in the second half of the 1990s. It was possible to explain the cutbacks to support for families at the start of the 1990s in relation to the fact that the system designed before 1989 was untenable in the new social conditions and that it was necessary to create a new system. However, this new system focused only on families in social need, and no new measures in support of families with children were adopted. The Czech Republic had to cope with economic difficulties, and there was no effective housing policy or family policy. Given the unfavourable conditions, in the late 1990s there was still no sign of any compensation for delayed fertility, despite the fact that such compensation might have been expected if the change in reproductive behaviour had occurred mainly as a result of the onset of new social conditions and the related valued changes among the young generation. It was only with the turn of the millennium that a gradual improvement in conditions occurred and subsequently there was some compensation for the previous low fertility among women at the age of highest fertility. It appears that young women who postponed motherhood in the 1990s began to have better conditions for starting a family once they reached the age of 33 and over. It can also be assumed that once women are older they become aware that their last chance to have a child is approaching, as most women want to have children.

A number of policy measures were introduced after 2000 and their main goal was to ensure financial assistance for families and support individual/parental care for children under the age of 3 within the family (*Kocourková* 2006a). Recent analyses have shown that the rise in income from employment had the biggest impact on the financial situation of households with children (*Jahoda* 2006). The Czech Republic employs two instruments to provide financial assistance to families with children: state social benefits and tax relief. However, a feature of development to date is that there is little interconnectedness between these two instruments and their impact on the financial situation of families is fragmented. The increase in the amount of some benefits – for instance, in 2001 the birth allowance increased from 6400 Czk to 8450 Czk and in 2006 to 17 500 – may have created the impression that social support for families increased, but the main trend in recent years has been a real decrease in benefits for children. The child allowance in particular has been affected, as it has become gradually targeted to just the lowest-income households (*Jahoda and Kofroň* 2007). The only exception is the parental allowance, which since 2005 has been the most important benefit paid to parents with children.

What proved to be a significant measure was the elimination of a cap on earnings for parents collecting a parental allowance, the objective of this being to increase the living standard of families and at the same time to help mothers to remain in contact with the employment sector (this measure came into effect on 1 January 2004). However, according to studies only less than one-fifth of mothers took advantage of this possibility in different (including short-time) forms. The parental allowance was also increased several times. The first important increase, by 40%, was passed on 1 May 2004. The next substantial increase was made in connection with the pre-election political-party contest, when effective 1 January 2007 a doubling of the parental allowance effective was passed, raising it to an amount equal to 40% of the average monthly wage in 2005. Another measure introduced was the extension of the amount of time a child can be in day-care without the parent losing entitlement to receive the parental allowance. Since 1 February 2006 a child over the age of 3 can be in day-care for up to four hours a day.

Unlike benefits targeting children, tax support for families with children has grown in significance in recent years[4]. An important basic tax instrument is the child tax credit, which between 1993 and 2004 took the form of a tax deductible item for each child; in a progressive tax system that means greater effective support for higher-income taxpayers[5]. From 2005 this was replaced with a tax advantage for each child, which can take the form of a tax allowance or a tax bonus of 6000 Czk per year per child raised. This targeted the financial support more towards low-income families because it resulted in a progressive income tax. At the same time, since 2005 joint taxation of spouses was introduced as an option, the objective being to strengthen the financial self-sufficiency of families. However, this modification, which gives an advantage to families in which the mother is either at home or has low income, applied for just three years[6]. A new tax system has been in effect since 2008, which increases the tax allowance for children and a spouse living in the same household if their income does not exceed a certain limit. Joint taxation can no longer be used, but as *Höhne* (2008) notes, changes in the tax and benefits system introduced in 2008 may help increase the motivation to participate in the labour market, reduce dependency on social benefits, and indirectly help support the traditional family model.

In the first stage of social reform in the Czech Republic, a change was made to the system of parental leave. In conformity with the trend in Europe, the main objective of this reform was to make the duration of parental leave more flexible. Now parents can choose one of three parental-leave regimes differentiated by the duration of leave. The main change was the introduction of 'short-term' parental leave, according to which a higher allowance (11 400 Czk) is paid for a two-year period; this measure is designed for women who want to return to work earlier than the standard three-year period.[7]. The traditional parental allowance (7600 Czk) is paid for a period of three years. With long-term parental leave, 7600 Czk is paid for just 21 months and then 3800 Czk is paid for the next 48 months. In the next step of reform, the current government intends to expand the spectrum of care services for pre-school-age children, for instance, by supporting the development of in-company day-care and the option of personal care by a non-parental figure. However, a less auspicious change was the reduction of two benefits intended for families: the birth allowance and the child allowance. Since 1 January 2008 the birth allowance has been reduced to 13 000 Czk. Also, the range of parents eligible to receive the child allowance became smaller, and the child allowance is now more like a social benefit intended for families with low per-capita income. More than ever before, this benefit is now like a kind of 'poor benefit', and that could be reflected in an increased risk of child poverty and material deprivation (*Hora, Kofroň and Sirovátka* 2008). The changes that have been ushered in since 2008 through simultaneous tax and social reform have served more to exacerbate the instability of the conditions generated by the state for families with children and may be viewed negatively by the wider public (*Kocourková* 2007). Previous studies that have examined the relationship between financial support and the fertility rate have revealed that limiting already existing advantages more often has a stronger (negative) effect than the small, often negligible (positive) effect of increasing financial support for families.

[4] R. Bláha of the Czech Ministry of Finance wrote in a paper he presented at an international conference on family policy in 2006: '…following all sorts of legislative amendments benefiting the family it finally pays in the Czech Republic to start a family and have children, even from a tax perspective…', cited in proceedings from the conference 'Complex Family Policy as a Priority of the State – Is the Czech Republic Family-Friendly?', November 2006, Ministry of Labour and Social Affairs Prague.

[5] In 2004, 25 560 Czk per child was annually deductible.

[6] In advanced countries it has been possible to observe somewhat of a departure from joint taxation, as in a long-term perspective it can have a negative impact on women's employment.

[7] Only a parent whose financial assistance in maternity is equal to at least the amount of the parental allowance as calculated at this higher level, i.e. 380 Czk a day, is eligible to take up short-term leave.

The current level of support for families in the Czech Republic can be said to have reached the European standard. A specific feature of family policy in the Czech Republic remains its preference for personal parental care over other forms of care for children. The country has one of the longest periods of maternity and parental leave, but with an entitlement to average financial compensation during this period. Paternal leave has not yet been established in legislation, though a proposal for its introduction has already appeared in the plans of the current Minister of Labour and Social Affairs. Parental leave does not stipulate any 'quota' for fathers, i.e. a requirement that a certain amount of leave be taken by fathers. Although men in the Czech Republic have had the same entitlement to leave since 2001, they very rarely take advantage of it. Less than 2% of fathers in the Czech Republic take parental leave (*Nešporová* 2006). However, the nature of parental allowance in the Czech Republic is different from what would correspond to the allowance parents are entitled to in other European countries. Given that parents are entitled to work without any restrictions while collecting this allowance and can under certain conditions also place their child in day care, it is essentially a benefit for caring for children up to the age of 4. There has been a clear shift in the area of financial support away from family benefits and more towards tax benefits. Nevertheless, families still take advantage of tax credit options to less of an extent; for instance, it is not possible to deduct expenses for the education of a child. The child allowance, which used to be the most important benefit targeting families with children, has assumed the character of a social benefit[8)]. However, this trend is rather unique in Europe, as in most states the effort is to retain the universal character of this benefit (*Kocourková* 2004).

The problem with the normative character of family policy

When studying the effect of family policy measures on the population's reproductive behaviour it is necessary to consider to what degree the adopted measures correspond to public expectations. *Bourdieu* (1966) points out that through its family policy the state can play a role in shaping certain norms of family behaviour. Family policy can also include measures that favour a certain type of family behaviour. The impact of these measures depends on how they are viewed by the public and to what extent people are willing to adapt their behaviour to the norm established by the given state. Since the 1990s the main trend in the EU has been towards transferring care for children up to the age of 3 partly outside the family. At the same time, individual EU Member States have proposed and gradually adopted measures aimed at furthering greater gender equality in the labour market and in childcare. In the Czech Republic, like most post-communist states, the change in political regime was followed by a swing towards more traditional values. The new governments in these states showed less support for gender equality and made little effort to promote economic activity among mothers with young children. Recent studies have shown that this largely conformed to public expectations. The public expressed strong support for financial benefits and a long period of parental leave, and, conversely, showed little interest in state childcare facilities for children up to the age of 3[9)].

Since the start of the 1990s relatively strong emphasis has been put on moving childcare into the family in the Czech Republic, without any support for gender equality. *Sirovátka and Bartáková* (2008) claim that this was probably the replication or even the continuation of a model that had already been established under socialism. They conclude that the so-called re-

[8)] M. Kudlová of the Ministry of Labour and Social Affairs has said that out of the total state material support for families only 58% is provided in the form of family benefits, while 42% is provided to families owing to their low income, i.e. as poverty assistance. The share of expenditures on family policy has been decreasing in recent years, while the share of expenditures on poverty has been increasing.

[9)] The harmful effect of nurseries on the psychological development of children was identified back during their widespread development in the former Czechoslovakia: Nováková 1957; Landmeier and Matějček 1964).

familisation process enjoyed strong support within Czech society. The process entailed adherence to the traditional gender division of labour in the household, a strong preference for caring for children under the age of 3 at home, and little support for the economic activity of women with young children in the labour market. For this reason the Czech public preferred childcare-related financial compensation for families over support for women's participation in the labour market. Nevertheless, *Sirovátka* (2008) has shown that the general values of Czech society are to some degree at odds with traditional gender arrangements. For example, men and women with higher education prevailingly favour an egalitarian family model. Gender arrangements are significantly influenced by the given institutional and structural context. For example, given the continued gender pay gap in the Czech Republic, family policy's focus on financial compensation seems the most appropriate solution. Only a departure from the traditional institutional context might contribute to a shift in preferences relating to family policy measures.

The Czech public still strongly favour various forms of financial support for families with children. It seems that this fact was underestimated in the 1990s and may have contributed to prolonging the unfavourable population climate. As some survey results have shown, measures adopted in 2001 and aimed at improving the conditions of parental leave largely conformed to the Czech public's expectations. For example, according to the results of the Population Policy Acceptance (PPA) survey in 2001 the majority of the population would most welcome measures aimed at improving the financial situation of families (*Kocourková* 2006b). One of the possible explanations for the recent increase in fertility intensity could be the greater financial support given to families with small children as a result of a simultaneous increase in the birth allowance, the introduction of the joint taxation of spouses, and the doubling of the parental allowance. Among families in which one parent was on parental leave for at least three years many may have experienced financial difficulties. In this context, the financial compensation of women on parental leave is viewed as much more important than the adoption of measures supporting the development of extra-family childcare.

Given that Czech society still favours traditional gender roles in the family, the reform of parental leave that came into effect in the Czech Republic on 1 January 2008 can be regarded as reasonable. This reform marked the start of the gradual transition from the model of long parental leave to a model more oriented towards women's employment. This constituted a rejection of a more radical approach that would have involved cutting the length of parental leave and introducing quotas for fathers. In terms of typology (*Wall* 2007), the newly introduced 'three-speed' system of parental leave in the Czech Republic brought it closer to a model 'oriented towards parental choice', which can be found in France, Norway, and Finland. A shorter period of paid parental leave and the prioritising of childcare outside the family, which is typical for Sweden, Ireland, Denmark, and Slovenia, appear to be less acceptable to the Czech public. Nevertheless, Germany, for instance, which until recently typically represented a parental leave model supportive of the traditional family, has headed down the 'Swedish' path[10]. Germany has long ranked among the countries with the lowest fertility rates. *Neyer and Andersson* (2007) note that one of the reasons for this was the persistent imbalance between development in society and the orientation of family policy. Until recently Germany supported the traditional male-breadwinner model of the family. As the rate of women's employment rose and the need for two incomes in the household grew stronger, and as consensual unions became more widespread, the nature of the state's family policy ceased to meet the expecta-

[10] The length of parental leave in Germany was shortened in a Reform introduced in 2007. Parents now have the opportunity to decide whether to take one-year leave with financial compensation at 67% of their wages or two-year leave with financial compensation at 33.5% of previous wages. In addition, two months were added for fathers in the case of one-year leave and four-months in the case of two-year leave. At the same time steps were adopted towards fulfilling the Lisbon requirement that by 2013 one-third of children under the age of 3 should be in a day-care facility.

tions of young people. This discord was perceived as an obstacle that had a negative impact on the population climate, as the share of deliberately childless women grew.

One of the models currently being promoted at the EU level is 18-month parental leave, 6 months of which is for the mother and 6 months for the father, and in the other 6 months both parents can take up leave according as arranged between them. The argument is that only by setting quotas for men will any real change in the behaviour of parents come about. Nevertheless, the policy of the current government in the Czech Republic suggests that they have no intention of replacing the current practice of favouring individual childcare in the family with a new practice aimed at transferring care for children under the age of 3 outside the family and significantly involving fathers in caring for the family. The aim is more towards expanding the range of options to choose from and respecting the different strategies used to organise family life. According to the current Czech government, it should not be the aim of family policy to 'force' mothers to go back to work earlier at the expense of family life. Czech society still takes a critical view of institutional care for children up to the age of 3, owing to the situation before 1990, when employment was mandatory, so women were forced to leave very young children at a nursery so that they could work. A lack of knowledge about the specific features of the Czech environment and the country's historical context often lead foreign experts to make misguided conclusions in their recommendations for the Czech Republic[11)].

Conclusion

While in the 1990s the role of family policy was often called into question in the Czech Republic, and not just by representatives of right-wing politics but also some Czech experts, at present it occupies an important place in family policy. It is increasingly more apparent that the functioning of the family is a key issue for society. Family policy has gradually become an important issue in the electoral contest between political parties. The discussions about the pros and cons of family policy and how much the state should interfere in family life have been replaced with reflections about what approach family policy should take to support families. An important role in this was played by the adoption of the Concept of Family Policy in the Czech Republic in 2005. Its significance lies in the fact that it is the first explicitly formulated family policy in the Czech Republic and the first acknowledgement of the state's responsibility for creating the conditions for families with children. Although subsequently this Concept was partly revised by the newly elected right-wing government, its existence may help secure family policy a necessary level of stability.

Creating a stable pro-family environment should be the primary goal of family policy, because, as has been found in other European states, long-term, systematic attention to families with children by the state can positively influence the trend in fertility. Family policy's next steps should be directed towards the further development of proven instruments, adapting them to the new circumstances, and expanding the range of options for individual solutions. There is no need to experiment or to get rid of effective instruments and introduce new ones. It is better to start out from an existing, proven system and create the possibilities for other solutions. The question remains to what extent promoting a specific European model should be the objective and to what extent the specific circumstances in this state should be taken into account. The Czech government very deliberately refuses to submit to some EU requirements. In its view the model currently promoted at the EU level is very normative and aims to promote the Swedish model on a Europe-wide level.

Although the adopted concept of family policy in the Czech Republic is regarded as interministerial, in institutional terms it falls within the scope of social policy, which to some ex-

[11)] For example, Klasen and Launov (2003), based on their own analyses, one of the key factors behind the low fertility rate in the Czech Republic is the shortage of available places in institutional childcare.

tent limits its further development. Unlike social policy, which mainly targets low-income families, family policy ought to create a wide spectrum of instruments designed to support all families with children, regardless of their income level. The primary goals of family policy current include creating conditions that will allow parents to better combine work and family. In this context, it is difficult to comprehend the current government's decision to separate equal opportunity policy from family policy.

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CIRCUMSTANCES SURROUNDING FIRST SEXUAL INTERCOURSE AND BIRTH CONTROL BEHAVIOUR OF PREGNANT WOMEN AND MOTHERS UNDER THE AGE OF 20[1)]

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Abstract: The author of this article examines the reasons for the 'responsible' or the 'irresponsible' sexual behaviour of young women who become mothers while still in their teens. The emphasis is placed on partner communication connected with first sexual intercourse and the increased risk of sexual abuse among the observed population.

Sexuality in adolescence as an important factor in the transition from childhood to adulthood

In connection with the life strategies and reproductive behaviour that researchers studying the issue of adolescent mothers usually focus on, it is important that they also examine the sexual behaviour and the timing of the first sexual intercourse of these women. The circumstances of sexual activity are significant predictors of demographic events such as fertility and abortion among teenagers. During adolescence, sexuality, sexual behaviour, and related decisions become a very important part of life, mainly owing to physical changes, pressure from society and the media, attempts to conform to peer values, personal curiosity, and finally also the longing for independence from one's own family.

The start of sexual activity represents a certain turning point in the physical and mental development of men and women in every society. The age at which people first become sexually active and the circumstances of a first sexual intercourse can have temporary or long-term consequences for the individual going through the experience. Once women become sexually active there are health and social consequences to this behaviour, especially if the woman becomes pregnant and the pregnancy leads to unplanned parenthood or to an induced abortion. In some cases, sexual intercourse at an early age occur involuntarily – e.g. as a result of rape, incest, or prostitution for financial or other reasons. In addition, from the moment of the very first sexual intercourse an individual is exposed to risks connected with sexually transmitted diseases (*Alan* 1989). In the light of these facts, the sexual behaviour of adolescent mothers is generally described as risky behaviour.

For this reason we were interested in learning how teenage mothers evaluate not just their sexual life in the past but also in the present, and how they view their first sexual intercourse in retrospect and what their views are on birth control behaviour. It is the failure to use or the inconsistent use of birth control that has sent their lives in a different direction than what the girls would once have imagined.

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The theme of sexual and birth control behaviour of pregnant teenage women and mothers was part of a wider qualitative study of such a group of women, which was conducted between March and June 2004. As part of this study, 58 semi-standardised in-depth interviews were carried out with women who were pregnant or gave birth to their first child before the age of 20[2]. With a view to our topic, the methodology used in the qualitative survey followed an interpretative approach, with the objective of describing the phenomenon in the words of the teenagers themselves and thus of taking into account their perspective of the issue.

The circumstances surrounding the first sexual intercourse of pregnant teenagers and teenage mothers

From a health perspective, the ideal first sexual intercourse should be a planned (not a shock), desired (by both partners), protected (against unwanted pregnancy and sexually transmitted diseases) intercourse that gives both partners enjoyment and makes both of them happy (*Mitchel and Wellings* 1998). It is difficult to determine the ideal age at which the first sexual intercourse should occur and it depends on the situation of each individual. It is necessary to consider the asynchronous nature of the process of growing up, i.e. people mature biologically faster than they do socially or psychologically. However, with regard to the population of teenage mothers, their description of their first sexual intercourse is usually little like the ideal described above:

It was at a party… we were celebrating someone's birthday, and I was really drunk. And then I don't know, I just started something with this guy, I didn't even know him. When I saw him after I realised that I didn't even like him. (Kristýna, age 19, one daughter aged 2 months)[3].

Age at the time of first sexual intercourse

According to available data, the observed population becomes sexually active at a much younger age than the average in the Czech Republic. In the sample in our study, the average age of girls at the time of their first sexual intercourse was 15.2 years. Currently the average age of first sexual intercourse for the population of the Czech Republic, for both males and females, is 18 (*Weiss and Zvěřina* 2004)[4].

The fact that women who become mothers as teenagers begin to be sexually active at a younger age than their peers has been confirmed in a number of foreign studies. However, they usually invert the relationship, i.e. girls who become sexually active at a younger age than their peers are more likely to become pregnant by the age of 20 (*Hofferth et al.* 1987; *Harvey and Springer* 1995). Twelve girls (21%) in our sample had even become sexually active before the age of 15, which according to legislation currently in effect in the Czech Republic[5] is the legal age limit for sexual intercourse. A shared feature of this group of girls was that the majority were Roma. Out of the twelve Roma girls in the sample exactly one-half had become sexually active before the age of 15.

[2] To ensure the data were current, the maximum age of the respondent's first child was set at 3 years; so the respondents should have been no older than 23. The screening of pregnant teenagers and teenage mothers was conducted by contacted staff at health facilities, staff of various social centres, civic associations, and charities. The interviews were conducted throughout the country and took between 35 minutes and 1 hour and 35 minutes. However, considering the issue, the sample is not and cannot be representative.

[3] The names of the girls have been changed to preserve the anonymity of the respondents.

[4] The figures are the average for the whole population of the Czech Republic aged 16 and over.

[5] According to § 242 of the Penal Code it is a criminal offence to have sexual intercourse with or in any way sexually abuse a person under the age of 15.

Sexual abuse

Sexual abuse unfortunately not infrequently comes up as a factor connected with early parenthood and the girls affected will most likely have to come to terms with the consequences of this abuse for the rest of their lives. Five of the girls in our sample were sexually abused at a young age by their own father or step-father. Two of these girls suffered the abuse after their father had obtained custody of them following their parents' divorce.

I[6]: It must have been really bad, you moved a lot and then from age 14 you were sent to a children's home, and someone figured out that you'd been beaten at home?

R: No, that wasn't the reason. My dad raped me, then I went to tell the cops and my mom didn't believe me, so they put me in a children's home… They investigated it, but then I took it back and said it wasn't true. It was getting to me, on my nerves. The constant interrogations and stuff…. (Nela, age 19, one daughter aged 6 months)

R: …I was already grown, but dad was alone, so it started to be kind of hard… It was that I was getting big, and he was a guy and I was a girl… I didn't understand it then, I don't know if he tried to explain it to me, but it was intimate, it wasn't nice.

I: Did he abuse you in some way?

R: Yes… I was in the sixth grade.

I: And did you tell anyone?

R: And if I told someone, then, of course, who's going to believe a little girl, right? (Patricie, age 19, four months pregnant).

For all the girls who had been abused or raped the memory of it was still very vivid, even though most of them were talking about it several years after it had happened. Our finding that teenage mothers often grow up in a home environment where rape and abuse has occurred conforms to findings in foreign studies (*Boyer and Fine* 1992; *Swenson* 1992), which indicate that there is a close relationship between teenage pregnancy or motherhood and a history of sexual abuse. Sexual abuse is also associated with becoming sexually active at an early age. Women who had become sexually active at a very young age, i.e. before the age of 15, indicated more often than others that they had been raped, that their first sexual intercourse had been involuntary, or that it had occurred outside a long-term relationship (*Elo et al*. 1999).

In addition to sexual abuse in the family, another three girls described their first sexual intercourse as rape (Lenka, Tereza, Erika). Romana, another girl, did not describe her first sexual intercourse as rape, but according to her it was involuntary and forced, even though it was with a partner she was in a relationship with.

The vulnerability of the girls in the study was caused by the background family, in which the mother had frequently changed partners over time and that increased the risk of possible abuse. In cases where the mother's partner had committed such abuse and the girl dared to tell her mother, in an effort to save her relationship the mother refused to believe the girl and either ignored what she said or, worse, accused the girl of being responsible for what had happened because of her provocative behaviour.

Then it got worse, he [the mother's partner] *started taking advantage of me in front of my friends, he'd like come and touch my underpants, so I told mom…Even her family* [the mother's parents and grandparents] *were saying that I'd been doing everything to get him into bed, that I was jealous that mom had him* (Romana, age 17, one son age 1 month).

In the observed population sexual abuse or harassment in the family often made the girls worried about or afraid of being intimate in the future.

[6] I: Interviewer, R: Respondent.

First sexual intercourse: anticipated or accidental?

If we go back to the circumstances of the first sexual intercourse and focus on girls who were not sexually abused, we find that only very few of them evaluate their first sexual intercourse as an event that was planned and anticipated, even though more than one-half of them had their first intercourse with a partner they were in a steady relationship with.

Many of the girls' narratives about their first sexual intercourse made characteristic use of the word 'mistake'. Also, 21 girls described their first sexual experience as 'a one-night stand'. Only two girls prepared with their partner for their first sexual experience beforehand. Both of these girls had their first sexual experience with partners for whom it was also their first time. Although the observed sample contains girls who had their first sexual experience with a steady partner they were in a relationship with, except for the two just mentioned none of them talked about the experience with their partners beforehand. The timing of their first sexual experience was described as 'it happened suddenly', 'it just happened', 'it occurred all of a sudden', etc.

The data show that it is very difficult for inexperienced adolescents to talk to each other about first intercourse. The lack of communication about sexual life is then reflected in a failure to make adequate use of protection during intercourse, which can have far-reaching consequences (see the chapter 'Birth control behaviour of adolescent mothers: attitudes towards protected sex'). The silence that surrounds first sexual intercourse may be the result of ambivalent feelings on the part of the girls. These feelings may derive from the disparate expectations of each partner.

The casuistries are confirmed by other empirical findings indicating that men are more perceptive than women of the stimuli and situations conducive to sexual intercourse (*Moore et al*. 1993; *Mitchel and Wellings* 1998), and this is both biologically and socially determined. Characteristics ascribed to men like being goal– and success-oriented and self-confident can also become apparent in sexual self-expression. It is not rare for the expectations of men to be fulfilled to the detriment of the expectations of their female partner, and the girls are pushed into something that they themselves do not yet want or are not yet sure about. Male dominance is most evident when the girls are unable, embarrassed, or afraid to talk openly about sexual intercourse with their partner. These circumstances can ultimately lead the girls to feel confused and unhappy about the act of sex. Male dominance in a relationship is all the more present in the case of teenage mothers, as they become sexually active at a very young age.

I: When did you first make love with someone? How old were you?

R: Hmm, I was, I think, something like fifteen, I guess.

I: And who was it with? Was it someone you had been seeing for some time?

R: No, I mean I knew him for some time, and then I used to see him sometimes for a while, but, I don't know, it wasn't like we were going together or anything… So he, I don't know, he ran into me, he had some ideas, and I liked him too, so we just like… and so it just somehow…

I: How did you like your first sexual intercourse?

R: Well it was nothing really. It was just sort of smack bam and then nothing. (Aneta, age 18, five months pregnant).

Based on available data, it is apparent that the majority of girls had similar feelings about their first sexual intercourse. Only four girls explicitly said that they liked their first sexual experience and enjoyed it. The others assessed it either in neutral terms or in the majority of cases they indicated feelings of pain or disappointment. In the discourse of contemporary adolescents pain is an essential part of the first sexual intercourse. Many girls indicated that they were afraid of their first sexual intercourse based on information they got from their girlfriends.

R: I was afraid of the first time, but then I liked it.
I: But you were afraid of it?
R: Yeah, I was.
I: Why?
R: Well, the girls, I was a virgin, they were experienced, so they told me that it doesn't hurt much, then one girl told me that it really hurts, that you bleed (Veronika, age 16, three months pregnant).

Some voiced the opinion that the first sexual intercourse is essentially a necessary evil and it is best to get it over with.

The first time definitely no [she didn't like it]. *I guess I felt good that I finally got it over with.* (Lydie, age 19, one son aged 1 year)

Promiscuous sexual behaviour and steady relationships

In the sample, 21 girls, or one-third of the sample, had their first sexual intercourse with the father of their child, and 16 (28%) of the teenage mothers had only one sexual partner in life, i.e. the father of their child. The research sample is of course very diverse, and it contains both girls who favoured long-term relationships and girls who had had several partners and brief acquaintances. Given the age range in the sample it would be inaccurate to observe the average number of sexual partners the girls had. What is interesting, however, is that some of the girls were unable to say how many sexual partners they had had, and that to some extent the sample divided into two groups. The first group contained those girls who had only had one partner, the second contained girls who had had multiple partners (usually around 5 or 6). Only one of the girls (Nela) was unsure who the father of her child was. To generalise on the basis of the data, the girls with a more promiscuous sex life usually came from more socially at risk families or grew up in an institution and generally were more inclined to engage in risky behaviour (running away from home, drug use, parties, alcohol, etc.). Foreign studies have also demonstrated the links between risky behaviour and the start of sex life at a younger age, alternating partners, and more frequent sexual encounters (*Hockaday et al*. 2000; *Harvey and Springer* 1995; *Gillmore* 1992).

I: Karel is listed as the father?
R: I didn't list anyone because I was going with this one guy and then I met Karel and I didn't know who's it was. I was going with Karel, but I had someone on the side because I didn't know if Karel was serious about me.
I: How did you find out that the child is Karel's.
R: Well she looks like him now, everyone says it.
I: You're still not sure?
R: Well, no, I'm not sure. (Nela, age 19, one daughter aged 6 months)

Birth control behaviour of adolescent mothers: attitudes towards protected sex

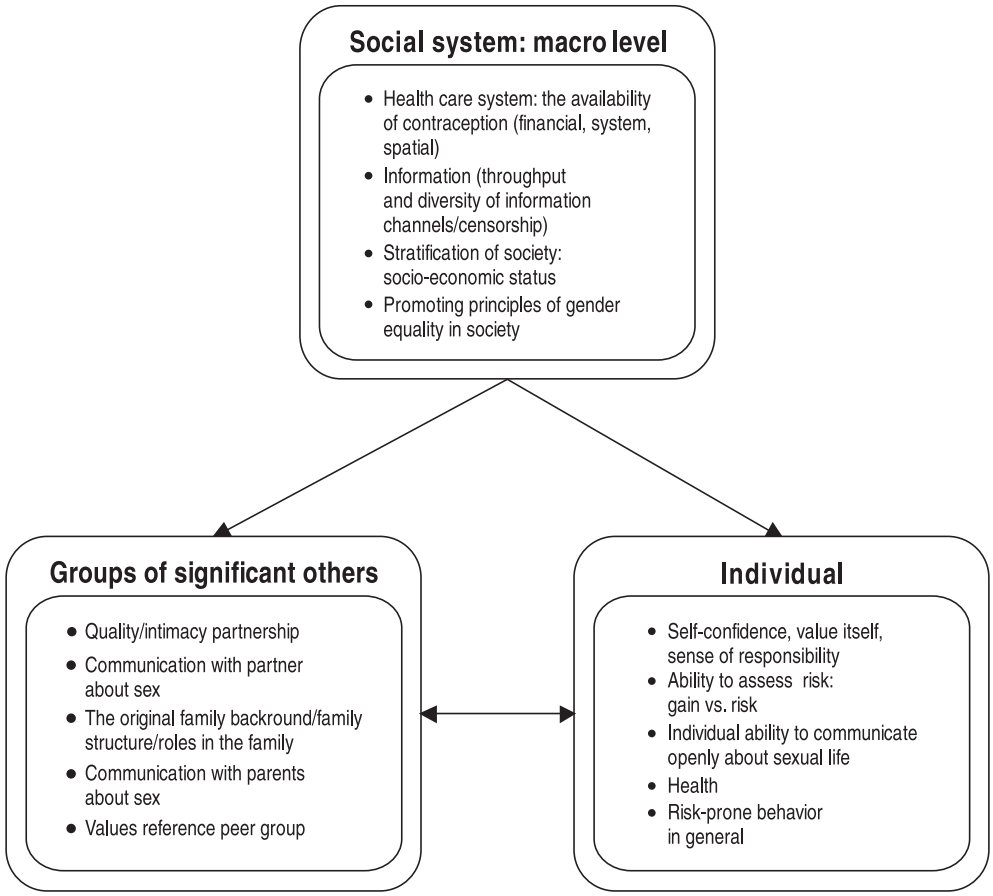
In Czech society, once an individual reaches the age of 15 he or she can freely make their own decisions about their sexual life. This freedom then also applies to choosing a method of birth control. While the system places almost no obstacles in the way of people who choose to use a condom during sex, the decision to use an IUD or birth control pills requires a visit to the doctor for a physical examination. Minors from the age of 15 do not however need their parents' approval to use any contraceptive method[7)].

Sexual activity at a young age is typically very irregular and thus also hard to predict. A responsible approach to sexual life thus requires more discipline and self-control from adoles-

[7)] Unlike induced abortion, where, if the woman seeking the induced abortion is under the age of 16, parental consent is required.

cents than it does from people who have a regular sex life. The problems with unreliable birth control behaviour are amplified by the lack of experience and the immaturity of adolescents. Although young people may possess theoretical knowledge, they lack the practical experience to properly use different types of birth control. Moreover, what also comes into play are certain characteristics and feelings that are typical for that stage in life when the identity of an individual is still forming, i.e. characteristics like a lack of confidence in one's self, indecisiveness, confusion, etc., which, for instance, make the entire process of physically getting access to a certain contraceptive device insurmountable because the individual may be too shy or embarrassed about it. The novelty of relying entirely on one's self can also lead to the responsibility being passed off on the partner. The close connection between the specific factors that influence the use of birth control during sex is illustrated in Schema 1.

Schema 1 Factors influencing the use of birth control methods in individual social systems



These factors are significantly responsible for the fact that even though the level of information is high and modern birth control is relatively widely available unplanned pregnancy among teenagers is still occurring. Therefore, studying birth control among young women also requires that their thoughts on sexuality and reproductive strategies as a whole also be

studied. Not all the women who became pregnant practised unprotected sex. Conversely, not all the women who did not use birth control during sex felt that becoming pregnant would be a big obstacle in life. However, the research work on this subject usually focuses just on how preventive measures failed and resulted in early parenthood and researchers rarely acknowledge that some girls may view parenthood in a positive light and may not do anything to prevent it (cf. *Vašková* 2006; *Forrest and Singh* 1990).

Protection during first sexual intercourse

To study birth control behaviour it is necessary to distinguish between protection during first sexual intercourse and protection when adolescents continue to be sexually active. As for methods of birth control, in this article we are focusing mainly on access to condoms and birth control pills, the two modern birth control methods used most widely among young people.

As indicated above, most of the girls did not plan their first sexual intercourse. This unpredictability means, for instance, that the likelihood that a girl will use birth control pills as protection against pregnancy is decreased.

In the sample of pregnant teenagers and teenage mothers 28 (48%) used a reliable method of birth control during their first sexual intercourse. Those girls who used protection most often used a condom (18 girls). However, the popularity of condoms decreases as young women continue to be sexually active. There were 10 girls who used birth control during their first sexual intercourse, a figure that seems relatively high. This fact can be explained by the relatively large number of girls in the sample who had been raised in institutions where, according to the girls, they are automatically prescribed birth control pills once they turn 15.

If we generally compare the population of teenage mothers with their peers we find that the rate of protection against unwanted pregnancy during first sexual intercourse does not differ much between this population and the other girls. According to the study 'Biographical Study of the Young Generation' dating from 2002 (BVMG02) 57%[8)] of respondents[9)] used birth control during their first intercourse. No statistically significant differences between men and women were found. A condom was the most commonly used method, just as it was in the population of teenage mothers[10)]. Another relatively interesting finding can be gleaned from the study, which is that birth control use during first intercourse depends on the age at which first intercourse occurs. Respondents who indicated that they did not use any contraception during their first sexual intercourse had sex for the first time at a younger age than those who indicated that they had used some form of protection (Tab. 1).

Table 1 Circumstances relating to the average age at the time of first sexual intercourse and the use of birth control during first sexual intercourse

	Sex	Used contraception	Did not use contraception	F– stat.	Sign.
Average age at the time of first sexual intercourse	Males	17. 6	16. 6	21. 08	0.000
	Females	17. 7	16. 9	20. 88	0.000
	Total	17. 7	16. 7	42. 98	0.000

Source: BVMG02.

[8)] The question read: 'Did you and your partner at that time use any birth control?' Even those respondents who had practised coitus interruptus or used the calendar method could answer in the affirmative. However, these birth control methods are not considered reliable and thus are not included in the category of responsible sexual behaviour.
[9)] 895 respondents aged 25–34. The research was conducted in three regions: Prague (50% of respondents), North-Bohemian Region (30% of respondents), and the South-Bohemian Region (20% of respondents) using representative quota sample selection method for the indicated regions.
[10)] Condoms were used by a full two-thirds of young people who did use some form of birth control during first intercourse. Hormonal birth control was used by 18% of couples and the morning-after pill by 4% of respondents.

There are many reasons why birth control is not used during first sexual intercourse. A key one is the inability of partners to talk about the act and circumstances of intercourse, the submissiveness of women to their partner and his views on birth control, and even a certain sense of invulnerability.

Gender stereotypes and communication between partners: factors influencing the use of modern birth control methods

With regard to long-term birth control, girls usually look for methods that are reliable, easy to use, that do not reduce sexual enjoyment, and have no negative side effects.

Condoms are a method of birth control that not only protects against unwanted pregnancy but also against sexually transmitted diseases and in the case of adolescent sexual activity would seem to be an ideal solution. However, the research shows that the use of condoms during intercourse after the first time was sporadic among the girls who became pregnant, because the male partner refused to use a condom. Partners often complained to the girls that sex wearing a condom was unpleasant or they simply refused outright to wear one. It is evident from the girls' statements that in most cases they did not resist their partners' objections and gave in to their wishes.

I: And when you slept together did you use some form of birth control?

R: No, never. We never had enough money for the pills. And he was careful. He said he'd once worn a condom and that it was horrible.

I: And weren't you afraid of becoming pregnant?

R: I don't know, I just trusted him, it worked for three years. (Dana, age 19, nine months pregnant)

I: Didn't you want to use a condom or some other method?

R: He wouldn't have liked that. He wouldn't have enjoyed it… (Zlata, age 19, one son aged 1 year 6 months, and currently five months pregnant)

Few of the girls who met with such an attitude from their partner then decided to use birth control pills and themselves take on the responsibility for protecting themselves against unwanted pregnancy. The usual scenario was to rely on coitus interruptus as a method of protection, which means leaving the responsibility entirely up to their partner. This reliance on the partner, that he will be careful, is to some degree typical for pregnant teenage girls.

I: And it didn't occur to you that you could become pregnant?

R: No, it never did.

I: Why not?

R: I don't know. He said he'd be careful, so I just trusted him, you know? (Andrea, age 20, one son age 1 year 6 months)

Clearly, the sexual activity of the studied population exhibits relatively distinct signs of relationship inequality. Although it might have seemed that women's submissiveness in sexual life is something that had largely been overcome already, this does not apply to adolescent mothers. Inequality in a sexual relationship leaves girls incapable of realising that they primarily need to rely on themselves. However, it is not just the inability to communicate about sex that leads women to make concessions to their partners; it is also their fears for their relationship. Many teenage girls are very unsure about their relationship with a man and fear losing their partner, and that forces them to take ill-considered steps that negatively impact their reproductive health. They put their emotional relationship with their partner before their own reproductive health. Asking a partner to use a condom may even be seen as a sign of distrust in the partner.

If we can say that people gain confidence as they grow older, then teenage mothers, having begun their sexual life at an earlier age, are to some extent at a disadvantage. Their ability to assert themselves in the relationship in the sense of being able to communicate their ideas and expectations to their partner is usually very weak.

R: I was afraid of that [pregnancy] *happening, so I knew it could happen, but…*
I: Were you afraid to say to your partner that you should buy a condom?
R: I was embarrassed to say it. It seemed kind of dumb.
I: And he didn't suggest it himself?
R: No. (Lucie, age 15, eight months pregnant)

Alongside obstacles caused by the lack of communication between partners, irresponsible sexual behaviour also stems from a widespread 'sense of invulnerability'. Very young girls especially believed that they were not at risk of pregnancy even though they were usually very well-informed about the risks of unprotected sex.

While we did find evidence of a lack of knowledge or information about reproductive health, there were only four such cases.

I: Didn't you use any birth control?
R: No.
I: And didn't you even consider it?
R: No.
I: It never occurred to you that you could become pregnant?
R: No, it didn't.
I: Weren't you concerned about catching any sexually transmitted diseases?
R: It never occurred to me. (Líba, age 19, eight months pregnant)

Birth control pills were used most consistently in the case of permanent relationships. As mentioned in the introduction, many of the girls used birth control for at least some period of time. However, the biggest problem was being disciplined about taking the pills regularly. Consequently, when the girls were asked whether they were using some form of birth control when they became pregnant, most of the girls would probably have answered affirmatively.

Another apparent problem was a lack of knowledge about and familiarity with the instructions for taking birth control pills. In two cases pregnancy occurred when the women were switching to a different type (brand) of birth control pills, and in one case when prescription renewal was delayed while the woman changed doctors. All three girls believed that taking birth control pills throughout their cycle would afford them some protection against pregnancy for a certain period even after they stopped taking them.

Well, half a year later, I was on the pill...we were arguing a lot, and I really love him, and since I was so stressed out I forgot to take my pills and after I forgot I wanted to make up for it and so I took them normally but it didn't work because I'd forgotten some pills, so I ended up like this. (Helena, age 17, eight months pregnant)

Girls who stopped using birth control pills or never started using them even though they had seriously considered it was significantly influenced by how expensive this form of birth control is. Those girls who stopped to take their pills were more often girls who had been raised in institutions or children's homes until they reached adulthood. Here again we find a reduced level of communication between partners. The majority of girls were unable to talk about the expense of birth control pills with their partner. Only two girls in the sample received some assistance in paying for birth control pills from their partners.

Conclusion

The discussion in this article focused on the circumstances surrounding first sexual encounter and on selected factors influencing the use of birth control among pregnant teenagers and teenage mothers. In the observed population first sexual intercourse is usually unplanned and unexpected and partners do not discuss it in advance. Adolescent mothers are also at relatively strong risk of sexual abuse because they tend to come from an unstable background family and have mothers who frequently changed partners.

The women who had become mothers or pregnant before the age of 20 also became sexu-

ally active at an earlier age than the average population. One-fifth of the girls in the sample had sexual intercourse for the first time before the age of 15. This very early start to sexual life has a significant influence on relationship inequality. It was apparent that many young girls, still unsure of themselves, were unable to talk effectively with their partners about intimate life. Submissive behaviour towards the partner had a significant impact on responsible sexual behaviour. Total reliance on the partners was one of the main reasons why unplanned pregnancies occurred. Many of the respondents' partners refused to wear a condom because they claimed it was unpleasant during sex. The girls then put blind trust in the method of coitus interruptus. Not all the girls were able by themselves to assume the responsibility of protecting themselves by taking birth control pills. Some of them for health reasons were unable to use birth control pills. However, other reasons that ruled out the use of birth control pills were their high cost, the need to see a doctor in order to obtain hormonal contraceptives, or concerns about side effects like weight gain. However, the biggest problem with this form of birth control proved to be inconsistent use. Few of the girls in the sample suffered from a lack of knowledge or information about different methods of protection during sex. Rather than a lack of knowledge, what was found was a certain sense of invulnerability on the part of the girls or the belief that they would not get pregnant.

It was beyond the limited scope of this article to discuss the other factors that have a significant influence on the use of birth control methods. These include the influence of the school, various interest organisations, cultural environment, and especially the opinions of one's peers. Another theme that should not be overlooked with regard to the sexual and birth control behaviour of adolescents is the role of the family, especially the mother, in the process of sexual socialisation.

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AVOIDABLE MORTALITY IN THE CZECH REPUBLIC IN 1990–2006*)

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Abstract: This article discusses avoidable mortality as a methodological instrument for measuring the efficiency of the health care system from the perspective of the reduction of mortality intensity and the practical application of this instrument in the Czech Republic. The first part of the article contains an introduction to and a discussion of this concept. The second part focuses on quantifying the contribution of the transforming Czech health care system to the significant extension of life expectancy in the Czech Republic in the period between 1990 and 2006.

During the period of the transition from a totalitarian society with a centrally planned economy to a democratic society with a market economy the Czech Republic has experienced fundamental changes in the state of public health and the mortality rate of its population. Since 1990 – which marks the start of the period of deep socio-economic changes and is also the year of the last more pronounced rise in mortality in the country – until 2005 male life expectancy at birth rose by 5.3 years and female life expectancy at birth rose by 3.9 years. By 2006 the change was 5.9 and 4.6 years, respectively. The period between 1990 and 2005, for which we have comparable international data, the annual increase in life expectancy at birth rose by 0.36 years for males and 0.25 for females. The figures rank the Czech Republic among the countries with the fastest declines in total mortality intensity, as the average value of the total increase in life expectancy of males and females for the most advanced European countries in this period was 'just' 4.0 and 3.1 years, respectively, which in annual terms is an increase of 0.27 and 0.20 years, respectively. This development brought the Czech Republic significantly closer to the average life expectancy at birth exhibited by the most advanced countries – among males the gap narrowed from 5.3 years in 1990 to 4.0 years in 2005 and among females from 3.0 years to 2.3 years.

It is clear that the positive development in the state of the population's health and the mortality rate in the Czech Republic since 1990 are connected with the ongoing processes of deep social transformation, but it is also apparent that the recorded changes are the result of the interactive effect of numerous factors. These include:

– an increase in funding of health care in a demonopolised and liberalised economy;
– the emergence of private care, the opportunity for people to freely choose their doctor, access to very effective medicines (beta-blockers, statins, ACE inhibitors, calcium channel blockers) and to modern health technology (diagnostic and therapeutic), rescue services with much greater mobility and better technical equipment;
– an increase in the output of health services (e.g. the number of cardiosurgery operations increased sixfold between 1991 and 2005);
– the introduction of various preventive programmes targeting risk population groups (e.g. breast cancer screenings, colorectal screenings, etc.);
– strengthening the awareness of the benefits of caring for one's health, partly motivated by new concerns people have about losing income from time off work or losing their job;

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Table 1 Comparison of the dynamics of the increase in life expectancy at birth in selected European countries 1990–2005

Country	Males		Difference	Country	Females		Difference
	1990	2005	2005–1990		1990	2005	2005–1990
Czech Republic	**67.57**	**72.92**	**5.35**	Ireland	77.67	81.72	4.05
Ireland	72.09	77.29	5.20	Poland	75.50	79.33	3.83
Switzerland	73.99	78.74	4.75	Portugal	77.53	81.33	3.80
Germany[1)]	71.99	76.71	4.72	**Czech Republic**	**75.48**	**79.25**	**3.77**
Finland	70.96	75.59	4.63	Finland	79.01	82.51	3.50
Austria	72.28	76.69	4.41	Germany[1)]	78.54	82.03	3.49
Norway	73.45	77.82	4.37	Hungary	73.79	77.17	3.38
Portugal	70.61	74.90	4.29	Austria	78.99	82.27	3.28
United Kingdom	72.80	77.08	4.28	Spain	80.59	83.66	3.07
Poland	66.50	70.75	4.25	Slovenia	77.83	80.86	3.03
Slovenia	69.82	73.94	4.12	Switzerland	80.93	83.96	3.03
France	72.80	76.80	4.00	France	80.90	83.80	2.90
Denmark	72.01	75.96	3.95	Norway	79.92	82.75	2.83
Italy	73.92	77.60	3.68	Italy	80.43	83.20	2.77
Sweden	74.83	78.49	3.66	United Kingdom	78.40	81.12	2.72
Spain	73.39	76.98	3.59	Denmark	77.83	80.50	2.67
Hungary	65.15	68.69	3.54	Romania	73.14	75.70	2.56
Belgium	72.73	76.18	3.45	Sweden	80.50	82.90	2.40
Slovakia	66.72	70.17	3.45	Slovakia	75.70	78.07	2.37
Netherlands	73.83	77.25	3.42	Belgium	79.54	81.85	2.31
Greece	74.66	76.82	2.16	Greece	79.48	81.63	2.15
Romania	66.69	68.68	1.99	Bulgaria	74.71	76.24	1.53
Bulgaria	67.97	68.99	1.02	Netherlands	80.25	81.72	1.47
Mean[2)]	72.90	76.93	4.04	Mean[2)]	78.53	81.58	3.05

Notes: [1)] Former Federal Republic of Germany in 1990; [2)] The average value does not include post-communist countries.
Source: Eurostat, INSEE.

– positive lifestyle changes among most of the population, especially in the area of nutrition (increased consumption of healthy foods partly owing to more diverse choices);
– improvement in the quality of the environment;
– a change in the structure of the economic activity of the population (a decrease in the share of the population working in industry, an increase in the share working in services) and the related improvement in the quality of the work environment;
– the social effects of the transition were tolerable.

Unfortunately with the current level of knowledge there is no way of ranking the amount of impact each of these factors has had, but the generally accepted claim is that the changes in the area of medical care are the main source of the observed decline in total mortality (*Rychtaříková* 2002, 2004). The trend in the main innovations in health care and selected services indicates that these changes were not inconsequential. The cited causal relationship is most often presented through the decline in the intensity in mortality from circulatory diseases, which in recent years clearly contributed most to the increase in life expectancy of the Czech population, as experts have do doubt that in this cause-of-death category extensive investments have had a direct effect on the observed positive development.

Although on a general level the causality of this positive development is clear, it is not possible from existing data to directly determine the share of individual and not always clearly defined factors on the trend in total mortality. Therefore, in the following text we will attempt at least indirectly to assess the role that progressive changes in the Czech health care system

Table 2 Trends in selected indicators of changes in the health care system, CR, 1990–2006

Year	Public expenditure on health		Consumption of drugs		Transplantation					Cardiosurgery operations
	CZK billions	Per capita (CZK)	CZK billions	Per capita (CZK)	Heart	Renal	Liver	Pancreas	Lung	
1990	30.1	–	6.27	605	–	–	–	–	–	–
1991	38.2	–	6.96	675	9	178	2	0	0	1 657
1992	43.6	4 221	9.33	904	–	–	–	–	–	–
1993	69.3	6 705	13.96	1 351	–	–	–	–	–	–
1994	81.1	7 850	21.19	2 050	–	–	–	–	–	–
1995	93.3	9 032	25.64	2 482	60	389	31	13	0	4 008
1996	102.4	9 927	28.18	2 732	75	393	42	19	0	5 042
1997	109.0	10 582	30.06	2 917	96	445	49	21	1	5 943
1998	119.3	11 585	33.31	3 236	55	366	66	21	8	6 464
1999	123.5	12 006	36.44	3 544	64	316	67	24	14	6 869
2000	133.0	12 943	38.39	3 737	58	353	61	23	7	8 438
2001	145.2	14 202	44.23	4 326	49	330	58	25	10	9 082
2002	162.3	15 910	48.03	4 709	54	326	62	23	9	10 817
2003	175.6	17 212	52.22	5 118	52	400	65	23	11	11 163
2004	184.8	18 108	56.99	5 583	48	442	83	25	7	11 621
2005	191.4	18 698	64.57	6 309	62	411	82	18	11	10 515
2006	199.2[1)]	19 402[1)]	58.97	5 744	57[1)]	395[1)]	99[1)]	25[1)]	15[1)]	9 938[1)]

Note: [1)] Preliminary estimates.
Sources: VÚPSV, ÚZIS, Národní kardiochirurgický registr.

have played in the development of mortality and we will do so in relation to selected causes of death and using the concept of avoidable mortality.

'Avoidable mortality' is a concept that provides both a theoretical foundation and a methodological framework for identifying how much the health care system influences the health of the population (*Andreev et al*. 2003). The concept of avoidable mortality was introduced as a tool for evaluating the quality of medical care by *Rutstein* and his colleagues, who more than thirty years ago came up with the idea of indirectly measuring the impact of changes in the quality of health care on mortality. As an indicator of the quality of the health system they used the differences in the share of deaths from selected causes of death or groups of causes (*Nolte et al*. 2002).

Despite the fact that the concept is not used too frequently, it has considerable informative value. The concept focuses on the primary function of the health care system, that is, on the reduction of mortality. With the available data it is possible not just to operationalise this concept for the Czech Republic but also to make an international comparison. We can thus compare the different national health care systems and from the differences in the level and dynamics of selected indicators we can then judge where the weaknesses and strengths of individual health care systems lie.

The concept of avoidable mortality

The concept of avoidable mortality as a tool for measuring the quality of health care emerged out of research conducted under the American Working Group on Preventable and Manageable Diseases by a team headed by *David R. Rutstein* (1976). The approach this concept represents is based on the assumption that the effectiveness of health care in the sense of its quality can be expressed in terms of the rate of mortality from different causes of death that can be completely or at least partly eliminated through timely and appropriate medical intervention. With the help of specialists from numerous medical fields, the research identi-

fied around eighty different causes of death that lead to premature death and yet could be eliminated with the help of preventive or treatment procedures. The causes include diseases that can be cured (e.g. appendicitis), can to some extent be avoided through prevention (e.g. lung cancer), or fall into both categories (e.g. diphtheria). The occurrence of death or increased mortality from these causes constitutes a warning signal indicating the need to improve the quality of prevention or the quality of health care provided (*Niti and Ng* 2001; *Westerling* 2001; *Korda and Butler* 2004).

Rutstein's original list was drawn up with a view to the imperatives of international comparison. The list therefore includes a wide spectrum of causes of death, some of which are almost entirely absent from advanced countries or, conversely, are rare or uncommon in developing countries. As a result, the causes of death selected for studies in different countries usually differ significantly, even though the authors draw on the same list of causes of deaths drawn up by Rutstein (*Mackenbach, Bouvier-Colle and Jougla* 1990).

Rutstein himself pointed out in a later work (*Rutstein et al*. 1980) that it is necessary to continuously observe the diseases on the list in relation to advances in medical knowledge and practises and to changes in society and the environment. The lists are therefore continuously revised and elaborated. Rutstein's list was substantially modified in connection with the creation of the European Community Atlas of Avoidable Death, which was prepared by a working group headed by W. W. Holland (*Holland (ed.)* 1991; *Holland (ed.)* 1993). The original, considerably longer list of avoidable diseases was as a result shortened to seventeen groups of diseases and some diseases were newly added to the list, such as breast cancer and testicular cancer, with the aim of obtaining a complete overview of the occurrence of these diseases in individual European countries.

However, authors of earlier works published mainly in the 1980s, who were the first to apply the concept of avoidable mortality on data from selected countries, also contributed to perfecting the selection of causes of deaths and groups of causes of deaths in Rutstein's original list (*e.g. Charlton et al*. 1983; *Bauer and Charlton* 1986; *Charlton and Velez* 1986). They not only helped perfect the selection of diseases on Rutstein's original list, but also helped to determine the age limits for each cause of death, with their upper age limit in most cases set at 65. Many studies from the 1980s and 1990s (*e.g. Charlton and Velez* 1986; *Poikolainen and Eskola* 1986; *Mackenback et al*. 1988; *Holand (ed.)* 1991; *Westerling* 1992; *Holland (ed.)* 1993) revealed a faster decrease in avoidable mortality in economically advanced countries than what was recorded in the case of mortality as a whole. This finding was also confirmed in later studies examining the trend in avoidable mortality in countries outside Europe, for instance, in New Zealand, Singapore, and Australia (*Tobias and Jackson* 2001; *Niti and Ng* 2001; *Korda and Butler* 2004). In the case of many avoidable causes of death it was found that mortality declined faster following the introduction of certain forms of health care, such as primary care programmes aimed at monitoring hypertension and serving to prevent cerebrovascular diseases, or regular pap smears (*Westerling* 2001).

Studies of avoidable mortality only began emerging in the eastern European region in the 1990s and were usually fashioned as comparisons between the West and the East (*e.g. Boys, Forster and Józan* 1991; *Velkova, Wolleswinkel-van den Bosch, and Mackenbach* 1997; *Andreev et al*. 2003; *Nolte et al*. 2002; *Newey et al*. 2004). One classic study is a comparative analysis of avoidable mortality in Lithuania and Sweden in 1971–1990 (*Gaizauskiené and Westerling* 1995).

With regard to the application of the concept of avoidable mortality in Czech research, it is necessary to mention the division of avoidable mortality into two basic categories – treatable mortality and preventable mortality (see *Newey et al*. 2004). Treatable mortality refers to causes of death that respond to health intervention in the form of secondary prevention and treatment. These include cervical cancer, hypertension, or appendicitis, and these causes are viewed as indicators of the quality of health care. Conversely, preventable mortality refers to causes that

usually lie outside the control of health services and are mainly affected by primary prevention. These include in particular lung cancer, which can be avoided by not smoking, or liver cirrhosis, which can be avoided by limiting alcohol consumption. Diseases in this category and their prevalence are logically regarded as an indicator of the quality of preventive care.

Data

Using available data sources, especially those published in a publication of the Czech Statistical Office called 'Deaths by a Detailed List of Causes of Death, Sex and Age in the Czech Republic (1919-2005)', for each year between 1990 and 2005 we obtained data on mortality by age, sex, and cause of death and the numbers of deceased were aggregated into the age groups 0, 1-4, 5-9,…, 75+ years. The data refer to the numbers of deaths by cause for each calendar year in the period 1990-1993 and 1994-2006 categorised with the help of the 9th or 10th revised International Statistical Classification of Diseases and Associated Health Problems. We took structurally analogical and temporally corresponding age structures of the population for 1990-2005 from the *Demographic Handbook 2006*. Data relating to deaths and the age structure for 2006 are taken from a publication of the Czech Statistical Office titled *The Demographic Yearbook of the Czech Republic 2006*.

Selected Avoidable Causes of Mortality

In the analysis we used 37 individual causes or cause-of-death categories (Tab. 3) regarded as avoidable according to *Newey et al*. (2004). In conformity with their specifications avoidable causes can be divided into three groups:

1. treatable diseases
2. preventable diseases
3. ischemic heart disease.

With regard to the third category, *Newey et al*. (2004) argue that ischemic heart disease must be studied separately because:

1. the effect of health care on limiting death from this disease is unclear,
2. ischemic heart disease can be viewed as an indicator of health care but also of health policy,
3. many deaths from this disease conceal the effects of health care for diseases other than ischemic heart disease.

For some causes of death (e.g. measles, whooping cough) not a single death was recorded in the statistics for the entire observed period. Nevertheless, we kept these causes in the list in order to preserve the ability to use the results of our analysis in international comparison with countries where deaths from these causes are still recorded.

An important part of applying the avoidable mortality concept involves setting the upper age limit to which it is still possible to think in terms of avoidable mortality. In conformity with most studies on this issue we set the upper age limit at 75 because whether or not a death was avoidable and what exactly the cause of death was become very questionable matters at an older age (*Mackenbach et al*. 1988). In the case of selected causes of deaths and cause-of-death categories Newey and his colleagues selected a different age limit. For example, in the case of intestinal infections, whooping cough, measles, and children's respiratory diseases deaths before the age of 15 were recorded and in the case of leukaemia they analysed deaths of people only up to the age of 45. These causes thus include a different group of diseases for children and for adults, and those deaths from the listed cause that occur at a time other than childhood then reflect the presence of some other disease. A different age limit was also set for diabetes (to age 50), because avoidable mortality from this disease at an older age, and especially the effectiveness of diabetic tests to limit vascular complications remains debatable (*Newey et al*. 2004).

Table 3 List of causes of death/cause-of-death categories by basic avoidable mortality categories, ages 0–74

Cause/group of causes of death	ICD9	ICD10
Treatable diseases		
Intestinal infections	001–009	A00–A09
Tuberculosis	010–018, 137	A15–A19, B90
Other infections (Diphtheria, Tetanus, Poliomyelitis)	032, 037, 045	A36, A35, A80
Whooping cough	033	A37
Septicaemia	038	A40–A41
Measles	055	B05
Malignant neoplasm of colon and rectum	153–154	C18–C21
Malignant neoplasm of skin	173	C44
Malignant neoplasm of breast	174	C50
Malignant neoplasm of cervix uteri	180	C53
Malignant neoplasm of cervix uteri and body of the uterus	179, 182	C54, C55
Malignant neoplasm of testis	186	C62
Hodgkin's disease	201	C81
Leukaemia	204–208	C91–C95
Diseases of the thyroid	240–246	E00–E07
Diabetes mellitus	250	E10–E14
Epilepsy	345	G40–G41
Chronic rheumatic heart disease	393–398	I05–I09
Hypertensive disease	401–405	I10–I13, I15
Cerebrovascular disease	430–438	I60–I69
All respiratory diseases (excl. pneumonia/influenza)	460–479, 488–519	J00–J09, J20–J99
Influenza	487	J10–J11
Pneumonia	480–486	J12–J18
Peptic ulcer	531–533	K25–K27
Appendicitis	540–543	K35–K38
Abdominal hernia	550–553	K40–K46
Cholelithiasis & cholecystitis	574–575.1	K80–K81
Nephritis and nephrosis	580–589	N00–N07, N17–N19, N25–N27
Benign prostatic hyperplasia	600	N40
Maternal deaths	630–676	O00–O99
Congenital cardiovascular anomalies	745–747	Q20–Q28
Perinatal deaths, all causes excluding stillbirths	760–779	P00–P96
Misadventures to patients during surgical and medical care	E870–E876, E878–E879	Y60–Y69, Y83–Y84
Preventable diseases		
Malignant neoplasm of trachea, bronchus, and lung	162	C33–C34
Cirrhosis of liver	571	K70, K73–K74
Motor vehicle accidents	E810–825	V02–V04, V09, V12–V14, V20–V79, V82–V87, V89
Ischemic heart disease		
Ischemic heart disease	410–414	I20–I25

Notes: Causes/groups of causes which we register the definition of different ages (see text):
Intestinal infectious diseases – 0–14
Pertussis – 0–14
Measles – 0–14
Malignant tumor of the uterine body and uterine – 0–44
Diabetes – 0–49
Leukemia – 0–44
Respiratory system diseases (excluding pneumonia and influenza) – 1–14.
Source: Newey et al., 2004.

With regard to the practice of setting age intervals for the study of avoidable mortality it is interesting that no author has yet taken into account the differences in mortality or specifically in the life expectancy at birth of females and males. In this context the logical thing would be to raise the age limit for females in the analysis of avoidable mortality by five years, that is, around the number of years that make up the difference between male and female life expectancy at birth in advanced countries. However, in the study at hand we deliberately chose not to make this innovation in order to preserve the comparability of the results with results from other, similar studies. Nevertheless, we do plan to make this adjustment in future research.

Indicators

We observed the trend in avoidable mortality in each of the three above-mentioned cause-of-death categories separately for males and females, and did so using standardised mortality rates. We chose the European Standard Population for this purpose (*Doll and Cook* 1966).

Given the mentioned need to limit the analysis of avoidable mortality to the 0–74 age interval we constructed abridged life tables for the exact ages between 0 and 75. Total mortality intensity in this and generally in analogically defined age intervals is characterised by an indicator that Anglo-Saxon literature calls 'temporary life expectancy' and often also 'partial life expectancy', specifically from birth to age 75 (ie_{0-75}). As with other table functions this one is calculated separately for males and females and it is defined as the average number of person-years lived in the given age interval per person just born, assuming that throughout the duration of that person's life the mortality schedule of the given life table remains unchanged. According to this definition then:

$$ie_{0-75} = (T_0 - T_{75}) / 1_0$$

where T_0 and T_{75} is the total number of person-years lived after the exact age of 0 or 75 years, and 1_0 represents the radix of the table.

Using the method of two-dimensional composition (*Arriaga* 1984) we drew on the calculated values of the relevant temporary life expectancies to describe the contribution of the listed avoidable cause-of-death categories to the differences of ie_{0-75} between 1990 and 2006 separately for males and females.

Based on the values calculated for the noted indicators, the temporary life expectancies and the contribution (shares) of individual cause-of-death categories we can fulfil two basic objectives of this study:

– to describe the trend in mortality (distinguishing between unavoidable and avoidable mortality, subsequently broken down into treatable mortality, preventable mortality, and ischemic heart disease) by sex and age in the period between 1990 and 2006,
– to estimate the contribution of the listed categories to the change in temporary life expectancy between 1990 and 2006.

Findings

Between 1990 and 2006 among males there was a decline in the number of deaths that constituted avoidable mortality by roughly 10 200, which signifies a decrease in the share of this component in total mortality from 63.0% in 1990 to 52.2% in 2006. A similar trend was observed among females: the number of deaths in the observed period decreased by approximately 5400. This led to a decrease in the share of avoidable mortality from the original 60.0% to 51.3%, which means that, like in the case of males, the share of avoidable and unavoidable mortality in the total number of deaths almost evened out.

In terms of the internal structure of avoidable mortality, the reduction in the number of deaths from ischemic heart disease, which contributed to approximately one-half (5600

Table 4 Deaths according to basic cause-of-death categories, by sex (ages 0–74), CR, 1990–2006

Category	Number of deaths			Proportion of total deaths (%)		
	1990	1998	2006	1990	1998	2006
	Males					
Treatable mortality	8 578	6 425	5 403	20.9	18.5	17.9
Preventable mortality	6 354	5 203	4 896	15.5	15.0	16.3
Ischemic heart disease	10 969	7 572	5 409	26.7	21.9	18.0
Avoidable mortality	25 901	19 200	15 708	63.0	55.4	52.2
Unavoidable mortality	15 213	15 448	14 402	37.0	44.6	47.8
Total mortality	41 114	34 648	30 110	100.0	100.0	100.0
	Females					
Treatable mortality	7 840	6 206	4 681	33.8	30.6	28.3
Preventable mortality	1 260	1 406	1 614	5.4	6.9	9.8
Ischemic heart disease	4 835	3 590	2 193	20.8	17.7	13.2
Avoidable mortality	13 935	11 202	8 488	60.0	55.2	51.3
Unavoidable mortality	9 272	9 109	8 063	40.0	44.8	48.7
Total mortality	23 207	20 311	16 551	100.0	100.0	100.0

deaths) of the decrease in the number of deaths, contributed most to the decline in the number and share of avoidable deaths among males. The observed trend led to a decrease in the share of deaths from this cause out of the total number of deaths by 8.7 percentage points, from 26.7% in 1990 to 18.0% in 2006. There was also a significant reduction in the number of deaths from treatable diseases, primarily owing to the decrease in cerebrovascular diseases. The decrease in the number of deaths in this category by 3200 also represented a decrease in its share in total mortality from 20.9% in 1990 to 17.9% in 2006. There was a smaller reduction in the number of deaths from preventable causes (1500 cases), while a full two-thirds of this figure was ascribable to the decrease in the number of deaths from malignant neoplasm of trachea, bronchus, and lung. As a result there occurred a slight increase in the share of deaths in this category of causes out of total mortality, when it increased from 15.5% in 1990 to 16.3% in 2006. The shifts in the structure of avoidable mortality that occurred during the observed period signalise that the effectiveness of prevention is somewhat lagging behind the effectiveness of the treatment process, and this trend is somewhat more apparent among females than males.

Unlike males, among females treatable diseases contributed most to the overall decrease in their number of deaths from avoidable causes. In 2006, 3200 fewer people died from these diseases than in 1990, which, considering the trend in mortality connected with other groups of diseases, signified a reduction in the share of treatable mortality out of total mortality by 5.5 percentage points (from 33.8% to 28.3%). Out of the absolute decrease, a full two thousand fewer deaths were due to cerebrovascular diseases. Ischemic heart disease, which is a separate category in our research, showed a decline of approximately 2600 deaths during the observed period, which ultimately led to a substantial decrease in the share of this cause in total mortality by 7.6 percentage points from 20.8% in 1990 to 13.2% in 2006. The only divergence from this in every respect clearly positive trend in mortality among females was causes of death in the category of preventable mortality. The number of deaths that were in the preventable category in the population of females did not decrease in the observed people but rather increased by 350 cases. This occurred mainly owing to the rise in the number of deaths from malignant neoplasm of trachea, bronchus, and lung in connection with the growing number of females smokers. However, given the significant decrease in the number of deaths in the other categories this increase of 350 deaths signified then an increase in the

Table 5 Standardised mortality rate by sex and cause-of-death category (ages 0–74); per 100 thous. inhabitants; European Standard Population, CR, 1990–2006

Year	Treatable mortality		Preventable mortality		Ischemic heart disease		Avoidable mortality		Unavoidable mortality		Total mortality
	Intensity	Share[1] (%)	Intensity	Share[1] (%)	Intensity	Share[1] (%)	Intensity	Share[2] (%)	Intensity	Share[2] (%)	Intensity
	Males										
1990	197.8	33.6	140.5	23.9	250.7	42.6	589.0	63.5	339.2	36.5	928.2
1991	182.1	33.1	136.1	24.7	232.3	42.2	550.5	63.3	319.1	36.7	869.5
1992	171.6	32.2	135.1	25.4	226.2	42.4	532.9	62.8	316.3	37.2	849.2
1993	161.5	32.2	127.8	25.5	212.4	42.3	501.7	62.6	300.2	37.4	802.0
1994	155.1	32.9	113.5	24.1	203.3	43.1	471.9	59.7	318.5	40.3	790.4
1995	150.7	32.8	114.0	24.8	195.0	42.4	459.6	59.1	317.9	40.9	777.5
1996	142.6	33.0	109.3	25.3	180.3	41.7	432.1	57.8	315.0	42.2	747.1
1997	132.7	32.8	109.1	27.0	163.1	40.3	404.9	55.1	330.1	44.9	735.0
1998	130.4	33.8	104.2	27.0	151.7	39.3	386.4	55.7	307.0	44.3	693.4
1999	128.3	33.0	113.5	29.2	146.9	37.8	388.7	57.5	287.4	42.5	676.1
2000	128.8	34.3	111.0	29.6	135.7	36.1	375.5	56.6	287.9	43.4	663.4
2001	118.9	33.6	106.7	30.1	128.5	36.3	354.1	55.6	282.5	44.4	636.6
2002	120.7	35.2	103.3	30.1	119.3	34.7	343.3	54.2	289.7	45.8	633.0
2003	119.3	35.7	102.2	30.6	113.0	33.8	334.5	52.9	298.2	47.1	632.7
2004	112.9	35.5	99.5	31.3	106.0	33.3	318.4	52.4	289.1	47.6	607.5
2005	107.3	34.9	97.0	31.6	103.2	33.6	307.6	52.4	279.6	47.6	587.2
2006	102.3	35.0	89.9	30.8	100.1	34.2	292.3	52.2	267.2	47.8	559.4
	Females										
1990	144.1	57.1	23.3	9.2	85.1	33.7	252.5	59.9	169.2	40.1	421.7
1991	137.8	56.1	25.3	10.3	82.5	33.6	245.5	60.5	160.0	39.5	405.5
1992	129.3	56.1	26.3	11.4	74.8	32.5	230.4	59.5	156.9	40.5	387.3
1993	126.6	56.1	23.8	10.6	75.0	33.3	225.4	59.6	153.0	40.4	378.4
1994	118.7	55.7	22.0	10.3	72.3	33.9	213.0	57.5	157.5	42.5	370.5
1995	117.0	55.2	23.5	11.1	71.4	33.7	211.9	57.3	158.0	42.7	369.9
1996	106.7	54.4	22.9	11.7	66.5	33.9	196.0	56.6	150.4	43.4	346.5
1997	103.9	55.3	23.3	12.4	60.5	32.2	187.7	54.7	155.7	45.3	343.4
1998	100.0	56.6	23.8	13.5	52.9	29.9	176.7	54.6	146.8	45.4	323.6
1999	97.9	55.6	26.4	15.0	51.8	29.4	176.0	55.3	142.3	44.7	318.3
2000	94.9	55.8	27.7	16.3	47.6	28.0	170.2	55.1	138.6	44.9	308.8
2001	92.8	56.3	27.1	16.4	45.1	27.3	165.0	54.2	139.2	45.8	304.2
2002	90.8	56.3	27.4	17.0	43.2	26.8	161.3	54.4	135.0	45.6	296.3
2003	88.2	56.4	27.8	17.8	40.4	25.8	156.4	52.7	140.3	47.3	296.7
2004	82.6	56.6	26.8	18.4	36.5	25.0	145.9	52.1	134.1	47.9	280.0
2005	79.2	55.5	26.9	18.8	36.6	25.7	142.7	51.3	135.2	48.7	277.9
2006	74.9	55.8	26.3	19.6	33.0	24.6	134.2	51.0	129.0	49.0	263.3

Note: [1] Proportion of avoidable mortality.
[2] Proportion of total mortality.

share of deaths caused by preventable diseases out of the total number of deaths from 5.4% in 1990 to 9.8% in 2006.

If we look at the trend in mortality using standardised mortality rates we find that the overall mortality intensity of males in the period between 1990 and 2006 decreased from 928.2 to 559.4 deaths per 100 000 average male population, which represents a decline to a level equal to 60.3% of the initial level in 1990. Among females, the same indicator fell during the ob-

served period to 62.4% of its original level in 1990, when the standardised mortality rate decreased from 421.7 to 263.3 deaths per 100 000 average female population. The positive trend in overall mortality was mainly the result of a decrease in the intensity of mortality from avoidable causes of death. Avoidable mortality among males decreased from 589.0 to 292.3 deaths per 100 000 average male population and thus fell to a level equal to just 49.6% of the original level. Among females a comparable change occurred, when the standardised mortality rate decreased from 252.5 to 134.2 deaths per 100 000 average female population, which signifies a decrease to 53.2% of the original intensity of mortality from avoidable diseases.

In the case of unavoidable mortality, among males a decrease in intensity of 21.3% (from 339.2 to 267.2 deaths per 100 000 males) was recorded, which is a somewhat lower decrease than what was recorded among females. In the case of females unavoidable mortality decreased by 23.7% (from 169.2 to 129.0 deaths per 100 000 females).

The result of the differentiated trend in mortality in both categories of mortality was a significant change in the share of avoidable and unavoidable mortality causes out of the overall mortality intensity – among males the ratio changed from approximately 64 : 36 in 1990 to 52 : 48 in 2006 and among females from 60 : 40 to 51 : 49.

With regard to the intensity of mortality in individual categories of avoidable mortality (treatable mortality, preventable mortality, ischemic heart disease) by sex we find that it was even during the observed period. Yet from the perspective of the total reduction in avoidable mortality the biggest influence for both males and females was the decline in mortality from ischemic heart disease, the intensity of which in 2006 was approximately 40% of the initial intensity in 1990. The standardised mortality rate from this cause decreased in the observed period among males from 250.7 deaths per 100 000 average male population in 1990 to 100.1 deaths in 2006 and among females an analogical decrease was observed in this indicator from 85.1 to 33.0 deaths.

Mortality in the relatively broadly defined cause-of-death category encompassing treatable diseases also decreased in the observed period by around the same rate for both males and females. The initial standardised mortality rate decreased by around 50%, which was a decrease from 197.8 to 102.3 deaths per 100 000 males and from 144.1 to 74.9 deaths per 100 000 females. In this cause-of-death category mortality became strongly concentrated in the top three most significant causes of death for both males and females. For example, among males the top three most common diseases causing death (cerebrovascular diseases, colorectal neoplasms, and pneumonias accounted for three-quarters of overall mortality in 2006. Among females the concentration of mortality in the top three causes of death was just slightly milder, with cerebrovascular diseases, colorectal neoplasms, and pneumonias accounting for almost 70% of the total intensity of treatable causes of death in 2006.

The cause-of-death category that can be influenced by primary prevention (malignant neoplasm of trachea, bronchus, and lung, cirrhosis of liver, and motor vehicle accidents) exhibited some significantly specific features compared to the observed trend. In the case of males we observed the least dynamic but still very significant decrease in overall mortality intensity in the case of these diseases, where the standardised mortality rate decreased between 1990 and 2006 from 140.5 to 89.9 deaths per 100 000 males, that is, to 64% of the level in 1990. Conversely, among females, under the same conditions and in the same time frame it increased by a full 13%, as the standardised mortality rate rose from 23.3 to 26.3 deaths per 100 000 average female population. Even if we take into account the relatively low initial rate of this indicator and the greater tendency towards randomness in the trend, this is unquestionably a significant shift and especially a significant trend. The most likely reason for this shift is the unhealthy lifestyle that is still prevalent among a large part of the Czech population (the large number of smokers and heavy alcohol consumption), which under the influence of socio-cultural behavioural patterns still widespread in the recent past females avoided more of-

Table 6 Standardised mortality rate by sex and cause of death/category of avoidable cause of death (ages 0–74; per 100 thous. inhabitants; European Standard Population), CR, 1990–2006 (selected years)

Cause/group of causes of death	Males			Females		
	1990	1998	2006	1990	1998	2006
Intestinal infections	0.1	0.0	0.0	0.2	0.0	0.0
Tuberculosis	2.0	1.1	0.5	0.5	0.3	0.2
Other infections (Diphtheria. Tetanus. Poliomyelitis)	0.0	0.0	0.0	0.0	0.0	0.0
Whooping cough	0.0	0.0	0.0	0.0	0.0	0.0
Septicaemia	0.5	0.4	1.6	0.6	0.3	0.8
Measles	0.0	0.0	0.0	0.0	0.0	0.0
Malignant neoplasm of colon and rectum	33.3	33.3	27.8	16.6	15.5	12.5
Malignant neoplasm of skin	0.6	0.5	0.6	0.4	0.2	0.2
Malignant neoplasm of breast	x	x	x	23.7	21.5	17.9
Malignant neoplasm of cervix uteri	x	x	x	5.6	5.2	4.6
Malignant neoplasm of cervix uteri and body of the uterus	x	x	x	0.4	0.2	0.2
Malignant neoplasm of testis	1.1	1.0	0.5	x	x	x
Hodgkin's disease	1.6	0.9	0.4	0.9	0.5	0.3
Leukaemia	1.8	1.0	0.6	1.3	0.7	0.4
Diseases of the thyroid	0.0	0.0	0.0	0.1	0.0	0.1
Diabetes mellitus	1.1	0.5	0.5	0.6	0.3	0.2
Epilepsy	1.9	1.6	1.7	1.1	0.7	0.7
Chronic rheumatic heart disease	5.6	1.8	0.5	5.6	1.8	0.4
Hypertensive disease	4.3	4.6	5.3	2.8	2.5	2.9
Cerebrovascular disease	100.0	57.0	37.1	59.6	34.7	20.3
All respiratory diseases (excl. pneumonia/influenza)	0.1	0.1	0.1	0.1	0.1	0.1
Influenza	0.4	0.1	0.1	0.2	0.1	0.0
Pneumonia	10.3	10.5	10.8	4.4	4.7	4.5
Peptic ulcer	6.6	3.7	3.5	1.6	1.1	1.4
Appendicitis	0.5	0.2	0.1	0.2	0.1	0.1
Abdominal hernia	0.5	0.4	0.3	0.8	0.1	0.3
Cholelithiasis & cholecystitis	1.9	0.6	0.5	1.9	0.7	0.4
Nephritis and nephrosis	7.4	4.6	5.0	4.8	3.6	3.1
Benign prostatic hyperplasia	1.9	0.1	0.2	0.0	0.0	0.0
Maternal deaths	x	x	x	0.2	0.1	0.2
Congenital cardiovascular anomalies	2.7	1.5	0.8	1.9	1.4	0.4
Perinatal deaths. all causes excluding stillbirths	11.5	4.8	3.5	7.8	3.6	2.8
Misadventures to patients during surgical and medical care	0.0	0.0	0.2	0.0	0.0	0.0
Treatable mortality	**197.8**	**130.4**	**102.3**	**144.1**	**100.0**	**74.9**
Malignant neoplasm of trachea. bronchus. and lung	91.8	70.7	55.7	10.5	13.0	15.2
Cirrhosis of liver	31.1	23.4	22.2	7.9	7.9	7.7
Motor vehicle accidents	17.6	10.2	11.9	4.9	2.9	3.4
Preventable mortality	**140.5**	**104.2**	**89.9**	**23.3**	**23.8**	**26.3**
Ischemic heart disease	**250.7**	**151.7**	**100.1**	**85.1**	**52.9**	**33.0**
Avoidable mortality	**589.0**	**386.4**	**292.3**	**252.5**	**176.7**	**134.2**

ten than they do today. Changes in the structure of the intensity of avoidable mortality in the case of males resulted in relatively equal rates of mortality in the individual cause-of-death categories in the avoidable mortality category. In 2006, treatable diseases accounted for 35.0%, preventable diseases for 30.8%, and ischemic hearth disease for 34.2% of the total intensity of mortality from avoidable causes of death. Among females, despite a decline treatable diseases still accounted for more than one-half the total intensity of mortality from

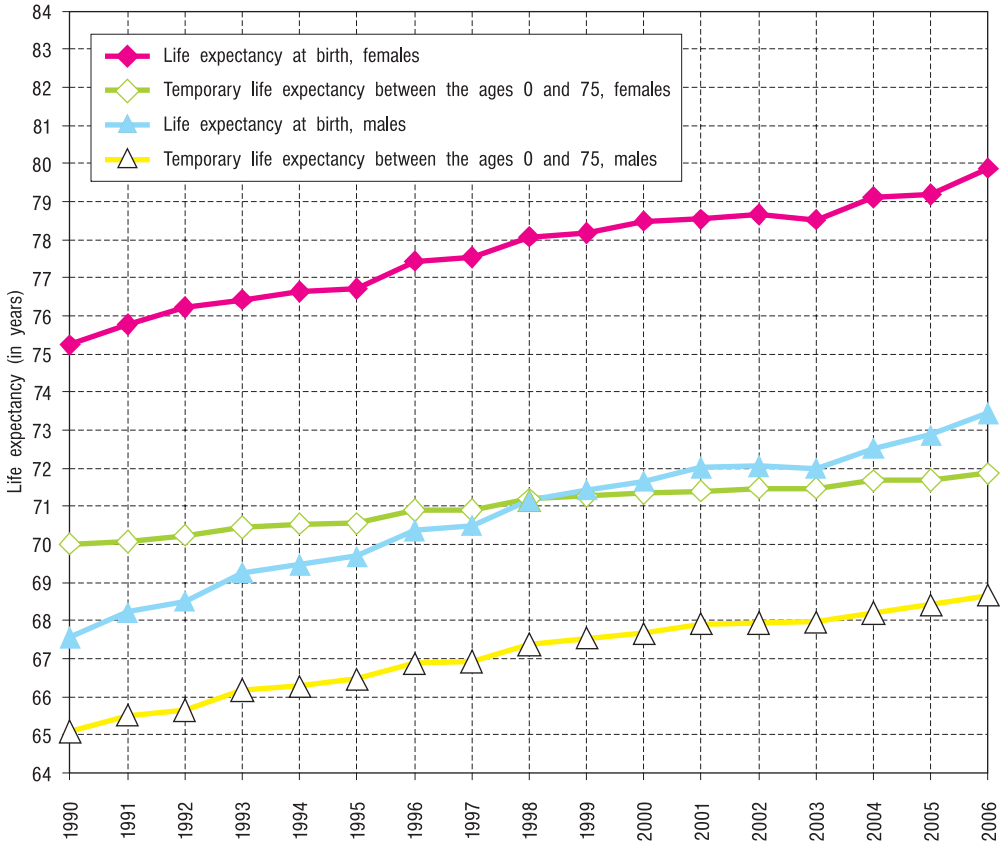
Table 7 Contributions of age groups and cause-of-death categories of the change in temporary life expectancy (ages 0–74) between 1990 and 2006, CR

Year	Treatable mortality		Preventable mortality		Ischemic heart disease		Avoidable mortality		Unavoidable mortality		**Total mortality**	
	Numbers	Per cent	Numbers	Per cent	Numbers	Per cent	Numbers	Per cent	Numbers	**Per cent**	**Numbers**	Per cent
	Males											
0	0.42	11.7	0.00	0.1	0.00	0.0	0.42	11.8	0.16	**4.5**	**0.58**	16.3
1–4	0.02	0.5	0.00	0.1	0.00	0.0	0.02	0.7	0.04	**1.0**	**0.06**	1.7
5–9	0.01	0.2	0.01	0.3	0.00	0.0	0.02	0.5	0.02	**0.5**	**0.04**	1.0
10–14	0.01	0.3	0.00	0.0	0.00	0.0	0.01	0.2	0.01	**0.4**	**0.02**	0.6
15–19	0.02	0.4	0.01	0.3	0.00	0.0	0.03	0.7	0.02	**0.4**	**0.04**	1.2
20–24	0.01	0.2	0.01	0.3	0.00	0.0	0.02	0.6	0.06	**1.7**	**0.08**	2.2
25–29	0.02	0.5	0.02	0.5	0.00	0.1	0.04	1.0	0.05	**1.5**	**0.09**	2.5
30–34	0.02	0.5	0.01	0.4	0.02	0.5	0.05	1.4	0.07	**1.8**	**0.12**	3.3
35–39	0.03	0.9	0.03	0.9	0.04	1.0	0.10	2.8	0.09	**2.6**	**0.19**	5.3
40–44	0.05	1.3	0.07	1.8	0.08	2.2	0.19	5.3	0.07	**2.0**	**0.26**	7.4
45–49	0.07	1.9	0.08	2.2	0.13	3.5	0.27	7.6	0.06	**1.8**	**0.34**	9.4
50–54	0.08	2.1	0.10	2.7	0.17	4.7	0.34	9.6	0.04	**1.1**	**0.38**	10.6
55–59	0.09	2.5	0.09	2.5	0.20	5.5	0.38	10.5	0.06	**1.6**	**0.43**	12.1
60–64	0.11	3.0	0.06	1.5	0.22	6.1	0.38	10.7	0.06	**1.7**	**0.44**	12.4
65–69	0.09	2.5	0.04	1.2	0.18	4.9	0.31	8.6	0.07	**2.0**	**0.38**	10.5
70–74	0.04	1.1	0.01	0.2	0.06	1.5	0.10	2.9	0.03	**0.7**	**0.13**	3.6
Total	1.06	29.7	0.53	14.9	1.08	30.2	2.68	74.9	0.90	**25.1**	**3.58**	100.0
	Females											
0	0.30	16.3	0.00	–0.1	0.00	0.0	0.30	16.3	0.16	**8.7**	**0.46**	25.0
1–4	0.02	1.0	0.00	0.2	0.00	0.0	0.02	1.2	0.03	**1.6**	**0.05**	2.8
5–9	0.01	0.7	0.01	0.3	0.00	0.0	0.02	1.0	0.01	**0.6**	**0.03**	1.6
10–14	0.01	0.7	0.00	0.0	0.00	0.0	0.01	0.7	0.02	**0.8**	**0.03**	1.5
15–19	0.01	0.5	0.02	1.0	0.00	0.0	0.03	1.6	0.03	**1.5**	**0.06**	3.1
20–24	0.01	0.6	0.00	0.2	0.00	0.0	0.02	0.8	0.01	**0.5**	**0.02**	1.3
25–29	0.01	0.8	0.00	–0.2	0.00	0.0	0.01	0.7	0.02	**1.0**	**0.03**	1.7
30–34	0.02	1.1	0.00	0.0	0.00	0.0	0.02	1.2	0.04	**2.0**	**0.06**	3.2
35–39	0.02	1.3	0.00	0.0	0.00	0.2	0.03	1.5	0.03	**1.5**	**0.06**	3.0
40–44	0.03	1.8	0.01	0.3	0.01	0.5	0.05	2.6	0.03	**1.4**	**0.07**	4.0
45–49	0.05	2.7	0.00	0.1	0.02	1.1	0.07	3.9	0.03	**1.8**	**0.11**	5.7
50–54	0.07	3.6	–0.01	–0.7	0.04	2.0	0.09	4.9	0.03	**1.5**	**0.12**	6.4
55–59	0.08	4.3	–0.01	–0.7	0.07	3.8	0.14	7.4	0.04	**2.3**	**0.18**	9.7
60–64	0.09	5.1	–0.01	–0.6	0.09	4.9	0.17	9.3	0.04	**2.3**	**0.21**	11.6
65–69	0.10	5.5	–0.01	–0.4	0.10	5.2	0.19	10.4	0.07	**3.6**	**0.26**	13.9
70–74	0.04	2.1	0.00	0.0	0.04	2.2	0.08	4.3	0.02	**1.0**	**0.10**	5.3
Total	0.89	48.3	–0.01	–0.5	0.37	20.1	1.26	67.9	0.59	**32.1**	**1.85**	100.0

avoidable causes of death, but the share of preventable diseases increased. Thus treatable diseases accounted for 55.8% of the total intensity of avoidable mortality, preventable diseases for 19.6%, and ischemic heart disease for 24.6%.

To assess the role of analysed cause-of-death categories in the change in life expectancy in the 0–74 age interval we first calculated temporary life expectancy between the exact ages of 0 and 75 for the period 1990-2006 and then using the method of two-dimensional decomposition we determined the specific contribution of each category to the change in temporary life expectancy between the years 1990 and 2006. Life expectancy in the 0–74 age interval increased significantly for both males and females: it reached 68.7 years for males in 2006

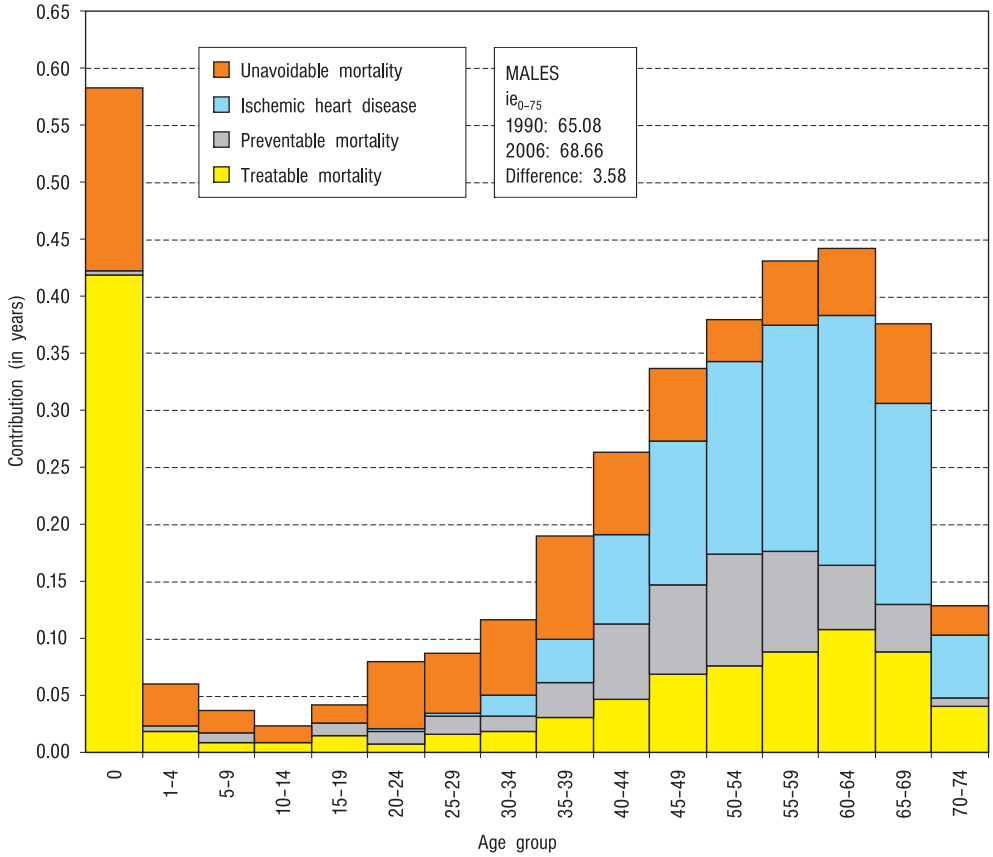
Figure 1 Life expectancy at birth and temporary life expectancy between the ages of 0 and 75, by sex, CR, 1990–2006



compared to 65.1 years in 1990 and grew gradually from 70.0 to 71.9 years for females. The increase in temporary life expectancy compared to life expectancy at birth was proportionally slower for females than males (1.9 : 4.6 and 3.6 : 5.9, respectively) owing to the above-mentioned higher modal age of deceased females. The disproportion observed in the dynamics of development would undoubtedly experience a significant decrease if we were to use a higher upper interval limit for females to calculate temporary life expectancy (see the discussion on this issue above).

Avoidable mortality contributed to the rise in average life expectancy in the 0–74 age interval in 1990–2006, which was 3.6 years for males and 1.9 years for females, by 2.7 years for males and 1.3 years for females, which in relative terms represents shares of 75% and 68%, respectively. Among both males and females this contribution occurred in the category of infants and people over the age of 35, which corresponds to the distribution of the intensity of mortality from causes belonging to the given category by age. In avoidable mortality approximately 40% of the increase in period life expectancy between the ages of 0 and 75 among males stemmed from treatable mortality and ischemic hearth disease (both contributed around 1.1 years in absolute terms) and 20% stemmed from the category of preventable causes (0.5 years). Among females, mortality from treatable causes contributed 0.9 years to the total decrease in the 0–74 age interval, which represents approximately 70% of the total change, and

Figure 2a Contributions of mortality category and age group to the change in temporary life expectancy (ages 0–74) between 1990 and 2006, CR, males



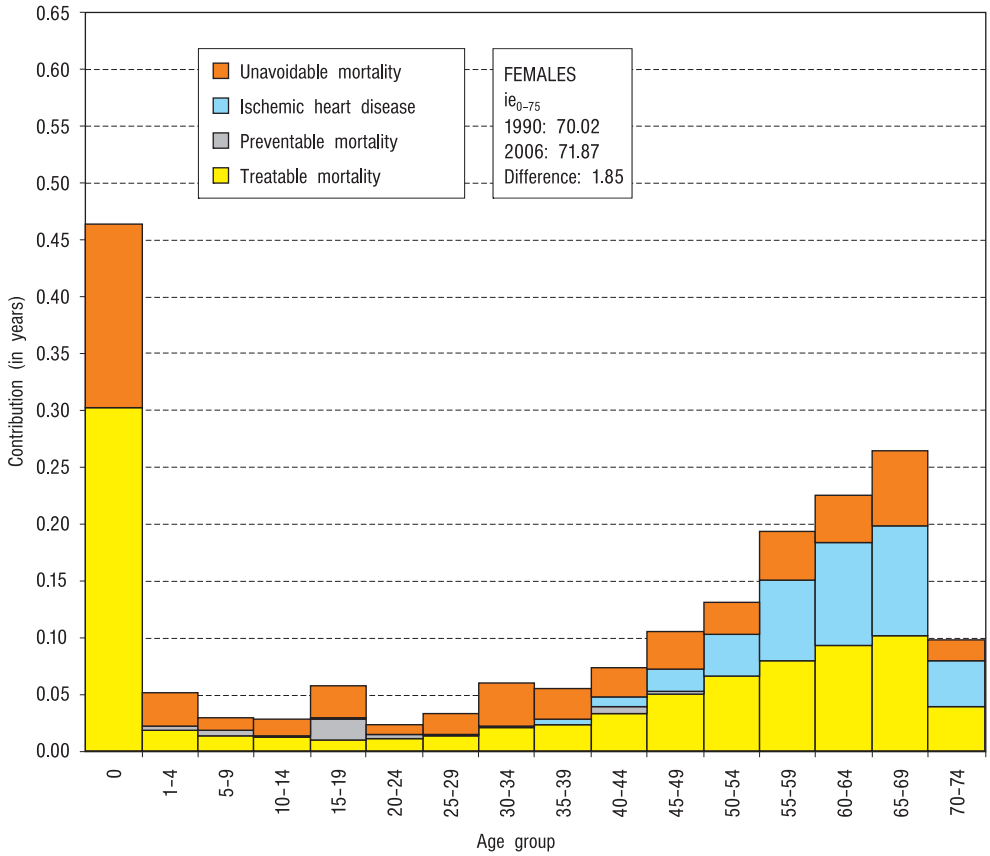
ischemic heart disease contributed 0.4 years representing around 30% of the change. In the case of treatable diseases the contribution was concentrated in the age groups of infants and people aged 40 and over (90% of the contribution to this group of causes). Conversely, the decline in mortality from ischemic heart disease among females occurred almost entirely in the age group over 40. Mortality influenced by prevention did not contribute to the increase in life expectancy of females in the Czech Republic, mainly owing to the increase in the intensity of mortality from malignant neoplasm of trachea, bronchus, and lung.

Conclusion

Between 1990 and 2006 we observed a decline in the intensity of avoidably mortality among males in the Czech Republic by almost 40% and among females by almost 38% and a decrease in the intensity of unavoidable mortality by 21% and 24%, respectively.

Given that in 1990 avoidable mortality accounted for 63.5% of the total mortality intensity among males and 59.9% among females, the decrease in avoidable mortality can be regarded as significant. The observed decline in this intensity moreover contributed very significantly (among males 75% and among females 68%) to the total increase in average life expectancy expressed as temporary life expectancy between the ages of 0 and 75. The rates confirm be-

Figure 2b Contributions of mortality category and age group to the change in temporary life expectancy (ages 0–74) between 1990 and 2006, CR, females



yond any doubt the fundamental role of the transforming health system in the improvement of the health and the decline in mortality of the population of the Czech Republic.

Our study of the issue does not end with these findings. In the current stage of research[1)] we are focusing attention on determining where the Czech Republic stands in terms of how effective its medical care is compared to other transition countries and compared to those countries with the best mortality indicators. Currently we are preparing to apply the concept of avoidable mortality to identify possible regional disproportions in the effectiveness of its health care.

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[1)] The research this study was based on was conducted as part of Research Project No. MSM 0021620831 'Geographic Systems and Risk Processes in the Context of Global Changes and European Integration', with the financial support of the Ministry of Education, Youth and Sport of the Czech Republic.

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A BRIEF OUTLINE OF THE DEVELOPMENT OF CZECH HISTORICAL DEMOGRAPHY*)

EDUARD MAUR**)

Abstract: The study provides a brief outline of the development of approach to the population history in the Czech lands until the 1950s. Then it deals with the establishment of historical demography as an independent scientific discipline after the Second World War and the reception of its impulses in this country (contacts with French historical demographers, the establishment of the Commission for Historical Demography and its yearbook Historická demografie in 1967, with a focus on the questions of population change within the former state plan and after 1989 within grant projects, international cooperation, etc).

Historical demography established itself as an independent scientific discipline after the Second World War, first in France and then in the UK. It produced its most interesting findings between the 1950s and 1970s, when economic and social historians began focusing on historical structures and processes and in this research began making significant use of quantitative methods. Historical demography has had a harder time establishing a dialogue with contemporary, anthropologically oriented history, but it nonetheless remains an important component of historical knowledge, as demographic structures and long-term trends form the vital context of people's behaviour, forming, in a sense, the frame for each individual's unique perception of the world and each individual's independent decisions.

Interest in applying a concerted approach to the study of past demographic phenomena emerged among the ranks of historians and demographers after the Second World War. Demographers were primarily interested in obtaining a deeper understanding of patterns of demographic development, a necessary precondition for successful demographic forecasting. Understanding the significance of knowledge about the nature of demographic phenomena in the past was in both fields accompanied by an awareness of the need for developing a joint method for both fields and sharing 'each other's methodology, and this soon produced some remarkable results. The methodological stimuli that arose out of this close cooperation soon found appeal in the ranks of Czech historiography and demography. However, like in other

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This overview was prepared as part of work on a research project supported by MŠMT ČR MSM 0021620827 České země uprostřed Evropy v minulosti a dnes, conducted at the Faculty of Arts, Charles University in Prague, and out of the revision and elaboration of previous studies: Eduard Maur. *Débuts, développement et état actuel de la démographie historique en République tchèque*. In Prager Wirtschafts– und Sozialhistorische Mitteilungen, Bd 3, Praha 1996, p. 21–35 and Eduard Maur: *K problematice historické demografie*. Časopis Matice moravské, Supplementum I/2001 – Historie a interdisciplinární výzkum, p. 77–86. There is indicated in the literature extensively. In this overview I present only the most important older works and to a greater extent more recent work not included in the cited studies. Other informative work worth mentioning from which to draw information about the development of Czech historical demography are in particular the work of P. Horská, L. Fialová and periodical bibliography published in *Historical Demography*. See Horská, P. – Havránek, J. *Historická demografie do roku 1985*. Historický časopis SAV 34, 1986, p. 403–423 ; Horská, P. *Česká historická demografie*. Český časopis historický, 89, 1991, p. 519–542; Fialová, L. *Dějiny obyvatelstva České republiky a francouzští demografové*. In Francouzská inspirace pro společenské vědy v českých zemích, Praha, CEFRES 2003 (Cahiers du CEFRES 29), p. 197–204. See also Fialová, L. – Kačerová, E. – Maur, E. – Matějů, J. – Melkesová, M. – Slabová, I. – Vránová, G. *Výběrová bibliografie české historické demografie za období 2000–1996 (recte 2006)*. In Historická demografie, 2007, 31, p. 211–246.
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countries, in this country the interest in the history of its population dates from a much earlier time, starting with the Enlightenment statisticians of the second half of the 18th century. It evolved along two lines: in the field of history and in the field of demography – but unfortunately with little contact between the two.

Czech historians were initially interested in determining the total population of the Czech lands and the changes to population size over time, for example, in connection with the Thirty Years War. In the late 19th century more critical perspectives revised the originally uncritical ideas of František Palacký and other authors, and the range of source materials for the study of population change was expanded, in particular by the inclusion of the use of sources that were initially developed for tax records (the tax rolls created in the period before the Battle of White Mountain and later land registers), but also with the use of other records, such as a census of the population of Bohemia according to religion, taken in 1651, or the so-called salt list dating from 1702. This stage in the study of population growth in Bohemia more or less culminated in 1957 in Otto Plachta's book *Lidnatost a společenská skladba českého státu v 16.–18. století* (Populousness and the social structure of Czech state in the 16th–18th centuries; 1957), smaller-scale works in this area however continue to be published to date.

Alongside the study of the population of Bohemia and Moravia as a whole, the study of population growth in individual Bohemian and Moravian towns also began advancing in the second half of the 19th century. Methodology also gradually progressed in this area of study, which initially derived its population size estimates from the known numbers of houses (W. W. Tomek, Z. Winter), and later from the number of taxpayers (B. Mendl, J. Marek), and increasing attention began to be paid to parallels in Europe. Population estimates were usually closely linked to the study of the social and the socio-occupational structure of individual towns, peaking with the production of numerous such studies in the 1950s and 1960s. Over time, the attention of historians (starting with Pekař's *Kniha o Kosti* – 'The book about Kost'; 1909-1911) turned to locally oriented research on the socio-occupational, property, and later also the demographic structure of the rural population, and they drew mainly on land registers and serf lists from the 17th and 18th centuries. The study of immigration to some towns in the pre-industrial age was also of great interest and had a partly nationalistic subtext to it. A characteristic feature of these studies was the clear absence of influence of demographic theory and demographic methodology, and especially the almost total neglect of the reproduction of the population, that is, specifically those phenomena on which demographers primarily base their interest. Therefore, it is more appropriate to refer to these works as population histories rather than historical demography.

Alongside historians, some demographers also studied population change in the Czech lands, and their approach to the topic was more complex. First mention must be made of Antonín Boháč, who in *Československá vlastivěda* (National history and geography of Czechoslovakia; 1936) published the first overview of population processes in Czechoslovakia from prehistoric to contemporary times. Even he did not avoid committing that same 'sin' we criticised above as committed by historians: he failed fully to take into account historians' findings about the quality of the individual sources he drew on, but notwithstanding this his study was excellent. Mention should also be made of František Dvořák, who following intense archive research published in 1923–1926 data on population conscription in the Czech lands since 1754. Tying in with these pioneering works, in the 1950s Vladimír Srb, Milan Kučera, and Zdeněk Vávra pulished their works on population processes in the Czech lands in the 19th and 20th centuries, enriching Boháč's overview with more detailed analyses of the reproduction and the application of a wider perspective to diverse economic aspects. The most important historically oriented study by Czech demographers at that time was *Nástin populačního vývoje světa* (An outline of world population processes; 1964) by Zdeněk Pavlík. In it, and in many other studies, Pavlík substantially discussed the theoretical issue of de-

mographic revolution. Later he edited and largely himself wrote the most thorough Czech textbook on demography (1986), in which considerable space was devoted to the history of the population and population thought. Milan Kučera later extended his historical scope to take in the period after 1918.

Czech historians' first contacts with demography occurred in the late 1950s, primarily owing to the broad interest the contemporary young generation took in economic and social history and their efforts to deepen their theoretical foundations and methodology by means of an interdisciplinary approach. The most important outcome of these efforts was Ludmila Kárníková's excellent *Vývoj obyvatelstva v českých zemích 1754–1918* (Population processes in the Czech lands 1754–1918; 1965); unfortunately, the author tragically died before completing her work. The monograph was especially remarkable for its analysis of population processes in different economic-social regions, which led the author to make some interesting conclusions about the reciprocal relationship between social and geographic mobility, economic activity, fertility, mortality, and other aspects of society's development. Similar results were produced by studies from other authors like Jan Havránek and Pavla Horská, who focused on the impact of the Industrial Revolution on Central European society.

Another step in the process of establishing Czech historical demography and advancing its theoretical foundations came in the 1960s with the formation of contacts abroad, in particular contacts with French representatives of the field. Václav Husa in particular was instrumental in this (until his untimely death in 1965), as well as Pavla Horská, who was mainly involved in fostering cooperation with Louis Henry and Jacques Dupâquier. In 1963 Professor Husa was the first in this country to try to assemble important historians (Ludmila Kárníková, Alena Šubrtová, and others) and demographers (František Fajfr) in a working group concentrating on historical demography; the group was attached to the Department of Czechoslovak History and Archive Studies at the Faculty of Arts of Charles University. However, around that time other academic centres independently began working in the field of historical demography, in particular the History Department at the Pedagogy Faculty in Ostrava, where the new field began to establish itself mainly owing to the initiative of Milan Myška. Following Husa's death, the character of the Prague group changed somewhat, and instead of coordinating tasks, it set itself the goal of focusing mainly on archivists and regional staff to work on specific fixed-scope research tasks and to exchange theoretical experiences. At the initiative of Josef Macek the Historical Demography Committee at the Institute of History of the Czechoslovak Academy of Sciences was founded in 1967 as a coordination centre and it brought together both Czech and Slovak historians. That same year the Committee began publishing the *Historická demografie* (Historical Demography) yearbook, which is still published today. At that time Czechoslovakia was one of the few countries, headed by France, in which historical demographers had their own journal.

Owing to developments in Czechoslovakia after 1968, the coordination of further research in the field of historical demography became centred at the Czechoslovak (now the Czech) Demographic Society, while following its forced 'reorganisation' in 1975 the Historical Demography Committee essentially ceased to function. The chair of the Committee, Pavla Horská, was forced to leave her post; the yearbook was not published for another decade; and people with absolutely no connection to historical demography were appointed to the Committee. However, individuals interested in historical demography were successfully assembled in an expert group for historical demography under the Czechoslovak Demographic Society, headed by Pavla Horská. The group regularly organised colloquia and discussions involving participation from historians and demographers. They managed in the 1970s to get topics in historical demography included on the National Scientific Research Plan. What was significant about that was this it occurred in connection with demographic and sociological not historical work, as at that time history was subject to much stronger ideological surveillance than other fields.

The activities of the working group attached to the Department of Czechoslovak History also came to a halt, but most of the group's members moved to a newly founded working group for historical demography that was attached to Archive Administration at the Ministry of the Interior; this group was headed by Eliška Čáňová and it became the new base for the research under way as part of the above-mentioned National Scientific Research Plan.

Gradually, and primarily thanks to Ludmila Fialová following her arrival at the Institute of Czechoslovak and World History at the Czechoslovak Academy of Sciences, the Committee was revived and in 1983 publication of its yearbooks was also renewed. Both centres of research, the Committee and the expert group, began to work closely together, especially in the organisation of social science meetings, which sometimes drew participation from other institutions. A number of these meetings received a strong response, such as *Populační vývoj českých zemí do roku 1914* (Population development in the Czech lands before 1914; 1987), or *Dějiny migrací v českých zemích v novověku* (The history of migration in the Czech lands in the early modern period; 2005), and the international colloquia *Stáří a dějiny* (Old age and history; 1989), *Francouzsko-český dialog o rodině* (French-Czech dialogue on the family; 1992), *Fenomén čelední služby v Evropě v 16.–20. století* (The phenomenon of domestic service in Europe in the 16th–20th centuries; 1996), and *Česko-francouzský dialog o dějinách rodiny* (Czech-French dialogue on the history of the family; 2000). The papers presented at these meetings were published either in special issues of the journal *Historická demografie* or in the *Acta Demographica* (XIII) publishing series. From the second half of the 1970s historical demography courses were successfully added to the curriculum for the professional training of historians and archivists, first in Prague and eventually at other universities. In 1989 new opportunities for international cooperation and new publishing opportunities at home opened up for Czech historical demography. Pavla Horská, the initiator and tireless organiser of all the above-mentioned activities, returned as the head of the Committee, which continues to operate to date. Alongside the traditional institutions devoted to historical demography and training young historical demographers (Faculty of Arts of Charles University in Prague, Ostrava University), others gradually joined in, such as the Faculty of Science of Charles University in Prague (Ludmila Fialová) and the universities in Brno (Zdeněk Háza), in České Budějovice (Josef Grulich), and Pardubice (Alice Velková, Eduard Maur). When the Faculty of Science of Charles University began teaching historical demography the field began acquiring young, professionally trained demographers, while previously it had consisted primarily of historians.

Thanks to the systematic efforts of a small circle of workers assembled around the Committee and the Society, as well as other individuals, over the past four decades historical demography has established itself firmly on the pages of Czech scholarly periodicals. In addition to the journal *Historická demografie*, whose regular publication, high quality of content, and good graphic style is due to the work of its devoted editor, Ludmila Fialová, we can also find historical demography on the pages of *Demografie*, *Sborník pedagogické fakulty v Ostravě* (Yearbook of the Pedagogical Faculty in Ostrava) (today the Faculty of Arts of Ostrava University), *Sborník archivních prací* (Yearbook of Archive Studies), *Archivní časopis* (Archive Journal), *Slezský sborník* (Silesian Yearbook), *Acta demographica* and *Acta Universitatis Carolinae*, and in some regional periodicals like the *Jihočeský sborník historický* (South Bohemian Historical Yearbook). The studies printed on these pages deal with several basic issues. Primary attention, especially in the early stages, was devoted to documenting and criticising sources stemming from the pre-statistics period and the potential usefulness of such sources (Eliška Čáňová, Josef Křivka, Eduard Maur, Vladimír Srb, and later Petra Berrová, etc.). Methodological issues have also been the subject of lively discussion, with the main emphasis put on drawing inspiration from French and British historical demography. Czech paleodemography became very successful (Milan Stloukal) and was able to take ad-

vantage of a unique opportunity to make use of extensive archaeological finds dating from the period of the Great Moravian Empire. Research on population and the social and ethnic structure of towns continued, and the findings from this research were recently summarised by František Šmahel and František Hoffman. At the same comments were also formulated on the limits to the methods used to date and on the possibilities offered by new methodological approaches, in particular prosopography (Jaroslav Čechura, Martin Nodl). Attention turned anew to the study of medieval mortality, in particular the demographic crises of the 14th and early 15th centuries, a topic long overlooked by Czech historians, although one that has played an important role in European discussions explaining the so-called crisis of the late Middle Ages. In the search for the preconditions of the Hussite Revolution, the thesis of this author was followed up on by František Šmahel and Petr Čornej, while younger authors (J. Čechura, M. Nodl) have taken a more critical view of the influence of this crisis. It is regrettable that Antonín Kostlan's dissertation on Czech agrarian development in the 15th and 16th centuries has never been published. It documents in great detail the impact of the depopulation of the Czech lands in the 15th century and the subsequent population increase in the next century.

In research on the early modern age the attention of historical demographers has concentrated mainly on the 17th and 18th centuries, which are especially rich in sources. Owing to the more modest number of sources available, the period before the Battle of White Mountain has been insufficiently studied. Between 1600 and 1800 the study of demographic structures and population dynamics, especially various aspects of the natural increase of the population, previously overlooked, began to develop. Study especially focused on the effects of the Thirty Years War on the demographic structure of Bohemia and the further development of its population after 1648, including the impact of demographic changes on feudal relationships. Natality and Momortality were studied mainly by using local micro-studies, with which it was possible to analyse the given issue in greater depth than when using data for the entire country. These studies drew mainly on parish registers and population lists for individual demesnes or parishes. Such research was conducted partly within the framework of the abovementioned National Scientific Research Plan and partly outside it. The first outcome of the coordinated research was the aggregation of data on natality, mortality and nuptiality for the period between 1650 and 1850 based on registers from 15 parishes in Bohemia and Moravia, the results of which were published in 1981. From this it was possible to make a detailed examination of the links between the economy, the population, and demographic crises. This research was followed by a study of register data using the Henry method of family reconstitution. From the data collected so far the results for four localities have been published (Domažlice, Budyně nad Ohří, Jablonec nad Nisou, Břevnov; Broumov is still in progress), and later a reconstruction for Brno and its surrounding area was created outside the framework of this research (P. Brabcová).

In the 1990s Ludmila Fialová was behind the revival of a project applying aggregate techniques on exploitatiomn of parish register data. From this it is not possible to make as thorough an analysis as with reconstitution, but it is less time-consuming and thus more productive. The original project was enriched with the introduction of methodological innovations introduced in the 1970s by the Cambridge Group for the History of Population and Social Structure and was coordinated by INED in Paris. In the first stage, the registers from 44 Bohemian and Moravian parishes were studied; in the next stage 170 register districts evenly distributed throughout the territory of the current Czech Republic were studied. The results of the research were published in the monograph *Přirozená měna obyvatelstva českých zemí v 17. a 18. století* (Natural population increase in the Czech lands in the 17th and 18th centuries; 1999), which was prepared cooperatively by Lumír Dokoupil, Ludmila Fialová, Eduard Maur, and Ludmila Nesládková. In addition to extending the level of knowledge about natal-

ity, mortality and nuptiality, it contributed to a more accurate estimate of the development of the size of the population of the Czech lands. The last-mentioned author later returned to this subject in a separate monograph focusing on Southern Moravia, which, alongside findings from register research, took a special look at population development among the Jewish population. The research showed that before the onset of the demographic transition, the demographic regime in the Czech lands basically resembled that in other countries in the Western part of Europe. A similar study, independent of this research, was conducted on Moravian parishes by a group centred at the Faculty of Science of Olomouc University. The findings from this research, organised by the anthropologist Václav Hajn, were for the most part published in the Brno-based periodical *Anthropologie.*

After 1989 Czech historical demographers expanded their contacts to include cooperation with Austrian historians; the object of cooperation was the study of the family and a more in-depth study of social structures. The joint Austrian-Czech research project, initiated by the Viennese professor Michael Mitterauer, was conducted under the title *Soziale Strukturen in Böhmen* in 1993–1999 (from 1996 British and German historians also participated in the project). The research mainly studied cadastral records from the 17th and 18th centuries, population lists, and land registers. The study focused dually on the development of the social structure in selected localities and on special issues like the family and the household in the Czech lands (e.g. in relation to birth right), menial services, and so on. It confirmed and amplified existing notions of the continuously growing social differentiation in the Czech countryside during the early modern period and traced its relationship to population growth on the one hand and proto-industrial development on the other, and at the same time it revealed some theories regularly espoused in foreign literature to be baseless; for instance, on the dependence of family formation on home ownership in traditional society. The project injected Czech historical-demographic research with new methodological impulses that involved expanding quantitative studies, which had thus far interpreted the individual as just an anonymous member of a given population, and emphasising qualitative analysis, and examining demographic processes as the outcome of action by individual, independently acting subjects whose actions are not just socially and economically determined but also, and oftentimes primarily, culturally determined. This research resulted in the publication of two anthologies and a series of studies, published mainly on the pages of *Historická demografie*, but also in foreign periodicals, which significantly contributed to extending the depth of knowledge of Czech historical demography abroad.

In addition to this project, studies were also developed on the social and socio-occupational structure of Czech towns in the early modern period and on urbanisation in Bohemia. Adding to earlier, valuable studies by Petr Jančárek on mining towns in the Czech Ore Mountains in the 16th century (1971) and by Alois Míka, Rostislav Nový, and Pavel Bělina on Czech towns using data from the Theresian cadastre (the updated assessment rolls) was this author's study on the size structure of Czech towns and changes to them over time, also based on land rolls, and an important monograph by Jaroslav Miller that situated the urbanisation of Bohemian towns and urban migration in the wider Central European context (2006). Irena Korbelářová's monograph on towns in the Těšín region focuses on a later period, the 18th century. Systematic archive research on Moravian serf lists was conducted at Brno university by Zdeněk Háza.

With regard to the 19th century, for a long time historical demographers were attracted to the new industrial regions, especially the coal-mining region around Ostrava. Milan Myška, Lumír Dokoupil, Ludmila Nesládková, Blanka Pitronová, and other authors from Ostrava or Opava mainly studied the migration of labourers, the formation of new demographic structures, and new population dynamics, as well as the formation of labourer families. They also intensively studied general issues connected with the demographic transition. Pavla Horská

and Ludmila Fialová situated Czech population processes in a wider European context. Methods tested in the study of the early modern age (especially using aggregate techniques on exploitation of parish registers on a local scale) and applied in research on natality and mortality even after 1800 were also gradually applied to the study of the 19th century, but efforts were also undertaken to study the transforming family and household. Significant findings were then produced by the use of censuses.

The ethnic structure of the Czech lands from the 16th to the 20th centuries was also the attention of research, and there were strong political motivations for this in the early stages of its study. The early studies by Kamil Krofa and František Roubík were followed in the 1970s by an important study by Alois Míka on the ethnic structure of Bohemia before 1620 and after the Thirty Years War, which summarised earlier regional literature. Vlastimil Häufler prepared a study describing the development of the ethnic structure between 1880 and 1945 using modern population censuses. However, the findings from these studies ought yet to be verified using more detailed local studies, which at present we still lack.

Czech historiography neglected the study of migration for a relatively long time. While there were many local studies on immigration to towns in the early modern period, a more theoretical approach and comparison were lacking. An important and only recent published study by Miller situated the phenomenon of migration to towns in the Czech lands in the 16th and 17th centuries in the wider context of Central Europe. At the same time, study began to focus on the migration of rural population, which led to a significant revision of ideas about 'ties to the land' during the period that Marxist historiography had come to refer to as the period of the 'second serfdom'. Special attention was devoted to emigration from the Czech lands overseas or elsewhere during the 19th century and partly also in the 20th century. However, this research focused more on cultural and political issues, not on demographic ones.

The last systematically studied area in recent decades is the history of demographic theory, demographic policies, and demographic thought. Alongside various smaller studies by different authors this interest primarily led to two large summary works on the history of European population theory and Czech demographic thought by Alena Šubrtová, who also wrote an important monograph on major figures in Czech demography (F. Fajfr, A. Boháč). Readers can learn more about the main theories in her studies from the above-cited demography textbook by Zdeněk Pavlík.

For decades research work has been accompanied by systematic editorial work, as a result of which a large number of primary sources have been made available for the needs of demographic analysis. The most important editorial undertakings in the interwar period included the publication of the confessional lists of the Prague archdiocese dating from 1671–1725 by J. V. Šimák, and after 1945 editions of older Bohemian, Moravian and Silesian land rolls were published: Bohemia (1654) and Moravian tax rolls, the Silesian Carolinian cadastre (1738), and the Bohemian and Moravian Theresian cadastre (1757). Although the first volumes of the tax rolls series, making available the earliest Bohemian cadastre in full, had already come out be the late 1940s, the series has not yet been completed, and although the series of other cadastres are just an excerpt of a much larger body of material, they represent the primary foundation for research on the social structure of the Czech lands in the early modern period. Tax roll data can be usefully combined with data from the population census in Bohemia by religious faith in 1651, which was recently made available in a twenty-two volume series prepared by staff at the National Archives in Prague. However, other lists have also been published, like the oldest confessional lists of the Prague archdiocese (E. Čáňová) or a list of Jews in Bohemia and Moravia from 1794. A new edition of data on conscription from 1754, which from 1828 are complemented with data on natality and mortality, was prepared by Václav Sekera (1978). Together with other, smaller-scale series (esp. tax registers, but also one of the Prague parish registers and the list of tenants in the Old Town in Prague in

1608, the so-called salt list of 1702), the above-mentioned series provides much better access to the demographic data housed in the country's archives.

As the discussion above reveals, today historical demography has available to it a dense network of local studies prepared using the same methodology, which allows for their comparisons with each other and with results from abroad, and thus creates good preconditions for summary analyses of population processes in the Czech lands. Czech readers already have several such summaries at their disposal. Alongside Antonín Boháč's early endeavour from 1936, mentioned above, there is also J. Stříteský's study from 1971, concentrating mainly on the 19th and 20th centuries and focusing on health issues, as well as a brief summary included in Pavlík's demography textbook and Vladimír Srb's summary, which is also especially useful for the 19th-20th centuries. Several summaries written by groups of authors have been created in recent decades at the initiative of Pavla Horská. The popular science work *Dětství, rodina a stáří v dějinách Evropy* (Childhood, the family and old age in the history of Europe), acquaints the Czech public with the main findings of European historical-demographic research. *Dějiny obyvatelstva českých zemí* (The history of the population of the Czech lands; 1996, 1998), which was published in two editions is an attempt at an overall summary that is also intended for the wider public. Unfortunately it is not accompanied by notes, but it draws substantially from the results of the above-cited studies. A special theme, the history of the urbanisation of the Czech lands, was the subject of a summary by E. Maur, P. Horská, and J. Musil titled *Zrod velkoměsta* (The birth of the city). Rather than summaries of development since earliest times to the present, in the near future historical-demographic research is likely to concentrate on monographs dealing complexly with a fixed historical period or certain basic problems, as intimated by a monograph on natural increase published in 1999 or the above-mentioned study by Miller. Especially desirable would be a deeper comparative perspective, situating Czech development in the wider Central European and Europe-wide context.

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THE PROFESSIONAL AND SOCIAL CHARACTERISTIC OF THE JEWISH POPULATION IN THE FIRST CZECHOSLOVAK REPUBLIC*)

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Abstract: The study focuses on reconstructing the professional and social structures of the Jewish population during the First Czechoslovak Republic. It is based on official Czechoslovak statistical information, which means it only analyses samples of people who identified themselves as being of Jewish faith and people who in censuses identified themselves as ethnic Jews. The author attempts to draw her conclusions mainly from the larger and more comprehensive sample of Jews (from the perspective of faith). The characteristics established therefore do not capture the conversion rate among Jews. The basic goal was to determine the difference and specific features of the Jewish populations in the lands that made up then Czechoslovakia. In this context, attention is also devoted to settlement by national land, by reproductive behaviour, and by housing conditions.

Since arriving in the Czech lands in the Middle Ages and permanently settling there, the Jews have formed a culturally, socially and professionally very specific minority community. For centuries they formed a marginal group in the population, the targets of various forms of aggressive behaviour and action by the Christian majority (pogroms, being driven out of the country, restrictions on family size, and so on), and both the church and state imposed restrictions on their professional activities.

The Enlightened-Absolutist state was interested in 'fructification' – engaging all the subjects within the state, even minorities, including the Jewish minority. In the 'pre-national' period under Joseph II, Jews were steered towards adopting the German language and culture, and they were only allowed to obtain an education at German schools, even at the university level. The era of mediaeval corporatism ended in the emergence of the concept of the right of the individual – in the various legal systems simultaneously in effect within the hierarchically ordered Estates state – and the era of civil society began, which was founded on the principles of legal unification. Jews in the Czech lands did not obtain full civic equality until 1867 (*Pěkný* 1993: 11–128). From then until the end of the Austro-Hungarian Empire they quickly and dynamically grew closer to and merged with the majority, but within that majority they again began to assume a specific social and professional position. Socially, many of them began to gravitate towards the middle class, some penetrated the upper class and formed part of the elites, and professionally they transformed dramatically – they to some extent moved away from economic activity in shops and sole proprietorships, especially in the hospitality sector and the distribution of alcohol, and became entrepreneurs on a local and cross-regional scale, and they joined the ranks of the intelligentsia in various fields (doctors, lawyers, journalists, teachers at all types of schools, engineers, etc.). From the start of the Diaspora in the Middle Ages they had practised the profession of doctor, and they almost had a 'genetic'

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predisposition to be lawyers given their civil laws and preparation for the period of dispersion (*halacha*). In terms of sectors they headed substantially into the quaternary sector, they traditionally had a strong position in the tertiary sector, and they entered the secondary and primary sectors as owners, tenants and entrepreneurs (*Nesládková* 2003: 55–64; *Nesládková* 2001a: 7–27; *Nesládková* 1998: 287–298; *Nesládková and Dokoupil* 1997: 149–174).

After the Czechoslovak state was founded in 1918 the position of the Jewish minority changed substantially in the new state. The First Republic enabled this specific cultural and ethnic minority to identify itself not just in the traditional sense as a religion (until the end of the Austro-Hungarian Empire the Jews were defined as a religious community) but also as an ethnic group. In the amendments to the Czechoslovak constitution for the first time a reference is made to a Jewish ethnicity. In the population census in 1921 the Jewish population for the first time was able to declare Jewish ethnicity, regardless of their mother tongue, which contemporary science deemed the basic indicator of ethnic affiliation (so-called tribal affiliation) (*Bubeník and Křesťan* 1995: 119–134). In practice this meant that we find both Jews from the ethnic perspective and Jews from the perspective of faith. Every member of Judaism, so even non-Israelites, whether from the Czechoslovak, German, Hungarian, or other ethnic or cultural circle, could declare themselves to be of Jewish ethnicity. The new state thus accommodated the situation of ethnic Jews, which had no state and from the end of the 19th century and under the effect of new waves of anti-Semitism began to develop a version of nationalism in the form of Zionism. Ethnicity was considered a very important social symbol in the very heterogeneous state during the interwar period, as noted by the prominent Czech demographer and statistician at that time, Antonín Boháč: 'Of…population only two-thirds (66.24%) are of Czechoslovak ethnicity, the other third is made up of minorities…German (22.53%), Hungarian (4.89%), Russian or Ukrainian (3.86%), Polish (0.68%), and Jewish (1.39%)' (*Boháč* 1936: 83). It is necessary to remember that the circumstances this minority was in were very complicated, as their historically conditioned, traditional cosmopolitanism meant that they tended to master the languages of the region they lived in (e.g. in the Ostrava region they could speak German, Czech and Polish), so it always depended on a number of political and also cultural and other circumstances, which led to the adoption of this or that language and culture, which was then attached to other commitments and expectations. Historical tradition adhered to for centuries dictated that they should cleave to the majority nation of the state and support the state. However, this mechanism and model of behaviour was disturbed by the advancement of Zionism, and in Czechoslovakia things were further complicated by the emergence of a new Czechoslovak ethnicity. Many Jews during the time of the Monarchy had already assimilated and merged with Czechs, Germans, Hungarians, Slovaks, and so on, and on rare occasions some of them left the Jewish religion and adopted another faith (Roman Catholic, Evangelical) or became atheists. Population census results reveal how this occurred at the level of the family. For example, the father, as head of the household, became an atheist, his wife remained a member of the Jewish faith, their one son was an Evangelical, and their two daughters followed Judaism. The combinations were infinite. A regional evaluation reveals various tactics and strategies are observed in the behaviour of individual families. During the Austro-Hungarian Empire the situation also varied by country: e.g. in Bohemia many more Jews were inclined to become Czech, while in Moravia they remained German; in Bohemia Zionism did not develop much, while in Moravia it did.

The settlement of the Jewish population in Czechoslovakia

The new republic emerged as a conglomerate of historical lands and territories that had various histories and were at different stages of economic and other development. The situation of Jewish communities living in these regions was even more complicated. The Jewish community was also considerably diverse. Ashkenazi Jews inhabited the entire territory of the new state, but while in the Czech lands (Bohemia, Moravia, and Silesia) they were Central

European Jews, in Subcarpathian Ruthenia and partly also in eastern Slovakia the way of life was closer to that of eastern Jews. The differences between them were large – not just in terms of the degree of assimilation, cultural habits, the concept of the family and everyday life, but also in a social and professional sense (on this history of the Jews, see, e.g. *Haumann* 1997: 50–169; *Milosz* 1997: 84–98).

The Jewish population did not live in a compact settlement in the new state but dispersed throughout it. In Bohemia the most intensive form of assimilation occurred in the 'national' period, with almost 50% of Jews declaring Czechoslovak nationality (49.5% in 1921), which by the second census in 1930 declined slightly to 46.4%. In 1921 only 14.6% of Jews in Bohemia identified themselves with the newly formed Jewish ethnicity, but by 1930 the share had grown significantly to 20.3% (*Kořalka* 1999: 16). Here Jews lived concentrated in large towns that were important centres of trade, industry, science and culture, and very few Jewish families lived in the countryside. One such town was Prague and in it the Jewish ghetto in the city, along with Staré Město, Nové Město, Karlín, Královské Vinohrady, Malá Strana, and Žižkov. In 2001 there were more than 31 000 Jews in Prague, by 1930 the number had increased to 35 425. Substantial Jewish minorities also lived in the spa towns of Karlovy Vary, Mariánské Lázně, Teplice-Šanov, and also in Plzeň, Liberec, České Budějovice, Ústí nad Labem, and elsewhere.

In Moravia and Silesia, like in Bohemia, Jews (ethnic and of faith) mainly resided in towns, but unlike in Bohemia they did not live primarily in large towns. Historically the degree of assimilation into the Czech language environment and culture and the effort to advance this process were significantly different. During the Austro-Hungarian Monarchy 82–90% of Jews declared German as they colloquial tongue, but during the First Republic a dramatic change occurred, as 47.8% claimed Jewish ethnicity in 1921 and 51.67% in 1930. This fundamental shift in orientation was understandably accompanied by a decline in the share of Jews who identified themselves as ethnic Germans (to around 34–29%) and also a decline – compared to the period before the First World War – in the share of people who identified themselves as ethnic Czechs or Czechoslovaks (15–9.5%). Jewish settlement followed from earlier development, and historically significant communities lived in Kyjov, Boskovice, Břeclav, Hodonín, Bzenec, Strážnice, Uherský Brod, Holešov, Uherské Hradiště, Přerov, Prostějov, Lipník, Hranice, Mikulov, etc., and new centres formed in Brno, Ostrava, Olomouc, and the largest communities were in the large towns of Brno and Ostrava. Centres of Jewish settlement in Silesia were Opava, Nový Bohumín, Fryštát (Karviná today), etc. (*Boháč* 1936: 83–85; *Šišková* 1998: 53 and further).

An altogether different situation took place in Slovakia within the new state. There Jews formed a large ethnic minority: 54% of the Jewish population of Slovakia declared Jewish ethnicity. They were settled unevenly in the country, and lived in large, mid-sized, and small towns, and significant numbers also settled in the countryside. There were large numbers of Jews in the south and the west of Slovakia. In the Hungarian-speaking parts of Slovakia, for instance, in Dunajská Streda, they made up as much as 26% of the population. In the Slovak-speaking region centres with large Jewish minorities included Trnava, Sereď, Nitra, Nové Mesto nad Váhom, Trenčín, Púchov, Velká Bytča, and Žilina. A much smaller Jewish population settled in the central region of Slovakia, while conversely in eastern Slovakia there evolved a large continuous belt of Jewish settlements centred on Košice, Bardejov, Humenné, and Michalovce. The largest Jewish population was in Bratislava, where in 1930 there were 15 000 Jews, and there were also large communities in Nitra (over 4300 people), Prešov (4300), Michalovce (more than 3900), and Žilina (2900). In the interwar period the decline in the share of Jews declaring Hungarian ethnicity gained in intensity (in 1921, there were 16.5%, in 1930 only 9%), while the share of Jews-Slovaks or Jews-Czechoslovaks increased insignificance (in 1921, there were 22%, in 1930 more than 32%).

In Subcarpathian Ruthenia 87.3% of the members of Jewish communities identified themselves with the new Jewish ethnicity. Jews here lived not just in towns but also in rural areas. In this administrative region they formed two islands in which Jewish ethnicity predominated over Ruthenians and Hungarians. One of them was the town of Mukačevo, which was considered the most Jewish town out of all the towns in Czechoslovakia, and the second was Handal Buština at Terešva (*Boháč* 1926: 148–161).

The reproductive behaviour of Jews (by ethnicity and faith) in Czechoslovakia

Differences stemming from the nature of the settlement structure, ranging from the predominant presence of Jews in large towns in the west of the republic to a stronger rural presence in the east of the state, were reflected on other levels, and of fundamental significance was the demographic area connected with reproductive behaviour, which was integrally linked with social development. While in the Czech lands the population declined almost continuously since the 1890s, which was due to a number of causes, in the east the population grew. One of the obvious causes of a reduction in the size of the Jewish population was assimilation, permanent emigration, a dynamic reduction in the number of children in the family, which was faster and more intensive compared to the majority population, and a change in the structure of marital status that reflected a continuous increase in non-family households made up of permanently single individuals, outside the reproductive process, and marital couples with two children. The formation of small families that were already practising planned parenthood, which the Jewish population did, initially spread in the cultural and social environments of urban neighbourhoods, where they lived side by side with members of the majority population with similar reproductive behaviour. This means that there was no major difference between minority (ethnic and religious) Jews and the middle-class non-Jewish majority. This trend progressed in the parts of the cities inhabited by the elites, regardless of their religious or ethnic profile. A difficulty here is that the method of processing natural change in statistics does not allow a reconstruction and evaluation of these data. Nevertheless, in the Czech lands statistics show decreases in the Jewish population by natural change and a continuous deteriorating of the age structure as the number and percentage of children aged 14 and under decreased while the share of elderly in the population grew. The crude fertility rate of the Jewish population in Bohemia was around 9‰, while among the majority population it was 20‰. In addition, there was also an increasing trend of mixed marriages, which were most often with Roman Catholics or people with no religious faith. This was another source of the decline in Jewish fertility. Typical differences included marriages between much older spouses, both compared to the majority population and in relation to ethnic Jews and Jews of faith in the Czech lands compared to Subcarpathian Ruthenia (*Nesládková* 2001b: 47–56; *Statistická ročenka*...1934: 23–24; *Statistická ročenka* 1938: 22–23; *Friedmann* 1934: 729–735).

Table 1 Number of religious Jews by lands in Czechoslovakia in 1930

Lands	Numbers	Per cent
Bohemia	76 301	1.07
Moravia and Silesia	41 250	1.16
Slovakia	136 737	4.11
Subcarp. Ruthenia	102 542	14.14
Czechoslovakia	356 830	2.42

Source: Statistická ročenka Republiky československé. Praha: 1934, p. 12, table II. 9.

It is interesting to compare the data on natural population change in Slovakia and Subcarpathian Ruthenia with the Jewish population as a whole in Czechoslovakia. We will conduct this brief analysis just for ethnic Jews, aware, however, that these just very general values are distorted by the age structure. Nevertheless, we recorded a relatively high intensity data, showing that in the 1930s natality in Slovakia and Subcarpathian Ruthenia ranged between 23.7‰ and 18.9‰, mortality between 13.2‰ and 12.6‰, and the natural increase fell sharply from 12.9‰ to 4.8‰. If we

Table 2 Occupational structure of religious Jews in Czechoslovakia 1921

Economic activity	Numbers	Per cent
Agriculture	43 261	12.2
Industry and trade	78 992	22.3
Trade and finance	145 814	41.2
Transport	9 348	2.6
Civil service, freelance occupation	25 538	7.2
Army	1 534	0.4
Servants, job	2 676	0.8
Other professions, without occup.	47 179	13.3
Total	354 342	100.0

Source: Československá statistika, vol. 23, p. 146, table 166.

compare data on individual 'Carpathian' lands where there were centres of ethnic Jewish communities we find substantial differences. Jewish reproduction in the 1930s was lower in Slovakia than of other ethnic groups (natality 16–12‰, mortality 12–11‰, natural increase 4.7–1.1‰). Conversely, the highest reproduction rate of ethnic Jews in the state was in Subcarpathian Ruthenia (natality 34.5–25.9‰, mortality 12.3–11.8‰, natural increase 22.7–13.7‰). It is clearly apparent therefore that the state-wide figures were significantly influenced by the conditions in Subcarpathian Ruthenia. The differences between individual lands were considerable (*Slaminka* 1938: 82, 96–97, 147).

The professional and social structure of the Jewish population

Two population censuses carried out in 1921 and 1930 provide us with information about the professional and social structure of ethnic Jews and Jews by faith. In these censuses their professional and social characteristics were observed from two perspectives: as individuals of the Jewish faith and as individuals of Jewish ethnicity. However, it is necessary to recall that only those people who identified themselves with one of these two characteristics could be observed, and not anyone who had converted or assimilated. Given that there was a significant increase in the number of mixed marriages, the assimilation process also grew in intensity, and the number of people remaining outside this record also increased. Therefore, this information is always just relative and to some degree approximate.

The professional and social structure developed more slowly, so it makes sense to observe it over the long term and note basic trends. In Czechoslovakia as a whole there were 354 342 Jews of faith and 190 856 ethnic Jews (180 855 of the latter with Czechoslovak citizenship), in 1930 there were 356 830 Jews of faith and 204 779 ethnic Jews, of which 186 642 had Czechoslovak citizenship, and 18 137 were Jews with foreign citizenship. These figures show that the number of people of Jewish faith stagnated and the number of ethnic Jews grew. In 1930 there were 572.9 ethnic Jews for every 1000 Jews of faith, and out of 1000 ethnic Jews 998.3 were Jews of faith. The characteristic of religious faith thus captures the Jewish community more entirely and also offers more information from the perspective of social and professional characteristics, and therefore in the ensuing discussion we will primarily adhere to this line (*Československá statistika*, vol. 23... 1927: 145; *Československá statistika*, vol. 98... 1934: 104–107).

In 1930 on the day of the census there were 76 301 Jews of faith in Bohemia (1.07% of all the inhabitants in the state), 41 250 in Moravia and Silesia (1.16%), 136 737 in Slovakia

Table 3 Occupational structure religious Jews in Czechoslovakia in 1921 by lands (%)

Lands	Agriculture	Industry and trade	Trade and finance	Transport	Civil service, freelance occupation	Other
Bohemia	3.4	19.6	47.9	2.2	8.8	18.1
Moravia and Silesia	1.9	24.3	45.2	3.5	8.0	17.1
Slovakia	10.7	22.3	46.0	1.7	7.4	11.9
Subcarp. Ruthenia	26.9	23.6	26.4	4.0	5.2	13.9

Source: Československá statistika, vol. 23, p. 149, table 171.

(4.11%), and 102 542 in Subcarpathian Ruthenia (14.14%), and in Czechoslovak they comprised 2.42% of the population. While in the Czech lands they formed just a very small part of the total population, in Slovakia they formed a larger share of the population and in Subcarpathian Ruthenia they accounted for more than one-seventh of the total population. When we examine this in relation to different ethnic groups in each of the lands in the state, we arrive at some interesting results. The most Jews that identified with Czechoslovak ethnicity were in Bohemia, but in a long-term perspective there was a steady and very substantial decline in the number and share of Czech or Czechoslovak Jews – in 1930 there were 35 418. German ethnicity experienced a sharp decline of 23 660 individuals at the time of the census, when 15 697 Jews identified themselves as ethnic Germans. In Moravia and Silesia most Jews identified with Jewish ethnicity, 21 396 people, followed by German ethnicity at 11 997 people, and in third place Czechoslovak ethnicity at just 7251 people. Jewish ethnicity predominated among Jews in Slovakia (72 678), followed by Czechoslovak ethnicity (44 009). Small numbers of Jews identified with German or Hungarian ethnicity – 9945 Jewish Germans and 9728 Jewish Hungarians. A unique situation arose in Subcarpathian Ruthenia, where 95 008 Jews identified with Jewish ethnicity, while the number of Jews that identified with other ethnicities, except for Hungarian at 5870 people, was negligible (811 Jewish Czechoslovaks, 130 Jewish Germans) (*Československá statistika*, vol. 98..., 1934: 104–107).

In the interwar period all of industrialised Europe, including Czechoslovakia, experienced significant changes in their national economies. They can very concisely be summarised as a general tendency towards fewer people working in agriculture and forestry as the primary sector, an end to the growth in the number of people linked to industry (secondary sector), and an increase in the share of people in services (tertiary sector) and science and culture (quaternary sector). This development was clearly headed towards a decline in the significance of the production sectors (agriculture and industry) and a rise in the importance of non-production sectors (services in a wide range of fields, from business, finance, transportation, to scientific institutions and cultural facilities). While in 1890, 80.1% of the population worked in agriculture and industry and just 11.9% in business, transportation, public services, and independent professions, in 1921 the significance of the primary and secondary sectors had declined to 71.59% and conversely the non-production branches had grown to 17.5%. In 1930 statistics indicated a further decline in the production sector to 67.0% and an increase in the non-production sector to 20%. A more detailed look at the non-production structure in 1930 reveals that 7.4% of this population worked in business and finance, 5.5% in transportation, and 4.9% in state and other public service and in free professions. An 'abnormal' increase was recorded mainly in business linked to banking (*Boháč* 1936: 65).

In this situation Jews of faith and ethnic Jews continued to work in those fields and professions that they had tended to work in for many generations, with the major difference that

Table 4 Occupational structure of the population of Bohemia and religious Jews in 1921 and 1930 (‰)

Economic activity	Total population		Religious Jews	
	1921	1930	1921	1930
Agriculture	296.8	240.6	34.1	20.5
Industry and trade	405.5	417.8	196.0	179.5
Trade, finance, transport	124.5	150.9	501.2	514.6
Civil service, freelance occupation, army	60.9	63.2	96.3	106.1
Servants	12.0	14.9	2.0	2.6
Other professions, without occupation	100.3	112.6	170.4	176.7
Total	1000.0	1000.0	1000.0	1000.0

Sources: Československá statistika, vol. 98, p. 104 et seq.; Čsl. statistika, vol. 23, p. 142 et seq.

they were able to do so now with civic freedom in the majority community, and they also pursued numerous other activities connected with the advancement of modernisation.

In 1921 (religious) Jews in Czechoslovakia were distributed between the primary, secondary, and tertiary sectors as follows: 12.2% : 22.3% : 51.8%; when the primary and secondary sectors are combined the ratio is 34.5% : 51.8%, which means that there were more Jews working in non-production sectors than production sectors. The distribution of production and non-production sectors among the population of Czechoslovakia as a whole (including the small percentage of the Jewish population by faith) was diametrically opposed (71.6% : 17.3%). If we base the calculation on (ethnic) Jews in the same year in Czechoslovakia, the result is somewhat different: 16.8% : 22.1% : 47.8%, and the ratio of production to non-production sectors is 38.9% : 47.8%. Qualitatively the structure remained the same, only the share in the production sectors increased slightly, especially in relation to agriculture and forestry, and the percentage of non-production branches decreased, which had to do with the large number of ethnic Jews settled in the eastern part of the state (Subcarpathian Ruthenia) (*Československá statistika*, vol. 23…, 1927: 131, 146).

A detailed look at the occupational branches that the Jewish population was employed in most on a nationwide scale reveals their prevalence in areas they had traditionally worked in for centuries, namely business and finance, areas in which 41.2% of Jews of faith were working in 1921. This was followed by industry and sole proprietorships in second place, agriculture, forestry, and the fishing industry in third place, and state and other public services and the independent professions in fourth place, and transportation in fifth place, while other fields were statistically insignificant.

From the perspective of occupational categories, the largest share of Jews of faith worked in the goods trade (113 084 Jews of faith worked in this occupation), in industry the main

Table 5 Occupational structure of ethnic Jews and religious Jews in Czechoslovakia and selected lands in 1930 (‰)

Economic activity	Slovakia	Subcarpathian Ruthenia	Czechoslovakia – Jews by nationality	Czechoslovakia – Jews by religion
Agriculture	70.6	214.8	106.8	88.8
Industry and trade	202.4	243.1	271.5	215.5
Trade, finance	530.4	337.0	473.3	453.3
Transport	18.1	54.5	31.7	28.6
Civil service, freelance occupation	73.4	45.0	84.9	77.4
Servants	6.4	6.7	10.0	5.7
Other professions, without occupation	96.4	93.7	21.6	123.6

Source: Československá statistika, vol. 104, p. 12 et seq.

occupations were in clothing (23 942), food (20 157), timber (5601), leather working (5398), and the machine and tool industry (4544). In the primary production sector agriculture and animal husbandry predominated (41 964), and in relation to the age structure a substantial number were rentiers and support recipients (33 920), the independent professions and public services (18 240), and education (4110) (*Československá statistika*, vol. 23…, 1927: 147, 148).

A very different situation existed at the level of the different lands within the state. In the primary sector (agriculture, forestry) there was a very clear west-east decline/cascade. In this sector the biggest difference was between the Czech lands on the one hand and Slovakia and Subcarpathian Ruthenia on the other, or specifically between the Czech lands and Subcarpathian Ruthenia. Industry and sole proprietorships (we cannot break down and specify individual trades) were the source of livelihood for relatively the most equal shares of people across the country. In the most typical professions – business and finance – the situation in

the Czech lands and in Slovakia was roughly the same (around 45%–48%), while conversely in Subcarpathian Ruthenia the share of local Jews in these professions was roughly the same as in agriculture, industry, and sole proprietorships. It is worth mentioning the notable difference between the share of Jews in state services and the independent professions in the Czech lands and Slovakia compared to the situation in Subcarpathian Ruthenia. The extent of the difference can also be documented by the share of Jews working in domestic services. While in the Czech lands and Slovakia the percentage was negligible, in Subcarpathian Ruthenia the figure was 2%.

Table 6 Social structure of ethnic Jews in Czechoslovakia in 1921

Economic activity	Numbers	Per cent
Independent	115 450	63.8
Independent without occup.	15 405	8.5
Tenats	816	0.5
Officials	15 867	8.8
Workers	29 202	16.1
Servants	1 483	0.8
Soldiers, pupils, students	2 632	0.9
Total	180 855	100.0

Source: Československá statistika, vol. 23, series VI, workbook 5, tome II. Praha: 1927, p. 140, table 154.

The very specific and unique professional structure of the Jewish population is indelibly linked to social stratification. This description – unfortunately – will be based on contemporary categories processed and published in *Československá statistika* (Czechoslovak statistics). The social structure was divided very roughly into three basic social groups: the independent class, the administrative class, and the working class. It is necessary to realise that the scope of these categories was enormous, so the independent class encompassed wealthy factory owners, large landowners, other large property owners or leasers, but also smallholders, small tradesmen and shop owners, and also included pensioners, the poor, the disabled, retired farmers, self-employed, rentiers. According to contemporary practice, the working class included low-level employees, apprentices, day labourers, and domestic servants. If we look at the Jewish population at the level of the individual lands, again there is considerable differentiation from the west to the east of the republic. A similar structure is observed among the Czech lands, a slightly different structure formed in Slovakia, while in Subcarpathian Ruthenia the social stratification of the Jewish population was completely different. While the basic structure remained the same across the state – the independent class predominated and from the west to the east grew continuously more pronounced. While in Bohemia 61.8% of Jews belonged to this category, in Moravia and Silesia the figure was 62.4%, in Slovakia 72.1%, and in Subcarpathian Ruthenia the figure was 74.1%. The administrative class be-

Table 7 Social structure of religious Jews by lands in 1921 (‰)

Lands	Branches	Agriculture	Industry and trade	Trade, finance	Transport	Civil service, freelance occupation
Bohemia	Independent	839.7	541.6	676.3	273.5	470.2
	Officials	89.0	279.1	156.8	576.3	468.5
	Workers	71.3	179.3	166.9	150.2	61.3
Moravia and Silesia	Independent	747.6	497.0	757.8	293.8	370.0
	Officials	150.5	266.4	82.4	536.8	549.6
	Workers	101.9	236.6	159.8	169.4	80.4
Slovakia	Independent	764.5	620.0	841.8	577.1	243.9
	Officials	126.9	116.6	40.2	198.9	662.6
	Workers	108.6	263.4	118.0	224.0	93.5
Subcarp. Ruthenia	Independent	733.5	729.4	873.0	716.9	173.7
	Officials	9.4	21.5	20.6	28.5	713.4
	Workers	257.1	249.1	106.4	254.6	112.9

Source: Československá statistika, vol. 23, series VI, workbook 5, tome II. Praha: 1927, p. 151, table 174, 176, 177.

Table 8 Social structure of some ethnic groups in Czechoslovakia in 1930 (%)

Economic activity	Czechs	Slovaks	Germans	Jews	Total
Independent	35.2	51.4	34.2	68.8	39.6
Officials	19.8	12.4	18.0	18.0	17.2
Workers	45.0	36.2	47.8	13.2	43.2

Sources: Statistická ročenka Republiky československé. Praha: SÚS, 1938, p. 15; Průcha, V. Odvětvové…, p. 74, table 2.

came a fast-growing group in Bohemia (22.8%) and in Moravia and Silesia (20.2%), while in Slovakia they represented just 12.6% of the community and in Subcarpathian Ruthenia just 5.9%. Another typical feature is the small share of working class. In Bohemia this category comprised just 15.4% of the community, in Moravia and Silesia 17.4%, in Slovakia 15.4%, and in Subcarpathian Ruthenia 20%.

When the Jewish population is combined according to contemporary social class divisions with basic economic sectors in the individual lands we find, for example, that the largest share of people in the independent class were employed in business and finance in Subcarpathian Ruthenia and Slovakia, while in Bohemia this class predominated in agriculture. It is very clear that these were primarily small-scale independents: small shop owners, as well as the poor, the disabled, and rentiers in Subcarpahtian Ruthenia, and smallholders in Bohemia.

The smallest percentage of people in the administrative class recorded in the census in Subcarpathian Ruthenia was in agriculture, while the largest was again in Subcarpathian Ruthenia in state service and independent professions. The largest share of working class in the state was in Slovakia in industry and sole proprietorships, while in Subcarpathian Ruthenia it was in agriculture and transportation. Again, we cannot distinguish the share of industrial labourers from the complex categories of the working class in trades.

In Bohemia the independent class predominated in all the basic economic fields, with one exception, state services and the independent professions, in which the share of the independent class and the administrative class was equal. The census recorded the most working class people working in industry and in sole proprietorships.

The situation was the same in Moravia and Silesia as in Bohemia, except for the higher share of officials in state services, the independent professions, and transportation. Like in Bohemia industry and sole proprietorships belonged to the working class categories, the share of which was relatively higher.

In Slovakia the social structure was more distorted than that in the Czech lands, with a higher share of the independent class in business and finance, industry, sole proprietorships, and transportation. The administrative class was not as big – only a small percentage of people in business and finance belonged in this category and most were found in state services and the independent professions. The largest share of the working class was in industry, sole proprietorships, and transportation.

In Subcarpathian Ruthenia the west-east progressive increase in the share of the independent class reached its peak, except in state services and the independent professions. There was almost no administrative class, while conversely the working class formed the largest share in agriculture, industry, sole proprietorships, and transportation (*Československá statistika*, vol. 23…1927: 151, 152).

It is interesting to observe the social structure of ethnic Jews in combination with other ethnic groups recorded in Czechoslovakia. In 1921, according to contemporary measures, the social stratification of ethnic Jews diverged completely from that of other ethnic categories; they were entirely unique. Above all, they had the largest percentage of people in the independent class in the whole state – 72.8%, which, compared to Czechoslovaks at 45%, Germans at 40.4%, and Hungarians at 52.8%, stands out substantially. Also, there was a larger

share of people in the administrative class among ethnic Jews at 8.8%, compared to Czechoslovaks at 5.5%, Germans at 7.4%, and Hungarians at 4.7%. Conversely, the smallest share of ethnic Jews was recorded in the working class at 17%, compared to 47.6% among Czechoslovaks, 50.7% among Germans, and 41.4% among Hungarians representing the exact opposite (*Československá statistika*, vol. 23,..., 1927: 142). In the notes accompanying contemporary statistics we find comments on the tables, for instance, like: '…it is clear, however, that the Jewish people have the largest stratum of the best economically situated people…'. (*Československá statistika*, vol. 23...1927: 140). For more on the specific features of the social structure of the Jewish population during the First Czechoslovak Republic, see, e.g., *Soukupová* 2002: 5–16; *Zahradníková* 2002: 17–23; *Čermáková* 2003: 9–20; *Machačová and Matějček* 1999: 135; *Nesládková* 1999: 114–123).

It is possible to observe trends in the changes to the professional and social structure of ethnic Jews and Jews of faith when we compare the two censuses dating from the First Czechoslovak Republic. Among the Jewish population at the state-wide level the significance of the primary sector declined significantly – agriculture, forestry, and the fishing industry. Among the majority population (ethnic Jews and Jews of faith) a similar tend occurred – but starting from a much larger base. The importance of industry and sole proprietorships among Jews of faith decreased very slightly, while in the population of Czechoslovakia as a whole it increased very slightly. Czechoslovakia became a state in which the population connected with industry, sole proprietorships and services outweighed those tied to agriculture. The economic profile of the Jewish population, even during the crisis of the 1930s, remained grounded in business and finance, which as non-production sectors grew from 41.2% to 45.3%, and that was the biggest increase of all the branches observed and of significance for the given community. In the population of the state the significance of these fields also grew – increasing from 5.8% to 7.4%. Other branches worth mentioning are state services and the independent professions, which increased slightly among Jews of faith – from 7.2% to 7.7%, in the total state population (including military) increased from 5.6% to 6.2%. In the context of crisis it is interesting that the significance of other professions and of people without occupation was further decling among Jews of faith – from 13.3% to 12.4%. However, even the population of Czechoslovakia as a whole did not experience any sharp changes, just a slight increase – from 10.8% to 11.3%, but the higher shares among Jews of faith are interesting.

A regional look encompassing the entire population of the state reveals some characteristics that were typical for certain lands. In 1930 Bohemia had the most advanced branch structure, both among the total population and among Jews of faith. One of its key characteristics was that it had the lowest share of people involved in the primary sector – just 24.1%, while Jews of faith in Bohemia were much less involved in agriculture – just 2.1%. While 41.8% of the population made their living in industry and sole proprietorships, and only 18% of Jews of faith did. While 15.1% of the population in the region was tied to business, finance and transportation, 51.5% of Jews of faith were involved in these professions. State services, the independent professions, and the military provided a living for 6.3% of the population of Bohemia and 10.6% of Jews of faith in the land. The census also recorded a difference in the case of other occupations and people without an occupation, where the total population accounted for 11.3%, and Jews of faith clearly more at 17.7%.

It is also informative to compare statistical data from 1930 on Jews of faith and ethnic Jews at the state level from the perspective of branches and professions. In that year a certain disproportion remained between the two structures. In the numerically larger group of Jews of faith there was significant growth of non-production sectors at the expense of production sectors, which means that it corresponded to the overall trend in Europe and the world, as did the group of ethnic Jews, though the previous state slightly more rigidly remained accented on the production sectors. Among Jews of faith this situation can be expressed in the ratio of

30.4 : 56.5, among ethnic Jews as 37.8 : 60. However, compared to the population of the republic as a whole, where the relationship of production to non-production sectors was 65.8 : 22.9, both groups show an entirely different, directly 'opposite' quality. The economic profile of the Jewish population, though internally differentiated, remained distinct and diametrically opposite throughout the period of the First Republic.

Let us also look at the branch structure of ethnic Jews in Slovakia and Subcarpathian Ruthenia, where there were large communities. There were quite large differences between the two regions. While the share of ethnic Jews involved in agriculture was small in Slovakia, in Subcarpathian Ruthenia it was more than one-fifth. The share working in industry and sole proprietorships was more or less the same in both regions. More than one-half of ethnic Jews in Slovakia were engaged in the most typical professions of business and finance, while only one-third in Subcarpathian Ruthenia. Also, transportation provided a livelihood for just 1.8% of ethnic Jews in Slovakia, but for 5.5% in Subcarpathian Ruthenia. Similarly, more ethnic Jews worked in state services and the independent professions in Slovakia than in Subcarpathian Ruthenia. In both lands only a negligible share of ethnic Jews worked in domestic service (*Statistická ročenka*…1938: 15; *Československá statistika*, vol. 98, 1934: 46 et seq.; *Československá statistika*, vol. 104, 1934: 12 et seq.).

What shifts occurred in the social structure of Jews of faith and ethnic Jews between the first and second population censuses? If we compare the structure of the population of ethnic Jews in 1921 and 1930 in Czechoslovakia it is impossible to overlook some very clear changes. Above all, the share in the variegated category of the independent class decreased, which, given the ongoing economic crisis, was understandable and adequate for that time. Conversely, the administrative category grew considerably, while the very under-dimensionalised working-class category decreased further. The unique and, if you will, distorted social structure of the ethnic Jewish population remained intact. Its specificity stands out compared to the total population of the state and in comparison with the largest ethnicities of Czechoslovaks and Germans. The social stratification of Czechoslovaks and Germans was most alike and also most resembled the state-wide situation, or, to be more precise, it was the Czechs and Germans that were most alike. The share of the independent class among Czechs was 35.2%, among Germans 34.2%, and in the state as a whole 39.6%. 19.8% of Czechs belonged to the administrative class (including low-level staff), 18% of Germans, and 17.2% of the population as a whole belonged to the administrative class. Also, in the working class were 45% of Czechs, 47.8% of Germans, and 43.2% of the total population. Ethnic Slovaks differed overall and the agrarian nature of the population was confirmed at another level. The independent class was larger among Slovaks – 51.4%, and the administrative class, including low-level employees, was smaller – 12.4%, and the working class was also not as large as it was among Czechs and Germans, accounting for 36.2% of the population. We will leave aside the internal structure of labourers, where in the west of the republic, that is, among Czechs and Germans, industrial labourers predominated, while the eastern part of the state was predominated by agricultural and forestry labourers (*Průcha* 1999: 73–75; *Československá statistika*, vol. 116, 19...:10–22; *Statistická ročenka*..., 1938: 15).

An overall unfavourable developmental trend in the social structure was observed not just among ethnic Jews but also Jews of faith. A comparison of the two censuses reveals the same features as those observed for ethnic Jews. The 1930 census showed a sharp decrease in the share of the independent class, but social decline in this case was much greater, and the statistics employ the term 'pauperisation'. Conversely, the category of the administrative class and low-level employees saw unusual growth, while the category of the working class grew smaller. Social stratification in this – numerically much larger – population underwent even more extreme development than in the case of ethnic Jews.

Housing

To accompany these professional and social characteristics we can add relevant information on the housing situation of the population drawn from a survey that was conducted in large towns in the Czechoslovak Republic on 1 December 1930. The statistical data say nothing about the religious or ethnic composition of the given urban population, but they do refer to the social stratus of the dwelling's occupant/owner. The survey was conducted in 34 urban agglomerations throughout the state, and those agglomerations included had to have at least 10 000 inhabitants (with the exception of 10 agglomerations where this criterion was ignored). According to the social divisions used to divide up the sample it is possible to obtain a relatively good idea of the housing situation of the population in the given urban agglomerations in general and the housing situation of the Jewish population in particular.

The survey primarily found that 'the dominant part of the population in our large towns' was made up of people employed in industry and skilled trades and their family members. The larger the city, the more dwelling owners/occupants that were found to be involved in business, transportation, public service, and the independent professions, which were all occupations typical for the Jewish population. Urban agglomerations also contained sizable shares of rentiers and pensioners, who contributed (according to contemporary classifications) significantly to the structure of the most diverse social category, the independent class. The Jewish population also formed a significant share of this group. Contemporary statistics also included the poor, if they had their own dwelling, in the independent class. Truly wealthy people therefore disintegrated within this almost unlimited category and their influence on the characteristics of the given social stratum was small. However, just under one-third of the large share of the working class (40%) owned their housing (this relates to flats in permanent structures). Conversely, two-thirds of the dwellings located in provisional structures were occupied by people in the working class. The administrative class and low-level employees formed a significant urban category, one that also contained many Jewish families.

Interesting differences can be traced between the given urban populations by the different lands in the state. Here again there are significant differences between the Czech lands on the one hand and Slovakia and Subcarpathian Ruthenia on the other, above all with regard to the share of the population involved in industry and the skilled trades, in which the western part of the state clearly dominated, or specifically Moravia did, thanks to the Ostrava and Zlín regions. Conversely, the structure of large towns in Subcarpathian Ruthenia was different, with much larger categories of the population (as well as flat owners) involved in business, transportation, the independent professions, and public services, professions and fields in which there were large shares of Jews of faith and ethnic Jews. For this reason in this region large towns had a smaller working class in any branch but larger independent and administrative classes. This structure thus played more to and was more equated with Jewish households and flat owners *(Československá statistika*, vol. 17..., 1935: 40–47).

Social inclusion and the standard of the property also had an influence on the size of the flat. The survey showed that it did not depend on the specific occupation but on the social category. Relatively the largest flats were owned by people in the independent class and the administrative class, the smallest by the working class. The narrow stratum of entrepreneurs, and people involved in free professions (especially doctors and lawyers), who more often lived in the largest flats, stood out from the relatively diverse class of independents. Again we find the Jewish minority in this group. Surveys conducted in some specific towns show large shares of Jewish doctors and lawyers. For example, in Moravská Ostrava and Ostrava the share of Jewish lawyers at the turn of the 20th century range between one- and two-thirds out of the total in the given professional category (here this refers to followers of Judaism). In 1910 the share in Moravská Ostrava was extraordinarily large – 68%. The situation in the interwar period underwent not profound changes in this respect (*Pokludová* 2003: 87–88).

Not just the size of a flat but also the facilities of housing revealed something about the social status of the given household, its advantages, but also about the lifestyle of the inhabitants. The survey indicated that the vast majority of flats had one room, no entrance vestibule, no WC of its own, and no bathroom. Conversely, large flats had a number of rooms, an entrance vestibule, or even a hall, a WC, a bathroom, and a room for servants. Often the flats of the working class and even low-level employees were modern. They tended to have electricity, running water, and gas. On the whole lower-level employees had small flats because large numbers of them were located in administrative buildings, where they were belonged among the flats for servants. The independent class most often lived in their own homes, the administrative class and low-level employees lived in tenement buildings, often in service flats. There was a large share of the Jewish population among the independent class and the administrative class.

Private flats could be used not just as housing but also for operating a business (in the given sample this was the case of around one-tenth of the total). During the First Republic this phenomenon has a declining trend. Most such flats were concentrated in centres of domestic industry (e.g. Prostějov, Kraslice, the Jablonec agglomeration). An exception to these small businesses and shops were flats connected with the offices of lawyers, notaries, doctors, and dentists, and so on. These accounted for a full forty flats out of (every) one hundred flats used in health services. To a smaller degree this connection was also found among lawyers (solicitors, notaries). These so-called 'business' flats were in as many as 80% of cases five-room flats, and they were usually located on the ground floor or the lower floors (*Československá statistika*, vol. 107,..., 1935: 47).

The example of the Jewish community in Nitra

The specificity of the Jewish minority in the wider social and cultural context is also revealed in a historical-demographic study of Nitra carried out for the period of the First Republic. Nitra was a centre of business and administration in western Slovakia with traditional cultural institutions (the Nitra chapter house, secondary school, seminary, *ješiva* – school of higher education focused on the study of Talmud Tora, Talmud Tora). The local Jewish community was characterised by its strong focus on the tertiary sector, which used to be customary for this minority. While only a small percentage of the Jewish population there was involved in agriculture (3%), and only 4.6% with industry, a large share of the population was involved in skilled trades (22.7%), and among women the figure was even 37%. As everywhere else, business dominated, involving more than two-thirds of the observed population. In the sphere of hospitality and hotel services around one-half of all restaurants were owned by Jews, and they owned three out of the five hotels. On the whole they were widely employed in administration (especially private) – as much as 30% of the population – and in the banking sector (21%). They were significantly involved in professions in the field of the independent professions. More than one-half of the doctors were Jews (28 of the 53 doctors were Jewish), and they all had their private medical offices, and none worked in hospitals. Out of the 30 lawyers 15 were Jews, out of the 19 notaries 9 were. Just under one-tenth of the Jewish community was involved in education. Social status was also attached to the overall identification. A large number of owners and tenants of estates and farms lay in the sector of basic industry, and large-scale entrepreneurs were in industry (these involved entrepreneurs in the sugar-refining and brick manufacturing industries, the production of tobacco paraphernalia, a quarry, a mill, etc.). Skilled tradesmen were already operating smaller-scale sole proprietorships (tailors, barbers, skinners, cobblers, upholsterers, tinsmiths), with a substantial number of women among them, too. It is understandable that in Nitra Jews of faith and ethnic Jews lived in large privately owned homes or buildings and in large flats with modern amenities in such buildings and in flats used as accommodation and as a place of business.

This was especially true in the case of flats used as accommodation and a doctor's office (*Zetocha* 2003: 89–103).

Conclusion

It is possible to sum up that both Jews of faith and ethnic Jews remained faithful to their traditional professions and occupations during the period of the First Republic, but they also pursued other fields and activities with a basic economic focus, which became widespread in all the advanced states in the world. Owing to this trend the weight and significance of the production sectors decreased amidst the advancement of non-production branches. This focus conformed to the centuries-long general economic orientation of Jewish communities in this country, corresponded to their intellectual background, behavioural models, and so on. They differed significantly from the rest of the population in the state in terms of professions and in terms of their social structure, which was considerably dominated by categories in the independent class and a small working class. Households in the administrative class grew most significantly, and it can be assumed that it was made up of people in lower-ranking employees than elites in managerial and top-ranking positions.

Despite the basic consistency between characteristics of professional orientation and social structure there were differences between the Jewish populations (both ethnic and of faith) in the lands that made up the First Czechoslovak Republic running from west to east. The industrialised and most advanced westernmost part of the state had very specific characteristics, as did the more agricultural and more backward easternmost part.

These distinctions were reflected mainly in the share and significance of basic industry in the given population. While in the Czech lands the sector had a minor role that decreased further during the First Republic, in Slovakia in 1930 the sector was more than three times greater than that in Bohemia, and in Subcarpathian Ruthenia the share of the sector indicated the involvement of the majority society. The areas of business, finance, and to some extent transportation, which accounted for more than half of the economic activity of the Jewish population in the Czech lands and Slovakia, was also the largest in Subcarpathian Ruthenia, but the primary sector and sole proprietorships immediately followed it. Jews in this land had three basic economic 'pillars': business, sole proprietorships, and basic industry. Social stratification varied more significantly by land. Subcarpathian Ruthenia, which differed most from the rest of the state, was characterised by a larger share of working class in basic industry, the independent class among sole proprietorships and in transportation. Conversely, the independent professions and state services, where the fewest sole proprietors were found but the most administrative workers, were entirely under-dimensionalised.

The given differences were also related to reproductive behaviour. If in the Czech lands the Jewish population was decreasing by natural change, in Slovakia it still had increases, albeit the lowest increases, while in Subcarpathian Ruthenia reproductive growth was the most dynamic.

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LUDMILA NESLÁDKOVÁ has been engaged in research in historical demography for many years. She initially focused on analysis of demographic development (reproduction, migration, population structure) in regions undergoing advancing capitalist industrialisation (e.g. Ostrava region, Šumperk region, etc.) and later in projects analysing long-term reproductive development of the population in the Czech lands she (in cooperation with Lumír Dokoupil) focused on Moravia and Silesia. Since the start of the 1990s she has studied demographic characteristics (population structure, natural change) of the Jewish population in Moravia starting from the 1780s until the end of the First Czechoslovak Republic. She regularly publishes work in the domestic and foreign press, actively participates in conferences, seminars, and other scientific activities. She teaches in the Department of History at the Faculty of Arts of the University of Ostrava.

Book Reviews

A CONTRIBUTION TO THE DISCUSSION ON DEMOGRAPHIC DEVELOPMENT AND FAMILY POLICY*)

In 2006 the Department of Demography and Geodemography at the Faculty of Science, Charles University, published a study by a group of authors titled *Marriage and the Family: A Private or Public Interest?*[1)] The book comprises a collection of studies prepared as a parts of three projects, especially as part of work on a project titled 'The Public, Demographic Processes and Population Policy'[2)]. The studies share two broad themes. These are demographic changes in the context of global changes and European integration and the role of population and family policy. The collective of authors included researchers from three institutions that have long specialised experience in the study of these issues: together with the Department of Demography and Geodemography these were the Faculty of Social Studies at Masaryk University in Brno and the Institute of Sociology AS CR in Prague. A basic feature of the authors' approach was their linking of demographic statistical data to findings from sample surveys on the population climate. They primarily made use of the international survey 'The Acceptance of Population-Related Policies' (PPA2).

The publication contains studies that fall into two basic areas: on the one hand, a description and assessment of changes in demographic behaviour, on the other hand, the role of the relevant state policies in these changes. The first part of the publication comprises chapters dealing with the opinions, attitudes, and subjectively interpreted behaviour of people in the area of family formation and partnership behaviour, and chapters devoted to selected 'new' phenomena in Czech society, namely, lone motherhood and unmarried cohabitation. The second part of the publication contains assessments of the development and current conception of family and population policy in the Czech Republic in the eyes of both experts and the general public.

In the first chapter, 'Nuptiality, Unmarried Cohabitation and Public Opinion', Dana Hamplová analyses how different groups of the Czech population (especially by education), view the current changes in demographic behaviour. Although more than one half take a neutral view of the demographic changes, there is some unease in the population over the nature of current trends, most so in the older generation. The author also looked into what people believe to be the causes of these demographic changes, and here the population proved to be divided according to how much of an influence they ascribed to basic groups of factors – economics and values. Like in other studies here again the effect of education on observed attitudes and opinions was confirmed, but this effect was also shown to be complicated and structured. Although it was not the author's explicit focus, her research identified a slight generational shift in a reflection of the demographic behaviour changes.

One of Jitka Rychtaříková's current main research focuses is lone motherhood, and the author addresses this subject again in this publication in a chapter titled 'To Be a Single Mother in the Czech Republic'. Here she assesses lone motherhood both in relation to overall demographic changes in the Czech Republic and from the perspective of international comparison. She attempts to show that the trend of a rising number and growing share of extramarital births and in particular births to lone mothers cannot simply be explained as the result of the westernisation of Czech society. Instead, it is necessary to search for connections in Czech society itself and in its recent social and economic development and possible also in the government's policy. The author poses several key questions (p. 24): whether the increase in the fertility in recent years has really been that dramatic; what role was played by demographic factors; how long do children born out of wedlock live with both parents or just with one; how much is this a long-term trend or part of the social transformation in the Czech Republic; and what is the gradient of differentiation of lone motherhood by education. Her analysis confirmed that despite the unquestionable increase in lone motherhood the change has not been that dramatic. What is more it oc-

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*) This article was published in Demografie, 2008, 50 (1), p. 49–51. The contents of the journal are published on the website of the Czech Statistical Office at: http://www.czso.cz/csu/redakce.nsf/i/demografie

1) Kocourková, J. and L. Rabušic. 2006. *Sňatek a rodina: zájem soukromý nebo veřejný?* Praha: PřF UK.

2) The project was supported by the Grant Agency of the Czech Republic. The other projects are 'Geographic Systems and Risk Processes in the Context of Global Changes and European Integration' (a research project of the Faculty of Science, Charles University) and 'Active Ageing, the Family and Intergenerational Solidarity' (funded by the Ministry of Education, Youth and Sport).

curred in a context where all sorts of other demographic indicators were changing, and this must be taken into account when assessing the demographic and social consequences of the observed phenomenon. She also shows that children of lone mothers more often grow up in lone-parent families, suggesting that unmarried cohabitation is not a significant 'substitute' for married families. However, the author herself notes that this conclusion needs to be verified using other, more evidential methods. The need to complexly examine the phenomenon of lone motherhood using various methods is moreover one of her main conclusions.

The same topic is the focus of a chapter by Tomáš Katrňák, but from a different perspective ('Who Are the Lone Mothers in Czech Society?'). Both chapters have a common interest: to reveal the sources of the rise in lone motherhood and establish the social identification of lone mothers. However, Katrňák works with sample survey data. He surveys the factors that are or could be the cause of lone motherhood as well as the characteristics of lone mothers that are the result of their lone motherhood. He came to a similar conclusion as J. Rychtaříková, namely that the increase in the number of lone mothers in Czech society is most likely a result of a reaction of weaker strata to economic conditions and to the parameters of socio-political measures than a sign of a new lifestyle among the more educated strata.

Petra Šalamounová writes about another important demographic trend – the decline in fertility – in a chapter titled 'The Value of the Child and the Natality Plans in Czech Society'. This chapter is more descriptive than the others largely owing to the subject of analysis. The value orientations attached to parenthood and being parents, including the determination of these attitudes and behaviour, are very complex phenomena and any kind of broad generalisation is misleading. In the conclusion the author confirms a fact well known from other studies that children, especially in the emotional sense, are still highly valued. She compares these findings with the natality plans, which are more 'modest' among childless young people compared to the declared importance of children. While most authors note the discrepancy between parental plans and the fulfilment of those plans in reality, here the discussed discrepancy is between plans and the subjective perception of parenthood as such, which is certainly a good incentive for further analysis (even despite the real increase in fertility it is not expected that it will return to a level like that observed in the late 1980s).

Within the first part of the publication the chapter by Ladislav Rabušic is somewhat distinct. It focuses on an international comparison of fertility trends (articulated in the question 'Will Czech Fertility Be One of the Lowest in Europe in the Future?'). The methodology used is again based on value orientations, in this case the value orientations associated with marriage and parenthood. Two basic questions lie at the conceptual basis of this chapter: whether the value of marriage in the eyes of the young generation of Czechs is declining, and whether the decline in fertility (in the end of the 20th and the start of the 21st centuries) is just a reflection of the postponement of marriage and the family formation or a reflection of long-term changes. Rabušic's conclusions about the future of fertility in the Czech Republic tend to be and here again are more 'optimistic' than those of many other authors. He reaches his conclusions using a method that he himself regards as a partial approach to understanding the complex determination and variability of the natality plans of individuals and thus also the future trend in fertility. This 'optimism' does not lie in claims about the future substantial increase in fertility or the top position of the Czech Republic in a European comparison of fertility, but in the expectation that in the future it will not fall below the current European average, which in the given socio-economic circumstances cannot be regarded as bad.

The second part of the book is titled 'Reproductive Conditions, the Expectations of the Czech Population, and State Policy towards Parents', which indicates a certain diversity of texts. Yet here again we can find a basic unifying idea. It concerns relationship between 'the government and the people', namely the required extend of families' autonomy versus the desirable amount of support for parenthood and family life.

In a chapter titled 'Will the Czech Public Succumb to Demographic Panic?', Lucie Vidovičová analytically reflects on the different forms of interpretation of demographic ageing, from the media, to public opinion, to expert analysis. The chapter focuses mainly on admonition against simplified interpretations of demographic data (not just on ageing) and on how the use of such data can be abused to mislead the public or be manipulated by the media. The author appeals for a complex view of data on demographic ageing and the individual aspects of this phenomenon. An attitudes survey confirmed how a lack of information and the amateur handling of data may form the public's fears about demographic development. What is required to counter this are policies shorn of scientifically unsubstantiated viewpoints and narrow perspectives.

The chapter by Zdeněk Pavlík titled 'Population Policy Dilemmas' offers a deeper reflection on the philosophy, the scientific and objective foundation, and the focus and potential of (pro)population policy. The author also identifies certain developmental stages of population policy. In the author's view

what is important for the current conception of population policy is an understanding of the population climate in a given society and of the motives and objectives behind the development of population policy. The author does not reject the legitimacy of efforts to influence fertility through state policy measures, but he notes that natality behaviour can only partly be influenced by such measures. He assigns greater weight to a broadly conceived population policy as an explicit or implicit part of the overall policy of the government and as part of a complex of policies designed to respond to changing social circumstances (e.g. migration, health, etc.).

Jiřina Kocourková describes the most recent development in population and family policy in the Czech Republic in a chapter titled 'From Population Policy to Family Policy: Development in the Czech Republic since the Early 1990s'. The objective of this chapter is to portray the 'development of the conditions that the state intentionally had been creating for families from the start of the 1990s by means of so-called direct measures' (p. 107). She directs her interpretation at the changes in the approach and objectives of state support for families compared to the situation in the 1980s and earlier. The chapter contains a detailed description of the objectives of individual governments over time and the specific measures and general course of development from an implicit to an explicitly defined family policy. One of the author's conclusions is that during the 1990s population policy was gradually supplanted by family policy, but the pro-natal objective remained intact (p. 127).

The next chapter touches on issues of the relationship between family and professional roles of parents raising children and options of support from the state to facilitate the reconciliation of the two spheres. Using PPA2 data, in a chapter called 'Employing Parents, Raising Children, and the Expected Role of the State', Květa Kalibová examines what young families require from the state in order that the needs of families with young children should be satisfied while allowing men and women to fulfil their high professional ambitions. The author found that the expectations are relatively high, in particular among people with lower education, but less obviously the expectations of young people were lower. The author does not analyse these findings further.

The final chapter is a contemplation on the effectiveness of family policy and the perception of its role. In 'Why and What Kind of Family Policy in the Czech Republic: The Czech Public's Attitudes towards Pro-natal Policy Measures', which is something like the culmination of the book, Jiřina Kocourková specifically follows up with her historically oriented chapter in the book, but she concentrates on the possibility to increase the effectiveness of family policy by accepting the demands of public opinion in this area. The author sets out from the theory that in countries with a higher share of unfulfilled parental plans people give more support to family policy measures. Based on this theory she uses PPA2 data to examine the Czech public's expectations from family policy compared to other countries. The opinions of the Czech public on family policy measures are examined again from the perspective of their differentiation but, unlike the previous chapter, their evaluations of the overall focus of family policy are included. The conclusion of this chapter serves as a substitute for the absence of a conclusion to the book.

On the whole the book can be regarded as a rich source of information and stimuli for further research on trends in demographic behaviour, which has moved on somewhat since the time the data used herein were collected. However, that does not mean that the analytical conclusions are in any way out of date. The book is also inspiring for anyone working on the formation of family policy and for anyone evaluating such efforts. The book contains valuable methodological notes from the authors about the processing of PPA data and demographic statistical data in relation to the overall focus of this publication. The book does not provide a straightforward answer to the question posed in the title of the book. It can be deduced that all the authors recognise the complementarity of the roles of both basic subjects in family policy, but the share or distribution of responsibility they tend to view somewhat differently, though they all see how that has varied over time. The authors stuck to their resolution of not always having to provide an answer to the questions posed but helping readers to formulate their own answers.

Věra Kuchařová

RECONSTRUCTING THE DEMOGRAPHIC BEHAVIOUR OF THE JEWISH POPULATION IN BOHEMIA IN THE 19th AND THE FIRST THIRD OF THE 20th CENTURY

At the start of the 1990s historiography emerged with the new concept of not just as usual studying the history of the Czechs but also the history of the German and Jewish populations in this region living long term in a particular place and contributing to its cultivation and changes there. In relation to the globalising world today, the interest of the research community is turning increasingly to the study of multi-ethnicity, acculturation processes, and the coexistence, contact, and conflict between majorities and minorities in different times and places. These new impulses have also led us to devote greater attention to Jewish studies. This area can be approached from a variety of perspectives, one of which is the demographic perspective, but also sociological and historiographic perspectives. This conception has been adopted by the demographer and sociologist Jana Vobecká.

The objectives of Vobecká's study are to reconstruct the trends in the demographic behaviour of the Jews in Bohemia during a period (the 19th and the first third of the 20th centuries) when it was undergoing significant changes and to identify these changes and interpret them in a complex sense that goes beyond the framework of demographic analysis. As Vobecká notes in the opening of the study, to achieve these objectives she chose three basic lines of observation. The first is an examination of the Jews as a specific cultural minority in history and society, the second is a demographic comparison of this population with the majority population in Bohemia and the common trends of both groups, and the third line involved introducing into this systemic approach a wider Central European comparison and context for examining the population development of Jews in neighbouring countries (Moravia, Silesia, Lower Austria, Galicia, Bukovina, and Cisleithania).

A precise, accurate, and meticulously conducted demographic analysis served as the author's tool, but she also understood this approach as a means of making a broader interpretation of the observed phenomena and processes and of putting together a picture not just of the changes in demographic behaviour, but also of the transformation and shifts in the social status of Jews in the given time frame.

Because statistical data were used as the basic research source, she used a definition of the Jewish population that conformed to the concept applied in contemporary official statistics. A Jew is defined as someone who professes the Jewish faith (Judaism) and is a member of the Jewish religious community. During the First Republic anyone of Jewish ethnicity could also declare themselves a Jew, but the author works mainly with the numerically larger, long-term data base that encompasses people of Jewish faith. In the text she consistently uses the term 'Jew' with a capital 'J', which was however the term used for ethnic Jews. She distinguishes between 'jews' with a lower-case 'j' (Jews of faith) and 'Jews' with a capital 'J' (ethnic Jews) [this distinction reflects the difference between the Czech 'žid' for Jews of faith and 'Žid' for ethnic Jews – translator's note]. However, at the opening of the study the author notes that she intends to consistently use the form with the capital letter (*Žid*) for her sample, which is acceptable. Converts to Judaism are not covered in the study. It is however known that in the period up to the demise of the Austrian Monarchy conversions to Judaism were not that common and are therefore statistically insignificant. During the First Republic the situation was different, as there was an increase in the number of mixed marriages between Jews and non-Jews, which led to the loss of Judaism in the generation of children that followed. The author was aware of these changes and takes them into account in her interpretations. This approach in my view was the only possible approach she could have taken.

J. Vobecká focused the study on the period of advancing modernisation, which brought fundamental changes to the overall population of Central Europe and to minorities, including the Jewish minority. Therefore, at various information levels and in varying scope she examines the entire 19th century and the first decades of the 20th century, ending in 1939 (with the creation of the Protectorate of Bohemia and Moravia), which marks the reintroduction of restrictions on the civil rights and freedoms of the Jewish population, eventually leading up to the Holocaust. This time frame is optimal for adequately observing all the phenomena the study is interested in. My only reservation is the decision to use the year 1939 as the end of the period; I feel that 1938 would have been more appropriate, as after the Munich Agreement the Sudetenland was annexed, an enormous amount of migration occurred, and, in short, the Second Republic treated the given ethnicity entirely differently. The tables and figures run up to the year 1937, which I consider perfectly appropriate. The author speaks of two logical timelines: historical and demographic. However, the historical timeline cannot be regarded as logical (history is

not logical), but given the researcher's objectives it is logical to examine Jewish history from in this context the most appropriate point in time.

The highly professional demographic analysis draws mainly from official Austrian published data and the related Czechoslovak statistics. A consistently macro-analytical approach is used, and only rarely does the author use data drawn from Jewish records and thus apply a micro-analytical approach.

The study is suitably divided into six chapters, which are further subdivided into numerous subchapters and sections. An exposition of the research work is concentrated in Chapter Four and partly also Chapter Five. In the analytical section in the extensive and thorough fourth chapter the author has accommodated readers and data users as much as possible by dividing up the form and content of the text in a very rational and effective way. The text is accompanied by numerous tables and figures, and the appendix lists important data files and describes the methodology used in the calculations. The appendix section contains 18 appendices spread out over 30 pages, from which researchers can draw on important hard data from various sources, along with absolute and relative figures, and many characteristics are accompanied by long time series. I find all the figures very useful and well-elaborated, but exceptionally valuable are those that capture the method in which the publication of data on natural population change in 1832–1941 were published, including the source and regional scope of every census, data on the Jewish population of Bohemia for the years 1762–1941, the trend in the size of the total and the Jewish population in selected lands in the Austrian Empire for the years 1785–1910. The appendix contains numerous age structures for the Jewish population combined with marital status in Bohemia and neighbouring lands, the structure of deaths in the Jewish population by sex and age during the First Republic, mortality, the ethnic and religious structure of the population during the First Republic in the Czech lands, and a final appendix indicating natural change and the size of the Jewish population in Bohemia for 1831–1940.

Following the introductory sections, in which the author provides readers with a successful introduction to the state of knowledge, sources, and methodology used to work with the data, the next chapter offers a brief but nonetheless dense excursion into Jewish history, outlining settlement changes in the period after 1948 or 1867 and the trends in the social and economic situation of Jews in the period following complete emancipation up until 1939, or its main features up to the present. In this section J. Vobecká is again draws mainly on domestic and foreign literature and the conclusions contained in the literature.

The key fourth chapter is focused on systematically reconstructing all demographic indicators and processes with the objective of determining the stage of the demographic transition in the Jewish community in Bohemia and situating this knowledge in the wider context of the history and demography of the Jews in Central Europe. The picture she presents begins with a detailed analysis of the settlement changes in the Jewish population in Bohemia. She notes its specificity: from the middle of the 19th century it was increasingly concentrated in towns and cities with a low to negative natural increase and with no capacity for compensating population losses through migration.

The author then presents the population structure by sex, age, and marital status from 1890, with a reconstruction of a series of age pyramids, finding that the Jewish population aged more quickly, had a larger number of singles in the population, married at a later age, and there was also a larger number of divorcees, which all led gradually to the formation of a regressive age structure. These tendencies began to become apparent from the second half of the 19th century.

An important finding is that nuptiality – like many other indicators – can only be traced from the end of the 19th century, when changes in the demographic behaviour of the Jewish population were already in progress. Nuptiality is revealed to be specific, with an overall low marriage rate, the inferred cause of this being the large volume of migration and the break up of traditional communities in which the close community and the family exercised social control. But other factors involved were changes in professional orientation and social advancement, and as the author notes also the increasing intensity of secularisation, individualisation, and changes in value orientations. It is possible to accept the finding the transition to the model of marrying at a late age occurred fastest between the years 1850 and 1870.

The author used the maximum amount of available data (there is a shortage of data) to prepare the key part of the study focusing on the fertility of the Jewish population. Based on her analysis she concludes that significant changes in reproductive behaviour were occurring from at least the last third of the 19th century. She also provides a perfectly acceptable explanation of the causes: both the marriage age rose and the intensity of higher-order births decreased. The interval in which Jewish women gave birth were shorter compared to women in the majority population. In the period after timely completing their reproduction women consciously limited their fertility. The author was aided in arriving at these conclusions by a manuscript of a demographic study by J. Heřman, which was based in excerpts from surviving Jewish records in communities in Bohemia and Moravia and from other statistical sources

dating from 1754-1953. Using a broad database from the census in 1930 she also conducted a comparison of the structure of the fertility of Jewish women with other socio-professional groups. She finds that the reproductive behaviour of Jewish families was comparable with that of urban middle classes in which the household heads had a higher education and were mainly self-employed in public services and the free professions, clerks' families linked to trades, industry, business and finance. These were the categories to which Jews themselves belonged.

An analysis of the mortality of Jews in Bohemia confirmed the assumption that the mortality rate was lower, mainly owing to the lower rate of infant mortality. The positive mortality conditions were most certainly influenced from the second half of the 19th century by the rising social standard of their lives in the city but also by their traditional way of life. The author calculated mean life expectancy in 1930 as 61 years for men and 65 years for women, which is much higher than that of the overall population of the Czech lands (54 years for men and 58 years for women). She also examined causes of death, which confirmed earlier findings (more deaths were caused by diseases connected with old age, fewer by infectious and sexual diseases).

The study also examined the natural population movement of Jews and determined its stages and looked at migration and the nature migration from the start of the 18th century until almost the end of the Second World War.

It was a very good idea of the author to include a chapter on the wider social and economic context of the life of Jews in Bohemia and Czechoslovakia, with a special focus on observing the movement of more secularised minority Jews into majority society. The author looked at colloquial language, ethnicity, education, social stratification, professional structure, and acculturation. The basis of her working approach was again a comparison between countries. In Moravia in the second half of the 19th century independent political communities formed in some traditional urban Jewish religious communities (with or without a land registry), but they were not communities with the status of a political district. Of interest is the author's conclusion about who in Moravia and Bohemia identified most with Jewish ethnicity. In both places it was mainly German-oriented Jews.

Given the topic, an interesting part of the text deals with education, and the author managed to create data files on education from the level of grammar school to university. She reached a conclusion that, while it is often repeated in the literature, is presented here with the backing of a broad base of information. In Bohemia Jews continued their studies at secondary schools and universities ten times as often as the majority population. Even in Bohemia, where the so-called second Jewish assimilation (into the Czech language environment) occurred most extensively, as Jews progressed into the higher levels of education they more often attended German schools, both in the second half of the 19th century and in the interwar period. According to the author, at the end of the 1920s, over 37% of Jews studied at the German university in Prague.

The author captured all the most essential socio-professional characteristics in the section devoted to this area, in particular the traditional dominance of every shape and form of business. Y. Don's hypothesis about the recruitment of new employees into business from the ranks tradesmen and factory workers in the second half the 19th century can – in my opinion – only partly be confirmed as valid in Bohemia, given that the given time frame involved the period of industrialisation rather than proto-industrialisation. Micro-analytical research conducted for Moravia and for the given period based on the manual results of a population census (counters) for individual urban Jewish communities confirm the author's 'pure speculations' about the sons of businessmen and tradesmen who also worked professionally as clerks. However, I cannot accept the author's opinion that the increase in large-scale factory production led straight to the destruction of small-scale production (trades), another area of economic activity the Jewish community was strongly involved in. The situation was more complicated. Many trades went into demise with the emergence of large-scale production, but they also often expanded in rapidly growing industrial centres.

The study also includes a list of sources and literature, including many foreign titles, Czech and English summaries, and extracts from reviews.

This is an exceptionally high-quality publication, presenting a complex and multi-dimensional picture of the demographic development of Jews in Bohemia and neighbouring lands during the period of modernisation and situating it within a wider social and cultural context. It is an example of an interdisciplinary approach, the perfect handling of methodology, the meticulous criticism of sources, and the studied collection of sources. The stylistic quality of the publication is also very high. The work presents many new findings, and it can be regarded not just as an excellent work of analysis but also as a quality monographic study.

Ludmila Nesládková

MORE THAN JUST A DEMOGRAPHIC HISTORY OF RUSSIA IN THE PAST TWO CENTURIES*)

Several years back the well-known Russian demographer and sociologist Anatoly Grigorievich Vishnevsky published an important study on the demographic history of Russia. As implied in its title, *The Sickle and the Rouble* (1998)[1)], he took a very broad approach, focusing on the wider economic and social background of this development.

The book is divided into two parts: the period of unsettling revolutions and the agony of the empire. Both parts are divided up into chapters whose titles aptly characterise the content so that the publication almost resembles almost an encyclopaedic work. The first part has six chapters: the Russian crisis at the start of the 20th century: late-stage agrarian society; economic revolution: the horse-drawn automobile; the urban revolution: towns without townspeople; demographic and family revolution: demographic freedom in a bondage society; the cultural revolution: a religious man with a collective (the hard-to translate Russian term *sobornyj*) consciousness and a university degree; political revolution: marginal people in government. The second part has four chapters: the onset of the Russian empire; empire and modernisation; the empire in crisis; the empire and the world.

In the first part the author describes Russia's backwardness in the context of Europe from the 17th to the 19th centuries. The signs of reforms coming from Europe were only just emerging and more substantial industrial development did not get going until the 1880s. Russia never experienced a Reformation or Enlightenment and the Enlightened Absolutism of some tsars was more of an exception and was short-lived (Peter the Great, Catherine II). The government-supported Orthodox Church suppressed any kind of reform and Enlightened Absolutism did little to change the situation of the rural population. The slow pace of development stemmed partly from the massive area the Russian empire covered, its inadequately developed infrastructure, and its geographic position on the edge of Europe. The underdevelopment of personal ownership and the system of farming commons, a relic of feudal conditions, were also of fundamental significance. Given that the primary economic sector throughout the 19th century was agriculture, this also had an impact on productivity, which in Europe was growing as a result of the development of other sectors and in tandem with them (industry, transport, and trade).

This was the situation that lay behind the position of Russia in economic, demographic and social areas at the turn of the 20th century compared to the advanced states of Europe and the world. The average corn yield per ha in Russia in 1909–1913 was twice as low as that in France and 3.4 times lower than that in Germany. However, much bigger differences existed in industrial production. In 1913 coal production per person was 209 kg (in the US it was 5358 kg), electric energy was 14kWh (in the US it was 176); national income in Russia was 102 roubles per head, which was 2.9 times lower than in Germany, 3.4 times lower than in France, 4.3 times lower than in England, 6.8 times lower than in the US. Corresponding differences exist in demographic indicators. In 1906–1910 infant mortality was 247‰, which is the level observed in the Czech lands in the mid-19th century and at the time indicated it, like in most countries of Western Europe, was 100‰ lower. The life expectancy of men in 1907–1910 was 32 and of women 34; in the Czech lands life expectancy was ten years higher; the situation was similar in the other European countries going through the second phase of the demographic revolution.

At that time the First World War broke out and led up to the Bolshevik Revolution in 1917. By then there already existed the germs of a market economy, and it was possible either to support them or set off out down another path – the author calls this the American or the Prussian path. The Soviet government chose the Prussian path, that is, state-run industrialisation. This could not occur without the help of advanced capitalist countries, which were a source of advanced technology and machinery. This fact was written about publicly in the press until the 1930s, but later an embargo was placed on such information, mainly because industrialisation was focusing on production in the sphere of heavy industry and contributed little to increasing the population's level of consumption, which then lagged substantially behind that of other countries at roughly the same level of development. Industrialisation was given priority, and the countryside remained under-developed; this combined with wasteful collectivisa-

*) This article was published in Demografie, 2008, 50 (3), p. 205–206. The contents of the journal are published on the website of the Czech Statistical Office at:http://www.czso.cz/csu/redakce.nsf/i/demografie

1) Višněvskij, A. G. *Serp i Rubl. Konservativnaja modernizacija v SSSR* (The Sickle and the Rouble. Conservative Modernisation in the USSR). Moskva: Objedinnoje gumanitarnoje izdatelstvo, 1998, 430 p.; Vischnevsky, A. G. *La faucille et le rouble: la modernisation conservatrice en USSR*. French translation by M. Vichnevskaya. Paris: Gallimard, 2000, 465 pp.

tion resulted in food shortages in some years, so food had to be imported instead. Hunger spread through the countryside and in 1932–1933 resulted in the deaths of hundreds of thousands to millions of people. The construction of housing for workers in industry was financed in a similar way, but little attention was paid to the quality of the construction work.

The author of the reviewed study was the first in Russia to introduce the term 'demographic revolution' (1976) to describe the qualitative transformation of the population's reproductive behaviour[2)]. This is dealt with relatively extensively in Chapter 5. The course of this revolution in Russia was influenced by the two world wars, the political repressions that occurred on a mass scale from 1929 until the death of Stalin, and the above-mentioned famine. These events had a very significant impact on the course of mortality. Nevertheless, official data indicate that the infant mortality rate had fallen by the end of the 1960s to 26‰ and life expectancy rose to age 65 for men and age 73 for women. It is interesting, however, that since then the life expectancy of women has stagnated and the life expectancy of men has even fallen below age 60. The second element of demographic reproduction also decreased during the first sixty years of the 20th century in a manner corresponding to the demographic revolution: total fertility decreased from 7 to 2.6 children, that is, by more than one-half. All the revolutionary changes in various processes relating to people (demographic behaviour, urbanisation, industrialisation, women's emancipation, changes in the character of the family, progress in education, medical care, and hygiene, etc.) are interconnected and can be described as a global revolution of the modern age. Owing to the lack of understanding of this process – a process that is universal and eventually occurs in every country in the world – it was ideologically rejected and various claims were made that were at odds with reality. So, for instance, in the mid-1950s it was still being claimed that under capitalism the mortality rate rises and the fertility rate decreases, while under socialism the opposite is true. Also for ideological reasons the terms of access to induced abortions were changed several times in Russia. After the October Revolution it was made fully available (like divorce, it had only to be reported); fears about a further decline in the number of births led to the introduction of a ban on induced abortion in 1936 (which was not very effective) and in 1956 that ban was repealed. It is interesting, however, that because at that time (the mid-1960s) there was still a lack of contraceptives, abortion became almost the only available, supplementary method of contraception (in some years the number of induced abortions was as much as four times the number of births).

There is a good deal of interesting information in the second part of the work, too. One such example is a figure describing the territorial expansion of the Russian Empire, which proceeded steadily from the mid-15th century; another figure shows a comparison with the territorial spread of the British Empire, which began three centuries later, but in the 19th century surpassed the Russian Empire in size and remained larger until the loss of Canada. A strong Russification process occurred across its territory, especially in Siberia; the demise of several nations occurred. The Soviet Union continued to reinforce the empire, but after the fall of communism it could not prevent the onset of federalisation and declaration of independence by some republics. The 20th century was an age of modernisation, and the character of the state transformed from agrarian and rural into industrial and urban. However, this modernisation was conservative, a hammer was added to the sickle, but modernisation was prevented from reaching completion as Soviet totalitarianism blocked the growth of a market economy and political democracy. Despite all the contradictions and inconsistencies of Soviet modernisation a foundation was laid on which to build. In the author's words, in the past Russia experienced great victories, great defeats, and much blood-letting, but the nation, the state, and society have changed. The sickle has become part of the past, agrarian society is spent. Russia has become a country in the modern economy, the rouble state. The author does not try to embellish Russia's past. He subjects it to a thorough analysis and identifies the causes of the irreversible crisis of the Soviet system. This kind of examination is of exceptional value for pragmatically determining the direction of future development. In the conclusion he exhorts that it is necessary to look back but not in anger.

The book was very positively received and was reviewed in a number of Russian scholarly and political journals. It has been translated into French and was published in Paris (2000).

Zdeněk Pavlík

[2)] Višněvskij, A. G. *Demografičeskaja revolucija.* Moskva: Statistika, 1976, 239 pp.

Surveys

CHILD GENDER PREFERENCES AND THE POSSIBLE EFFECT ON REPRODUCTIVE BEHAVIOUR[1)]

In the effort to identify the causes that led to and influence low fertility in Western societies, little attention has been paid to one very specific factor that may have an influence on the number of children people want and how many they have in reality. This factor is child gender preferences. This hypothesis is based on the idea that people who want to have children ascribe various advantages and disadvantages to having a boy or a girl, and their desire to have a son or a daughter or both is projected into the number of children they bring into the world. Child gender preferences do not just reflect a personal wish but are shaped by the socio-cultural context in which people live.

We can learn something about the different value placed on sons and daughters and the link between parents' gender preferences and their subsequent fertility behaviour from research done in Eastern countries, such as China, Korea, Vietnam, and India. *F. Arnold* and his colleagues (1998) documented how the much higher value placed on boys in India influences the fertility behaviour of parents. The existing (gender) structure of a family's children influences further reproduction in an attempt to bring as many boys into the world as possible, and this is especially apparent in third- and fourth-order births. The probability of the birth of a third or fourth child is much higher among women with two daughters than among women with some other gender combination of children. *U. Larsen* (1998) describes how in Korea the strong government pressure on people to have fewer children significantly reduced the number of births (total fertility fell from 6.0 children in 1960 to 1.6 in 1990), but the strong preference for sons still influences the reproductive behaviour of Korean couples. If the first child is a boy, the probability of the birth of another child is lower than if the first child is a girl. The same pattern can be observed in higher-order births, and there is a higher probability of the birth of a third child in the family if there are two daughters or a daughter and a son in the family. Studies focusing on the spread and use of contraceptives confirm the preference for sons in Vietnam, Bangladesh and Egypt based on the fact that couples who have not yet had the number of sons they want are much less likely to used contraceptives (cf. *Haughton and Haughton* 1998). The prevailing preference for sons combined with prenatal diagnosis revealing foetal sex and the induced abortion of girls has had tragic consequences, for instance, in China (*Zeng et al.* 1993). Out of interest we can add that observations of child gender preferences in 44 countries contained in the 'Demographic and Health Surveys' from 1986–1995 revealed that the only region where there was a clear preference for daughters was in the Caribbean (*Arnold et al*. 1998).

In Western societies the effect of child gender preferences on fertility is not given much attention (nor perhaps even assigned much importance). This need not be a surprising finding when we consider the different value a child has in these societies. The phenomenon of gender preferences is documented in most detail in studies by American authors, nevertheless, no straightforward pattern that would indicate whether parents prefer sons or daughters and partly accommodate their decisions about how many children to have was described (*Marleau and Maheu* 1998). Preferences for sons are apparent at a very low level. Men favour sons somewhat more than women do, but if potential parents were to express their wishes regarding the gender of their first child (even if it is their only planned child), men and women would prefer their first child to be a boy. It was found that American couples would prefer to have at least one boy and one girl, but if they planned to have more children the preference was again for boys (cf. *McDougall et al*. 1999). The same pattern (a couple's preference in the case of two children, but an inclination towards boys in the case of the first-born child and third- or higher-order children) is found in isolated European studies (cf. *Hank and Kohler* 2000).

It is a question whether in advanced Western societies it makes any sense to deal with child gender preferences, especially in connection with the number of children people plan to have and how many they have in reality. Preferences for sons and daughters derive from certain 'advantages' or higher value

[1)] This study was prepared with the support of the Ministry of Education, Youth and Sport under the Research Programme 'The Reproduction and Integration of Society' (MSM0021622408).
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assigned to a child of one gender. In less advanced countries the value of a son stems from his greater economic utility for the family. His contribution to the household economy, dependent on agricultural production, is greater. In patrilineal societies sons are also valued as the continuer of the family line and the family name. There, unlike in Western European societies, it is also expected that sons will provide for the parents in old age, and their presence is also essential at the parents' burial. On the other hand, girls represent a form of assistance to mothers in the household and in caring for younger siblings. In some cultures the wedding feast increases the social status of the family and is even regarded as a beneficial religious act (*Kemkes* 2006; *Pollard and Morgan* 2002).

In industrial societies the value of a child has shifted almost entirely into the sphere of psychological and emotional benefits, a child is not seen as a source of labour and no economic advantage is derived from a child, on the contrary (cf. *Rabušic* 2001). It can be assumed then that in this kind of family environment there would be no fundamental preference for girls or boys. However, if we look at couples' preferences observed over the long term it appears that there can still be a difference between the value of daughters and sons in the eyes of their parents. If in contemporary Western culture a child is viewed as a sign of adulthood and a source of social identity, if a child imparts parents with a sense of expanding and of reproducing themselves, a feeling of affiliation, and if they represent a source of stimulation and joy (*Hofman and Hofman* 1973), then it is possible that daughters will better meet these values for mothers and sons will for fathers.

N. Williamson (1976) explains prevailing child gender preferences by the fact that boys and girls are ascribed different characteristics, skills, and interests. Given that people believe that boys form a tighter bond with their father and girls with their mother they also hope to have a gender-balanced parent-child relationship and therefore they prefer to have a daughter and a son. According to this theory parents prefer to combine boys and girls because fathers find fulfilment in the relationship with their son and the value of the child for him, as noted above, is met more by a boy, and the same applies for the mother-daughter relationship. There are also many psycho-social studies that write about the increased level of fathers' involvement in raising sons (cf. *Diekmann and Schmidheiny* 2004).

M. Pollard and P. Morgan (2002) argue that the long-term social transition from traditional gender roles to an egalitarian approach can however also be reflected in these preferences. They speak of 'emerging gender indifference' in connection with the family structure of children by gender. Using data from their research they show that in the age cohorts of mothers born in 1960 and later there has been an evident decrease in the effect of child gender preference on third-order births. While until that time in American society it was possible to observe a higher probability of the birth of a third child in families with two children of the same sex, this effect was no longer apparent in the reproductive behaviour of the above-cited cohorts. Pollard and Morgan are convinced that this is a sign of a change in views on gender roles. In societies where equal rights and opportunities for men and women have been promoted, child gender preferences have decreased in significance and cease to have an effect on reproductive behaviour. *J. Marleau and M. Maheu* (1998) concur. The process of modernisation weakens men's privileges and strengthens the status of women in society, which leads to the indifference of parents towards whether their planned children will be boys or girls.

H. Brockmann (2001) maintains the opposite view and claims that the modernisation process does not lead to neutral attitudes towards gender preferences, but on the contrary creates room for new and different preferences. She links her hypothesis to the various forms of the social state, which assumes the role of the family, and thus influences the value of daughters and sons for parents. For example, she shows how in Germany, when the social state provided little security and protection for the elderly, parents preferred sons as a potential source of economic security in old age. After the Second World War, when a strong pension system was developed, this preference for sons declines and in the western part of Germany parents are indifferent about the gender of their children. Conversely, in the eastern part of Germany, where under the communist regime access to household services and assistance in caring for the elderly was very limited, the author observes a preference for daughters as a source of assistance in this area.

What pattern can be observed in the Czech Republic? Are Czech parents open to having either boys or girls, with no fixed preference, or are they more inclined towards one gender over the other? *K. Hank and H. Kohler* (2002) made an interesting finding in their study based on data from 17 European countries in which the Family and Fertility Survey was conducted in the 1990s. They focused on women who at the time of the survey had two or more children, and based on real and planned third-order births they ascertained gender preferences. They believe that if parents favour one gender over another this will become apparent in the decision or motivation to have a third child. In one-third of the countries studied no gender preferences are observed. In other countries (including the Czech Republic) there is a higher probability that the parental couple will decide (or plan) to have a third child if the two children they al-

ready have are of the same sex. This pattern points to preferences for both genders in the constellation of children in the family. In a more detailed analytical model that takes into account the gender combination of children in a family (that is, whether there is a boy and a girl, two boys, or two girls) Czech women are found to have a strong and significant preference for girls (i.e. a higher probability of having a third child is found among women who have two boys)[2]. This finding by these German authors inspired us to try to verify it using more extensive Czech data sources.

The Method and Source of Data

In order to ascertain the presence of any child gender preferences we conducted two analyses, each one using a different data file. In the first part of the analyses we follow the same model as Hank and Kohler and we are interested in whether among women who already gave birth to two girls or two boys there is a higher probability that they will have a third child than among mothers whose first two children are a boy and a girl, thus a pair. We set out from the same assumption as these two authors that potential child gender preferences do not become apparent until higher-order births – that is, if the first two children do not satisfy their notion of the ideal combination of children in the family, this may play a role in subsequent fertility behaviour. We are working with the real number of births, that is, how many children a woman gave birth to in the Czech Republic and how this number related to the previous gender combination of children in the family. We were able to use a data file from the Czech Statistical Office recording all births in the Czech Republic between 1993 and 2004 (a total of 1 154 158 births were recorded) together with information on the child's gender and the education of the mother and the father. The data were obtained from forms filled in on the birth of a child, which are collected by the Registry Offices and contain a complete record of all births in a given period[3].

In these data we looked at whether the number of children in the family reflects the gender of the first two children born and then the first three children born. We only work with those cases in which we can see the gender of all the children in the family, that is, with the records of those women who had their first child after 1993. In this part of the analysis we assess gender preference solely on the basis of real fertility behaviour, not on the basis of the expressed wish to have a boy or a girl. We depart from the assumption that the births that occur in relation to the previous gender combination of children in the family can provide good evidence of whether the wish to have a boy or a girl in any way enters into parents' decisions to have a third child or more.

About this sample we ask two questions: 1) Are third children born more often in families with certain gender combinations of previously born children? 2) Can we observe any connection between higher-order births and the gender of previously born children?

In the second part of the analysis we rely on the comments of (potential) parents about whether they would more prefer a son, a daughter, or both. We started with the results of the survey 'The Value of Child' 2001–2002 and 2006[4], in which respondents were asked how important it is to them that one of their children be a boy or a girl[5]. From the responses to these two questions we created the variable 'importance of the child's gender', where those respondents who stated that it was important for them to have at least one boy and not important to have a girl we designated as parents who prefer boys. If they answered that it was important to them to have at least one girl but not important to have a boy, they were designated as parents who prefer girls. Those who indicated that both genders are important to them we designated as parents preferring a pair. The final group is those parents for whom it is not important whether their children are boys or girls. We observed gender preferences in the simple distribution of this artificial variable and then we conducted a multinomial regression analysis in order to veri-

[2] Outside the Czech Republic this preference for daughters was only observed in Portugal and Lithuania.

[3] In their data Hank and Kohler (2000) drew on the number of previously born children and the wish to have more children in the future. We observe births that have occurred. We must be aware that we are working with records on families in which the women have not yet completed their reproductive period and that the analysis does not include families that have only one child even if they are planning more. Similar limitations are connected to two-child families.

[4] This is a two-stage project of the Institute for Research on the Reproduction and Integration of Society at the Faculty of Social Studies, Masaryk University, and it focuses on the attitudes of young men and women towards parenthood and children, on their reproductive strategies, and on how these attitudes change over time. In both periods (2001–2002 and 2006) data were collected from 1000 women and 1000 men aged 28–35 (quota sample representative for the Czech population in terms of education, size of place of residence, and the current division of regions).

[5] The exact question read: 'How important is it to you that at least one of your children is a boy? Would you say that it is:' (the same question was then posed about girls) and the responses were expressed on a scale from 1 = very important, to 5 = not important at all.

Table 1 Number of children in the family by sex distribution of live-born children (transition from the two-child to the three-child family) %

Sex of the first two children	Number of children born (so far)		N
	Proportion of families with 2 children	Proportion of families with 3 children	
Two boys	87.6	10.5	62 188
Two girls	87.9	10.3	55 339
A boy and a girl	89.3	9.0	115 085

Source: CSO; Author's calculations.

Table 2a Number of children in the family by sex distribution of live-born children and education (%)

Sex of the first two children	Highest father's education – Basic school			Highest father's education – University		
	Proportion of families with 2 children	Proportion of families with 3 children	N	Proportion of families with 2 children	Proportion of families with 3 children	N
Two boys	82.7	13.9	1 950	88.4	10.5	7695
Two girls	82.5	14.6	1 853	88.9	9.8	6651
A boy and a girl	84.6	12.6	3 920	89.2	9.3	13 666

Source: CSO; Author's calculations.

Table 2b Number of children in the family by sex distribution of live-born children and education of the mother (%)

Sex of the first two children	Highest mother's education – Basic school			Highest mother's education – University		
	Proportion of families with 2 children	Proportion of families with 3 children	N	Proportion of families with 2 children	Proportion of families with 3 children	N
Two boys	72.7	19.0	7 266	89.7	9.4	6 519
Two girls	72.5	19.8	6 363	90.3	8.7	5 698
A boy and a girl	75.2	17.4	13 225	90.4	8.8	11 622

Source: CSO; Author's calculations.

fy the effect of various determinants on child gender preferences (respondent's gender, education, marital status, whether the person is with or without a partner). We divided the observed sample into childless respondents and respondents with children in order to trace the possible effect of the existing gender combination of previously born children.

Results of the analysis: the birth of a third or a fourth child in relation to previously born children

By looking for possible child gender preferences in the real fertility behaviour of the Czech Republic we found that if some ideas or preferences about the ideal combination of boys and girls in Czech families exist, they do not have a very strong effect on real fertility. When they bring a third– or fourth-order child into the world it is not because they are longing for the boy or the girl they do not have but for other reasons.

Table 1 shows what share of families with the given gender combinations of children remain at two children and what share become three-child families. We can see that families in which the first two children are of the same sex somewhat more often have a third child than families in which the first two children are a pair. We can also see that there is just a negligible difference between families with two boys and families with two girls. It makes no difference whether the first two children are both girls or both boys: in these families a third child is born slightly more often than in families where there is already a boy and a girl. This suggests that there is rather a preference for a pair than for a child of one specific gender.

The relationship between two variables is very weak (eta = 0.024); however, there is no point thinking about statistic significance when this is a complete population. The strength of this relationship remains unchanged even when another factor that we observed is taken into consideration: the education of the father and the education of the mother. Tables 2a and 2b present the differences between parents

Table 3 Number of children in the family by sex distribution of live-born children (transition from three-child to the four-child family), %

Sex of the first three children (chronology respected)	Number of children born (so far)		N
	Families with 3 children	Families with 4 children	
Three boys	84.3	12.1	4 108
Three girls	83.1	13.0	3 414
Two boys and a girl	84.2	12.3	3 616
Two girls and a boy	86.7	10.3	3 287
Pair and a boy	84.8	11.5	6 236
Pair and a girl	83.5	12.6	6 097

Source: CSO; Author's calculations.

with basic and with university education. Although education is not reflected in the resulting coefficient of association, we can see a somewhat greater differentiation between the two groups. In families where the father has basic education a third child is usually born if the first two were girls. In families where the father has university education, the opposite applies if the first two children are boys. In both groups families were least likely to have a third child if the first two children were a boy and a girl.

When we look at the effect of the mother's education (Tab. 2b), we see that women with basic education more often have a third child if the first two children are of the same gender (regardless of whether they are both boys or girls), while women with university education have a third child somewhat more often if the first two children were boys.

Even these differences between education groups need not necessarily be indicative of the existence of a gender preference pattern that then influences fertility behaviour.

Table 3 presents data with similar information, but we shift the number of children to four-child families. We look at whether families with a certain gender combination of children more often have a fourth child. We also at least partly take into account the chronological birth order of children by gender, because the decision to have a fourth child may also be influenced by the fact of whether after the birth of two girls or two boys a third child of the opposite gender is born or not. The results do not permit a straightforward interpretation. Parents who had a boy after having two girls least often had a fourth child; a fourth child is born most often in families with three girls. The problem is the interpretation of this finding. Can we regard this 'waiting for a boy' as a sign of a preference for both genders to be represented or a preference for boys?

In the case of four-child families the father's and the mother's education again had no great effect and it is not even possible to trace any distinct pattern of preferences in relation to the gender of the previously born children, so we do not present that data here.

We can close this part of the analysis by stating that if we based the results on data from the sample survey we would be unable on that basis to determine a certain model of child gender preferences in the real fertility behaviour of the Czech population. However, given that we are looking at *all* the Czech third- and fourth-order births over the relatively long period of ten years it cannot be ruled out that finding even a one- or two-percent difference could be an expression of gender preferences. Even if this potential preference model does exist, its relationship to subsequent fertility is very small.

Results of the analysis: gender preferences as expressed by (potential) parents

Let's now look at how preference to have a girl, a boy, or both is explicitly formulated by parents themselves. Table 4 shows the distribution of the variable 'important of the child's gender' (see above for its construction). The general overview suggests that young Czech parents (or potential parents) are indifferent about what gender their children are. For more than one-half of them it is not important whether their child will be a boy or a girl, just under one-third would like to have a pair, and just a small number explicitly prefer to have a son or a daughter. When the sample is divided into men and women we can see that Czech men have more fixed in their preferences about the gender of their children. They less often feel that their child's gender is not important and much more prefer boys.

Are other characteristics of the respondent reflected in their child gender preferences? Table 5 presents the results of the multinomial regression analysis, through which we attempted to capture the effect of mainly socio-demographic characteristics of (potential) parents.

The only variable that significantly and substantially really figures in the prediction of child gender preferences is the respondent's gender. The second important factor that appears influential in this situ-

Table 4 How important is it for you that at least one of your children is a boy/girl? (%)

Preference	Male (N=671)	Female (N=719)	Total (N=1390)
Boy more important	15.2	3.5	9.1
Girl more important	3.0	6.5	4.8
Both equally important	27.9	26.8	27.3
Gender does not matter	53.9	63.1	58.7

Sources: Dataset VOC 2001–2007; Author's calculations.

Table 5 Determinants of the importance of a child's sex – the results of a multinomial regression analysis (reference category: it does not matter what sex the child is)

Indicators	Childless respondents who considered it important to have…						Respondents with children who considered it important to have…					
	…Boy		…Girl		…Pair		….Boy		…Girl		…Pair	
	ß	s.e.	ß	s.e.	ß	s.e.	ß	s.e.	ß	s.e.	ß	s.e.
Male	2.5***	0.5	–1.1*	0.6	0.5*	0.2	1.5***	0.2	–0.3	0.3	0.1	0.1
Education (Secondary school and University)	–0.1	0.3	1.0	0.6	0.1	0.2	–0.3	0.2	0.0	0.3	–0.1	0.2
Married	–0.6	0.5	0.4	0.7	0.5	0.3	–0.4	0.3	0.1	0.3	0.2	0.2
Outside of marriage with partner	0.2	0.3	0.7	0.6	0.3	0.2	0.3	0.5	–1	0.6	0.1	0.3
Has son	–	–	–	–	–	–	1.3***	0.4	1	0.7	–0.7***	0.2
Has daughter	–	–	–	–	–	–	0.0	0.5	2.1***	0.6	–0.9***	0.2
Has two sons	–	–	–	–	–	–	0.9**	0.4	1.6*	0.7	–0.5*	0.2
Has two daughters	–	–	–	–	–	–	0.9	0.5	2.2***	0.7	–0.8**	0.2
Pair	–	–	–	–	–	–	0.	.	0.	.	0.	.
Constant	–3.8***	0.7	–3.4***	0.7	–1.5***	0.3	–1.9**	0.7	–2.4*	1.1	–0.5	0.5
Pseudo R^2	0.1						0.18					

Note: *** p < 0,001; ** p < 0,01; * p < 0,05
Sources: Dataset VOC 2001–2007; Author's calculations.

ation is the fact of whether the respondent already has children or not. Men have more fixed preferences about having a boy or a girl than women and men are the ones who tend to regard it as more important to have a boy and less important to have a girl. Compared to women they favour pair combinations somewhat more. The data indicate that the importance of having a boy and lesser importance of having a girl figures more strongly among men who are childless than men who already have a child. The real experience of parenthood probably alters their original notion about it being better to have a son.

Another significant effect that is apparent is the gender of previously born children. Respondents who already have one or two sons consider it more important to have boys, and similarly those who have one or two girls consider it more important to have a girl. For these parents who had brought just a boy or just a girl into the world a gender pair is less important than it is for parents who have a son and a daughter. However, rather than showing any general gender preferences these data indicate how previously born children influence the life of their parents. The parents of sons regard it as important to have sons, because they already have them and thus boys are a firm part of their life. The preference for girls among parents who already have one or two girls can be explained analogically. This pattern is even demonstrated by the less inclination towards the importance of having a pair: those who have one or two children of the same gender regard it as less important for the next child to be of the opposite gender. The hypothetical importance of having a boy or a girl changes with the experience of parenthood into the importance of having *the boy I already have* or *the girl I already have*.

The gender of previously born children thus predicts the importance of boys or girls for the parents based on their experience and evaluation of what 'I already have at home'. All the more interesting then is a finding relating to a sub-group of parents who have two boys: for them it is very important for at least one of their children to be a girl, who for the time being is missing from their sibling constellation. We can consider this some sign of a preference for girls, at least at the level of expressed attitudes.

Conclusion

Inspired by *Hank and Kohler's* (2000) study, according to which it is possible to detect a preference for daughters in the fertility behaviour of Czechs, we tried to test this finding on a larger data sample. We observed explicitly formulated attitudes about whether it is important to have a girl or a boy in the family and also examined the possible effect of child gender preferences on the real number of children born. Based on the observed data we are inclined towards the conclusion that Czech society is indifferent about child gender preferences and the fact of whether their child will be a boy or a girl plays little role in ideas about parenthood or in real fertility behaviour.

In an analysis of births we observed in relation to the gender combination of previously born children a very slight tendency for there to be at least one boy and one girl in the family, that is, a preference for pairs. However, this preference in no way enters the decision to have more children: the value of sons and daughters may be different for mothers and fathers, but it is not a motivating factor for further reproduction.

At the level of expressed preferences about the gender of the child, most young Czechs have no fixed attitude and the gender of their children is not important to them. If there is any pattern then it is a preference for pairs. Only few of them explicitly prefer a son or a daughter and what has the biggest influence on this is whether they are men or women. Fathers (current and future) much more often prefer a son than mothers. Also we can find a 'greater value' placed on girls among parents whose previous two children are boys. These parents more often state that it is important for them that at least one of their children is a girl.

The real meaning of the data and the results presented here can be conjectured. On the one hand it is possible to observe that indifference that *Pollard and Morgan* (2002) interpreted as a consequence of the gradual effort to assert gender equality in modern Western societies, on the other hand a preference for pairs (at least an expressed preference) persists that might suggest daughters and sons have a different value for mothers and fathers. Behind this preference is the idea of a greater affinity between father and sons and between mothers and daughters, which translates into a preference to have a boy and a girl, that is, 'one for each of them'. However, this idea has no basic influence on how parents try to achieve this. In families with two boys or two girls parents find that 'something for them' there rather than continuing to try to have a child of the opposite sex. Sons and daughters continue to have a symbolic value and these symbols can take on new meaning under the influence of the experience of parenthood.

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DIVORCES IN THE CZECH REPUBLIC 1991–2006: WHAT DIVORCE RECORDS CAN TELL US[*)]

Czech statistics on the divorce rate is drawn from the Divorce Reports (Obyv 4–12) submitted by district (precinct, municipal) courts where divorce or marriage annulment proceedings have settled or where petitions for divorce or annulment have been filed. The reports are filled out from court staff and they are required to submit them to the Czech Statistical Office. Until 2006 it was the duty of courts to submit these reports by the 15th and the last day of the calendar month, and this date was used in statistical processing in place of the date on which the decision came into effect. (Today the reports are submitted electronically and only once a month.)

Over time the content of these reports changed. For example, until 1985 the reports included information about employment and the exact date on which the court's decision came into effect. An interesting piece of information was the age group of the youngest child in the marriage which was useful for the discussion of whether couples postponed divorce for the sake of children's age or not. While the date on which the court's decision came into effect was returned to the report form in 2007, information about employment was not re-included, even though European statistical organisations call for this information.

During the observed period, 1991–2006, the forms were markedly altered on two occasions[1)], in 1995 and 2001. In the mid-1990s the citizenship of the man/woman was included in the form for the first time and replaced the 'nationality' (ethnic group) surveyed previously. The items in the report were also reduced or generalised: the item on the duration of the proceedings was removed, the number of (living) children in the marriage was limited to the number of dependent children, and the personal identification number of the divorcing partners was replaced by their date of birth. Conversely, since 2001 more detailed (complete) data were recorded on the date of marriage and on the submission of the Divorce Reports, which had previously been available only in a month-year format. However, the content of the report did not change.

Given that divorce reports are not used solely as a source of information for demographic statistics but are also a source for the divorce statistics maintained by the Ministry of Justice of the Czech Republic, they contain different types of information, that is, they do not just contain information intended for demographic statistics. In this article I attempt to provide a more detailed picture of what kind of data could be obtained from these divorce records. Compiled statistical summaries present information on frequency, structure, and intensity both from a demographic perspective (for the purpose of analysing the break up of marriages and taking stock of the population by marital status) and from the perspective of divorce proceedings as legal acts. Information about the course of divorce proceedings is more of interest to lawyers, sociologists, or psychologists, as it tells them about cases of reconciliation, about their reasons, about the length of the divorce proceedings, and therefore, this information is not usually found in demographic literature.

For the purpose of this article the items in the Divorce Reports were divided up into three groups, and the distinguishing criterion was the area the item refers to: a) information describing the course of the divorce proceedings, b) information about the couple seeking divorce, and c) information about the terminated marriage.

Divorce Proceedings according to the Information in the Divorce Reports

According to the current legislation, a marriage can be dissolved by divorce or by annulment (or by the death of a spouse). However, judicial proceedings to annul a marriage are sporadic in the Czech Republic. In 1991–2006 courts granted annulments no more than four times a year, on the basis of bigamy or mental disturbance of one of the spouses. Conversely, the number of proceedings initiated by petition for divorce was usually between 36 thousand and 40 thousand a year during the observed period. Only in 1999, as a result of an amendment to the Family Act[2)], specifically, to the method by which divorce proceedings are conducted, did the number decrease below 30 thousand, and the year 2000 also recorded a low figure.

[*)] This article was published in Demografie, 2008, 50 (3), p. 213–218. The contents of the journal are published on the website of the Czech Statistical Office at: http://www.czso.cz/csu/redakce.nsf/i/demografie

[1)] In addition, social changes at the end of the 1980s led to the elimination of the item 'It was made of collaboration with: marriage counselling, employers…'. This appeared in the forms in 1991 for the last time.

[2)] The Family Act No. 91/1998 Coll., available at: http://www.zakonycr.cz/seznamy/094-1963-Sb-zakon-o-rodine.html.

However, divorce proceedings need not always conclude in the divorce of a marriage. There are nine possible conclusions to judicial divorce proceedings of which only four correspond to the granting of a divorce: the marriage is divorced with the agreement of both spouses, against the man defending the petition, against the woman defending the petition, or in the case of the long-term absence of one spouse abroad. But the proceedings can be concluded on the basis of five other reasons: the court dismisses the petition for divorce, the petition is withdrawn by the petitioner, the proceedings are adjourned and then abandoned, the marriage was declared invalid and the marriage was terminated in some other way (Tab. 1). At the start of the 1990s more than one-fifth of divorce actions led to an outcome other than divorce, but over the course of the sixteen-year period under observation that figure decreased to 12%. The absolute number of divorce petitions not granted decreased from almost 9 thousand to 4.3 thousand. The only interruption of the trend towards a growing share of granted divorces out of the total number of divorce proceedings concluded was in 1998 and 1999 when owing to a failure to satisfy new legislative requirements the relative number of divorce petitions not granted increased. In 1999 proceedings abandoned after adjournment increased its share the most of all.

Table 1 Divorce proceedings by method of termination, CR, 1991–2006

Result of divorce proceedings	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	Ended in divorce															
Against the proposal male	1 126	1 019	932	988	944	1 061	1 147	1 088	779	883	884	841	837	711	878	710
Against the proposal female	602	581	525	637	505	593	552	585	451	522	578	538	515	498	511	426
Agreement both	27 502	26 897	28 703	29 225	29 592	31 359	30 644	30 512	22 270	28 071	29 884	30 148	31 191	31 611	29 645	30 029
Husband/wife abroad	136	75	67	89	94	100	122	178	157	228	240	231	281	240	254	250
Total granted divorces	29 366	28 572	30 227	30 939	31 135	33 113	32 465	32 363	23 657	29 704	31 586	31 758	32 824	33 060	31 288	31 415
	Otherwise terminated proceedings															
Rejection of proposal	533	371	283	300	318	297	280	282	217	192	163	166	134	186	91	129
Proposal withdraw	6 050	5 800	5 655	5 423	5 338	5 039	4 753	4 894	3 870	3 730	3 590	3 311	3 208	3 170	2 823	2 716
Disappeared after discontinuation	1 846	1 542	1 397	1 227	1 207	1 111	1 175	1 125	1 035	490	500	442	461	417	393	372
Spoken annulment of marriage	1	1	4	1	4	1	1	0	4	4	3	3	3	3	1	3
Otherwise	467	611	703	724	764	890	918	952	827	826	852	985	1 151	1 098	1 102	1 048
Total other	8 897	8 325	8 042	7 675	7 631	7 338	7 127	7 253	5 953	5 242	5 108	4 907	4 957	4 874	4 410	4 268
	Total															
Terminated the proceedings	38 263	36 897	38 269	38 614	38 766	40 451	39 592	39 616	29 610	34 946	36 694	36 665	37 781	37 934	35 698	35 683
– by divorce (%)	76.7	77.4	79.0	80.1	80.3	81.9	82.0	81.7	79.9	85.0	86.1	86.6	86.9	87.2	87.6	88.0
– otherwise (%)	23.3	22.6	21.0	19.9	19.7	18.1	18.0	18.3	20.1	15.0	13.9	13.4	13.1	12.8	12.4	12.0

Throughout the observed period the main reason for not granting a divorce was that the divorce petition was withdrawn (64% to 71% of cases). The share of proceedings with this outcome out of the total number of those concluded decreased continuously (again with the exception of 1998 and 1999) from 15.8% in 1991 to 7.6% in 2006. It is apparent from this that divorce petitions are increasingly often being submitted at the point where the couple is less inclined towards reconciliation. In recent years the absolute number of withdrawn petitions was around 3 thousand annually. (Given that since 2007 the Czech Statistical Office has not recorded proceedings that do not end in divorce, it does not have information on the total number of completed divorce proceedings today and so how many petitions did not end in divorce cannot be ascertained.)

In two-thirds of cases women are the initiators of the petition for divorce. This share has long remained unchanged and stable at 66% to 69%. If we look at divorce proceedings from the perspective of the plaintiff in the proceedings for divorce, men are slightly more 'successful', though not more frequent, plaintiffs (Tab. 2). The share of divorce proceedings concluding in divorce was several percentage points higher in the case of a male plaintiff than in the case of a female plaintiff throughout the observed period. However, the differences between the plaintiffs were not significant and they decreased over the years. While at the start of the 1990s a total of 80% of divorces in which the man was the plaintiff and 76% of those in which

Table 2 Divorce proceedings by outcome and petitioner, CR, 1991–2006

Result of divorce proceedings	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	Petitioner male															
Divorce	10 357	9 865	10 206	10 155	10 233	11 012	10 352	10 336	7 685	9 496	10 355	10 613	11 101	10 950	10 516	10 469
Other	2 659	2 393	2 266	2 166	2 167	2 189	2 098	2 069	1 742	1 514	1 519	1 506	1 607	1 488	1 349	1 239
Total	13 016	12 258	12 472	12 321	12 400	13 201	12 450	12 405	9 427	11 010	11 874	12 119	12 708	12 438	11 865	11 708
– by divorce (%)	79.6	80.5	81.8	82.4	82.5	83.4	83.1	83.3	81.5	86.2	87.2	87.6	87.4	88.0	88.6	89.4
	Petitioner female															
Divorce	18 976	18 691	19 999	20 764	20 902	22 101	22 113	22 027	15 972	20 208	21 231	21 145	21 723	22 110	20 772	20 946
Other	6 227	5 925	5 763	5 503	5 460	5 148	5 028	5 184	4 207	3 724	3 586	3 398	3 347	3 383	3 060	3 026
Total	25 203	24 616	25 762	26 267	26 362	27 249	27 141	27 211	20 179	23 932	24 817	24 543	25 070	25 493	23 832	23 972
– by divorce (%)	75.3	75.9	77.6	79.0	79.3	81.1	81.5	80.9	79.2	84.4	85.6	86.2	86.6	86.7	87.2	87.4

Table 3 Reasons cited for refusal to grant a divorce, CR, 1991–2006

Reason for refusal	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Reckless attitudes towards marriage	203	134	100	120	103	70	62	45	38	23	10	12	4	5	2	5
Interest of minor children	173	116	71	72	101	113	86	98	55	35	44	43	44	53	27	31
Short insignificant disruption	85	50	47	51	59	68	64	68	39	48	32	17	10	17	5	6
Elimination of causes that disturb the marriage	33	22	29	21	14	12	17	23	7	5	6	8	5	2	6	7
Other reason	39	49	36	36	41	34	51	48	78	81	71	86	71	109	51	80
Total cited	533	371	283	300	318	297	280	282	217	192	163	166	134	186	91	129
– of otherwise terminated proceedings (%)	6.0	4.5	3.5	3.9	4.2	4.0	3.9	3.9	3.6	3.7	3.2	3.4	2.7	3.8	2.1	3.0

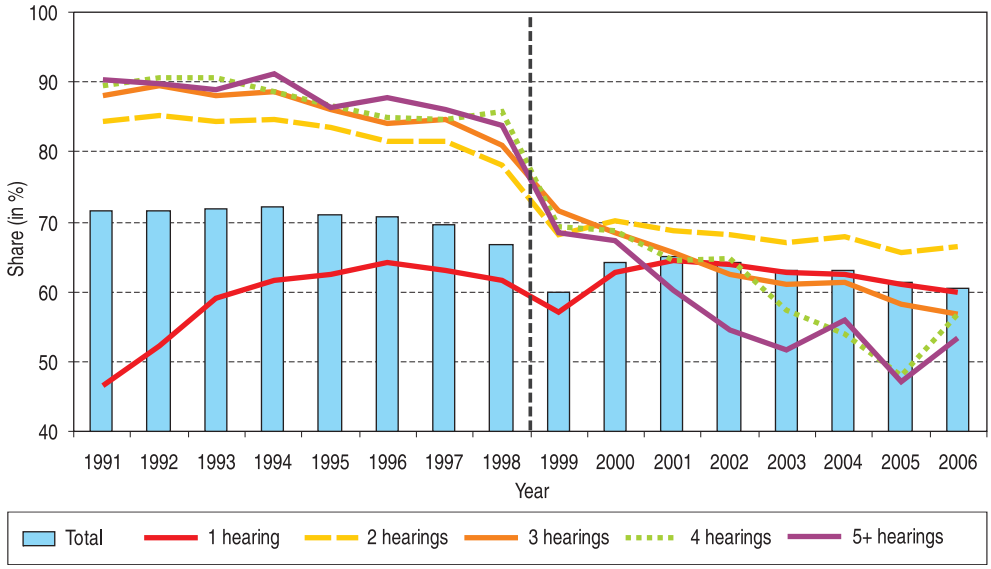
the woman was the plaintiff concluded in divorce, in 2005 and 2006 a total of 89% of male plaintiffs' and 87% of female plaintiffs' petitions for divorce were granted already.

The reason for dismissing a divorce petition was recorded in the divorce reports only for a small number of proceedings. Nevertheless, in a time series it is possible to clearly distinguish between the period before the amendment to the Family Act and the period after the amendment (Tab. 3). Starting in 1999, there was a sharp increase in the share of 'other reasons' for dismissing the petition, and in the last five years this accounted for more than one-half of all cases when a reason was listed. In the first half of the 1990s the large share of dismissed petitions were owing to 'reckless attitudes towards mar-

Table 4 Divorce by the number of hearings and dependent children, CR, 1991–2006

Number of hearings	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	All divorces															
1	10 604	12 443	15 584	17 676	18 993	21 290	21 552	22 864	17 832	23 543	26 039	27 007	27 999	28 130	26 557	26 862
2	12 341	10 915	10 090	9 057	8 220	7 838	7 331	6 385	4 021	4 347	4 107	3 575	3 682	3 835	3 651	3 554
3	4 003	3 304	2 947	2 628	2 422	2 426	2 131	1 877	1 076	1 107	863	738	783	757	723	699
4	1 432	1 073	911	904	845	869	777	651	394	373	316	258	244	211	213	180
5+	986	837	695	674	655	690	674	586	334	334	261	180	116	127	144	120
	Divorces without minor children															
1	5 675	5 932	6 380	6 782	7 121	7 634	7 971	8 777	7 667	8 767	9 240	9 755	10 442	10 575	10 333	10 784
2	1 921	1 622	1 574	1 403	1 364	1 440	1 351	1 406	1 280	1 296	1 285	1 142	1 212	1 235	1 255	1 191
3	473	344	350	302	338	385	328	356	307	348	296	276	305	292	303	303
4	150	102	86	103	114	131	119	93	121	117	112	91	104	97	111	78
5+	94	86	77	60	90	85	93	95	105	109	104	82	56	56	76	56
	Divorces with minor children															
1	4 929	6 511	9 204	10 894	11 872	13 656	13 581	14 087	10 165	14 776	16 799	17 252	17 557	17 555	16 224	16 078
2	10 420	9 293	8 516	7 654	6 856	6 398	5 980	4 979	2 741	3 051	2 822	2 433	2 470	2 600	2 396	2 363
3	3 530	2 960	2 597	2 326	2 084	2 041	1 803	1 521	769	759	567	462	478	465	420	396
4	1 282	971	825	801	731	738	658	558	273	256	204	167	140	114	102	102
5+	892	751	618	614	565	605	581	491	229	225	157	98	60	71	68	64

Figure 1 Percentage of divorces with dependent children out of total divorces, by number of hearings, CR, 1991–2006



riage', and in 1996 this reason was surpassed by the reason that had previously been in second place, 'in the interest of the children'. If we leave aside the category of 'other reasons', in the interest of the children is the main reason for dismissing divorce petitions even today. Concern for the children's welfare plays a role in six out of ten cases of specific reasons given.

Information about the number of court hearings could reveal whether a divorce of marriage with dependent children is more complicated and therefore requires more hearings. Data from the period between 1991 and 1998 confirm this supposition (Fig. 1). The vast majority of divorce proceedings that required more than one hearing involved divorces of marriages with dependent children. While these marriages accounted for only 59% of those divorces that required only one hearing, among divorce proceedings that required two hearings a total of 83% were for marriages with dependent children and out of divorce proceedings that required five or more hearing the figure was 88%.

Over the course of the 1990s the length of divorce proceedings gradually became shorter, at least in terms of the number of days in court. While in 1991 less than one-quarter of divorce proceedings for marriages with dependent children were concluded on the first hearing and 68% in the case of other marriages, in 1997 the figure was 60% and 81%, respectively. Since 1999, however, in connection with the legislative amendment, it is basically impossible to compare the structure of divorces by the number of hearings with the period before 1999. The amendment to the Family Act (effective as of 1 August 1998) stipulates that (cit. from § 25) 'A divorce cannot be granted until the terms of child custody have been established by the court for the period subsequent to the divorce, in a decision issued by the court in conformity with § 176 of the civic judicial code'. Prior to filing a divorce petition it must be determined by the court who will be given custody of the children and what amount of child support will be

Table 5 Average length of divorce proceedings (in months) by type of termination and type of marriage, CR, 1991–1994

Year	All marriages			Childless marriages			Marriages without minor children			Marriages with minor children		
	All divorce proceedings	Divorces	Otherwise terminated proceedings	All divorce proceedings	Divorces	Otherwise terminated proceedings	All divorce proceedings	Divorces	Otherwise terminated proceedings	All divorce proceedings	Divorces	Otherwise terminated proceedings
1991	6.0	5.7	6.8	4.7	4.5	5.5	4.8	4.5	6.0	6.4	6.2	7.1
1992	6.4	6.1	7.3	5.0	4.8	6.1	5.1	4.8	6.5	6.8	6.6	7.5
1993	7.2	7.0	7.9	5.8	5.6	6.9	6.0	5.7	7.1	7.7	7.5	8.2
1994	7.8	7.6	8.5	6.3	6.1	7.0	6.5	6.2	7.7	8.3	8.1	8.8

Table 6 Specific causes of the breakdown of marriage, CR, 1991–2006

Cause of breakdown	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	Cause on part of male															
Hasty marriage	1 680	1 659	1 366	1 289	1 385	1 296	1 286	1 148	698	656	505	558	380	348	272	228
Alcoholism	2 945	2 870	2 877	2 851	2 915	2 907	2 818	2 629	1 509	1 719	1 648	1 560	1 453	1 379	1 332	1 140
Adultery	4 341	4 224	4 276	4 232	4 002	4 119	3 979	3 898	2 105	2 371	2 284	2 071	2 078	2 026	1 831	1 745
Family neglect	2 120	1 825	1 697	1 979	2 279	2 446	2 418	2 195	1 270	1 569	1 532	1 285	1 191	1 318	1 085	928
Brutal treatment, conviction for a criminal offense	743	610	586	565	647	640	643	620	427	481	532	426	369	396	384	336
Health reasons	314	212	175	161	155	146	167	150	80	85	79	68	61	73	74	71
Sexual incompability	714	717	631	615	514	481	482	407	195	168	156	143	136	131	112	87
Total specific causes	12 857	12 117	11 608	11 692	11 897	12 035	11 793	11 047	6 284	7 049	6 736	6 111	5 668	5 671	5 090	4 535
– Share of all divorces (%)	43.8	42.4	38.4	37.8	38.2	36.3	36.3	34.1	26.6	23.7	21.3	19.2	17.3	17.2	16.3	14.4
	Cause on part of female															
Hasty marriage	1 680	1 659	1 366	1 289	1 399	1 283	1 301	1 197	686	667	519	557	400	362	292	255
Alcoholism	281	289	243	246	225	247	251	247	156	144	167	155	149	150	182	186
Adultery	3 985	3 830	3 648	3 554	3 277	3 136	2 925	2 718	1 510	1 676	1 480	1 267	1 312	1 325	1 163	1 048
Family neglect	658	564	432	415	574	628	552	455	321	370	404	373	426	421	331	357
Brutal treatment, conviction for a criminal offense	39	47	23	28	47	50	33	24	17	25	19	23	29	34	26	35
Health reasons	332	261	209	187	165	172	173	146	94	81	72	66	54	69	65	62
Sexual incompability	714	717	631	615	527	480	490	424	201	181	165	146	130	126	108	87
Total specific causes	7 689	7 367	6 552	6 334	6 214	5 996	5 725	5 211	2 985	3 144	2 826	2 587	2 500	2 487	2 167	2 030
– Share of all divorces (%)	26.2	25.8	21.7	20.5	20.0	18.1	17.6	16.1	12.6	10.6	8.9	8.1	7.6	7.5	6.9	6.5

paid. Only those couples that have already agreed on the custody terms pertaining to their children enter divorce proceedings, so the number of hearings does not (with some exceptions) increase as a result of complications over this issue. Hearings on the custody of dependent children fall under separate court proceedings and their length is not reflected off the number of hearings on divorce proceedings. As a result, since 2002 divorce petitions (with or without dependent children) are in 85% of cases granted at the first hearing, in 11% of cases a second hearing is required, and in only 4% of cases there were required three or more hearings.

For the period between 1991 and 1994 we also have information about the length of the proceedings (in months), that is, the length of time from when a petition is filed to the issuing of a divorce decree. The average length of divorce proceedings was longer in the case of those proceedings that ultimately did not conclude in divorce. However, there was not a pronounced difference – on average at most 1.5 months for marriages without dependent children. Generally the divorce petitions dealt with the fastest were those for marriages without dependent children (on average 4.7 to 6.3 months), and if there were independent children in the marriage then the proceedings were only a few weeks longer. Proceedings took almost two months longer if there were dependent children in the marriage. These proceedings took on average 6.4 to 8.3 months to conclude. Over time the average duration of divorce proceedings increased in every category.

The reasons cited for the breakdown of a marriage fall more within the category of information about the terminated marriage, but it is added here to fill in the picture of the course of divorce proceedings or more precisely to what extent the factor leading to the breakdown of the marriage is determined, both on the part of the man and the woman. The basic (primary) factor from which the other determined factors for the breakdown derived is supposed to be indicated. The concurrence of cause coded 0 (the court found no fault) among man as well as woman is inadmissible.

In 2006 the reason cited for more than one-half of divorces was ‘irreconcilable differences’ and for more than one-quarter the reason ‘other’ was cited. The share of this last category increased sharply after the introduction of the amendment to the Family Act in 1999. Pursuant to 24a Family Act no. 91/1998 Coll., with all other conditions met the court finds no fault for the divorce (this is a so-called ‘uncontested divorce’), as a result of which more specifically formulated reasons are statistically receding into the background.

If we focus our attention just on specifically formulated reasons for the breakdown of a marriage (alcoholism, adultery, neglect of the family, sexual incompatibility, hasty marriage, health reasons, ill

treatment, or sentence of confinement in a penal institution), there is a significant difference between men and women in terms of how often each reason is cited. Each year, throughout the observed period, women cited adultery in more than one-half of all cases in which a reason was explicitly formulated. Among men this reason also took first place, but it accounted for only one-third of all cases. In one-quarter of cases men were faulted for alcoholism and in one-fifth of cases for neglect of the family. The frequency with which the last two causes mentioned were cited increased even among women; in 2006 women were faulted for alcoholism in 9% of cases and neglect of the family in almost 18% of explicitly formulated reasons.

Information relating to the actual process of the divorce proceedings is the most abundant among all the defined categories of items contained in the divorce reports, even though it relates to divorce (as a demographic process) only partially. The piece of information in this group that is most important for calculating demographic indicators is the date on which the report was submitted, which was used to calculate the length of duration of marriages in the observed period. However, the divorce reports could provide a wealth of interesting information about divorce proceedings, whether granted or not, that could be used by scholars or experts in fields other than those with a demographic focus that, for instance, might be interested in how long divorce proceedings take or why a divorce petition may be dismissed by the court. In current practice and in conformity with legislative conditions many data are difficult to interpret owing to their limited frequency and lose their informative value. Increasingly the categories of information being recorded are general and vague or in most cases cumulated within one group. The question is whether it is at all necessary to ascertain certain kinds of information if they remain almost unused (at least as this applies to demographic statistics).

Michaela Němečková

Population and vital statistics of the Czech Republic: 2007, regions and districts

Area	Population 1 July	Population 31 December	Marriages	Divorces	Live births	Abortions	Deaths			Increase (decrease)			Marriages	Divorces	Live births	Deaths	Total increase
							Total	Within 1 year	Within 28 days	Natural	Net migration	Total	per 1000 inhabitants				
Czech Republic	**10 322 689**	**10 381 130**	**57 157**	**31 129**	**114 632**	**40 917**	**104 636**	**360**	**235**	**9 996**	**83 945**	**93 941**	**5.5**	**3.0**	**11.1**	**10.1**	**9.1**
Capital	**1 196 454**	**1 212 097**	**7 149**	**3 621**	**13 195**	**4 408**	**12 208**	**29**	**17**	**987**	**22 984**	**23 971**	**6.0**	**3.0**	**11.0**	**10.2**	**20.0**
Středočeský kraj	**1 187 032**	**1 201 827**	**6 682**	**3 696**	**14 279**	**4 706**	**12 210**	**35**	**19**	**2 069**	**24 504**	**26 573**	**5.6**	**3.1**	**12.0**	**10.3**	**22.4**
Benešov	92 105	92 631	516	211	1 018	375	1 012	2	1	6	940	946	5.6	2.3	11.1	11.0	10.3
Beroun	80 176	81 307	459	274	977	342	785	2	1	192	1 529	1 721	5.7	3.4	12.2	9.8	21.5
Kladno	154 199	155 314	832	584	1 916	740	1 712	6	2	204	1 815	2 019	5.4	3.8	12.4	11.1	13.1
Kolín	92 035	93 042	542	294	1 040	351	1 020	4	2	20	1 868	1 888	5.9	3.2	11.3	11.1	20.5
Kutná Hora	74 533	74 585	401	182	793	251	835	3	3	–42	238	196	5.4	2.4	10.6	11.2	2.6
Mělník	96 641	97 696	524	314	1 146	497	975	2	1	171	1 582	1 753	5.4	3.2	11.9	10.1	18.1
Mladá Boleslav	119 247	120 779	728	383	1 376	445	1 140	3	2	236	2 660	2 896	6.1	3.2	11.5	9.6	24.3
Nymburk	87 688	88 856	514	293	1 135	304	948	4	2	187	1 824	2 011	5.9	3.3	12.9	10.8	22.9
Praha–východ	123 762	127 041	793	375	1 710	462	1 201	3	2	509	5 447	5 956	6.4	3.0	13.8	9.7	48.1
Praha–západ	103 083	106 048	550	357	1 456	358	907	2	1	549	5 177	5 726	5.3	3.5	14.1	8.8	55.5
Příbram	110 447	110 893	546	246	1 148	409	1 110	3	2	38	670	708	4.9	2.2	10.4	10.1	6.4
Rakovník	53 116	53 635	277	183	564	172	565	1	–	–1	754	753	5.2	3.4	10.6	10.6	14.2
Jihočeský kraj	**631 387**	**633 264**	**3 449**	**1 627**	**6 922**	**2 327**	**6 246**	**22**	**10**	**676**	**2 582**	**3 258**	**5.5**	**2.6**	**11.0**	**9.9**	**5.2**
České Budějovice	183 240	184 256	1 055	538	2 060	760	1 657	7	3	403	1 530	1 933	5.8	2.9	11.2	9.0	10.5
Český Krumlov	61 053	61 261	353	155	762	270	540	2	1	222	38	260	5.8	2.5	12.5	8.8	4.3
Jindřichův Hradec	92 630	92 693	495	239	999	295	939	3	2	60	–4	56	5.3	2.6	10.8	10.1	0.6
Písek	70 302	70 310	357	158	692	268	780	2	–	–88	116	28	5.1	2.2	9.8	11.1	0.4
Prachatice	51 410	51 470	277	115	546	173	534	3	2	12	49	61	5.4	2.2	10.6	10.4	1.2
Strakonice	70 381	70 687	367	161	780	191	713	2	2	67	588	655	5.2	2.3	11.1	10.1	9.3
Tábor	102 371	102 587	545	261	1 083	370	1 083	3	–	–	265	265	5.3	2.5	10.6	10.6	2.6
Plzeňský kraj	**557 313**	**561 074**	**2 989**	**1 734**	**6 100**	**2 629**	**5 653**	**10**	**6**	**447**	**6 090**	**6 537**	**5.4**	**3.1**	**10.9**	**10.1**	**11.7**
Domažlice	59 440	59 731	308	180	694	274	596	1	–	98	513	611	5.2	3.0	11.7	10.0	10.3
Klatovy	88 070	88 345	442	211	913	378	912	–	–	1	323	324	5.0	2.4	10.4	10.4	3.7
Plzeň–město	179 722	180 799	1 063	637	1 955	948	1 838	2	–	117	1 870	1 987	5.9	3.5	10.9	10.2	11.1
Plzeň–jih	59 082	59 651	314	161	624	264	598	1	–	26	890	916	5.3	2.7	10.6	10.1	15.5
Plzeň–sever	72 480	73 061	352	211	839	308	683	4	4	156	990	1 146	4.9	2.9	11.6	9.4	15.8
Rokycany	46 447	46 762	236	164	471	193	556	1	1	–85	730	645	5.1	3.5	10.1	12.0	13.9
Tachov	52 072	52 725	274	170	604	264	470	1	1	134	774	908	5.3	3.3	11.6	9.0	17.4
Karlovarský kraj	**305 620**	**307 449**	**1 737**	**1 111**	**3 438**	**1 584**	**2 920**	**20**	**14**	**518**	**2 329**	**2 847**	**5.7**	**3.6**	**11.2**	**9.6**	**9.3**
Cheb	94 265	95 203	478	374	1 093	552	845	6	5	248	1 220	1 468	5.1	4.0	11.6	9.0	15.6

(Continue)

Area	Population 1 July	Population 31 December	Marriages	Divorces	Live births	Abortions	Deaths			Increase (decrease)			Marriages	Divorces	Live births	Deaths	Total increase
							Total	Within 1 year	Within 28 days	Natural	Net migration	Total	per 1000 inhabitants				
Karlovy Vary	118 271	119 165	684	439	1 301	526	1 225	8	6	76	1 335	1 411	5.8	3.7	11.0	10.4	11.9
Sokolov	93 084	93 081	575	298	1 044	506	850	6	3	194	–226	–32	6.2	3.2	11.2	9.1	–0.3
Ústecký kraj	**825 523**	**831 180**	**5 006**	**2 783**	**9 715**	**4 461**	**8 741**	**51**	**34**	**974**	**6 941**	**7 915**	**6.1**	**3.4**	**11.8**	**10.6**	**9.6**
Děčín	134 925	135 441	814	485	1 627	751	1 458	7	3	169	696	865	6.0	3.6	12.1	10.8	6.4
Chomutov	125 262	125 743	801	448	1 402	733	1 203	6	5	199	504	703	6.4	3.6	11.2	9.6	5.6
Litoměřice	114 120	117 159	683	388	1 384	512	1 210	6	3	174	3 542	3 716	6.0	3.4	12.1	10.6	32.6
Louny	86 280	86 710	485	248	999	453	977	8	5	22	554	576	5.6	2.9	11.6	11.3	6.7
Most	116 718	116 728	743	413	1 332	594	1 280	4	3	52	–156	–104	6.4	3.5	11.4	11.0	–0.9
Teplice	128 540	129 202	745	384	1 518	740	1 427	13	10	91	1 131	1 222	5.8	3.0	11.8	11.1	9.5
Ústí nad Labem	119 678	120 197	735	417	1 453	678	1 186	7	5	267	670	937	6.1	3.5	12.1	9.9	7.8
Liberecký kraj	**432 109**	**433 948**	**2 564**	**1 537**	**5 045**	**2 008**	**4 289**	**15**	**9**	**756**	**2 418**	**3 174**	**5.9**	**3.6**	**11.7**	**9.9**	**7.3**
Česká Lípa	102 806	103 254	637	372	1 294	569	927	4	2	367	425	792	6.2	3.6	12.6	9.0	7.7
Jablonec nad Nisou	89 082	89 450	497	307	996	438	892	3	3	104	563	667	5.6	3.4	11.2	10.0	7.5
Liberec	165 703	166 547	1 067	627	1 976	753	1 657	7	3	319	1 273	1 592	6.4	3.8	11.9	10.0	9.6
Semily	74 518	74 697	363	231	779	248	813	1	1	–34	157	123	4.9	3.1	10.5	10.9	1.7
Královéhradecký kraj	**550 523**	**552 212**	**2 964**	**1 736**	**6 122**	**2 250**	**5 586**	**18**	**13**	**536**	**2 033**	**2 569**	**5.4**	**3.2**	**11.1**	**10.1**	**4.7**
Hradec Králové	160 684	161 349	857	547	1 751	728	1 652	5	3	99	838	937	5.3	3.4	10.9	10.3	5.8
Jičín	78 259	78 852	416	231	892	320	807	2	2	85	669	754	5.3	3.0	11.4	10.3	9.6
Náchod	112 377	112 507	607	355	1 225	419	1 161	5	4	64	141	205	5.4	3.2	10.9	10.3	1.8
Rychnov nad Kněžnou	78 900	79 042	420	190	889	284	802	1	1	87	202	289	5.3	2.4	11.3	10.2	3.7
Trutnov	120 303	120 462	664	413	1 365	499	1 164	5	3	201	183	384	5.5	3.4	11.3	9.7	3.2
Pardubický kraj	**508 921**	**511 400**	**2 765**	**1 400**	**5 709**	**1 666**	**5 134**	**15**	**12**	**575**	**3 074**	**3 649**	**5.4**	**2.8**	**11.2**	**10.1**	**7.2**
Chrudim	103 586	103 860	523	281	1 126	338	1 139	4	4	–13	397	384	5.0	2.7	10.9	11.0	3.7
Pardubice	162 478	163 926	957	500	1 836	441	1 577	3	3	259	1 818	2 077	5.9	3.1	11.3	9.7	12.8
Svitavy	104 553	104 756	541	278	1 193	366	1 039	1	1	154	16	170	5.2	2.7	11.4	9.9	1.6
Ústí nad Orlicí	138 304	138 858	744	341	1 554	521	1 379	7	4	175	843	1 018	5.4	2.5	11.2	10.0	7.4
Vysočina	**512 555**	**513 677**	**2 580**	**1 252**	**5 373**	**1 789**	**4 880**	**23**	**16**	**493**	**1 539**	**2 032**	**5.0**	**2.4**	**10.5**	**9.5**	**4.0**
Havlíčkův Brod	95 177	95 618	468	234	1 031	337	915	10	8	116	577	693	4.9	2.5	10.8	9.6	7.3
Jihlava	111 024	111 257	626	310	1 198	435	1 009	3	2	189	192	381	5.6	2.8	10.8	9.1	3.4
Pelhřimov	72 720	72 958	326	172	677	303	756	3	2	–79	555	476	4.5	2.4	9.3	10.4	6.5
Třebíč	114 062	114 153	556	283	1 179	343	1 171	4	3	8	158	166	4.9	2.5	10.3	10.3	1.5
Žďár nad Sázavou	119 572	119 691	604	253	1 288	371	1 029	3	1	259	57	316	5.1	2.1	10.8	8.6	2.6

Area	Population 1 July	Population 31 December	Marriages	Divorces	Live births	Abortions	Deaths			Increase (decrease)			Marriages	Divorces	Live births	Deaths	Total increase
							Total	Within 1 year	Within 28 days	Natural	Net migration	Total	per 1000 inhabitants				
Jihomoravský kraj	**1 135 421**	**1 140 534**	**6 287**	**3 369**	**12 371**	**4 074**	**11 774**	**46**	**38**	**597**	**7 374**	**7 971**	**5.5**	**3.0**	**10.9**	**10.4**	**7.0**
Blansko	105 324	105 663	531	259	1 127	367	1 023	3	2	104	443	547	5.0	2.5	10.7	9.7	5.2
Brno–město	366 812	368 533	2 314	1 449	4 209	1 463	4 091	16	13	118	1 735	1 853	6.3	4.0	11.5	11.2	5.1
Brno–venkov	193 103	195 644	1 008	500	2 201	570	1 870	9	7	331	4 479	4 810	5.2	2.6	11.4	9.7	24.9
Břeclav	113 041	113 171	619	214	1 076	379	1 119	5	4	–43	260	217	5.5	1.9	9.5	9.9	1.9
Hodonín	157 186	157 176	781	403	1 551	512	1 610	7	6	–59	–56	–115	5.0	2.6	9.9	10.2	–0.7
Vyškov	87 292	87 519	428	238	918	321	892	3	3	26	390	416	4.9	2.7	10.5	10.2	4.8
Znojmo	112 663	112 828	606	306	1 289	462	1 169	3	3	120	123	243	5.4	2.7	11.4	10.4	2.2
Olomoucký kraj	**640 508**	**641 791**	**3 325**	**1 853**	**6 931**	**2 252**	**6 458**	**18**	**13**	**473**	**1 424**	**1 897**	**5.2**	**2.9**	**10.8**	**10.1**	**3.0**
Jeseník	41 722	41 565	209	103	416	161	402	2	1	14	–276	–262	5.0	2.5	10.0	9.6	–6.3
Olomouc	229 459	230 607	1 305	752	2 559	777	2 201	5	4	358	1 078	1 436	5.7	3.3	11.2	9.6	6.3
Prostějov	109 811	109 979	590	236	1 211	394	1 128	2	1	83	263	346	5.4	2.1	11.0	10.3	3.2
Přerov	134 958	135 165	635	435	1 398	478	1 425	6	6	–27	524	497	4.7	3.2	10.4	10.6	3.7
Šumperk	124 558	124 475	586	327	1 347	442	1 302	3	1	45	–165	–120	4.7	2.6	10.8	10.5	–1.0
Zlínský kraj	**590 000**	**590 780**	**2 966**	**1 536**	**6 059**	**1 895**	**5 869**	**22**	**10**	**190**	**751**	**941**	**5.0**	**2.6**	**10.3**	**9.9**	**1.6**
Kroměříž	107 688	107 789	536	350	1 123	322	1 117	2	–	6	110	116	5.0	3.3	10.4	10.4	1.1
Uherské Hradiště	143 915	144 242	684	329	1 425	445	1 416	2	–	9	502	511	4.8	2.3	9.9	9.8	3.6
Vsetín	145 672	145 761	741	385	1 556	451	1 402	9	6	154	–54	100	5.1	2.6	10.7	9.6	0.7
Zlín	192 725	192 988	1 005	472	1 955	677	1 934	9	4	21	193	214	5.2	2.4	10.1	10.0	1.1
Moravskoslezský kraj	**1 249 323**	**1 249 897**	**6 694**	**3 874**	**13 373**	**4 868**	**12 668**	**36**	**24**	**705**	**–98**	**607**	**5.4**	**3.1**	**10.7**	**10.1**	**0.5**
Bruntál	98 135	98 148	480	256	1 064	400	929	3	1	135	–160	–25	4.9	2.6	10.8	9.5	–0.3
Frýdek–Místek	210 020	210 369	1 114	554	2 246	768	2 101	6	4	145	639	784	5.3	2.6	10.7	10.0	3.7
Karviná	275 401	275 397	1 492	923	2 737	1 174	2 793	9	7	–56	–301	–357	5.4	3.4	9.9	10.1	–1.3
Nový Jičín	152 103	152 352	808	464	1 714	508	1 373	3	–	341	54	395	5.3	3.1	11.3	9.0	2.6
Opava	176 698	176 820	904	469	1 950	652	1 823	6	6	127	69	196	5.1	2.7	11.0	10.3	1.1
Ostrava–město	336 966	336 811	1 896	1 208	3 662	1 366	3 649	9	6	13	–399	–386	5.6	3.6	10.9	10.8	–1.1

Population and vital statistics of the Czech Republic in towns with a population above 20 thous.: 2007

Town	Population 1 July	Population 31 December	Marriages	Divorces	Live births	Abortions	Deaths	Increase (decrease)			Marriages	Divorces	Live births	Deaths	Total increase
								Natural	Net migration	Total	per 1000 inhabitants				
Praha	1 196 454	1 212 097	7 149	3 621	13 195	4 408	12 208	987	22 984	23 971	6.0	3.0	11.0	10.2	20.0
Brno	366 812	368 533	2 314	1 449	4 209	1 463	4 091	118	1 735	1 853	6.3	4.0	11.5	11.2	5.1
Ostrava	308 832	308 374	1 761	1 146	3 431	1 291	3 364	67	–791	–724	5.7	3.7	11.1	10.9	–2.3
Plzeň	164 230	165 238	984	592	1 789	884	1 676	113	1 733	1 846	6.0	3.6	10.9	10.2	11.2
Olomouc	99 966	100 373	605	375	1 116	366	989	127	78	205	6.1	3.8	11.2	9.9	2.1
Liberec	99 288	99 721	655	409	1 177	472	977	200	740	940	6.6	4.1	11.9	9.8	9.5
České Budějovice	94 925	95 071	612	314	1 054	478	870	184	140	324	6.4	3.3	11.1	9.2	3.4
Ústí nad Labem	94 723	94 960	581	345	1 171	510	932	239	156	395	6.1	3.6	12.4	9.8	4.2
Hradec Králové	94 134	94 252	542	342	961	478	992	–31	28	–3	5.8	3.6	10.2	10.5	–0.0
Pardubice	88 661	89 245	535	309	978	248	847	131	555	686	6.0	3.5	11.0	9.6	7.7
Havířov	84 164	84 033	491	322	810	339	764	46	–232	–186	5.8	3.8	9.6	9.1	–2.2
Zlín	78 084	78 066	467	209	796	335	806	–10	–46	–56	6.0	2.7	10.2	10.3	–0.7
Kladno	69 485	69 675	368	274	839	325	787	52	347	399	5.3	3.9	12.1	11.3	5.7
Most	67 580	67 543	439	252	804	343	697	107	–255	–148	6.5	3.7	11.9	10.3	–2.2
Karviná	62 872	62 881	297	196	635	309	731	–96	–68	–164	4.7	3.1	10.1	11.6	–2.6
Frýdek–Místek	59 401	59 233	337	202	689	330	541	148	–331	–183	5.7	3.4	11.6	9.1	–3.1
Opava	59 047	58 923	299	194	665	284	603	62	–295	–233	5.1	3.3	11.3	10.2	–3.9
Děčín	52 285	52 509	311	222	628	306	575	53	291	344	5.9	4.2	12.0	11.0	6.6
Teplice	51 219	51 461	304	170	621	313	558	63	352	415	5.9	3.3	12.1	10.9	8.1
Karlovy Vary	50 940	51 202	300	199	494	206	572	–78	589	511	5.9	3.9	9.7	11.2	10.0
Jihlava	50 826	50 795	312	154	532	228	439	93	–214	–121	6.1	3.0	10.5	8.6	–2.4
Chomutov	49 825	49 882	310	186	561	291	500	61	4	65	6.2	3.7	11.3	10.0	1.3
Přerov	46 929	47 037	215	184	454	168	434	20	105	125	4.6	3.9	9.7	9.2	2.7
Prostějov	45 763	45 675	252	116	511	202	449	62	–245	–183	5.5	2.5	11.2	9.8	–4.0
Jablonec nad Nisou	44 960	45 051	276	165	522	238	446	76	153	229	6.1	3.7	11.6	9.9	5.1
Mladá Boleslav	44 176	44 602	279	143	481	193	361	120	559	679	6.3	3.2	10.9	8.2	15.4
Třebíč	38 610	38 493	212	122	447	142	340	107	–210	–103	5.5	3.2	11.6	8.8	–2.7
Česká Lípa	38 289	38 315	275	175	501	235	278	223	–89	134	7.2	4.6	13.1	7.3	3.5
Třinec	37 760	37 657	221	99	369	154	389	–20	–69	–89	5.9	2.6	9.8	10.3	–2.4
Tábor	35 768	35 769	220	121	360	176	312	48	–138	–90	6.2	3.4	10.1	8.7	–2.5
Cheb	34 323	34 818	161	134	423	261	278	145	637	782	4.7	3.9	12.3	8.1	22.8
Znojmo	34 793	34 735	209	112	385	156	357	28	–195	–167	6.0	3.2	11.1	10.3	–4.8
Příbram	34 660	34 591	194	91	384	152	312	72	–141	–69	5.6	2.6	11.1	9.0	–2.0
Orlová	33 015	32 918	185	130	365	133	266	99	–342	–243	5.6	3.9	11.1	8.1	–7.4
Trutnov	31 061	30 993	169	110	356	150	296	60	–176	–116	5.4	3.5	11.5	9.5	–3.7

(End of table)

Town	Population 1 July	Population 31 December	Marriages	Divorces	Live births	Abortions	Deaths	Increase (decrease)			Mar-riages	Divorces	Live births	Deaths	Total increase
								Natural	Net migration	Total	per 1000 inhabitants				
Kolín	30 482	30 736	207	117	328	160	329	–1	579	578	6.8	3.8	10.8	10.8	19.0
Písek	29 909	29 898	150	78	319	140	314	5	–16	–11	5.0	2.6	10.7	10.5	–0.4
Kroměříž	29 107	29 036	159	92	304	91	332	–28	26	–2	5.5	3.2	10.4	11.4	–0.1
Vsetín	27 991	27 963	147	80	323	101	242	81	–193	–112	5.3	2.9	11.5	8.6	–4.0
Šumperk	28 040	27 946	131	88	313	122	332	–19	–104	–123	4.7	3.1	11.2	11.8	–4.4
Valašské Meziříčí	27 350	27 336	142	80	314	90	242	72	–68	4	5.2	2.9	11.5	8.8	0.1
Litvínov	27 112	27 118	180	104	296	152	324	–28	67	39	6.6	3.8	10.9	12.0	1.4
Nový Jičín	26 115	26 071	126	86	316	122	245	71	–180	–109	4.8	3.3	12.1	9.4	–4.2
Hodonín	26 026	25 897	130	99	265	138	264	1	–214	–213	5.0	3.8	10.2	10.1	–8.2
Uherské Hradiště	25 944	25 865	135	94	258	117	240	18	–160	–142	5.2	3.6	9.9	9.3	–5.5
Český Těšín	25 710	25 633	130	82	252	113	248	4	–151	–147	5.1	3.2	9.8	9.6	–5.7
Krnov	25 237	25 211	121	63	307	80	261	46	24	70	4.8	2.5	12.2	10.3	2.8
Havlíčkův Brod	24 388	24 506	129	67	305	116	222	83	158	241	5.3	2.7	12.5	9.1	9.9
Sokolov	24 451	24 488	164	75	264	132	209	55	–23	32	6.7	3.1	10.8	8.5	1.3
Břeclav	24 359	24 319	166	63	245	115	291	–46	–42	–88	6.8	2.6	10.1	11.9	–3.6
Litoměřice	23 223	23 768	162	112	318	120	209	109	568	677	7.0	4.8	13.7	9.0	29.2
Žďár nad Sázavou	23 709	23 717	125	71	251	107	151	100	–71	29	5.3	3.0	10.6	6.4	1.2
Chrudim	23 363	23 379	143	69	282	100	207	75	–58	17	6.1	3.0	12.1	8.9	0.7
Strakonice	23 351	23 280	129	59	278	70	229	49	–94	–45	5.5	2.5	11.9	9.8	–1.9
Kopřivnice	23 249	23 248	137	77	284	73	156	128	–166	–38	5.9	3.3	12.2	6.7	–1.6
Bohumín	22 942	22 914	138	74	266	109	271	–5	–55	–60	6.0	3.2	11.6	11.8	–2.6
Klatovy	22 877	22 890	124	56	240	101	225	15	–15	–	5.4	2.4	10.5	9.8	–
Jindřichův Hradec	22 400	22 300	132	80	266	95	212	54	–218	–164	5.9	3.6	11.9	9.5	–7.3
Vyškov	21 914	21 901	118	70	199	106	199	–	–56	–56	5.4	3.2	9.1	9.1	–2.6
Kutná Hora	21 444	21 444	116	66	238	76	217	21	50	71	5.4	3.1	11.1	10.1	3.3
Jirkov	20 934	20 924	120	78	240	154	193	47	–129	–82	5.7	3.7	11.5	9.2	–3.9
Blansko	20 860	20 920	99	70	219	92	172	47	49	96	4.7	3.4	10.5	8.2	4.6
Náchod	20 906	20 898	123	88	246	91	231	15	–78	–63	5.9	4.2	11.8	11.0	–3.0

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