

## SINGLE MOTHERS – WHAT HAPPENS NEXT?\*)

**Keywords:** single mother, marriage, next-order children, abortion, divorce

The standard data published by the *Czech Statistical Office (CZSO)* on demographic change in the Czech Republic year by year provide information about the number of births and the composition of the mother population by various criteria, for example, by age, marital status, birth order, the interval since the birth of the previous child, etc. The data thus provide an overview of the group of women that give birth during a single year, but even time series of these indicators do not make it possible to observe development of the given population in subsequent years. However, the basic database that the CZSO uses to compile the data above does facilitate a longitudinal analysis. This article monitors the further demographic development of the cohort of single mothers that gave birth in a given year to their first child and the child was live born.

### The formation of the monitored data sets

Source data from the CZSO make it possible to monitor single mothers for the period between 1991 and 2004 and to monitor both the changes in their number (decrease) owing to death or emigration from the Czech Republic, and the changes in their demographic structure, as a result of marriage, the birth of other children, or divorce. The occurrence of abortions can also be monitored. The database is not complete for the year 1991, as data on abortions are lacking, or for the years 2003 and 2004, when the necessary indicator on divorces is missing.

During the period under observation the lowest number of single mothers with a first child was in the first year (1991), at 7368. In most subsequent years the number increased to reach its maximum to date in 2004, when the number exceeded 17 000, almost twice that of the first year of observation (an increase of 134%). The percentage of live-born first-order children of single mothers out of the total number of live-born children increased from 5.7% to 17.6%.

In order to reveal the above-indicated vital events in the basic sample, it was necessary to eliminate records with incomplete or erroneous identifiers. Also eliminated from the sample were entries that were illogical when previous vital events (birth, marriage, divorce) were added in. These were cases of women for whom prior to the data item on the birth of the first child while single had a record of a marriage, divorce, or birth of a child indicated in the database. The number of such cases is very small, so their effect on the sample is marginal. The total proportion of records eliminated owing to the cited deficiencies in individual years equals just 5.9–7.4%, so the samples that were ultimately analysed are adequately representative for the individual years, and the quality of the records in the database can be considered as very good.

Also eliminated from the base samples for individual years were women who in the period under observation died or emigrated from the Czech Republic. In the case of these women there was no way for the other monitored events to find their way into the sample or for these events to be traced, and thus the findings would have been slightly though not substantially influenced by this. The samples monitored thus comprised in the individual years between 90.9% and 93.8% of the base sample.

With the exception of Table 8, in which the data for women in total are entered, the data in the other tables are for the samples defined as above for continued monitoring (see the previous table).

### Age structure of the data sets

The age structure of the women included in the data sets in the research indicates that, as in the case of the population overall, the age of mothers has been increasing. This is also confirmed by the averages cited here. The average age of the groups increased between the first and the final year of the studied time series by 3.5 years.

Also, the age of the highest intensity of first birth while single also increased to higher averages. In a conversion to 1000 women the highest percentage of women was included in the monitoring in 1991 among 18-year-olds, in 2004 among 21-year-olds, with a datum of 18.7 per thousand.

In comparison to the age structure of married mothers at the time of first birth, single mothers are younger, by 1.1 year at the start of the time series and by 2.4 years in 2004.

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Table 1 Selected birth indicators in the Czech Republic in 1991–2004

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total 1991–2004
Fertility															
Live-born children	129 354	121 705	121 025	106 579	96 097	90 446	90 657	90 535	89 471	90 910	90 715	92 786	93 685	97 664	1 401 629
Live-born children of single mothers	9 226	9 441	11 269	11 378	10 910	11 244	11 946	12 875	13 966	15 064	16 359	18 095	20 753	23 451	195 977
Share of live births to single mothers out of total live births	7.1	7.8	9.3	10.7	11.4	12.4	13.2	14.2	15.6	16.6	18.0	19.5	22.2	24.0	14.0
<b>First-order (live) births to single mothers = initial number</b>	<b>7 368</b>	<b>7 421</b>	<b>8 717</b>	<b>8 609</b>	<b>7 979</b>	<b>8 121</b>	<b>8 719</b>	<b>9 214</b>	<b>10 070</b>	<b>10 957</b>	<b>11 697</b>	<b>12 944</b>	<b>15 071</b>	<b>17 226</b>	<b>144 113</b>
Share of first-order live births to single mothers – total	5.7	6.1	7.2	8.1	8.3	9.0	9.6	10.2	11.3	12.1	12.9	14.0	16.1	17.6	10.3
Exclusion of records with errors	543	518	525	405	581	530	620	620	642	770	710	765	898	1094	9 221
Cases that moved or died	125	98	80	75	62	50	48	45	32	36	19	32	30	8	740
<b>Sample for further observation</b>	<b>6 700</b>	<b>6 805</b>	<b>8 112</b>	<b>8 129</b>	<b>7 336</b>	<b>7 541</b>	<b>8 051</b>	<b>8 549</b>	<b>9 396</b>	<b>10 151</b>	<b>10 968</b>	<b>12 147</b>	<b>14 143</b>	<b>16 124</b>	<b>134 152</b>
Percentage of the initial number	90.9	91.7	93.1	94.4	91.9	92.9	92.3	92.8	93.3	92.6	93.8	93.8	93.8	93.6	93.1

## Marriages

The basic question set out in the research was to determine how long the period is before single mothers marry and what percentage of them remain single. The data in the following table show this information for the data sets for the individual years after the lapse of a certain period of time (to the end of 2004). Given that in the data set of each subsequent year there is one less year in the period during which the occurrence of a marriage could be observed, it is not possible to compare the individual data sets. (The occurrence of a marriage or not in some of the other monitorings divided the basic data set of individual years into two sub-groups.)

During the time period monitored a permanent shift occurred in the direction of there being a longer period after birth and a related increase in the percentage of those who remained single. Given than from the time of nine years after the birth the increases in the percentage of married women become quite small, it is possible to deduce that in the groups from the start of the 1990s approximately 40% remain single, and in the groups from recent years more than one-half. The largest number of marriages occurs within one year of the birth of a child, and with each additional year after the birth the number of marriages decreases.

A more detailed look at the period between a birth and first marriage by months (in the first two years after a birth) shows an evident shift in the occurrence of marriages to a later period after the birth. While up until the mid-1990s, for example, marriages within the first four months after a birth accounted for almost 40% of the marriages within one year, the current figure is around 20%.

## Divorce

As in the case of other vital events, in the case of divorce each monitored data set has a different period during which the event could take place. The data clearly show that the divorce rate is high, for example, of the first three groups monitored, approximately one-quarter of the first marriages end in divorce within 10–12 years.

A comparison of the percentages of divorced first marriages among women in total and the single mothers observed here (those whose marriages were preceded by the birth of at least one child) shows no significant differences. In the data sets of the oldest cohorts (1991–1993) the divorce rate is higher among the single mothers observed here (the highest is in the data set for 1991, by 3.0 percentage points for the entire period up to 2004). The difference between the two groups then decreases, and in the data set for 1995 the divorce rate among total women is higher, with a maximum difference in 1999 at 3.3 percentage points. In the data sets for the next years this difference falls, but it is necessary to take into account the fact that the period during which the event could occur is no longer very large

(0–5 years). These data indicate that a small portion of single mothers are women who lived with their partner (usually the father of the child), and this pre-marital cohabitation may have a slight influence on the stability of the subsequent marriage, whether with the same or even with a different partner.

### The birth of other children

The decline in the birth rate and the postponement of childbirth to a later age, which is evident throughout the entire population, is also exhibited by the data on the birth of other children in the monitored groups of single mothers. While the data sets from the start of the period show the largest number of second-order births within two years after the birth of the first child, in the data sets from the second half of the 1990s the span is four years. In a conversion to 100 women there is a notable decline in the first half of the 1990s, after which it is possible to speak of stagnation.

The decline in the birth rate of second-order and other children in the first half of the 1990s and the subsequent continuation of the birth rate at similar levels is confirmed for comparable periods by data on the percentage of women who remain without a second child.

**Table 2 Characteristics of the age structure of the sets**

Age	Set for year													
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Mode	18	19	19	19	19	19	19	20	20	20	21	22	20	25
Median	19.6	19.6	19.5	19.8	20.1	20.4	20.6	21.0	21.4	22.0	22.6	23.0	23.6	24.2
Average age total	21.3	21.2	21.2	21.3	21.6	21.8	22.1	22.4	22.7	23.2	23.7	23.9	24.4	24.8
remained single	22.4	22.2	21.9	22.0	22.1	22.3	22.5	22.6	22.9	23.2	23.7	23.9	24.4	24.8
married	20.4	20.4	20.5	20.5	20.9	21.2	21.4	21.9	22.4	22.9	23.7	23.9	24.4	24.6

**Table 3 Number of marriages and structure of the sets by marital status**

Indicator	Set for year													
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	Number of marriages													
First	3730	3678	4120	3866	3321	3058	3047	2842	2781	2619	2286	1872	1351	456
Other	408	338	295	235	155	131	92	46	35	12	9	-	1	-
Total	4138	4016	4415	4101	3476	3189	3139	2888	2816	2631	2295	1872	1352	456
	%													
Married	55.7	54.0	50.8	47.6	45.3	40.6	37.8	33.2	29.6	25.6	20.8	15.4	9.6	2.8
Remained single thus far	44.3	46.0	49.2	52.4	54.7	59.4	62.2	66.8	70.4	74.2	79.2	84.6	90.4	97.2

**Table 4 First marriages by time since childbirth**

Years	Set for year												
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
0	1104	981	989	826	682	663	665	655	784	809	806	754	839
1	632	562	613	559	520	530	509	540	602	665	675	755	
2	408	441	516	466	458	404	442	470	507	486	541		
3	252	340	425	455	342	382	437	411	404	432			
4	265	264	331	354	323	326	359	321	318				
5	223	235	267	334	288	250	260	278					
6	204	223	287	263	281	213	256						
7	145	158	186	222	188	190							
8	121	143	157	169	146								
9	126	108	141	143									
10	87	95	127										
11	73	91											
12	62												

**Table 5 Share of women with first marriage by time since childbirth to marriage, in %**

Years	Set for year												
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
0	16.5	14.4	12.2	10.2	9.3	8.8	8.3	7.7	8.3	8.0	7.3	6.2	5.9
1	9.4	8.3	7.6	6.9	7.1	7.0	6.3	6.3	6.4	6.6	6.2	6.2	
2	6.1	6.5	6.4	5.7	6.2	5.4	5.5	5.5	5.4	4.8	4.9		
3	3.8	5.0	5.2	5.6	4.7	5.1	5.4	4.8	4.3	4.3			
4	4.0	3.9	4.1	4.4	4.4	4.3	4.5	3.8	3.4				
5	3.3	3.5	3.3	4.1	3.9	3.3	3.2	3.3					
6	3.0	3.3	3.5	3.2	3.8	2.8	3.2						
7	2.2	2.3	2.3	2.7	2.6	2.5							
8	1.8	2.1	1.9	2.1	2.0								
9	1.9	1.6	1.7	1.8									
10	1.3	1.4	1.6										
11	1.1	1.3											
12	0.9												
to 5 years	39.7	38.0	35.4	32.7	31.7	30.6	30.0	28.0	27.8				
to 10 years	51.9	50.8	48.2	46.6									

**Table 6 First marriages within 2 years of childbirth by time in months**

Months	Set for year												
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
0	43	33	29	23	17	12	24	12	14	14	17	13	8
1	115	113	103	59	54	49	55	49	61	54	45	51	49
2	147	132	124	102	73	68	68	68	74	95	67	69	47
3	113	101	100	73	75	81	67	67	88	74	79	57	66
4	105	92	99	86	68	60	57	57	76	83	88	83	54
5	102	96	75	65	69	65	63	63	74	62	88	67	62
6	86	89	80	87	62	58	66	56	68	78	71	74	66
7	102	63	81	83	58	57	60	49	73	63	69	76	93
8	79	76	84	72	53	62	63	56	66	66	64	60	91
9	60	69	85	66	52	45	42	67	63	63	72	57	104
10	76	61	63	58	54	53	60	49	64	74	71	64	106
11	76	56	66	52	47	53	40	62	63	83	75	83	93
12	67	61	58	50	47	44	55	61	64	96	82	70	
13	52	58	52	44	46	45	49	45	46	59	57	69	
14	57	53	61	47	38	48	44	34	57	57	59	61	
15	58	35	57	55	61	60	49	39	51	57	61	63	
16	58	47	63	51	48	54	33	55	58	53	48	51	
17	60	48	50	44	29	37	50	43	42	51	54	44	
18	48	40	51	38	40	40	39	44	50	48	50	63	
19	53	48	37	48	47	49	35	54	54	39	50	65	
20	45	49	44	39	49	48	39	39	40	62	56	63	
21	48	43	51	51	44	41	46	42	56	50	50	63	
22	51	36	49	44	38	29	32	41	43	44	58	56	
23	35	44	40	48	33	35	38	43	41	49	50	87	

In the data on the birth of other children broken down into mothers who remained single and mothers who married refer to the marital status at the end of the monitored period, not at the time of the specific birth. Given that every subsequent data set in this monitoring has a shorter period in which the birth of a

**Table 7 Divorces**

Divorces	Set for year												
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Divorces total	1243	1025	1063	877	654	555	437	333	244	163	79	21	4
First	1161	971	1022	852	641	544	434	332	243	163	79	21	4
Other	82	54	41	25	13	11	3	1	1	-	-	-	-
Per 100 marriages:													
Total	30.0	25.5	24.1	21.4	18.8	17.4	13.9	11.5	8.7	6.2	3.4	1.1	0.3
First	31.1	26.4	24.8	22.0	19.3	17.8	14.2	11.7	8.7	6.2	3.5	1.1	0.3
Other	20.1	16.0	13.9	10.6	8.4	8.4	3.3	2.2	2.9	-	-	-	-

**Table 8 Share of divorced first marriages of women in total and of unmarried mothers, in %**

Indicator	Set for year												
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Number of monitored years after marriage												
	13	12	11	10	9	8	7	6	5	4	3	2	1
Women total	28.1	24.4	24.1	22.0	20.4	18.7	16.6	14.9	12.0	8.9	6.4	3.6	1.2
Single mothers	31.1	26.4	24.8	22.0	19.3	17.8	14.2	11.7	8.7	6.2	3.5	1.1	0.3
Difference	3.0	2.0	0.7	0.0	-1.1	-0.9	-2.4	-3.2	-3.3	-2.7	-2.9	-2.5	-0.9

**Table 9 Children of next birth order per 100 women**

Number of years from birth	Set for year										
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
3	35.5	31.1	26.8	25.6	26.6	24.4	24.5	23.5	24.4	23.4	23.9
5	55.0	50.2	45.8	45.2	46.4	44.9	44.3	43.5	44.5		
8	77.7	71.7	68.9	68.5	70.9	70.1					
10	88.8	83.8	80.9	80.4							
12	97.3	93.5									

**Table 10 Share of women without another child, in %**

Number of years from birth	Set for year										
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
3	68.3	71.8	75.2	76.5	75.7	77.8	77.6	78.3	77.5	78.3	77.7
5	55.7	58.6	61.5	61.8	61.3	62.1	62.3	62.8	62.0		
8	44.2	46.7	48.3	47.9	46.8	47.3					
10	40.1	41.7	42.9	42.2							
12	36.9	38.0									

**Table 11 Share of women without another child, in %**

Indicator	Set for year													
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
All women	35.6	38.0	40.7	42.2	43.6	47.3	51.2	56.8	62.0	69.4	77.7	87.6	96.4	100.0
Remained single	53.0	53.7	56.9	56.1	56.3	58.9	61.3	64.7	68.8	74.6	81.0	89.1	96.7	100.0
Married	21.8	24.6	25.1	26.8	28.2	30.3	34.5	40.9	45.8	54.3	65.2	79.8	93.3	100.0

**Table 12 Average number of children per woman**

Indicator	Set for year													
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
All women	2.03	1.93	1.86	1.80	1.78	1.70	1.62	1.53	1.44	1.34	1.24	1.13	1.04	1.00
Remained single	1.82	1.76	1.67	1.63	1.62	1.57	1.51	1.44	1.37	1.29	1.21	1.11	1.03	1.00
Married	2.19	2.09	2.05	1.99	1.96	1.89	1.79	1.70	1.62	1.50	1.36	1.21	1.07	1.00

**Table 13 Abortion indicators**

Indicator	Set for year													
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	Average number of abortions per women													
All women	0.82	0.73	0.71	0.73	0.68	0.64	0.60	0.53	0.37	0.38	0.32	0.26	0.23	0.19
Remained single	0.79	0.73	0.69	0.76	0.71	0.63	0.62	0.54	0.39	0.39	0.33	0.27	0.23	0.20
Married	0.85	0.73	0.73	0.69	0.66	0.66	0.56	0.49	0.33	0.33	0.28	0.24	0.20	0.19
	Women without abortion, in %													
All women	51.5	54.7	55.0	53.6	55.1	57.1	58.5	62.2	70.7	70.6	74.0	77.9	80.6	84.0
Remained single	54.3	56.2	57.0	52.4	54.9	57.5	57.8	61.5	69.5	69.5	73.3	77.7	80.5	82.7
Married	49.3	53.5	53.1	55.0	55.3	56.5	59.6	63.8	73.5	73.7	77.0	79.0	82.0	84.0

second child can occur, the data in the table are not comparable over time but can be used to compare mothers according to the two alternative marital statuses cited above. There is clear evidence that a subsequent marriage has an effect on the birth of other children, or the opposite effect appears, i.e. that the birth of other children while single is affected by the subsequent marriage. For example, in the case of the data set for 1991, the proportion of mothers among single mothers that had no further children was almost 2.5 times as high as the proportion among the women who married.

The differences in natality behaviour among the groups are confirmed by a comparison of the average number of children per woman married and unmarried.

### Abortions

An abortion is the only vital event monitored that relates to women even the year before their inclusion in the monitored data set, that is, before the birth of the first child and while single. (We must, however, also take into account that there are no available data for the period before 1992 and since 2003, which obstructs a comparison of the data sets from different periods.) Therefore, the data in Table 13 can only be used for a comparison between the cited groups of women and not for a comparison over time.

The highest number of abortions, the major part of which are induced abortions, occurs in the year after the birth, which is likely connected with an increased interest in preventing the birth of another child so early after the birth of the first child. From the period prior to the birth, the most abortions occur one year or two years before the birth. Even this comparison shows a notable decrease in the abortion rate – the relative values in data sets from later years are lower.

There is no substantial difference in the abortion rate between the women who married and the women who remained single. The average number of abortions per woman differs very little between these two groups. More often, but not every year, there is a higher abortion rate among women who did not marry. A similar conclusion regarding the insignificant and ambiguous differences between the compared groups can be drawn from a comparison of the percentages of women who had no abortion in the monitored years.

### Conclusion

An analysis of the data sets from the CZSO presents a different view on some aspects of demographic trends and makes it possible to observe the development and changes that affect certain groups over time. In this article, attention was devoted to women who had their first child while single. The percentage of data that for various reasons had to be eliminated from the analysis was not large (roughly 5%), and the findings offer a reliable portrait of the phenomena monitored. There is a clear shift in the age

structure of mothers in the direction of older mothers. The age group with the largest relative number of single mothers of a first-order child out of the total number of women is currently the group of 21-year-olds, while in 1991 it was 18-year-olds. There is an evident postponement of subsequent marriage to a later age. The data indicate that there is also an increase in the percentage that never married. In the case of all the data sets most marriages occur within one year of the birth. In the data sets from earlier years this primarily occurred within months, soon after the birth, but this is no longer true. The data for more recent years indicate a decline in the divorce rate among the monitored group of women and possibly a slightly lower divorce rate compared with total women. Marriage has an effect on the birth rate in this monitoring – women who married have more children than those who did not marry. Conversely, there is no difference in the abortion rate between women who married and those who did not. These data summaries represent a basic departure point for this form of analysing basic statistical data. Further work will draw on these summaries and will be devoted to elaborating the topic further.

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