

## ANNUAL NUMBER OF LIVE BIRTHS AND CRUDE BIRTH RATE

### Definition

The annual number of live births is defined as the number of live births taking place in a certain country or area during a year. Unless otherwise specified, the reference period for the number of live births presented in *World Fertility Data 2012* is the calendar year.

The crude birth rate is the annual number of live births per 1,000 population.

According to the *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision* a "live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definitive 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 liveborn" (see [www.who.int/classifications/icd](http://www.who.int/classifications/icd)).

### Data sources

Data on number of births can be obtained from three sources: civil registration systems, sample surveys and censuses. Civil registration systems are considered the best source of information on number of live births. However, some countries, especially those in the less developed regions, either lack a civil registration system or have a registration system whose coverage is too incomplete to be utilized for statistical purposes. Civil registration systems are considered to be complete if they cover 90 per cent or more of all live births taking place within a country or area.

In countries where civil registration systems are lacking, surveys and censuses can be utilized to estimate the crude birth rate. Such information is generally obtained from questions regarding the number of live births that occurred in the household in the 12 months preceding the census or survey enumeration, or questions on the date of birth of the last child born alive in the household. Compared to data from complete civil registration, such direct retrospective questions tend to yield less reliable estimates since they rely on the ability of individuals to recall with accuracy an event that took place several months or years before. Furthermore, while civil registration systems tend to generate annual estimates, the availability of survey and census data depends on the existence of adequate survey or census programmes. Censuses are generally conducted every 10 years. Surveys are undertaken at different intervals in different countries. In developing countries they typically take place every three to five years.

For civil registration systems, the annual number of births and total population (as of July 1) are obtained from country data reported by national statistical offices to the United Nations Statistics Division. The data are also taken from reports and other analytical publications produced by national

statistical systems or compiled by other international and regional statistical units. For countries and areas where the annual number of births is very small, the data present the average number of births occurring over two or more years. If country data on total population for the denominator are not available, estimates of total population from the *World Population Prospects: The 2010 Revision* are used.

For surveys, the data on crude birth rate are directly taken from the report. The main surveys utilized are the Demographic and Health Surveys (DHS), the Reproductive Health Surveys (RHS), the World Fertility Survey (WFS), the Multiple Indicator Cluster Surveys (MICS), the Contraceptive Prevalence Surveys (CPS), and other nationally sponsored surveys. Total population data for calculating the number of births are national estimates published by the United Nations Statistics Division or are estimated by the United Nations Population Division and published in the *World Population Prospects: The 2010 Revision*.

For censuses, preference is given to number of births and total population reported by national statistical offices to the United Nations Statistics Division. Data are also taken from census reports and other analytical publications produced by national statistics offices.

### **Criteria for data source selection**

Generally, only one source is provided per year. When more than one source is available for the same period, preference is given to estimates based on civil registration. However, where such estimates are unavailable or incomplete, survey or census estimates are used. Registration data regarded as less than 90 per cent complete are used for countries where alternative sources are either not available or present problems of comparability, and where registration data can provide an assessment of trends. In countries with multiple survey programmes, sample surveys conducted on an annual or biennial basis are used where they exist. When such surveys are not available, other surveys or censuses are selected.

For each data point, information is provided on the source type (registration, census, survey or sample registration system) and the source (usually denoted by an acronym). A description of each acronym is given in the data file in the worksheet labeled "Sources". For surveys, the full name is provided in the field "Survey name". When the numerator and denominator come from different sources, a note is provided. Notes are also used to indicate adjusted estimates. Start and end years for the reference period covered by the data are reported when they differ from the calendar year.

### **Comments and limitations**

Limitations depend on the data source:

For civil registration, estimates are subject to limitations that depend on the completeness of birth registration. Comparability of data is also affected by the treatment of infants born alive but who died

before registration or within the first 24 hours of life, and the inclusion of births from previous periods. While most countries and areas report information on the number of live births by date of occurrence, others present data tabulated by the date of registration. Depending on the timeliness with which live births are recorded, there can be considerable time lags between the date of occurrence and the date of registration. Population estimates may suffer from limitations connected to age misreporting and coverage.

For survey and census data, the main limitations concern birth omissions, misreporting of the date of birth of the child and, in the case of surveys, sampling variability.

Notes are used to indicate any differences between the data presented and the definition given above.

### **Discrepancies between data presented in *World Fertility Data 2012* and other estimates**

Generally, there is no discrepancy between data presented in *World Fertility Data 2012* and the number of births and crude birth rate reported by national statistical systems. There is no attempt to provide estimates when country data are not available from published reports.

Data on the number of births and crude birth rate reported in *World Fertility Data 2012* differ from estimates produced by the United Nations Population Division and published in the *World Population Prospects*. The latter are best estimates based on all available demographic data and a cohort-component method used for estimation and projection. For further details on estimates of the number of births and crude birth rate from the *World Population Prospects*, see:

United Nations, Department of Economic and Social Affairs, Population Division (2011). *World Population Prospects: The 2010 Revision*. <http://esa.un.org/unpd/wpp/index.htm>

### **Data coverage**

*World Fertility Data 2012* contains 1088 data points on the number of births and crude birth rate for 230 countries or areas of the world. Data are provided, where available, for five different reference dates: the years closest to 1970, 1985 and 1995, 2005 and the most recent data available. Data are available for five reference dates for 189 countries or areas. The data base presents data available as of October 2012.

Suggested citation: United Nations, Department of Economic and Social Affairs, Population Division (2013). *World Fertility Data 2012* (POP/DB/Fert/Rev2012).