

Standard-documentation Meta information

(Definitions, comments, methods, quality)

on

Demographic indicators

This documentation is valid from the reference period:
2002 (period indicators), 1961 (time series)

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Executive Summary

Demographic indicators are international standard descriptive statistics on population stocks and population flows. Demographic indicators have been calculated for centuries; the oldest known demographic indicators are the age-specific survival probabilities in John Graunt's 1662 "Bills of Mortality".

Whereas in the social sciences the term "indicator" is mostly used for measures of theoretical quantities, in demography indicators are codified knowledge on a closed system of stocks and flows. Formal demography serves as the mathematical basis of demographic indicators.

Certain demographic indicators like mortality rates have been published by Austrian Official Statistics for a long time (typically around population censuses). A systematic annual publication started in the 1970's, when regular updates on fertility rates, mortality rates and population totals became necessary for annual population projections by the cohort-component method.

The system of demographic indicators was fundamentally reformed and modernized in 2008-2014. Since then, three books of tables are published annually: current period indicators, time series, and cohort indicators.

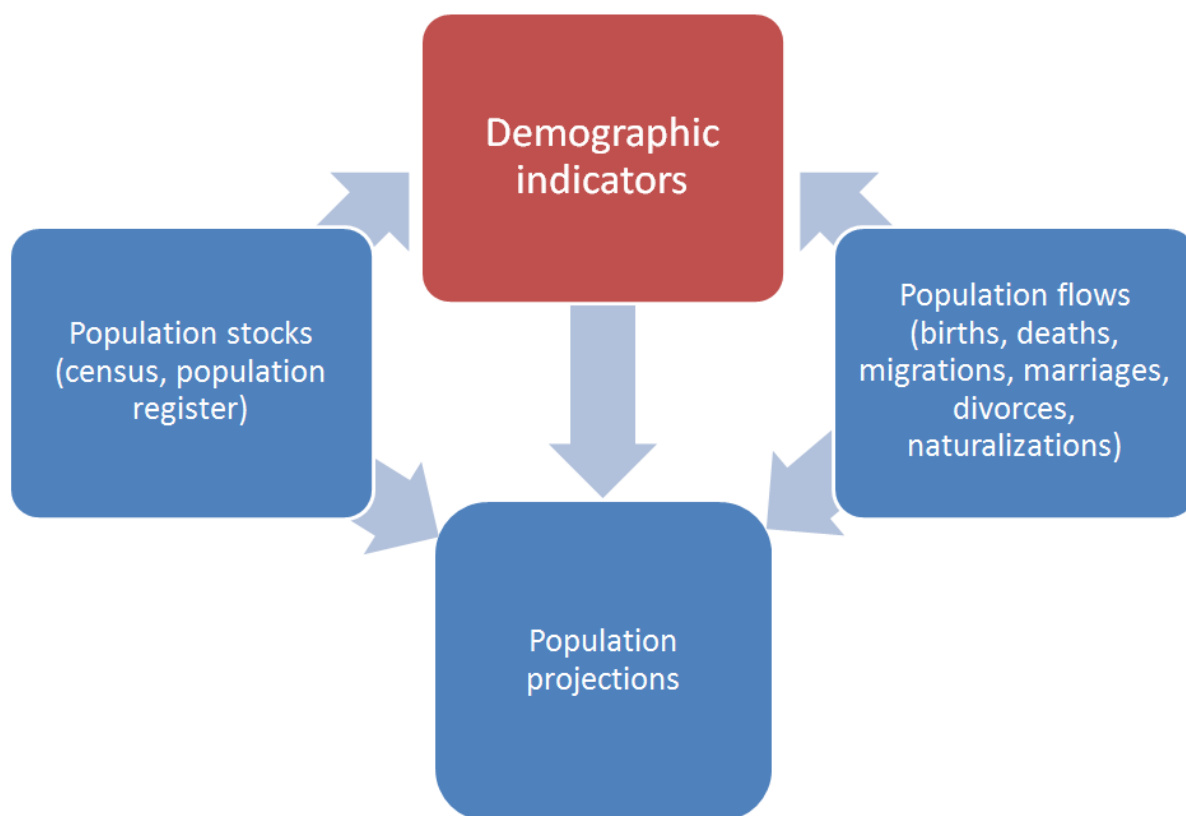
Demographic indicators are applied in population projections, and also in statistical analysis of population flows, where they allow for mathematical separation of effects caused by population structure and effects due to individual behavior. For example, a decline in the number of births may be caused by a decline in the female population of reproductive age, or by a decline in individual fertility levels.

Time-specific rates are the basic indicators in analyzing population flows: age-specific birth rates, age-specific death rates, duration-specific divorce rates, and the like. They are aggregated to intuitively accessible summary measures: total fertility rate, mean age of fertility, life expectancy at birth, total divorce rate.

Most demographic indicators are based on secondary statistics based on administrative data covering the entire target population: population register, migration statistics, vital events, divorces, naturalizations. For some indicators additional information is used based on estimates from sample surveys (micro census, EU-SILC).

Given their solid mathematical foundation, demographic indicators are essentially comparable over time and between countries (many demographic indicators are also published by Eurostat and the United Nations). In practice however comparability may be affected by different data sources or accuracy of population figures. To give an example, since 2009 the Austrian mortality records cover also deaths abroad, so since then life expectancy is slightly lower than it would have been when covering only inland deaths.

The following figure shows how demographic indicators are embedded in the closed system of population statistics.



Demographic indicators – Main Features	
Subject Matter	Description of population stocks and flows by established methods and measures of demography (in particular, demographic rates and their summary measures)
Population	(i) The Austrian annual average or end-year population (period indicators) (ii) Certain Austrian populations with the same initial year, e.g. birth cohorts (cohort indicators)
Type of statistics	Secondary statistic
Data sources/Survey techniques	Population register, migration statistics, vital statistics (births, deaths, marriages), divorces, naturalizations, micro census, EU-SILC
Reference period or due day	Depends on the indicator; the earliest calendar year for which period indicators are published is 1961
Periodicity	Annual
Survey participation (in case of a survey)	Not applicable (no survey)
Main legal acts	Bundesstatistikgesetz
Most detailed regional breakdown	For period indicators, it is either federal provinces (NUTS-2) or political districts. No regional breakdown is available for cohort indicators
Availability of results	Final period indicators are published in July following the reference year, final time series and cohort indicators in December following the reference year
Other	For some indicators, estimates based on sample surveys are used in calculation (e.g. healthy life expectancy)