

# HUMAN FERTILITY DATABASE DOCUMENTATION: SLOVAKIA

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## 1 General information

This report documents age- and birth order-specific data on births as well as data on exposure populations (women by age (birth cohort) and the number of live born children) for Slovakia, which were collected for the Human Fertility Database (HFD) project. Data on births by age of mother and (biological) birth order were included in the greatest possible detail. Time series cover the years between 1925 and 1937 and between 1945 and 2014. The population data cover the periods between 1950 and 2014.

The territory of the Slovak Republic was part of Czechoslovakia between 1918 and 1938 and between 1945 and 1992. It was constituted as an independent country on 1<sup>st</sup> January 1993 and has had the same borders since 1945. In 1945, minor territorial changes affected 17 small municipalities; these differences have had a negligible influence on the continuity of births and population statistics.

Through this document, we comment on all data collected for the purpose of HFD project, and included into the input files. The report and data files include a complete documentation of the official data on birth counts and exposure populations obtained from the Statistical Office of the Slovak Republic, vital statistics publications and the publications of population censuses. All the input data used for generating the HFD output data and indicators are specified in Appendix 1.

However, due to some data limitations described in the following sections of this document, and due to the restricted population exposure data, only data since 1950<sup>1</sup> are used for the calculation of the HFD output.

### 1.1 Data collection and availability

The history of statistical data collection dates back to 1847 when the Hungarian Central Statistical Office was established. An important turning point was the formation of Czechoslovakia on 28<sup>th</sup> October 1918 and, subsequently, the establishment of the State Statistical Office, which collected data on births, marriages, deaths, divorces and population

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<sup>1</sup> With the exception of the series of monthly birth counts that are available also for the earlier periods, for 1925–1937 and 1945–2015.

counts for the whole territory of Czechoslovakia<sup>2</sup> from 1918 to 1937 and from 1945 to 1992. Slovakia was part of Czechoslovakia and formed a common state with the Czech Republic during these periods. Hence, the birth registration system as well as the vital statistics publications are identical and have the same structure as those of the Czech Republic during this period.

A break in the data series on births occurred between 1938 and 1945 due to the Second World War (WW2). Vital statistics were not published between 1938 and 1944 and the existing statistics cover only part of the present territory of the Slovak Republic. Data on territories annexed by Hungary have not yet been reconstructed. For this reason, data for this period for the complete territory of Slovakia have not been published yet.

The State Statistical Office (Státní úřad statistický, SUS) started publishing annual vital statistics from 1919 covering the whole territory of Czechoslovakia. The statistical office was renamed repeatedly, especially during the 1960s. In 1960, it was renamed the Ústřední úřad státní kontroly a statistiky (Central Office of State Control and Statistics), from 1961 to 1963 it was Ústřední komise lidové kontroly a statistiky (Central Commission of the People's Control and Statistics), and from 1964 to 1965, Státní úřad statistický úřad (State Statistical Office). Finally it was known as the Federal Statistical Office (Federální statistický úřad, FSO) for the period 1966 to 1991. The State Statistical Office and later the Federal Statistical Office published vital statistics for the whole of Czechoslovakia and also separately for the Czech and Slovak Republics. The exceptions are for the years 1974 to 1985 when the Slovak Statistical Office published vital statistics for the Slovak Socialist Republic only. Data on population change have been available in an electronic form since 1992.

Since 1993, the Statistical Office of the Slovak Republic (SO SR) has collected and processed the data on births, marriages, divorces, deaths and population structures. The vital statistics data cover all the inhabitants residing permanently in Slovakia regardless of their citizenship.

The SO SR prepares, collects, processes and publishes also data from population censuses. Nine population censuses have taken place during the period since 1919 (1921, 1930, 1950, 1961, 1970, 1980, 1991, 2001 and 2011). The data cover the population present during the censuses in the period 1921 to 1950 (de facto population), and the resident population in the censuses since 1961 (de jure population; all inhabitants with a permanent residence permit in Slovakia are included). In the HFD data from the censuses 1950, 1961, 1970, 1980, 1991, 2001 and 2011 are used.

## **1.2 Population statistics online**

An important source of demographic information and data on the Slovak Republic is the Demographic Research Centre INFOSTAT [[www.infostat.sk/vdc/en/](http://www.infostat.sk/vdc/en/)] (*Výskumné demografické centrum*, VDC). It contains data on the population and a series of demographic indicators. The site is updated annually. The data can be downloaded in Microsoft Excel format and the website is in English.

The website of the Statistical Office of the Slovak Republic [[slovak.statistics.sk](http://slovak.statistics.sk)] contains a complete listing of vital statistics publications. However, these are not published in English and, hence, access to the data is through the Slovak version of the website only. Vital statistics publications have had different formats during the periods 1992 to 1995 and 1996

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<sup>2</sup> During the period 1919 to 1937, Czechoslovakia included the region of Ruthenia and data were collected for this region as well. Data series in the vital statistics are available for the country as a whole, and separately for the Czech lands, Moravia, Slovakia and Ruthenia.

to 2006. Vital statistics in the period 1992 to 1995 were available only in Microsoft Word format. The administrative division of the country was changed in 1996 (see also below). As a result of this change, regional data for the Nomenclature for Territorial Units for Statistics (NUTS) 2 and NUTS 3 units are not comparable before 1996.

The vital statistics tables have been published in greater detail since 1996. From this time, for example, the tabulation of births by Lexis triangles has been available (Table 26).

### **1.3 Territorial coverage**

Territorial changes affected the unity of Czechoslovakia during the period 1938 to 1945. First, the southern territories of Slovakia were annexed by Hungary in 1938. In 1939 a puppet Slovak State was established in the remaining territory of Slovakia. In 1945, Czechoslovakia was re-united largely within the pre-1938 borders, with the exception of Ruthenia that was taken over by the Soviet Union (now part of Ukraine). However, the territory of Slovakia since 1945 has not exactly corresponded to the territory occupied during the years 1918 to 1937 (FSU 1978) for the following reasons:

- 13 municipalities (10,352 inhabitants, as of 1930) were incorporated into the USSR territory in 1945;
- 1 municipality (population of 1277 in 1950) was connected to Slovakia, which formerly belonged to Ruthenia; and
- 3 municipalities with 3112 inhabitants, as of 1950, which belonged to Hungary prior to 1938, were incorporated into the Slovak territory after 1945.

These changes of state borders to the Slovak territory were only minor and affected a small number of inhabitants. Thus, the changes of state borders in 1945 had a negligible effect on the population statistics of Slovakia. However, the sizeable population transfers and deportations that took place after WW2 did influence the quality of the population statistics (see below).

Another relevant issue when using the vital statistics publications issued during the period 1946 to 1992 is the way the territory of Slovakia is addressed in the headings of the tables. These vary considerably. Slovakia is referred to as 'Slovensko', 'Slovenské kraje', SSR (Slovak Socialist Republic) or SR (Slovak Republic). All of these names referred to the same territory. Note that Czechoslovakia was declared a federation of the Czech (Socialist) Republic and Slovak (Socialist) Republic in 1969.

In 2017 Slovakia had population of 5.4 million. The share of foreign-born population is very low: 2.8% were born in other EU countries (153.7 thousand) and a mere 0.5% come from outside the EU (32.5 thousand); 97% are native-born (Eurostat 2018). Since 1945, the area of Slovakia has covered 49,035 km<sup>2</sup>. The administrative divisions of the country have changed several times. The last major change took place in 1996. At present, the territory of Slovakia is divided into 4 territorial units (NUTS 2), 8 regions (NUTS 3), and 79 districts (NUTS 4).

## **2 Birth count data**

The Human Fertility Database for Slovakia is based on the official data on birth counts presented in vital statistics publications and the records on individual births provided by the Statistical Office of the Slovak Republic (SO SR). Registration of births is considered complete and covers the whole territory of the Slovak Republic. Data on births include all births to permanent residents of the Slovak Republic, including births that were registered abroad.

Input data cover the periods 1925 to 1937 and 1946 to 2015. Data for the periods 1925 to 1937 and 1946 to 1991 come from the vital statistics publications. Since 1992, files on individual birth records were used (provided by the SO SR). Vital statistics publications contain data on births dating back to 1919, however, until 1925 births were not specified by birth order.

The design of the vital statistics publications has changed several times over the period 1925 to 1991 and the changes influenced the level of detail of the data on births by age of mother and birth order as shown in the overview table (see Appendix 1).

**1925–1937, 1946–48:**

- Total births<sup>3</sup> by age of mother in completed years and birth order (biological birth order, including still-births);
- Live births by age of mother available only in 5-year age intervals;
- Live births by birth order.

**1949–1973:**

- Total births by age of mother in completed years and birth order (biological birth order, including still-births); column on live births by age of mother added. Published data split by marital status (births within and outside marriage, but both categories recorded by biological birth order). It is necessary to combine both categories to obtain the distribution of births by birth order and age of mother. Since data on births out of wedlock are available for birth orders 1 through 7+, it is possible to obtain order-specific data only up to the 7+ birth order category;
- Live births by age of mother;
- Live births by birth order.

**1974–1985:**

- Total births by age of mother in completed years and birth order (biological birth order, including still-births); column on live births by age of mother added. Data by birth order are shown irrespective of marital status of the mother for births up to birth order 10+;
- Live births by age of mother;
- Live births by birth order.

**1986–1991:**

- Live births by age of mother in completed years and birth order, birth orders 1 through 10+ are distinguished.

The vital statistics records for the years between 1959 and 1985 also included a table on live births by birth order and the ages of the mothers in 5-year age groups. These data can be used for estimating the number of live births by birth order in years when the order-specific data on births by age of mother in completed years are available only for total births.

Available files on individual birth records for the period 1992 to 2015 were used to tabulate live births by Lexis triangles (both the age and birth cohort of mother) and birth order. A similar table is included in the official vital statistics publications for 1992 to 2015 (also available online at the SO SR website, see the section Additional data sources), however, in a less detailed version.<sup>4</sup>

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<sup>3</sup> Less detailed data on live births for the period before 1986 are used for estimating the number of live births by birth order and by single years of age of the mother (see Appendix 2 for details).

<sup>4</sup> Vital statistics publications show data on births with open-ended intervals (<15, 50+) and an abridged interval for ages 45–49. Individual data files enable us to show the data in greater detail.

In addition, data on total births and live births by calendar months were added to the database. Counts of total births by calendar months cover the period 1925 to 1985. Since 1986 live births by calendar months have been available.

### **3 Population count data**

#### ***3.1 Population count data by age***

The annual age structure of women since 1950 is taken from the Human Mortality Database (HMD); for reference see file 'About mortality data for the Slovak Republic' at the HMD website [www.mortality.org](http://www.mortality.org) (Mészáros and Jasilionis 2015).

Official mid-year population counts of women by age are available for the periods 1925 to 1934 and 1946 to 1949. These data cover all women aged 10 to 55 years. All data are published in completed years of age. Prior to the March 1950 Census, post-WW2 population estimates were reconstructed from the registers of the population that were provided with food stamps. War losses, migration and post war population transfers might affect the quality of population data for the period 1946 to 1949. Population transfers between Czechoslovakia and Hungary took place shortly after WW2. According to one estimate, about 72,000 inhabitants were transferred from Hungary to Slovakia and almost 90,000 were transferred from Slovakia to Hungary (see Vaňo 2001, pp.6-7). In addition, there was a notable migration from Slovakia to the border areas of the Czech Republic, from which a sizeable population of Germans was forced to migrate to Germany. According to the official registration, 110,254 inhabitants of Slovakia moved to settle the Czech borderland between 1 May 1945 and 22 May 1947 (Vaňo 2001, pp.1–14). Due to these issues, data used for calculation of output in the HMD and the HFD databases start from 1950.

The State Statistical Office and later the Statistical Office of the Slovak Republic produced a series of post-census population estimates for the inter-census periods (for a greater level of detail see Mészáros and Jasilionis 2015).

#### ***3.2 Population count data by age, cohort and birth order***

The distribution of women by the number of live born children is available from the census data. Women aged 15 and over are obliged to report the number of live born children they have ever had in total as well as the number of children they have had in their current marriage.<sup>5</sup> For the purpose of the HFD, data from the censuses of 1950, 1961, 1970, 1980, 1991, 2001 and 2011 are used. Census 1950 counted de facto population. Censuses that took place in the period 1961 to 2011 were conducted on the basis of the resident population (de jure). 'Resident population' refers to people who are officially registered as permanent residents whether or not they were at their place of residence at the time of the census (Mészáros and Jasilionis 2015).

Data on number of women by the number of live born children have been collected since the census of 1930. However, the results for the 1930 census were published for Slovakia and Ruthenia together. Furthermore, the censuses of 1930 and 1950 were based on the concept

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<sup>5</sup> Women had to fill in a question on "the number of all live born children" they ever had. The phrasing of the question was the same through period 1961 to 1991. In 2001 the question was changed to indicate "the number of live born children". For more details, including the originals of the census questionnaires since 1921, visit <http://sodb.infostat.sk/sodb/index.htm> (Slovak and English versions).

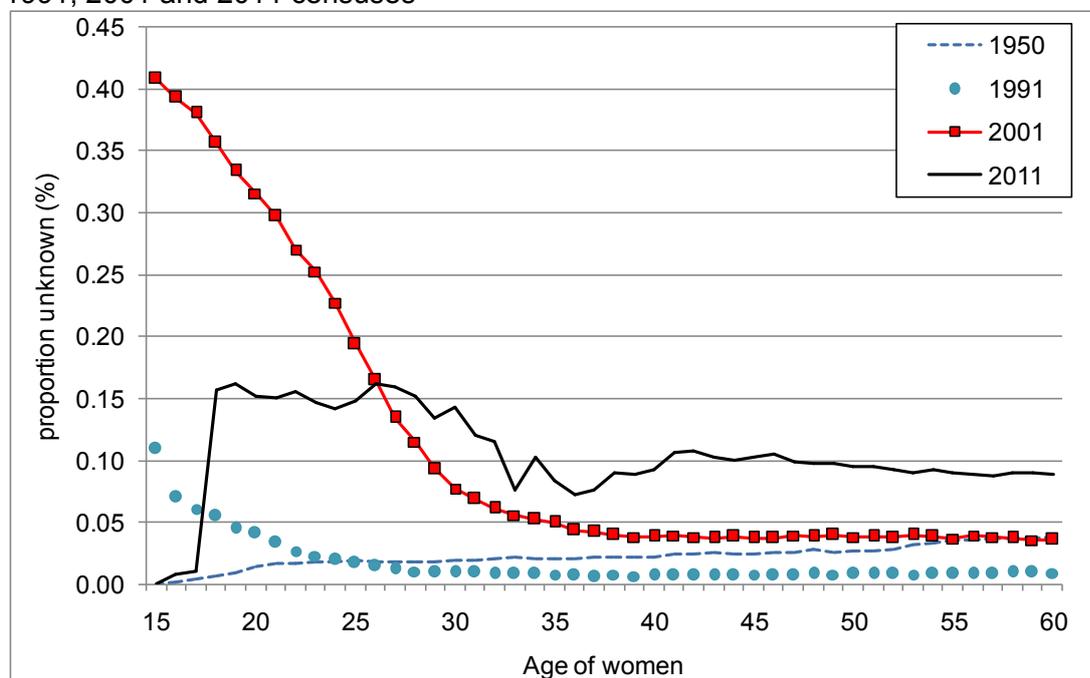
of population present at the time of the census rather than resident population as used later. Data from census 1930 are not incorporated into the Human Fertility Database.<sup>6</sup>

The distributions of women by the number of all live-born children and age are available from the censuses of 1961, 1970, 1980, and 1991. The table from the 2001 census displays the structure of female birth cohorts by number of all live born children.

Data from the 1961, 1980 and 1991 censuses show a low proportion of women with an unreported number of children (unknown) when compared to the 2001 census (Figure 1). In 2001, the proportion of unknown cases ranged between 3 and 5 % at ages 35 to 89, but reached considerably higher values for younger ages, peaking at over 40 % among women aged 15. It is very likely that a large majority of women who did not report their number of children in 2001 were childless. In fact, when women with unknown number of children in 2001 are added to those reported as childless, completed fertility rates and parity distributions are practically identical with the estimations based on the 1980 census combined with the vital statistics data for the period 1980 to 2001 (see estimates of childlessness in Figure 2). Since the 2001 census data produced downward-biased estimates of childlessness when disregarding unknown cases, these data should be used in the HFD computations only when all the women with an unknown number of children are assumed to be childless.

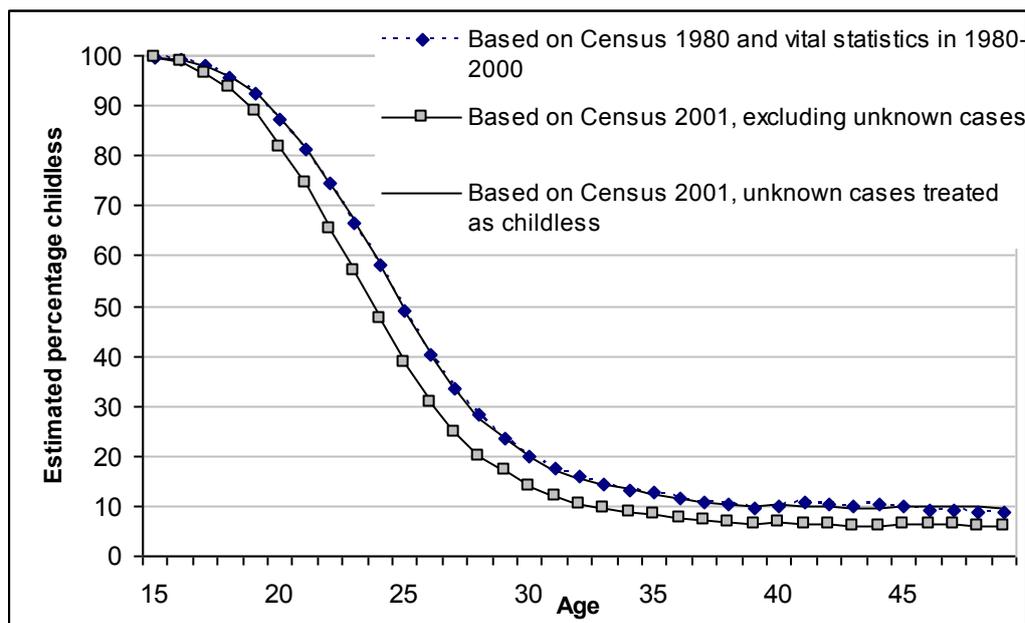
Data from 2011 show very different pattern of unknown responses, concentrated around age 20–30, with low proportion of unknown cases at the lowest ages (see Figure 1) – and these cases were redistributed proportionally.

**Figure 1** Proportion of women with an unknown number of live born children, by age. 1950, 1991, 2001 and 2011 censuses



<sup>6</sup> For the history of the censuses in the territory of the Slovak Republic see the documentation of the data on Slovakia in the Human Mortality Database (Mészáros and Jasilionis 2015).

**Figure 2** Estimated percentage of childless women by age on 1 January 2001, using different estimates based on the 1980 and 2001 censuses and vital statistics data



**Note:** Data computed by Tomáš Sobotka

## 4 Specific details

### 4.1 Definitions of live birth and stillbirth

Different definitions of live birth have been applied during the period covered by HFD data, which have influenced the number and proportion of live births in the vital statistics. These definitions are relevant to the data in the HFD since the data on total births (not on live births) by birth order and completed age of mother are available until 1985.

#### *Definition of live birth before 1948*

Live birth was defined as any foetus showing signs of life - a heartbeat or breathing. Any foetuses delivered after a gestation period of 28 weeks showing no signs of life were considered stillbirths (Mészáros and Jasilionis 2015).

#### *Definition of live birth valid from 1949 until 31 October 1952*

Live birth was defined as any foetus showing signs of life - a heartbeat or breathing. Foetuses showing no signs of life and weighing more than 400 g were registered as stillbirths. Those having a birth weight below 400 g were considered spontaneous abortions (Mészáros and Jasilionis 2015).

#### *Definition of live birth valid from 1 January 1953 to 31 December 1964*

Live birth was defined as a birth of foetus that showed signs of life (breathing or heartbeat), born after a 28 week gestation period, longer than 35 cm and weighing at least 1000 g. All foetuses which did not meet the criteria of live birth, but survived at least 24 hours were considered live births. Those surviving less than 24 hours were registered as spontaneous abortions.

#### *WHO definition of live birth was valid during 1 January 1965 to 28 February 1988*

Live birth refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life – e.g. beating of the heart, pulsation of the

umbilical cord or definite movement of voluntary muscles – whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.

*Definition of live birth valid since 1 March 1988*

Live birth refers to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life – e.g. beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles – whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born if the weight at birth is at minimum 500 g or if a weight at birth is below 499 g and the child survives 24 hours.

*Definition of stillbirth valid since 1 March 1988*

Stillbirth refers to the complete expulsion or extraction from its mother of a product of conception, which, after such separation does not show any evidence of life and which has a birth weight of 1000 g or more.

## **4.2 Age**

The age of the mother was recorded in completed years throughout the period from 1946 to 2014. It is possible that a rounding of the age to 40 or 45 (age heaping) may have influenced the observed number of births in the 1940s and 1950s.

## **4.3 Birth order**

The Czechoslovak statistics distinguished between ‘birth order’ and ‘birth order within the current marriage’ in the vital statistics publications of the period 1919 to 1937. ‘Birth order’ always refers to biological (true) birth order of a child to the mother. When used, birth order within current marriage is always explicitly specified in the table.

Total births have been tabulated by birth order and age of mother in completed years since 1925. A similar tabulation for live births by birth order and age of mother has been available only since 1986.

## **4.4 Data quality issues**

Use of post-census estimates produces inconsistencies in the population trends, mainly due to under-registered emigration. This issue is discussed in greater detail in Mészáros and Jasilionis (2015).

Since 2012, Statistical Office of the Slovak Republic does not record live births born abroad to Slovak residents. This creates a discontinuity in the time series of the number of live births (by 5–6 thousand annually), as well as in the indicators of fertility and total fertility rate (by 0.13 in 2012–2014 – see Table 1). To retain a continuous time series, the data used in the HFD were revised by Branislav Šprocha for the period starting in 2012, incorporating also the live births born abroad to Slovak residents, which have been recorded by the Ministry of Interior of Slovak Republic through the Special register of demographic events abroad. This revision provides a more realistic estimate of fertility rates in Slovakia as many Slovak citizens who have been residing abroad for a longer period of time are still included in the official resident population in Slovakia, which serves as a basis for estimating population exposure data for Slovakia.

**Table 1** Difference between the officially published TFR and the HFD estimates

Year	HFD	SO SR	Difference
2001	1.20	1.20	0.00
2002	1.19	1.19	0.00
2003	1.21	1.20	0.01
2004	1.25	1.24	0.01
2005	1.26	1.25	0.01
2006	1.25	1.24	0.01
2007	1.27	1.25	0.02
2008	1.34	1.32	0.02
2009	1.44	1.41	0.03
2010	1.43	1.43	0.00
2011	1.45	1.45	0.00
2012	1.47	1.34	0.13
2013	1.47	1.34	0.13
2014	1.50	1.37	0.13

The final problem to be considered is the quality of the census data on the parity distribution of women. The distribution of women by number of live born children shows a high number of unreported cases in the 2001 census (see Figures 1 and 2). This high proportion of women with an unknown number of children, especially in the age range 15 to 25, may be due to the phrasing of the question in the census questionnaire not being clear. The pattern of unknown cases in the 2011 census is different, concentrated not among the youngest women, but rather around the ages 20–30. In the HFD calculations, unknown parity cases are redistributed proportionally in the 1950, 1961, 1970, and 2011 census data, while in the 1980, 1991, and 2001 census data they are all recoded to zero parity.

#### **4.5 Revision history**

##### **Changes with the April 2018 revision:**

Data for 2010–2014 were added. Compared to the previous release as of 1 November 2011, there are significant changes in the exposure of population, concentrated at the ages between 20 and 40. According to Mészáros and Jasilionis (2015, pp. 7): “Population counts for 2001 – 2011 were previously based on official post-censal estimates of census 2001. They were replaced by the newly derived inter-censal estimates calculated according to the HMD methodology.” Changes in the population estimates affected also the values of fertility rates as well as of the summary indicators, and the differences between the old and new values are rather substantial for 2001–2009.

#### **Acknowledgements**

We are thankful to Tomáš Fiala (University of Economics, Prague) for making part of his personal database accessible for the purposes of the Human Fertility Database.

#### **References**

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**APPENDIX 1  
DESCRIPTION OF DATA USED FOR LEXIS DATABASE**

**BIRTHS**

Period	Type of data	Age range	Birth order	RefCode(s)
1950–1985*	Annual number of live births by age of mother (Lexis squares)	≤14, 15, ...,44, 45–49, 50+, unknown	1, 2,...,7+, unknown	9
1986–1991	Annual number of live births by age of mother (Lexis squares)	≤14, 15, ...,44, 45–49, 50+	1, 2,...,10+	9
1992–2014	Annual number of live births by age of mother, mother's year of birth and birth order (Lexis triangles)	12,...,61	1, 2,...,10+	1, 10
1925–2014	Annual number of live births by month	—	—	1, 9, 10

\* Estimated using iterative proportional fitting procedure – see Appendix II.

**FEMALE POPULATION: Distribution by age and parity**

Period	Type of data	Age range	Year of birth, range	Parity	RefCode	Notes
01.03.1950	Number of women by age and parity	15, ..., 94, 95+, unknown	—	0, ..., 14, 15+, unknown	3	'Golden census' unknown parity to be distributed proportionally
01.03.1961	Number of women by age and parity	15, ..., 94, 95+, unknown	—	0, ..., 14, 15+, unknown	4	unknown parity to be distributed proportionally
01.12.1970	Number of women by age and parity	15, ..., 94, 95+, unknown	—	0, ..., 11, 12+, unknown	5	unknown parity to be distributed proportionally
01.11.1980	Number of women by age and parity	15,...,99,100+, unknown	—	0, ...9, 10+, unknown	6	unknown parity to be regarded as parity 0
03.03.1991	Number of women by age and parity	15,...,99,100+, unknown	—	0, ...9, 10+, unknown	7	unknown parity to be regarded as parity 0
01.03.2001	Number of women by year of birth and parity	—	1920,..., 1986, unknown	0, ...9, 10+, unknown	8	unknown parity to be regarded as parity 0
01.03.2011	Number of women by year of birth and parity	—	1900,..., 2011, unknown	0, ...11, 12+, unknown	12	unknown parity to be distributed proportionally

**FEMALE POPULATION: Exposure by age and year of birth**

Female exposure population by calendar year, age, and year of birth (Lexis triangles) is estimated using data on population size and deaths from the Human Mortality Database, which is available at <http://www.mortality.org> or <http://www.humanmortality.de>.

## APPENDIX 2

### IPF method

The **iterative proportional fitting procedure** (IPF, also known as RAS algorithm) is an iterative algorithm for estimating single values of a contingency table such that the marginal totals remain fixed. In Human Fertility Database (HFD) the IPF is used for estimating live births by age of mother and birth order  $LB_{i,x}$ , when these data are available only for the distribution of total births  $TB_{i,x}$  (including stillbirths), whereas numbers of live births are specified by less detailed subtotals – namely live births by age of mother  $LB_x$  and live births by birth order  $LB_i$ . In the initial stage of HFD, this was the case for the databases of two countries, the Czech Republic 1950–1985, and Slovakia 1950–1985.

The iterative procedure repeats step ( $k$ ) consisting of two estimations until certain criterion is reached. The estimations are:

- Estimate by rows:  $B_{i,x}^{k'} = B_{i,x}^{k-1} / \sum_i B_{i,x}^{k-1} * LB_x$
- Estimate by columns:  $B_{i,x}^k = B_{i,x}^{k'} / \sum_x B_{i,x}^{k'} * LB_i$
- in the first step ( $k=1$ ), known values of total births by age of mother and birth order  $TB_{i,x}$  are used as  $B_{i,x}^0$
- The criterion is that for each  $(i,x)$ :  $|B_{i,x}^k - B_{i,x}^{k-1}| \leq 0.01$ . After reaching this criterion in step  $k^{\max}$ , estimated values are used as numbers of live births by age of mother and birth order  $LB_{i,x} \cong B_{i,x}^{k^{\max}}$

## APPENDIX 3

### References to the birth count data in the vital statistics publications used (1925–1937 and 1945–2014)

1925–27	Pobyb obyvateľstva v Československé republike v letech 1925-1927 [Vital statistics in the Czechoslovak Republic in the years 1925-1927], SSO, Praha 1932, (Tab. VIII. Pořadí a legitimita narodeného dieťaťa v kombinácii s vekom matčiny v roce 1925-1927 [Birth order and legitimacy status of children born in combination with the age of the mother in 1925-1929]); p. 178, 180, 183
1928–30	Pobyb obyvateľstva v Československé republike v letech 1928-1930 [Vital statistics in the Czechoslovak Republic in the years 1928-1930], SSO, Praha 1936, (Tab. VIIIa, b,c. Poradie a legitimita narodeného dieťaťa v kombinácii s vekom matčiny v roku 1928/1929/1930 [Birth order and legitimacy status of children born in combination with the age of the mother in the years 1928/1929/1930]); p. 124, 126, 128
1931–33	Pobyb obyvateľstva v Československé republike v letech 1931-33 [Vital statistics in the Czechoslovak Republic in the years 1931-1933], SSO, Praha 1938, (Tab. VIII. Pořadí a legitimita narodeného dieťaťa v kombinácii s vekom matčiny v roce 1931 az 1933 [Birth order and legitimacy status of children born in combination with the age of the mother in the years 1931-1933]); p.154, 156, 159
1934–37	Pobyb obyvateľstva v Československé republike v letech 1934-37 [Vital statistics in the Czechoslovak Republic in the years 1934-1937], SSO, Praha 1941, (Tab. IX. . Pořadí a legitimita narodeného dieťaťa v kombinácii s vekom matčiny v roce 1934 az 1937 [Birth order and legitimacy status of children born in combination with the age of the mother in 1934-1937]); p. 197, 199, 201, 204
1946	Pohyb obyvateľstva na Slovensku v rokoch 1945-48 [Vital statistics in Slovakia in the years 1945-1948], SSO, Praha 1959 (table 4: Poradie a legitimita narodeného dieťaťa v kombinácii s vekom matky v roku 1946 [Total births by birth order and legitimacy in combination with the age of the mother in 1946], p. 82)
1947	Pohyb obyvateľstva na Slovensku v rokoch 1945-48, SSO, Praha 1959 (Table 4: Poradie a legitimita narodeného dieťaťa v kombinácii s vekom matky v roku 1947 [Total births by birth order and legitimacy in combination with the age of the mother in 1947], p. 83)
1948	Pohyb obyvateľstva na Slovensku v rokoch 1945-48, SSO, Praha 1959 (Table 4: Poradie a legitimita narodeného dieťaťa v kombinácii s vekom matky v roku 1948 [Total births by birth order and legitimacy in combination with the age of the mother in 1948], p. 84)
1949	Pohyb obyvateľstva v republike československé v roce 1949, SUS, Praha 1955 (Table 5: Narodení v roce 1949 podle legitimacy, pořadí, veku matek a vitality [Total births in 1949 by legitimacy, birth order, age of the mother and vitality], p. 66-67)
1950	Pohyb obyvateľstva v republike československé v roce 1950, SUS, Praha 1955 (Table 5: Narodení v roce 1950 podle legitimacy, pořadí, veku matek a vitality [Total births in 1950 by legitimacy, birth order, age of the mother and vitality], p. 66-67)
1951	Pohyb obyvateľstva v republike československé v roce 1951, SUS, Praha 1956 (Table 5: Narodení v roce 1951 podle legitimacy, pořadí, veku matek a vitality [Total births in 1951 by legitimacy, birth order, age of the mother and vitality], p. 59)
1952	Pohyb obyvateľstva v republike československé v roce 1952, SUS, Praha 1957 (Table 5: Narodení v roce 1952 podle legitimacy, pořadí, veku matek a vitality [Total births in 1952 by legitimacy, birth order, age of the mother and vitality], p. 59)
1953	Pohyb obyvateľstva v republike československé v roce 1953, SUS, Praha 1958 (Table 5: Narodení v roce 1953 podle legitimacy, pořadí, veku matek a vitality [Total births in 1953 by legitimacy, birth order, age of the mother and vitality], p. 61)
1954	Pohyb obyvateľstva v republike československé v roce 1954, SUS, Praha 1958 (Table 4: Narodení v roce 1954 podle legitimacy, pořadí, veku matek a vitality [Total births in 1954 by legitimacy, birth order, age of the mother and vitality], p. 64)
1955	Pohyb obyvateľstva v republike československé v roce 1955, SUS, Praha 1959 (Table 4: Narodení v roce 1955 podle legitimacy, pořadí, veku matek a vitality [Total births in 1955 by legitimacy, birth order, age of the mother and vitality], p. 54)
1956	Pohyb obyvateľstva v republike československé v roce 1956, SUS, Praha 1959 (Table 4: Narodení v roce 1956 podle legitimacy, pořadí, veku matek a vitality [Total births in 1956 by

	legitimacy, birth order, age of mother and vitality], p. 54)
1957	Pohyb obyvatelstva v republice československé v roce 1957, SUS, Praha 1960 (Table 4: Narození v roce 1957 podle legitimacy, pořadí, věku matek a vitality [Total births in 1957 by legitimacy, birth order, age of mother and vitality], p. 54)
1958	Pohyb obyvatelstva v republice československé v roce 1958, SUS, Praha 1961 (Table 4: Narození v roce 1958 podle legitimacy, pořadí, věku matek a vitality [Total births in 1959 by legitimacy, birth order, age of mother and vitality], p. 54)
1959	Pohyb obyvatelstva v republice československé v roce 1959, SUS, Praha 1961 (Table 5: Narození v roce 1959 podle legitimacy, pořadí, věku matek a vitality [Total births in 1959 by legitimacy, birth order, age of mother and vitality], p. 56)
1960	Pohyb obyvatelstva v ČSSR v roce 1960, Ustřední úřad státní kontroly a statistiky, Praha 1962 (Table 5: Narození v roce 1960 podle legitimacy, pořadí, věku matek a vitality [Total births in 1960 by legitimacy, birth order, age of mother and vitality], p. 48)
1961	Pohyb obyvatelstva v ČSSR v roce 1961, Ustřední komise lidové kontroly a statistiky, Praha 1963 (Table 5: Narození v roce 1961 podle legitimacy, pořadí, věku matek a vitality [Total births in 1961 by legitimacy, birth order, age of mother and vitality], p. 50)
1962	Pohyb obyvatelstva v ČSSR v roce 1962, Ustřední komise lidové kontroly a statistiky, Praha 1965 (Table 5: Narození v roce 1962 podle legitimacy, pořadí, věku matek a vitality [Total births in 1962 by legitimacy, birth order, age of mother and vitality], p. 50)
1963	Pohyb obyvatelstva v ČSSR v roce 1963, Ustřední komise lidové kontroly a statistiky, Praha 1966 (Table 5: Narození v roce 1963 podle legitimacy, pořadí, věku matek a vitality [Total births in 1963 by legitimacy, birth order, age of mother and vitality], p. 50)
1964	Pohyb obyvatelstva v ČSSR v roce 1964, SSU, Praha 1967 (Table 5: Narození v roce 1964 podle legitimacy, pořadí, věku matek a vitality [Total births in 1964 by legitimacy, birth order, age of mother and vitality], p. 50)
1965	Pohyb obyvatelstva v ČSSR v roce 1965, SSU, Praha 1968 (Table 5: Narození v roce 1965 podle legitimacy, pořadí, věku matek a vitality [Total births in 1965 by legitimacy, birth order, age of mother and vitality], p. 50)
1966	Pohyb obyvatelstva v ČSSR v roce 1966, FSO, Praha 1970 (Table 5: Narození v roce 1966 podle legitimacy, pořadí, věku matek a vitality [Total births in 1966 by legitimacy, birth order, age of mother and vitality], p. 56)
1967	Pohyb obyvatelstva v ČSSR v roce 1967, FSO, Praha 1971 (Table 5: Narození v roce 1967 podle legitimacy, pořadí, věku matek a vitality [Total births in 1967 by legitimacy, birth order, age of mother and vitality], p. 56)
1968	Pohyb obyvatelstva v ČSSR v roce 1968, FSO, Praha 1972 (Table 5: Narození v roce 1968 podle legitimacy, pořadí, věku matek a vitality [Total births in 1968 by legitimacy, birth order, age of mother and vitality], p. 56)
1969	Pohyb obyvatelstva v ČSSR v roce 1969, FSO, Praha 1973 (Table 5: Narození v roce 1969 podle legitimacy, pořadí, věku matek a vitality [Total births in 1969 by legitimacy, birth order, age of mother and vitality], p. 56)
1970	Pohyb obyvatelstva v ČSSR v roce 1970, FSO, Praha 1973 (Table 5: Narození v roce 1970 podle legitimacy, pořadí, věku matek a vitality [Total births in 1970 by legitimacy, birth order, age of mother and vitality], p. 56)
1971	Pohyb obyvatelstva v ČSSR v roce 1971, FSO, Praha 1974 (Table 5: Narození v roce 1971 podle legitimacy, pořadí, věku matek a vitality [Total births in 1971 by legitimacy, birth order, age of mother and vitality], p. 64)
1972	Pohyb obyvatelstva v ČSSR v roce 1972, FSO, Praha 1975 (Table 5: Narození v roce 1972 podle legitimacy, pořadí, věku matek a vitality [Total births in 1972 by legitimacy, birth order, age of mother and vitality], p. 64)
1973	Pohyb obyvatelstva v ČSSR v roce 1973, FSO, Praha 1976 (Table 5: Narození v roce 1973 podle legitimacy, pořadí, věku matek a vitality [Total births in 1973 by legitimacy, birth order, age of mother and vitality], p. 64)
1974	Pohyb obyvatelstva v SSR v roce 1974, SSO, Bratislava 1977 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 71)
1975	Pohyb obyvatelstva v SSR v roce 1975, SSO, Bratislava 1978 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 71)
1976	Pohyb obyvatelstva v SSR v roce 1976, SSO, Bratislava 1979 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 83)

1977	Pohyb obyvatelstva v SSR v roku 1977, SSO, Bratislava 1979 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 75)
1978	Pohyb obyvatelstva v SSR v roku 1978, SSO, Bratislava 1980 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 75)
1979	Pohyb obyvatelstva v SSR v roku 1979, SSO, Bratislava 1980 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 75)
1980	Pohyb obyvatelstva v SSR v roku 1980, SSO, Bratislava 1981 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 78)
1981	Pohyb obyvatelstva v SSR v roku 1981, SSO, Bratislava 1982 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 78)
1982	Pohyb obyvatelstva v SSR v roku 1982, SSO, Bratislava 1983 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 78)
1983	Pohyb obyvatelstva v SSR v roku 1983, SSO, Bratislava 1984 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 78)
1984	Pohyb obyvatelstva v SSR v roku 1984, SSO, Bratislava 1985 (Table 5a: Narození podle pořadí, vitality a věku matky [total births by order, vitality and age of mother], p. 78)
1985	Pohyb obyvatelstva v SSR v roku 1985, SSO, Bratislava 1986 (Table 5a: Narození podle pořadí, vitality a věku matky [Total births by order, vitality and age of mother], p. 78)
1986	Pohyb obyvatelstva ČSSR v roce 1986, FSO, Praha 1988 (Table D.10.01: Živě narození podle pořadí, pohlaví a věku matky [Live births by order, sex and age of mother], p. 169)
1987	Pohyb obyvatelstva ČSSR v roce 1987, FSO, Praha 1989 (Table D.10.01: Živě narození podle pořadí, pohlaví a věku matky [Live births by order, sex and age of mother], p. 165)
1988	Pohyb obyvatelstva ČSSR v roce 1988, FSO, Praha 1989 (Table D.10.01: Živě narození podle pořadí, pohlaví a věku matky [Live births by order, sex and age of mother], p. 165)
1989	Pohyb obyvatelstva ČSFR v roce 1989, FSO, Praha 1990 (Table D.10.01: Živě narození podle pořadí, pohlaví a věku matky [Live births by order, sex and age of mother], p. 165)
1990	Pohyb obyvatelstva ČSFR v roce 1990, FSO, Praha 1991 (Table D.10.01: Živě narození podle pořadí, pohlaví a věku matky [Live births by order, sex and age of mother], p. 151)
1991	Pohyb obyvatelstva ČSFR v roce 1991, FSO, Praha 1993 (Table D.10.01: Živě narození podle pořadí, pohlaví a věku matky [Live births by order, sex and age of mother], p. 149)
1992–2010	Files on individual birth records 1992–2010, Statistical Office of the Slovak Republic.
2011–2014	Statistical Office of the Slovak Republic. Data provided by Branislav Šprocha, INFOSTAT