Appendix 2: Data Sources

US Data Sources

Data are for the census category "white" unless otherwise specified. Following US vital statistics definitions, urban refers to cities with population 10,000 or more.

US national data (1850–80, 1900–70)

Under-five white populations by sex for 1900 to 1970 are presented in the *1970 Census of Population: Characteristics of the Population;*[53] values for 1850 to 1870 are in the *Ninth Census – Volume II. The Vital Statistics of the United States;*[54] the published census values for 1880 are from the *1880 Census, Volume 1, Statistics of Population.*[55] IPUMS full count "samples" are available decennially for 1850-1880, and 1900-1940. Where both are available, we average the census volume and IPUMS full count values (taking each as a plausible tally of the underling census manuscripts). As discussed in the text, we do not include 1890 in our analysis because that census's enumeration of ages was inconsistent with that in the other censuses.

Infant mortality rates for the US as a whole (1936–1970) are from U.S. Department of Health, Education, and Welfare (1996). *Vital Statistics of the United States 1992, Volume II – Mortality.*[56]

The State of Massachusetts (1860–1925)

We use state totals quinquennially 1860-1895, 1905-1915, and 1925. For 1900, 1920, and 1930 we have various regional breakdowns of Massachusetts data (see below), so we do not use the state totals. The state-level data are for the total population (white and nonwhite). Annual infant mortality rates (1856–1925) are from *HSUS (2006)* Series Ab928. Massachusetts state censuses provide under-five populations by sex decennially 1865-1925.[57] The US federal cen-

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[53]Chapter B. General Population Characteristics, United States Summary, Table 53 Age by Race and Sex: 1900 to 1970, pp. 276–77; Washington DC: GPO 1973.

[54]Table XXVI – "Ages, with sex at each period of life, of the white population of the United States, at the censuses of 1870, 1860, and 1850," pp. 610, 619.

[55]Table XX, "Population of the United States, by specified age, sex, race . . . 1880," p. 548.

[56]Section 2. Infant Mortality, Table 2-2 "Infant, neonatal, and postneonatal mortality rates, by race: Birth-registration States, 1915–32, and United States, 1933-92" (pp. 3–4 of Section 2; pdf pp. 507-08). This is also the source for the HSUS series for this period.

[57]*Abstract of the Census of Massachusetts, 1865*, p. 2; *The census of Massachusetts: 1875, Volume I, Population and social statistics*, p. 269 (the published total for age-one females corrected from 15589 to 13589 via pp. 263-68); *The census of Massachusetts: 1885, Volume I, Population and social statistics, Part 1*, p. 434; *Census of the Commonwealth of Massachusetts: 1895, Volume II, Population and social statistics,*

suses have data decennially for 1860-1890 and 1910.[58] We average the values from published federal census volumes with the available IPUMS full count data (1860-1880, 1910)[59]

Other states and areas of the US (1900, 1920, 1930)

Aggregates were formed to achieve a minimum under-5 population over 49,000.

US areas in 1900 include 23 observations. These are comprised of rural Northern New England (ME, NH, VT); rural Southern New England rural (CT, MA, RI); Boston MA, other MA urban, other New England urban; NY rural, Brooklyn NY, Manhattan NY, other New York City, other NY urban; NJ rural, NJ urban; Philadelphia PA, other PA cities (registration cities with population over 4,000); MI rural, MI urban; Cleveland & Cincinnati; Chicago; Milwaukee & Minneapolis & St Paul; St Louis; other Midwestern cities (registration cities with population over 4,000); registration cities of the South; registration cities of the West. Infant mortality rates are single-year values calculated from births and infant deaths reported in US Census Office (1902), Twelfth Census, Census Reports Volume III, Vital Statistics Part 1, Table 19; under-five populations by sex are from the same source.

US areas in 1920 include 37 observations. These are comprised of rural and urban parts of MA, NY, PA, MD, IN, MI, OH, WI, and CA; the urban parts are exclusive of larger cities, which are included separately. The largest cities enter individually: Boston, Brooklyn, New York City, Philadephia, Pittsburgh, Chicago. Smaller cities are in urban aggreagates, as follows: other MA urban, urban CT, other urban New England; urban KS & MN; urban areas of the South; urban WA & OR. We also have: rural northern New England (ME, NH, VT), rural CT & RI, the rural parts of each of KS, MN, and VA; rural WA & OR; and the state of UT.

For 1920, infant mortality rates are calculated from on births and infant deaths for 1915–1919, taken from annual reports of birth statistics for the BRA.[60] The 1920 US census data refer to population as of January 1, 1920 so we take the simple averages (of births and of infant deaths) for the 5 years from 1915 to 1919.

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p. 422; *Census of the Commonwealth of Massachusetts 1905, volume 1, population and social statistics*, p. 480; *The decennial census 1915*, p. 478. These are available online

[58] *Ninth Census, Volume II, The Vital Statistics of the United States*, Table XXIII, pp. 563, 575 (data for 1860 as well as 1870). *Statistics of the population of the United States at the tenth census (June 1, 1880)*, Table XXI, p. 592. *Report on the population of the United States at the eleventh census: 1890, Part II*, Table 3, pp. 104–105. *Twelfth census of the United States, taken in the year 1900, Population Part II* (Census Reports Volume II), Ages, Table 3, pp. 110–111. *Thirteenth census of the United States taken in the year 1910, volume 1, population 1910, General Report and Analysis*, Table 43, p. 380.

[59] Steven Ruggles, Catherine A. Fitch, Ronald Goeken, J. David Hacker, Matt A. Nelson, Evan Roberts, Megan Schouweiler, and Matthew Sobek. IPUMS Ancestry Full Count Data: Version 3.0 [dataset]. Minneapolis, MN: IPUMS, 2021. The 1890 census manuscripts have not survived, so there is no full count data for that year.

[60] US Bureau of the Census, *Birth statistics for the registration area of the United States* : 1915, first annual report (Washington: GPO, 1917); 1916, second annual report (1918); and *Birth statistics for the birth registration area of the United States* 1917, third annual report (1919); 1918, fourth annual report (1920); 1919, fifth annual report (1921). These are available online at HathiTrust)

Under-five populations by sex are from the IPUMS 1920 full count data.[61]

US areas in 1930 include 66 observations. These are comprised of rural and urban parts of New Jersey, New York, Pennsylvania, Illinois, Indianna, Michigan, Ohio, Wisconsin, Iowa, Missouri, Washington, and California; the urban parts are exclusive of larger cities, which are included separately. The largest cities were entered individually: New York City, Chicago, Detroit, Philadelphia, Los Angeles, Cleveland, Boston, Pittsburgh, St Louis. Smaller cities were grouped to varying degrees, as follows: Minneapolis & St Paul; San Francisco & Oakland; Baltimore & Washington DC, and other southern cities (New Orleans, Louisville, Atlanta, Memphis, Nashville). Cities smaller than those above are included in various urban aggregates, as follows: urban Massachusetts excluding Boston; urban New England excluding Massachusetts; West North Central urban (excluding Iowa and Missouri, included above); South Atlantic urban; other urban South (urban areas of states in the East South Central and West South Central census Divisions, exclusive of cities mentioned above). For 1930, we also have the rural parts of the states of Kansas, Minnesota, Nebraska, North Dakota, Virginia, Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Kentucky, Tennessee, and West Virginia.[62] Rural aggregates (for under-five populations over 49,000) include northern New England rural (ME, VT, NH), southern New England rural (CT, MA, RI), and rural Maryland & Delaware. With very small urban populations, we aggregated the smaller states Idaho & Utah, and Montana & Wyoming. Finally, for each of Colorado, New Mexico, and Oregon we use the entire state, because the urban portions fell well below our 49000 population-size threshold.

The 1930 data for California, Colorado, and New Mexico refer to total populations (white and nonwhite). Colorado births and infants deaths are not presented by race in 1930. For the other states, total populations are used because the 1930 census (unlike other censuses) classified persons deemed "Mexican" as non-white[63]

For 1930, infant mortality rates are calculated from births and infant deaths for 1925–1930, taken from annual reports of birth statistics for the BRA.[64] The 1930 US census data refer to the population as of April 15, 1930; for an appropriate average IMR, we take weighted averages (of births and of infant deaths) across the 6 years 1925-1930; 1925 is weighted 260/365 of one-fifth, 1930 is weighted 105/365 of one-fifth, and the other 4 years each weighted one-fifth (thus we treat April 15 as 105 days through the year). Under-five

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[61]Steven Ruggles, Catherine A. Fitch, Ronald Goeken, J. David Hacker, Matt A. Nelson, Evan Roberts, Megan Schouweiler, and Matthew Sobek. IPUMS Ancestry Full Count Data: Version 3.0 [dataset]. Minneapolis, MN: IPUMS, 2021.

[62]The urban parts of these states fell below our 49,000 population threshold, so they are included in urban aggregates (described above).

[63]See e.g. the 1940 Census (1943), *Population Volume 2, Characteristics of the population ..., Part 1: United States Summary ...* , p. 3). The 1940 census includes various corrected counts for the 1930 census, with "Mexicans" classified as "white" as in the census years other than 1930.

[64]US Bureau of the Census, *Birth, stillbirth, and infant mortality statistics for the birth registration area of the United States* 1925, eleventh annual report, part 1 (Washington: GPO, 1927); 1926, twelfth annual report, part 1 (1929); 1927, thirteeth annual report, part 1 (1930); 1928, fourteenth annual report (1930); 1929, fifteenth annual report (1932); 1930, sixteenth annual report (1934). These are available online at HathiTrust)

populations by sex are from the IPUMS 1930 full count data.[65]

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[65]Steven Ruggles, Catherine A. Fitch, Ronald Goeken, J. David Hacker, Matt A. Nelson, Evan Roberts, Megan Schouweiler, and Matthew Sobek. IPUMS Ancestry Full Count Data: Version 3.0 [dataset]. Minneapolis, MN: IPUMS, 2021.

Non-US Data Sources

The *Human Mortality Database* provides original data and access to other sources for infant mortality rates and under-five sex ratios for many historical populations. We expand our geographic scope by also drawing on vital statistics and census data from various official sources for populations not included in the HMD.[66] In many cases, the data are available from *International Historical Statistics* (Palgrave Macmillan (Ed.) 2013), which we abbreviate as *IHS* below. For infant mortality rates, we rely on official vital statistics except when demographic scholarship offers better estimates. In general, we calculate sex-ratio values (girls/boys in the under-five population) from official population counts by sex and age, most often census counts. For registry-based sex ratios, we take values at five-year intervals. Specific sources and methods by country follow.

Australia (1876–1961)

Infant mortality rates for 1876–1901 are from McDonald et al. (1987:58).[67] Rates for 1901–1971 are from Australian Bureau of Statistics, Historical Population.[68]

Under-5 populations by sex are census values for non-aboriginal populations. We have decennial data from 1881–1921 and 1961–1971, and single-year values for 1933, 1947, 1954, and 1966.
The data for 1881 and 1891 are reported in Caldwell (1987:33–34).
The 1901 and 1911 data are from the 1911 Census of Australia.[69]
Data for 1921, 1933, 1947, 1954, 1961, and 1966 are reported in the Census of 1966.[70]
The data for 1971 are calculated from values for the total and aboriginal populations in the 1971 census. Age by sex for the total population is in Part 9 of Bulletin 1, *Summary of Population*.[71] The age-sex data for the Aboriginal population are from Bulletin 9. *The Aboriginal Population*.

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[66]The HMD "is limited by design to populations where death registration and census data are virtually complete," but for our analysis we include populations with credible but incomplete infant mortality and sex-ratio data.

[67]Series MFM 154

[68]Deaths data downloads, Table 5.4 "Infant mortality rates, states and territories, 1901 onwards", released 2019-04-18; downloaded 2021-06-21

[69]*Census of the Commonwealth of Australia taken for the night between the 2nd and 3rd April, 1911*, Vol. II, Part 1 – Ages, pp. 10-11.

[70]Commonwealth Bureau of Census and Statistics (1970), *Census of Population and Housing, 30 June 1966 Commonwealth of Australia*. Volume 1. Population: single characteristics, part 1. Age, pp. 10–11.

[71]*Census of Population and Housing, 30 June 1971, Commonwealth of Australia, Bulletin 1. Summary of Population*, Part 9 Australia, p. 1.

Austria (1865–1961)

Infant mortality rates (1865–1971) are from *IHS* (2013: 3577,3580,3583), Series A7.

Under-5 populations by sex are for the years 1869 and 1934, and decenially 1880–1910 and 1951–1971. The data for 1869 and 1910 are from *IHS* (2013: 3440), Series A2.[72] The data for 1880, 1890, and 1900 are reported in editions of *Österreichisches statistisches Handbuch*.[73] The data for 1934, 1951, and 1961 are reported in Statistik Austria, *Statistisches Jahrbuch 2010*.[74]

For the years 1865–1910, Austria refers to Austria-Hungary (as in *IHS*); for later years Austria refers to the Republic of Austria (whose area in 1910 had less than 1/4 of the population of Austria-Hungary (*IHS* 2013: 3402, 3440)).

Belgium (1842–1960)

Infant mortality rates (1842–1970) are HMD data (downloaded on 2021-10-26).

Under-5 populations by sex are census data, decennially 1846–1866 and 1880–1910, with single-years 1930, 1947, 1961, and 1970. The data were obtained through the HMD (downloaded on 2021-07-01). The data for 1846, 1856, 1866, 1880, 1890, 1900, and 1910 are reported in the volumes for 1893, 1908, and 1923–24 of *Annuaire Statistique de la Beligique*[75] HMD reports that the data for 1930 are in the 1940 volume of *Annuaire Statistique de la Beligique ed du Congo Belge* (pp. 34–35). HMD reports the data for 1947 are published in volume 5 of the 1847 census of Belgium.[76] HMD reports the data for 1961 are published in volume 5 of the 1961 census.[77] HMD reports the data for 1970 are published in volume 5 of the 1970 census.[78]

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[72]Austrian provinces of the Hapsburg Empire. The values here are rounded to the nearest thousand; although we prefer unrounded data, we were unable to locate the data in official sources.

[73]For 1880: *1886* p. 3; for 1890: *1893*, p. 6; for 1900: *1909*, p. 7.

[74]2.08 Bevölkerung 1869 bis 2001 nach fünfjährigen Altersgruppen und Geschlecht (Population 1869 to 2001 by five-year age groups and sex, p. 45

[75]For 1846, 1893:64; for 1856, 1909:64; and 1926:30 for 1866 and decenially 1880–1900. These are available online from HathiTrust (1893 and 1908 and 1923–24)

[76]Institut National de Statistique (1951), *Recensement Général de la Population, de L'Industrie et du Commerce au 31 décembre 1947, tome V, Répartition de la population par âge*, Tableau 1 - Répartition des habitants par âge et sexe . . . " (p. 10). Bruxelles: Imprimerie Fr. Van Muysewinkel.

[77]Institut National de Statistique (1965). *Recensement Général de la Population, 31 décembre 1961, tome V, Répartition de la population par âge.* Bruxelles (publisher and pages not given in HMD source notes).

[78]Institut National de Statistique (1974). *Recensement Général de la Population, 31 décembre 1970, tome V, Répartition de la population par âge.* "Population selon l'état civil et par âge". Bruxelles (publisher and pages not given in HMD source notes).

Denmark (1836–1960)

Infant mortality rates (1836–1970) are HMD data (downloaded on 2021-10-26).

Under-5 populations by sex are quinquennial 1840–1860 and 1910–1970, and decennial 1870–1890. The data were obtained through the HMD (downloaded on 2021-07-01), which identifies the source as Danmarks Statistik.

England and Wales (1847–1961)

Infant mortality rates (1847–1971) are from Mitchell & Deane (1962:36-37) for 1847-1937 and from *IHS* (2013: 3582, 3587) for 1942-19171.

Under-5 populations by sex for England and Wales are decennial for 1851–1891 and quinquennial for 1901–1971. The decennial data (1851–1891) are from the censuses of England and Wales, as reported in Mitchell & Deane (1962:12). The quinquennial data (1901–1971) are from the Historic Mortality Datasets of the National Archives.[79]

Finland (1881–1960)

Infant mortality rates (1881–1970) are HMD data (downloaded on 2021-10-26).

Under-5 populations by sex are quinquennial from 1885 to 1970, obtained through the HMD (downloaded on 2022-02-28) and the HMD identifies Statistics Finland as the source of the data.[80]

France (1897–1954)

Infant mortality rates (1897–1968) are HMD data (downloaded on 2021-10-26).

Under-5 populations by sex are quinquennial 1901–1946, with single-years 1954, 1962, 1968. The data were obtained through the HMD (downloaded on 2021-07-01), which identifies the source as Vallin & Meslé (2001).[81]

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[79]RG 69/2, Historic Mortality: 1901–1995 dataset, Population, 1901–1995 (file POPLNS.csv), downloaded 2021-06-18.

[80]Under-five populations for 1885–1940 and 1945–1970 were received as computer files by the HMD from Statistics Finland: "Population estimates for years 1866–1940," and "Population estimates for years 1941–1995." This according to the "Data Sources" (https://mortality.org/hmd/FIN/DOCS/ref.pdf – login required) on the Finland page of the HMD website (accessed 2022-03-02.)

[81]The "Data sources" (https://mortality.org/hmd/FRATNP/DOCS/ref.pdf – login required) on the HMD data page for France describe the source as follows: "Vallin, J. and F. Meslé. (2001). Tableau I-C-1: Population par sexe et âge (de 0 à 100 ans), au 1 janvier, de 1899 à 1998, avec deux estimations selon le territoire pour les années de changement de territoire [revised post-publication]. In: Tables de mortalité

Germany (1876–1933)

Infant Mortality Rates (1876–1933) are from IHS (2013: 3577, 3580), Series A7.

Under-5 populations by sex are census values, decennially for 1880-1910, with single-years 1925 and 1933. The data are from various years of the *Statistisches Jahrbuch*.[82] IHS (2013:3454, Series A2) also reports these age-sex population data, but rounded to the nearest thousand.[83]

West Germany (1960)

Infant mortality rates (1956–1970) are HMD data (downloaded on 2021-10-26).

Under-5 populations by sex for 1960, 1965 and 1970 were obtained through the HMD (downloaded on 2021-10-26), which identifies the source as Statistisches Bundesamt.[84]

East Germany (1960)

Infant mortality rates (1960–1970) are HMD data (downloaded on 2021-10-26).

Under-5 populations by sex for 1964 and 1970 are census data, obtained through the HMD (downloaded on 2021-10-26), which identifies the source as Statistisches Bundesamt[85]

Italy (1907–1961)

Infant mortality rates (1907–1971) are from Istat (Italian National Institute of Statistics) Time Series.[86]

Under-5 population by sex are decennial 1911–1931 and 1951–1971; also 1936; from Istat, Time Series.[87]

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françaises pour les XIXe et XXe siècles et projections pour le XXIe siècle. Paris: Institnational d'études démographiques.cite Table Tableau I-C-1: Population par sexe et âge (de 0 à 100 ans), au 1 janvier, de 1899 à 1998" (accessed 2022-03-03).

[82]The 1880 data are from the 1883 *Statistisches Jahrbuch*, p. 10; 1890 data are from the *1896* volume, p. 5; 1900 from *1903*, p.6; 1910 from *1919,* pp. 6–7; 1925 from *1929*, p. 14; 1933: *1939*, p. 14.

[83]The IHS value for 1933 differs from ours; we use the value from the 1933 census (June 16); the IHS values for 1933 are consistent with the estimates for Dec. 31, 1933, found in *Statistisches Jahrbuch 1936*, p. 12.

[84]Annual population estimates as of December 31st, by age (0–94, 95+) and sex. Unpublished data.

[85]The "Data Sources" (https://mortality.org/hmd/DEUTE/DOCS/ref.pdf – login required) on the HMD data page for East Germany gives the source as "Statistisches Bundesamt, ed. (1996). Bevoelkerungsstatistische Uebersichten 1946 bis 1989 (Teil II). Wiesbaden: Arbeitsunterlage. (Sonderreihe mit Beitraegen für das Gebiet der ehemaligen DDR, Heft 28). The reference days were: 1964-12-31, 1971-01-01 and 1981-12-31."

[86]Health, Infant mortality rate by age at death and sex; perinatal mortality rate by sex - Years 1863-2013 (Table_4.8.xls).

[87]Population, Population by age class and sex, aging ratio and dependency ratio at Census from 1861 to

New Zealand (1863–1961)

Infant mortality rates are for the non-Maori population from 1863–1945 and for the total population from 1947–1970. Data for 1863–1936 are from Stats NZ Store House.[88] The data for 1936–1945 are from The New Zealand Official Year-book 1957.[89] Data for 1947–1971 are for the total population (including Maori), from Stats NZ Inforshare.[90]

Under-5 census populations by sex are for 1867, 1874, and 1881; quinquennially for 1886–1926 and 1951–1971; and also for 1936 and 1945. Data are for the non-Maori population until 1951. The data for 1867, 1874, and 1881 are found in the 1881 census.[91]

Quinquennial data for 1886–1916 are reported in the 1916 census.[92]

The data for 1936, 1945, and quinquennially 1951–1971, are from the Stats NZ Store House.[93]

Netherlands (1855–1960)

Infant mortality rates (1855–1970) are HMD data (downloaded on 2021-10-26).

Under-5 populations by sex (1859, 1869, and quinquennially 1875–1970) were obtained through the HMD (downloaded on 2021-07-01), which identifies the sources as the NIDI mortality database for 1859–1949 and Statistics Netherlands (Centraal Bureau voor de Statistiek) for 1950–1970.

Norway (1886–1960)

Credible IMR data for Norway start with 1876. Although counts of births and infant deaths start with the year 1836, we are guided by the judgment of Julie E. Backer, writing as "former chief of the Population Statistics Division, Central Bureau of Statistics of Norway". According to Backer (1961, p. 36), until 1876 infants who died early inflated counts of the stillborn, with live-births and infant deaths correspondingly understated.[94] Although

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2011 according to reference year borders (Table_2.2.1.xls).

[88]A2.7 Infant mortality rate and infant mortality number (spreadsheet), Thorns/Sedgwick non-Maori (column 3).

[89]Section 4 – Vital Statistics. European Infant Mortality.

[90]Population, Death Rates - DMM, Infant mortality rate (Annual-Dec).

[91]*Results of a census of the colony of New Zealand, taken for the night of the 3rd of April, 1881*, Chapter 28, Table 1, "Showing the Increase of Persons of Both Sexes, Males, and Females (exclusive of Maoris), at different Ages, in the Intervals between the various Censuses, from December, 1864, to April, 1881."

[92]*Results of a census of the Dominion of New Zealand . . . 1916*, Part II Ages, p. 1.

[93]Spreadsheet (182.xls) titled A1.6 Population by age and sex (Long-term data series; Population;), spreadsheet A1.6 (citing Bloomfied (1984), "Census Reports: Table II.6. Age Groups . . . 1874-1976").

[94]STATISTISK SENTRALBYRÅ (Oslo 1961): Dette førte til at tallet på registrerte levende fødte og døde barn ble for lavt og tallet på dødfødte for høyt. De gjeldende bestemmelser om hva en skulle forstå med et

some early publications from Statistics Norway report IMR data from before 1876, their *Historical Statistics* of 1978, 1994, and 2000 present 5-year average values of IMR starting with 1876. In our view, that corroborates our conclusion that 1876 marks the start of reliable IMR data for Norway.

Infant mortality rates (1886–1970) are from IHS (2013: 3578, 3581, 3585); Statistics Norway online data on births and infant-deaths corroborate the IHS infant mortality data.[95]

Under-five populations by sex are census values, decennially 1890–1930 and 1950–70; and 1946.[96] Data for 1890–1900 are from Statistics Norway (1910).[97] Data for 1910–1930 are reported in the 1930 census.[98] The rest of the age-sex data for Norway are taken from published census volumes from the respective years: 1946 from Statistics Norway (1951), *Folketellingen 1946, Hefte 3*[99]; 1950 from Statistics Norway (1953), *Folketellingen 1950, Hefte 2.*[100]; 1960 from Statistics Norway (1963), *Folketellingen 1960, Hefte 2.*[101]; and 1970 from Statistics Norway (1971)[102](https://www.ssb.no/a/histstat/nos/nos_a448.pdf) (Population by age and marital status 31 December 1970), pp. 24–25.].

Scotland (1857–1961)

Infant mortality rates (1857–1971) are HMD data (downloaded on 2021-10-26).

Under-5 populations by sex are decennial 1861–1901 and quinquennial from 1911 to 1971; the data were obtained through the HMD (downloaded on 2021-07-01); original sources are as follows. The quinquennial data for 1861 to 1881 are published in the 1881 census.[103] Data for 1891–1901 are in the 1901 census.[104] Quinquennial data for 1911 to

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levende og dødfødt barn ble imidlertid stadig innskjerpet overfor jordmødrene, og fra 1876 kan en gå ut fra at de tall som står oppført i den offisielle statistikk stort sett gir et riktig uttrykk for forholdet. See also "Preface" (unpaged) regarding Backer's authorship.

[95]Statistisk sentralbyrå, Historisk statistikk, 3.13 Folkemengde, fødte, døde, ekteskap, flyttinger og folketilvekst.

[96]The census values refer to January 1 of a year so we treat them as the prior year's ending value (so our 1890 U5 counts are from the January 1, 1891 census). The IHS and HMD list Norway's population data with the census years (so our 1890 value is listed in HMD as 1891).

[97]*Norges Folkemængde fordelt paa de enkelte aldersaar, 1846-1901*, Norges Officielle Statistik. V. 113, pp. 32, 34.

[98]Statistics Norway (1934), Folketellingen 1930, Hefte 5. *Folkemengden fordelt efter kjønn, alder og ekteskapelig stilling*, p. 2.

[99]*Folkemengden etter kjønn, alder og ekteskapelig stilling, . . .*, Tabeller p. 2.

[100]*Folkemengden etter kjønn, alder og ekteskapelig stilling . . .* (Population census December 1, 1950, Second volume, Population by sex, age, and marital status . . .), Tabeller p. 2.

[101]*Folkemengden etter kjønn, alder og ekteskapelig status*.

[102]*Folkemengden etter alder og ekteskapelig status 31. desember 1970*

[103]Scotland Census Office (1883), *Ninth decennial census of the population of Scotland . . . 1881 . . . Vol. II*, Appendix tables; with the 1861 and 1871 data in Table XXII, "Population of Scotland in 1861 and 1871, in sexes and ages . . . " (p. xxxii) and the 1871 and 1881 in Table XXI, "Population of Scotland in 1871 and 1881, in sexes and ages . . . " (p. xxxii). The volume is available online from HathiTrust.

[104]Scotland Census Office (1903), *Eleventh decennial census of the population of Scotland . . . 1901 . . . Vol*

1936 are from the General Register Office for Scotland.[105] Quinquennial data for 1941 to 1971 are from General Register Office for Scotland.[106]

South Africa (1913–1921)

Infant mortality rates (1913–1921) are from *IHS* (2013:219) Series A7.

We have under-5 census populations by sex for 1918 and 1921, reported in the 1922 and 1925 volumes of the *Official Yearbook* of South Africa.[107]

Sweden (1753–1960)

Infant mortality rates (1753–1970) are from Statistics Sweden.[108]

We have under-5 populations by sex for 1757, 1763, 1850, and quinquennially for 1785-1805, 1815-1835 and 1860-1970. Data for 1860-1970 are from Statistics Sweden.[109] For years before 1860, we use "official" counts reported by Sundbärg (1908:180).[110] We use years for which those "official" counts are consistent with Sundbärg's "corrected" counts (pp. 208, 216, 224), in terms of childhood sex ratios; the latter figures are used by the HMD.[111]

Switzerland (1875–1960)

Infant mortality rates (1875–1970) are calculated from data on births and infant-deaths from Historical Statistics of Switzerland, Marriage, Birth, and Death.[112] These IMRs are

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II, Appendix Tables, Table 1, "Population of Scotland in 1891 and 1901, distinguishing males and females at each year of life . . . " (p. xxxii). Available online from Google Books.

[105] Mid-year population estimates by sex and five year age group, 1911-1938. The HMD reports these as "Retrieved 15 May 2008" http://www.gro-scotland.gov.uk.

[106] Mid-year population estimates by sex and single year of age until the last age 85+ (1939-1970) or 90+ (1971-2001); unpublished data received by HMD via email on 28 February 28, 2007.

[107] The 1918 data are in Union office of census and statistics (1923), *Official Yearbook of the Union and of Basutoland, Bechuanaland Protectorate and Swaziland, No. 5 –1922* (pp. 158–59); Pretoria: The Government Printing and Stationary Office. The 1921 data are in Union office of census and statistics (1927), *Official Yearbook of the Union and of Basutoland, Bechuanaland Protectorate and Swaziland, No. 8 –1925* (p. 868); Pretoria: The Government Printing and Stationary Office.

[108] Statistical Database, Population, Population statistics, Deaths, Live births, stillbirths and infant mortality rates by sex. Year 1749–2020 (accessed 2022-03-01).

[109] Statistical Database, Population, Population statistics, Number of inhabitants, Population by age and sex. Year 1860–2021 (accessed 2022-02-28). The HMD uses these data.

[110] We relied on a variety of internet translation sites to access Sundbärg's tables and discussion, which are in Swedish.

[111] We deem two counts to be consistent when their child sex ratios differ by less than 0.5% (log basis). When the difference is greater, we deem the observations to be unreliable.

[112] HSSO, 2012. Tab.C.41. hsso.ch/2012/c/41 (Total Deaths (Excluding Stillborn Births) by Age Group

corroborated by *IHS* (2013: 3578,3582) Series A7.

We have under-5 populations by sex for 1880, 1888, decennially 1900–1930, 1941, and decenially 1950-1970. The data are from Historical Statistics of Switzerland, Population[113]

1867–1995) and HSSO, 2012. Tab.C.5a hsso.ch/2012/c/5a (Marriage, Birth, and Death 1867–1995: General Overview).

[113]HSSO, 2012. Tab. B.8a. hsso.ch/2012/b/8a (Total Residential Population by Age in Five Year Increments (Approximate Ages), 1860–1990)

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