

ABOUT MORTALITY DATA FOR LUXEMBOURG

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GENERAL

Historical Background¹

The first known written account referring to the territory of modern Luxembourg is given by Julius Caesar in his fifth book "Commentarii de Bello Gallico" (Commentaries on the Gallic War). In the middle of the tenth century AD (about 963) the feudal lord, Siegfried I, Count of Ardennes, acquired the Castellum Lucilini (supposedly an ancient Roman fort) with the lands in its vicinity, and styled himself Graf von Lützelburg. This historical moment is commonly considered the beginning of the history of Luxembourg proper.

In 1444, independence of Luxembourg ended and the whole duchy came under the rule of the House of Burgundy. From the House of Valois, the country passed to Austria in 1477, and was later ruled by the Spanish Habsburgs (1556-1714), then by the German Habsburgs (1714-95), and finally by the French (until 1814). Following the overthrow of Napoleon, Luxembourg was made a Grand Duchy in personal union with Netherlands in 1815. Much of the Luxembourgish population supported the Belgian revolution against Dutch rule, which started with a riot in Brussels in August 1830. The treaty of London of 1839 (a.k.a. First Treaty of London or the Convention of 1839) recognized and guaranteed the independence of Belgium and confirmed the independence of Luxembourg. This year is commonly considered the beginning of Luxembourg's independence. The territorial consequences to the Grand Duchy of Luxembourg were quite severe: almost two third of its territory and half of its population (the predominantly French speaking part) was transferred to the new Province of Luxembourg within the Belgian state. This left Luxembourg a predominantly German state, and in 1842, it was integrated into the German *Zollverein*. Luxembourg's independence was not confirmed until 1867 by the Second Treaty of London, which guaranteed the independence and neutrality of the state, following the diplomatic crisis of 1867 between Germany and France over the status of Luxembourg.

Despite its neutrality, Luxembourg was occupied by Germany during both the First and Second World Wars. After World War II, it abandoned its neutrality by joining the United Nations in 1945 and the North Atlantic Treaty Organization (NATO) in 1949. It also entered into an economic union with Belgium and the Netherlands known as the BeNeLux and became a founding member of the European Economic Community (later the European Union).

¹ This section is based on the following sources and publications: Catholic encyclopedia, Wikipedia, Goyer and Draaijer (1992) and Calmes (1989).

Source of Data

Data on population originate from censuses conducted approximately every ten years (Appendix II). Census counts serve as a basis for producing annual population estimates for intercensal and postcensal periods. Both census tabulations and population estimates are disseminated by the national statistical office [STATEC Luxembourg](#). At present time, not all of the original publications on population estimates have been collected; to fill in the gaps, data from the Eurostat database and the internal Demographic Yearbook Database (DYBNET) maintained by Eurostat and the United Nations Statistics Division (Department of Economic and Social Affairs), respectively, are used. For both databases, the demographic data were originally provided by the national statistical office and thus can be regarded as official numbers. Little information is given about the original publications or the means by which statistics were submitted to these databases. There are often discrepancies between these two data sources. For overlapping time periods, the population estimates that were the most consistent with the official data available (e.g., total counts) were used.

Data on deaths are available from periodical vital statistics publications also published by [STATEC Luxembourg](#). For the years 1960-1995, the data have been computerized by STATEC and for the years 1996-2009, the data were retrieved from the [Eurostat online database](#). Data for the years 2010-2020 were received by email from STATEC. Where Eurostat data are used, they have been checked against the official (but less detailed) counts (e.g., total deaths by age and sex). No major discrepancies have been found.

TERRITORIAL COVERAGE

There are no changes in territorial coverage for the period covered by the Human Mortality Database (HMD).

POPULATION COUNT DATA

Coverage and Completeness

The first census in Luxembourg was conducted in 1821 followed by a second census in 1839. Since then, a census was conducted approximately every five years until 1947, when the period between censuses was extended to about ten years (STATEC, 2007). Generally, population tabulations were available for both *de jure* and *de facto* populations, but starting in 1947 the usual resident population (i.e., the *de jure* population) became the predominant grouping used for statistical purposes. As suggested by the Whipple index, all postwar censuses were of good quality (Goyer and Draaijer, 1992). Appendix II provides a list of all censuses supplemented by information on total population size.

DEATH COUNT DATA

Coverage and Completeness

Civil registration in Luxembourg commenced in 1778. For the period covered by the HMD, registration of deaths has been required by law and the data on deaths are

considered to be complete and of good quality. Vital registration covers the *de jure* population, which includes deaths of residents and excludes deaths of nonresidents. Deaths of residents that occurred abroad are included in vital statistics (European Communities, 2003).

BIRTH COUNT DATA

Coverage and Completeness

For the period covered by the HMD, birth registration has been required by law and the data on births are considered to be complete and of good quality. Birth counts represent the *de jure* population: births to nonresidents that occurred in Luxembourg are excluded from vital statistics, whereas births to legal residents that occurred abroad are included (European Communities, 2003).

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REVISION HISTORY

Changes with the November 2015 revision:

Population: the November 2015 revision includes new intercensal population estimates by sex and single year age groups for the period 2001-2010, which were made available by STATEC incorporating results from the 2011 Census. The new population series introduces a few changes in population numbers compared with the previous series but with only minor impacts on the death rates and life expectancies estimates.

Changes with the December 2017 revision:

Life tables: All life tables have been recalculated using a modified methods protocol. The revised protocol (Version 6) includes two changes: 1) a more precise way to calculate a_0 , the mean age at death for children dying during the first year of life and 2) the use of birth-by-month data (where and when available) to more accurately estimate population exposures. These changes have been implemented simultaneously for ALL HMD series/countries. For more details about these changes, see the revised Methods Protocol (at <http://v6.mortality.org/Public/Docs/MethodsProtocol.pdf>), particularly section 7.1 on Period life tables and section 6 and Appendix E, on death rates. The life tables calculated under the prior methods (Version 5) remain available at v5.mortality.org but will not be further updated in the future.

REFERENCES

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The Catholic Encyclopedia. Retrieved November 22nd 2007 (<http://www.newadvent.org/cathen/09465a.htm>).

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APPENDIX I: DESCRIPTION OF DATA USED FOR LEXIS DATABASE

DEATHS

Period	Type of Data	Age groups	Comments	RefCode(s) [†]
1960–1995	Annual death counts for the <i>de jure</i> population by single year of age to 100+	0,1...100+		1
1996-2005	Annual death counts for the <i>de jure</i> population by single year of age	0,1...maximum age attained		4
2006–2009	Annual death counts for the <i>de jure</i> population by single year of age and by cohort [‡]	0,1...maximum age attained		7, 11, 14
2010-2020	Annual death counts for the <i>de jure</i> population by single year of age and by cohort	0,1...maximum age attained		105, 112, 116, 120

† The reference code is used in the raw data files (Input Database) to link data with sources.

‡ Deaths by age and cohort were reconstructed from Eurostat MAGEC and MAGER tables, “Deaths by sex and age at last birthday” and “Deaths by sex and age reached during the year”, respectively.

POPULATION

Period	Type of Data	Age groups	Comments	RefCode(s) [†]
1960	Census (Dec 31 st), <i>de jure</i>	0, 1 ... 100+		95
1966	Census (Dec 31 st), <i>de jure</i>	0, 1 ... 100+		5
1970	Census (Dec 31 st), <i>de jure</i>	0, 1 ... 85+		98
1972–73	Annual population estimates (Dec 31 st) for <i>de jure</i> population	0, 1 ... 85+		59, 61
1978–79	Annual population estimates (Oct 15 st) for <i>de jure</i> population	0, 1 ... 85+		65, 67
1981	Census (Mar 31 st), <i>de jure</i>	0, 1 ... 85+		100
1983-1985	Annual population estimates (Jan 1 st) for <i>de jure</i> population	0, 1 ... 80+		69, 71, 73
1986-1988, 1990-1991	Annual population estimates (Jan 1 st) for <i>de jure</i> population	0, 1 ... 100+		3
1992-2021	Annual population estimates (Jan 1 st) for <i>de jure</i> population	0, 1 ... 95+		3, 104, 115, 119

† For more information, see the references file for the raw data.

BIRTHS

Type of data: Annual live birth counts for the resident population by sex.

Period covered: 1950–2020.

RefCodes: 3, 6, 8, 10, 106, 109, 113, 117.

BIRTHS BY MONTH

Type of data: Annual live birth counts by month

Period covered: 1901 to 2020

RefCodes: 107, 108, 110, 114, 118

APPENDIX II: POPULATION CENSUSES IN LUXEMBOURG

Date (YYYY/MM/DD)	Total population	Notes
1821/1/1	134,082	
1839/10/1	175,223	
1846/12/3	186,140	
1847/12/31	186,062	
1849/12/3	189,783	
1851/12/31	194,719	
1855/12/3	189,480	
1861/12/3	197,731	
1864/12/3	202,937	
1865/12/31	203,664	
1871/12/1	204,028	
1875/12/1	204,606	
1880/12/1	210,507	
1885/12/1	214,633	
1890/12/1	211,481	<i>De facto</i>
1895/12/2	217,716	
1900/12/1	234,674	
1905/12/1	245,888	
1910/12/1	259,027	
1916/12/1	263,490	
1922/12/1	261,643	
1927/12/1	284,702	
1930/12/31	299,782	
1935/12/31	296,913	
1947/12/31	290,992	<i>De jure</i> (the total is also available for the <i>de facto</i> population); Whipple index = 1 ^{a)}
1960/12/31	314,889	<i>De jure</i>
1966/12/31	334,790	<i>De jure</i> ; Whipple index = 1 ^{a)}
1970/12/31	339,841	
1981/3/31	364,602	<i>De jure</i> ; Whipple index = 1 ^{a)}
1991/3/1	384,634	
2001/2/15	439,539	
2011/2/1	512,353	

a) Whipple index = 1 — highly accurate data.