**Estimates of Infant Mortality**

**in Eight East Asian and Latin American Societies, 1900-2000**

McGuireA2IMREstim.doc

Web Appendix A2 to:

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# Table 1: Mortality Underregistration in Latin America, 1986-2005

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Country (ranked in order of overall mortality underregistration in 1996) | Overall mortality underreg. (percent) | Overall mortality underreg. (percent) | Overall mortality underreg. (percent) | Overall mortality underreg. (percent) | Overall mortality underreg. (percent) | Infant (0-1) mortality data complete-ness | Child (1-4) mortality data complete-ness | Birth data complete-ness |
|  | 1986 | 1990 | 1993 | 1996 | 2000-05 | 1985-90 | 1985-90 | 1985-90 |
| USA | 1.0 | 1.1 | 2.8 | 2.8 | 0.0 | C | C | C |
|  |  |  |  |  |  |  |  |  |
| Uruguay | 25.3 | 3.9 | 2.6 | 2.1 | 0.0 | C | C | C |
| Argentina | 9.3 | 8.1 | 8.2 | 4.4 | 0.0 | C | IC | C |
| Mexico | 15.5 | 14.3 | 7.5 | 7.2 | 0.8 | VIC | IC | C |
| Cuba | 1.5 | 0.0 | 0.0 | 0.1 | 1.7 | C | C | C |
| Chile | 12.5 | 9.4 | 0.0 | 0.1 | 3.6 | C | IC | C |
| Costa Rica | 5.0 | 5.0 | 0.0 | 0.1 | 7.1 | C | C | C |
| Venezuela | 18.5 | 18.5 | 3.7 | 3.7 | 13.0 | IC | VIC | C |
| Ecuador | 31.6 | 34.7 | 24.8 | 24.3 | 13.4 | VIC | VIC | IC |
| Guatemala | 18.1 | 7.2 | 2.5 | 5.8 | 14.3 | IC | IC | C |
| Brazil | 25.3 | 27.8 | 22.4 | 19.0 | 16.0 | VIC | IC | C |
| Colombia | 36.4 | 21.7 | 14.5 | 16.4 | 17.5 | VIC | VIC | C |
| Panama | 23.1 | 23.1 | 26.4 | 20.0 | 18.0 | VIC | VIC | C |
| El Salvador | 45.0 | 28.9 | 22.5 | 22.5 | 23.1 | VVIC | VVIC | VIC |
| Paraguay | 15.2 | 50.3 | 43.7 | 44.5 | 30.9 | VVIC | VVIC | VVIC |
| Nicaragua | nd | 53.4 | 44.8 | 56.0 | 40.4 | VVIC | VVIC | IC |
| Peru | 53.3 | 52.9 | 46.2 | 47.0 | 42.7 | VVIC | VVIC | nd |
| Dominican Rep. | 40.3 | 0.0 | 43.9 | 48.0 | 49.5 | VVIC | VIC | nd |
| Bolivia | nd | nd | nd | nd | 72.6 | nd | nd | nd |
| Haiti | nd | nd | nd | nd | 91.9 | nd | nd | nd |
| Honduras | 47.8 | 46.6 | 52.7 | 42.0 | nd | VVIC | VIC | C |

nd: no data.

Definitions: Overall mortality underregistration: percentage by which the estimated crude death rate per 1000 (calculated by the UN Population Division mostly from census and survey data) exceeded the official crude death rate per 1000 (according to national vital registration statistics reported to the Pan American Health Organization, PAHO) at a year close to the indicated year. Infant mortality, child mortality, and birth data completeness: codes are C (complete; underregistration 10 percent or less), IC (incomplete; underregistration between 10 and 20 percent), VIC (very incomplete; underregistration between 20 and 50 percent), and VVIC (very, very incomplete; underregistration more than 50 percent). The calculations compare estimates prepared by the Centro Latinoamericano y Caribeño de Demografía (CELADE), the Pan American Health Organization, and the Population Division of the United Nations to the average annual numbers of registered deaths of children under 1 year old and 1-4 years old, and of registered births, as reported to PAHO in 1985-1990.

Sources: Overall mortality underregistration: 1986: PAHO 1990: 37 (Brazil and Paraguay figures are for "information areas" within each country); 1990: PAHO 1994: 433; 1993: PAHO 1998b: 455; 1996: PAHO 1999; 2000-05: PAHO 2005 (figures for Dominican Republic, Guatemala, and Peru from 1995-2000). Completeness of infant mortality, child mortality, and birth registration: PAHO 1998b: 40.

# Table 2: Costa Rica: Infant Mortality Estimates, 1960-2001

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Hill et al. 1999 | CIHI 1996 | CCP-UCR 2009 | UN 1992 | Cens. 1973, indir. | NFS 1976, indir. | CPS 1978, indir. | CPS 1981, direct | CPS 1981, indir. | Cens. 1984, indir. | FHS 1986, indir. |
| **Source** | multp | multp | multp? | vit reg | census | survey | survey | survey | survey | census | survey |
| **Note** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1960 | 87 | 85 | 77.9 | 74 |  |  |  |  |  |  |  |
| 1961 |  |  | 70.9 | 69 |  |  |  |  |  |  |  |
| 1962 |  |  | 75.3 | 74 |  |  |  |  |  |  |  |
| 1963 |  |  | 79.0 | 78 |  |  |  |  |  |  |  |
| 1964 |  |  | 84.1 | 87 | 80 |  |  |  |  |  |  |
| 1965 | 75 | 75 | 75.5 | 76 |  |  |  |  |  |  |  |
| 1966 |  |  | 71.0 | 65 |  |  |  |  |  |  |  |
| 1967 |  |  | 67.2 | 62 | 73 | 67 |  |  |  |  |  |
| 1968 |  |  | 62.1 | 60 |  |  | 55 |  |  |  |  |
| 1969 |  |  | 69.4 | 67 | 68 |  |  |  |  |  |  |
| 1970 | 62 | 60 | 68.4 | 62 |  | 58 |  |  |  |  |  |
| 1971 |  |  | 63.7 | 56 | 68 |  | 46 |  | 54 |  |  |
| 1972 |  |  | 60.8 | 54 |  | 60 |  |  |  |  |  |
| 1973 |  |  | 45.5 | 45 |  |  | 34 |  |  |  |  |
| 1974 |  |  | 40.4 | 38 |  | 47 |  |  | 49 |  |  |
| 1975 | 41 | 41 | 40.1 | 38 |  |  | 27 |  |  | 46 |  |
| 1976 |  |  | 34.7 | 33 |  |  |  | 26 | 34 |  |  |
| 1977 |  |  | 30.7 | 28 |  |  |  | 26 |  | 37 | 45 |
| 1978 |  |  | 23.6 | 22 |  |  |  | 18 | 36 |  |  |
| 1979 |  |  | 23.7 | 22 |  |  |  | 18 |  |  | 30 |
| 1980 | 22 | 25 | 19.9 | 19 |  |  |  |  |  | 28 |  |
| 1981 |  |  | 18.8 | 18 |  |  |  |  |  |  | 26 |
| 1982 |  |  | 19.4 | 19 |  |  |  |  |  | 23 |  |
| 1983 |  |  | 18.8 | 19 |  |  |  |  |  |  | 20 |
| 1984 |  |  | 19.3 | 19 |  |  |  |  |  |  |  |
| 1985 | 18 | 18 | 18.5 | 18 |  |  |  |  |  |  |  |
| 1986 |  |  | 17.7 | 18 |  |  |  |  |  |  |  |
| 1987 |  |  | 17.7 | 17 |  |  |  |  |  |  |  |
| 1988 |  |  | 14.6 | 15 |  |  |  |  |  |  |  |
| 1989 |  |  | 13.8 | 14 |  |  |  |  |  |  |  |
| 1990 | 15 | 15 | 15.0 |  |  |  |  |  |  |  |  |
| 1991 |  |  | 14.0 |  |  |  |  |  |  |  |  |
| 1992 |  |  | 13.4 |  |  |  |  |  |  |  |  |
| 1993 |  |  | 13.7 |  |  |  |  |  |  |  |  |
| 1994 |  |  | 12.9 |  |  |  |  |  |  |  |  |
| 1995 | 12 | 13 | 13.3 |  |  |  |  |  |  |  |  |
| 1996 |  |  | 11.5 |  |  |  |  |  |  |  |  |
| 1997 |  |  | 14.1 |  |  |  |  |  |  |  |  |
| 1998 |  |  | 12.3 |  |  |  |  |  |  |  |  |
| 1999 |  |  | 11.7 |  |  |  |  |  |  |  |  |
| 2000 |  |  | 10.3 |  |  |  |  |  |  |  |  |
| 2001 |  |  | 10.9 |  |  |  |  |  |  |  |  |
| 2002 |  |  | 10.5 |  |  |  |  |  |  |  |  |
| 2003 |  |  | 10.1 |  |  |  |  |  |  |  |  |
| 2004 |  |  | 9.3 |  |  |  |  |  |  |  |  |
| 2005 |  |  | 9.8 |  |  |  |  |  |  |  |  |
| 2006 |  |  | 9.6 |  |  |  |  |  |  |  |  |

**Notes to Table 2**

1. Hill et al. 1999: 66. Estimated on the basis of the 1973 and 1984 censuses, the 1976 World Fertility Survey, the 1978 and 1981 Contraceptive Prevalence Surveys, the 1986 fertility and health surveys, and (since 1970) vital registration statistics. Pre-1970 vital registration statistics are too unreliable to use as a basis for estimation, according to Hill et al. The Hill et al. figure of 87 per 1000 for 1960 is strongly influenced by the 1973 census, which put the infant mortality rate at 91 per 1000 in 1959. This estimate, however, was based on responses to survivorship questions aged 40 and older, as was the estimate of 85 for 1962. Responses from women in these age groups are considered to be less reliable than estimates based on responses from younger women.

2. Centre for International Health Information 1996b. Original Source: United Nations, Department of International Economic and Social Affairs, World Population Prospects1994 (Tape). New York, NY: United Nations, 1994.

3. CCP-UCR 2009. Original data: Instituto Nacional de Estadística y Censos and Centro Centroamericano de Población -- Universidad de Costa Rica (2008). "Estimaciones (1950-2007) y proyecciones (2008-2100) de la población de Costa Rica por sexo y edad. Actualización a 2008." San José, Costa Rica.

4. United Nations 1992: 94. Vital registration figures from various sources.

5. United Nations 1992: 95. Data are indirect estimates (West model) from 14-19 May 1973 census. Estimates based on 15-19 and 40+ year-olds omitted.

6. Hill et al. 1999b. Data are indirect estimates (West model) from July-December 1976 National Fertility Survey. Estimates based on 15-19 and 40+ year-olds omitted.

7. United Nations 1992: 95. Data are indirect estimates (West model) from March-May 1978 Contraceptive Prevalence Survey. Estimates based on 15-19 and 40+ year-olds omitted.

8. United Nations 1992: 96. Data are direct estimates from January-April 1981 Contraceptive Prevalence Survey. Estimates based on 15-19 and 40+ year-olds omitted.

9. United Nations 1992: 95. Data are indirect estimates (West model) from January-April 1981 Contraceptive Prevalence Survey. Estimates based on 15-19 and 40+ year-olds omitted.

10. United Nations 1992: 96. Data are indirect estimates (West model) from 11 June 1984 census. Estimates based on 15-19 and 40+ year-olds omitted.

11. United Nations 1992: 96. Data are indirect estimates (West model) from January-May 1986 Fertility and Health Survey. Estimates based on 15-19 and 40+ year-olds omitted.

# Table 3: Chile: Mortality and Life Expectancy Estimates, 1960-2000

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | IMR Hill et al. 1999 | IMR BCC and INE | IMR Life Tables UN'92 | IMR Cens 1970, UN'92 | IMR Cens 1982, UN'92 | IMR Cens 1992, Hill | Neonatal mortality rate | Post-neonatal mortality rate | Life expect-ancy at birth | Life expect-ancy at age 1 | Maternal mortality rate |
| **Source** | multipl | vit reg | cens? | census | census | census | vit reg | vit reg | cens? | cens? | vit reg |
| **Note** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1960 | 118 | 119.5 |  |  |  |  | 34.5 | 85.0 | 58.1 | 64.9 | 275 |
| 1961 |  | 106.4 | 117 |  |  |  | 33.9 | 72.4 | 58.6 | 64.5 | 294 |
| 1962 |  | 109.2 | 117 |  |  |  | 33.5 | 75.7 | 59.1 | 65.3 | 260 |
| 1963 |  | 100.3 |  |  |  |  | 34.3 | 65.9 | 59.6 | 65.2 | 239 |
| 1964 |  | 103.7 |  |  |  |  | 34.3 | 69.4 | 60.1 | 66.0 | 238 |
| 1965 | 94 | 97.3 |  | 88 |  |  | 34.3 | 63.0 | 60.6 | 66.2 | 260 |
| 1966 |  | 98.5 |  | 83 |  |  | 35.2 | 63.3 | 61.2 | 66.9 | 230 |
| 1967 |  | 94.7 |  |  |  |  | 34.5 | 60.2 | 61.8 | 67.3 | 230 |
| 1968 |  | 87.0 |  | 87 |  |  | 32.5 | 54.5 | 62.4 | 67.3 | 210 |
| 1969 |  | 83.1 |  |  |  |  | 32.1 | 51.0 | 63.0 | 67.7 | 180 |
| 1970 | 78 | 82.2 | 82 |  |  |  | 31.7 | 50.5 | 63.6 | 68.2 | 180 |
| 1971 |  | 73.9 | 82 |  |  |  | 28.9 | 45.0 | 64.3 | 68.4 | 128 |
| 1972 |  | 72.7 |  |  |  |  | 29.4 | 43.3 | 65.0 | 69.1 | 114 |
| 1973 |  | 65.8 |  |  | 57 |  | 27.4 | 38.3 | 65.7 | 69.3 | 123 |
| 1974 |  | 65.2 |  |  |  |  | 26.1 | 39.1 | 66.5 | 70.1 | 119 |
| 1975 | 56 | 57.6 |  |  | 49 |  | 25.4 | 32.2 | 67.2 | 70.3 | 122 |
| 1976 |  | 56.6 |  |  |  |  | 24.1 | 32.5 | 68.0 | 71.0 | 105 |
| 1977 |  | 50.1 |  |  |  |  | 21.4 | 28.8 | 68.7 | 71.3 | 94 |
| 1978 |  | 40.1 |  |  | 46 |  | 18.7 | 21.4 | 69.5 | 71.4 | 74 |
| 1979 |  | 37.9 |  |  | 49 |  | 18.7 | 19.2 | 70.2 | 72.0 | 66 |
| 1980 | 34 | 33.0 |  |  |  |  | 16.7 | 16.3 | 71.0 | 72.4 | 55 |
| 1981 |  | 27.0 | 24 |  |  |  | 13.1 | 13.9 | 71.1 | 72.1 | 44 |
| 1982 |  | 23.6 | 24 |  |  |  | 11.8 | 11.8 | 71.2 | 71.9 | 52 |
| 1983 |  | 21.9 | 24 |  |  | 29 | 10.7 | 11.1 | 71.3 | 71.9 | 41 |
| 1984 |  | 19.6 | 24 |  |  |  | 9.2 | 10.3 | 71.4 | 71.8 | 35 |
| 1985 | 22 | 19.5 | 24 |  |  | 24 | 9.9 | 9.6 | 71.5 | 71.9 | 50 |
| 1986 |  | 19.1 | 24 |  |  |  | 9.7 | 9.4 | 71.6 | 72.0 | 47 |
| 1987 |  | 18.5 |  |  |  |  | 9.6 | 8.9 | 71.7 | 72.0 | 48 |
| 1988 |  | 18.9 |  |  |  | 21 | 9.5 | 9.4 | 71.8 | 72.2 | 41 |
| 1989 |  | 17.1 |  |  |  |  | 9.1 | 8.0 | 71.9 |  |  |
| 1990 | 17 | 16.0 |  |  |  | 23 | 8.5 | 7.5 | 72.0 |  |  |
| 1991 |  | 14.6 |  |  |  |  | 7.9 | 6.7 | 72.1 |  |  |
| 1992 |  | 14.3 |  |  |  |  | 7.7 | 6.6 |  |  |  |
| 1993 |  | 13.1 |  |  |  |  | 6.9 | 6.2 |  |  |  |
| 1994 |  | 12.0 |  |  |  |  | 6.1 | 5.9 |  |  |  |
| 1995 | 11 | 11.1 |  |  |  |  | 6.1 | 5.0 |  |  |  |
| 1996 |  | 11.1 |  |  |  |  | 6.3 | 4.8 |  |  |  |
| 1997 |  | 10.0 |  |  |  |  | 5.7 | 4.3 |  |  |  |
| 1998 |  | 10.3 |  |  |  |  | 6.0 | 4.3 |  |  |  |
| 1999 |  | 10.1 |  |  |  |  | 5.9 | 4.2 |  |  |  |
| 2000 |  | 8.9 |  |  |  |  | 5.6 | 3.3 |  |  |  |
| 2001 |  | 8.3 |  |  |  |  |  |  |  |  |  |
| 2002 |  | 7.8 |  |  |  |  |  |  |  |  |  |
| 2003 |  | 7.8 |  |  |  |  |  |  |  |  |  |
| 2004 |  | 8.4 |  |  |  |  |  |  |  |  |  |
| 2005 |  | 7.9 |  |  |  |  |  |  |  |  |  |

**Notes to Table 3**

1. Hill et al. 1999: 56. Estimated on the basis of vital registration statistics, national life tables, and the censuses of 1970, 1982, and 1992.

2. 1960-1988: Chile. Banco Central de Chile 1989: 428. 1989: Mesa-Lago (2000), 161. 1990-2005: Chile. Ministerio de Salud 2008.

3. Based on national life tables. United Nations 1992: 76. Some of the original sources pertain to 1960-61 and 1969-70; hence the first two figures at least are probably based on census data.

4. United Nations 1992: 77. Data are indirect estimates (Chilean model) from the 22 April 1970 census. Estimates based on 15-19 year-olds omitted; no estimates for women 35 or above.

5. United Nations 1992: 77. Data are indirect estimates Chilean model) from the 21 April 1982 census. Estimates based on 15-19 year-olds omitted; no estimates for women 35 or above.

6. Hill et al. 1999. Data are indirect estimates (North model) from 1992 census. Estimates based on 15-19 and 40+ year-olds omitted.

7. Neonatal mortality rate (deaths in the first 28 days of life per 1000 live births). Based on vital registration statistics. 1960-1979: Chile. Banco Central de Chile 1989: 428. 1980-2000: Chile. INE 2002: 57. The two series overlap from 1970 to 1988 and are identical.

8. Postneonatal mortality rate (deaths between 29 and 365 days of life per 1000 live births). Based on vital registration statistics. 1960-1979: Chile. Banco Central de Chile 1989: 428. 1980-2000: annual figure in Column 2 minus annual figure in Column 7.

9. Life expectancy at birth. Based on vital registration statistics. 1960-1988: Chile. Banco Central de Chile 1989: 405. 1989-1991: Mesa-Lago 2000: 161-162.

10. Life expectancy at age 1. Based on vital registration statistics. Chile. Banco Central de Chile 1989: 405. Data for 1988 are provisional.

11. Maternal mortality ratio (maternal deaths per 100,000 live births). Based on vital registration statistics. Chile. Banco Central de Chile 1989: 421. Data for 1988 are provisional.

# Table 4: Argentina: Infant Mortality Estimates, 1960-1999

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Hill et al. 1999 | US Census | ECLA | Nqn 2001 | MdeS 2007 | Prov. vit. reg. | Life tables | Census 1970 | Census 1980 |
|  | **Source** | various | various | various | vital reg | vital reg | vital reg | census? | census | census |
|  | **Note** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
|  | 1960 | 60 |  |  | 62.4 |  |  | 58 |  |  |
|  | 1961 |  |  |  | 59.1 |  |  | 58 |  |  |
|  | 1962 |  |  |  | 58.8 |  |  |  |  |  |
|  | 1963 |  |  |  | 61.8 |  |  |  |  |  |
|  | 1964 |  |  |  | 58.3 |  |  |  | 54 |  |
|  | 1965 | 56 |  |  | 56.9 |  |  |  |  | 38 |
|  | 1966 |  |  |  | 55.3 |  |  |  | 51 |  |
|  | 1967 |  |  |  | 55.2 |  |  |  |  |  |
|  | 1968 |  |  |  | 59.9 |  |  |  | 59 | 38 |
|  | 1969 |  |  |  | 52.5 |  |  | 60 |  |  |
|  | 1970 | 57 |  |  | 61.2 |  |  | 60 |  |  |
|  | 1971 |  |  |  | 62.2 |  |  | 60 |  | 35 |
|  | 1972 |  |  |  | 57.2 |  |  |  |  |  |
|  | 1973 |  |  |  | 55.4 |  |  |  |  | 35 |
|  | 1974 |  |  |  | 49.3 |  |  |  |  |  |
|  | 1975 | 46 |  |  | 43.2 |  |  |  |  |  |
|  | 1976 |  |  | 40.5 | 44.4 |  | 46.9 |  |  | 36 |
|  | 1977 |  |  | 40.5 | 44.6 |  | 44.8 |  |  |  |
|  | 1978 |  |  | 40.5 | 40.8 |  | 38.8 |  |  | 42 |
|  | 1979 |  |  | 40.5 | 35.4 |  | 35.3 | 36 |  |  |
|  | 1980 | 33 | 32.9 | 40.5 | 33.2 | 33.2 | 33.5 | 36 |  |  |
|  | 1981 |  | 33.4 | 36.0 | 33.6 | 33.6 | 31.4 | 36 |  |  |
|  | 1982 |  | 31.1 | 36.0 | 30.5 | 30.5 |  |  |  |  |
|  | 1983 |  | 30.5 | 36.0 | 29.7 | 29.7 |  |  |  |  |
|  | 1984 |  | 30.4 | 36.0 | 30.4 | 30.4 |  |  |  |  |
|  | 1985 | 25 | 27.0 | 36.0 | 26.2 | 26.2 |  |  |  |  |
|  | 1986 |  | 27.7 | 32.2 | 26.9 | 26.9 |  |  |  |  |
|  | 1987 |  | 26.6 | 32.2 | 26.6 | 26.6 |  |  |  |  |
|  | 1988 |  | 26.2 | 32.2 | 25.8 | 25.8 |  |  |  |  |
|  | 1989 |  | 25.6 | 32.2 | 25.7 | 25.7 |  |  |  |  |
|  | 1990 | 24 | 26.0 | 32.2 | 25.6 | 25.6 |  |  |  |  |
|  | 1991 |  | 24.8 | 28.8 | 24.7 | 24.7 |  |  |  |  |
|  | 1992 |  | 23.8 | 28.8 | 23.9 | 23.9 |  |  |  |  |
|  | 1993 |  | 23.1 | 28.8 | 22.9 | 22.9 |  |  |  |  |
|  | 1994 |  | 22.2 | 28.8 | 22.0 | 22.0 |  |  |  |  |
|  | 1995 | 23 | 22.1 | 28.8 | 22.2 | 22.2 |  |  |  |  |
|  | 1996 |  |  |  | 20.9 | 20.9 |  |  |  |  |
|  | 1997 |  |  |  | 18.8 | 18.8 |  |  |  |  |
|  | 1998 |  |  |  | 19.1 | 19.1 |  |  |  |  |
|  | 1999 |  |  |  | 17.6 | 17.6 |  |  |  |  |
|  | 2000 |  |  |  |  | 16.6 |  |  |  |  |
|  | 2001 |  |  |  |  | 16.3 |  |  |  |  |
|  | 2002 |  |  |  |  | 16.8 |  |  |  |  |
|  | 2003 |  |  |  |  | 16.5 |  |  |  |  |
|  | 2004 |  |  |  |  | 14.4 |  |  |  |  |
|  | 2005 |  |  |  |  | 13.3 |  |  |  |  |
|  | 2006 |  |  |  |  | 12.9 |  |  |  |  |

**Notes to Table 4**

1. Hill et al. 1999: 32. Based on knotted regression line fitted to estimates from vital registries, national life tables, the 1970 census, and the 1991 census.

2. United States. Bureau of the Census 2000. "Combines data from country sources (especially censuses and surveys) with the Census Bureau's International Programs Center's estimates and projections."

3. Lloyd-Sherlock 1997a: 30. Original data: UN Economic Commission on Latin America. Estimates for 1975-1980, 1980-1985, 1985-1990, 1990-1995.

4. Neuquén. SS/MDS 2000a. Based on vital registration statistics. Series identical in all but a few years to vital registration series for shorter periods in Argentina. MSPyMA 1983: 67-93; United Nations 1992: 34; and United Nations 2000.

5. Argentina. Ministerio de Salud (2007).

6. Mychaszula and Acosta 1990: 7. Data from monographs on vital statistics in each province.

7. United Nations 1992: 35. Based on national life tables. Estimates for 1959-1961; 1969-1971; 1979-1981.

8. United Nations 1992: 35. Data are indirect estimates (East model) from the 30 September 1970 census. All estimates from women aged 20-35. Original data from Schkolnik 1975: 23.

9. United Nations 1992: 35. Data are indirect estimates (East model) from the 22 October 1980 census that "appear to be flawed, possibly because of high levels of non-response combined with computerized imputation" (United Nations 1992: 34). Estimates based on 15-19 and 40+ year-olds omitted.

# Table 5: Brazil: Infant Mortality Estimates, 1960-2000

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Hill et al. 1999** | **Becker and Lechtig 1986** | **CELADE 1998** | **United Nations 1992** | **US Census Bureau 2000** | **IBGE 1998** | **Simões et al. 1989** | **United Nations 1992** | **Mini-stério da Saúde 2001** | **Mini-stério da Saúde 2001** |
| **Source** | Census Survey | Census | Census Survey Vital reg. | Survey | Census Survey Other | Census Survey | Survey, Vital reg. | Vital reg. | Survey? | Survey, Vital reg. |
| **Note** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| 1960 | 115 | 121 | 109 |  | 116 |  |  |  |  |  |
| 1961 |  |  | 109 |  |  |  |  |  |  |  |
| 1962 |  |  | 109 | 114 |  |  |  |  |  |  |
| 1963 |  |  | 109 | 109 |  |  |  |  |  |  |
| 1964 |  |  | 109 | 107 |  |  |  |  |  |  |
| 1965 | 107 |  | 100 | 109 |  |  |  |  |  |  |
| 1966 |  |  | 100 | 104 |  |  |  |  |  |  |
| 1967 |  |  | 100 | 104 |  |  |  |  |  |  |
| 1968 |  |  | 100 | 103 |  |  |  |  |  |  |
| 1969 |  |  | 100 | 94 |  |  |  |  |  |  |
| 1970 | 95 | 114 | 91 | 99 | 98 |  |  |  |  |  |
| 1971 |  |  | 91 | 96 | 96 |  |  |  |  |  |
| 1972 |  |  | 91 | 89 | 94 |  |  |  |  |  |
| 1973 |  |  | 91 | 84 | 92 |  |  |  |  |  |
| 1974 |  |  | 91 | 92 | 90 |  |  |  |  |  |
| 1975 | 82 |  | 79 | 81 | 88 |  |  |  |  |  |
| 1976 |  |  | 79 | 89 | 85 |  |  |  |  |  |
| 1977 |  |  | 79 |  | 83 |  |  |  |  |  |
| 1978 |  |  | 79 | 70 | 80 |  |  |  |  |  |
| 1979 |  |  | 70 |  | 78 |  |  |  |  |  |
| 1980 | 67 | 81 | 64 | 64 | 75 | 80 |  |  |  |  |
| 1981 |  |  | 64 |  | 73 | 77 | 75 |  |  |  |
| 1982 |  |  | 64 | 63 | 71 | 74 | 68 |  |  |  |
| 1983 |  |  | 64 |  | 68 | 70 | 65 | 57 |  |  |
| 1984 |  |  | 64 | 59 | 66 | 67 | 67 | 61 |  |  |
| 1985 | 61 |  | 55 |  | 64 | 64 | 66 | 49 |  |  |
| 1986 |  |  | 55 |  | 61 | 61 | 58 | 47 |  |  |
| 1987 |  |  | 55 |  | 59 | 57 | 53 | 45 |  |  |
| 1988 |  |  | 55 |  | 56 | 54 | 51 | 41 |  |  |
| 1989 |  |  | 55 |  | 53 | 51 |  | 40 | 52 |  |
| 1990 | 50 |  | 47 |  | 51 | 47 |  | 39 | 49 | 48 |
| 1991 |  |  | 47 |  | 48 | 44 |  |  | 47 | 45 |
| 1992 |  |  | 47 |  | 47 | 43 |  |  | 45 | 43 |
| 1993 |  |  | 47 |  | 46 | 43 |  |  | 43 | 41 |
| 1994 |  |  | 47 |  | 45 | 42 |  |  | 41 | 38 |
| 1995 | 41 |  |  |  | 44 | 41 |  |  | 39 | 37 |
| 1996 | 39 |  |  |  |  |  |  |  | 38 | 35 |
| 1997 |  |  |  |  |  |  |  |  | 37 | 33 |
| 1998 |  |  |  |  |  |  |  |  | 36 | 32 |
| 1999 |  |  |  |  |  |  |  |  |  | 31 |
| 2000 |  |  |  |  |  |  |  |  |  | 30 |

**Notes to Table 5**

1. Hill et al. 1999: 34. Based on knotted regression line fitted to estimates from PNAD surveys from 1972 to 1986, DHS surveys from 1986 and 1996, and censuses of 1970 and 1980.

2. Becker and Lechtig 1986: 21. Indirect estimates from census data.

3. CELADE 1998: 19. Figures for 1962 and 1967 from PAHO 1998b: 29, which draws on CELADE, Demographic Bulletin 58, 1996. Estimates are for five-year periods (1960-65, 1965-70,...1990-95) and are based on census, survey, and vital registration data.

4. United Nations 1992: 57-60. Based on PNAD surveys of 1972, 1973, 1976, 1977, 1978, 1984, and 1986. When surveys produced differing estimates for the same reference year, the mean of the estimates is recorded. Estimates based on interviews with mothers aged 15 to 19 are excluded from the data set.

5. United States. Bureau of the Census 2000. "Combines data from country sources (especially censuses and surveys) with the Census Bureau's International Programs Center's estimates and projections."

6. Brasil. IBGE 1998: 2.27. Based on census, population enumeration, and PNAD survey data.

7. Simões et al. 1989: 32. Based on vital registration statistics corrected for underreporting of both births and deaths using region-specific correction factors derived from PNAD survey estimates.

8. United Nations 1994: Table 19. Excludes "Indian jungle population" (?!). Based on vital registration statistics from IBGE, which are known to suffer from underreporting of infant deaths.

9. Brasil. Ministério da Saúde 2001. Source reports only that "data were estimated on the basis of indirect demographic methods."

10. Brasil. IBGE (2003). Censo Demográfico 2000 - Fecundidade Mortalidade. Tabela 3 - Taxas de mortalidade infantil, segundo as Grandes Regiões - 1990-2000.

# Table 6a: Taiwan: Infant Mortality Estimates, 1940-1960

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | IMR UNDY, uncorr. vital reg. | IMR DGBAS uncorr. vital reg. | IMR Barclay corr. vital reg. | IMR Mirzaee census, corr. vit. reg. | IMR Mirzaee life tab. West model | IMR Mirzaee life tab. North model | IMR Chow & Hsu "field studies" |
|  | **Note** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|  | 1940 | 136 |  |  | 128 |  |  |  |
|  | 1941 | 123 |  |  |  |  |  |  |
|  | 1942 | 126 |  |  |  |  |  |  |
|  | 1943 | 125 |  |  |  |  |  |  |
|  | 1944 |  |  |  |  |  |  |  |
|  | 1945 |  |  |  |  |  |  |  |
|  | 1946 |  |  |  |  |  |  |  |
|  | 1947 | 77 |  | 179 |  |  |  |  |
|  | 1948 | 57 |  | 115 |  |  |  |  |
|  | 1949 | 48 |  | 123 |  |  |  |  |
|  | 1950 | 35 | 40 | 110 | 60 | 105 | 91 |  |
|  | 1951 | 35 | 40 | 100 |  |  |  |  |
|  | 1952 | 35 | 37 |  |  |  |  |  |
|  | 1953 | 34 | 36 |  |  |  |  |  |
|  | 1954 | 30 | 32 |  |  |  |  |  |
|  | 1955 | 34 | 37 |  | 58 | 71 | 66 |  |
|  | 1956 | 33 | 36 |  |  |  |  |  |
|  | 1957 | 36 | 37 |  |  |  |  |  |
|  | 1958 | 35 | 38 |  |  |  |  | 51 |
|  | 1959 | 33 | 36 |  |  |  |  |  |
|  | 1960 | 31 | 32 |  | 54 | 56 | 53 |  |

**Sources**

1. 1940-50: United Nations 1952: 322-323; figures exclude "tribal aborigines." 1951: United Nations 1953. 1952-1960: United Nations 1962. These figures, by all accounts, suffer from underregistration.

2. Taiwan. DGBAS 1975: 36. These figures, by all accounts, suffer from underregistration.

3. Barclay 1954b: 27. Based on registered births, the registered number of children aged less than one at the end of the calendar year, and the share of infants born in the calendar year who are expected to die in the next calendar year before reaching age 1. Barclay regards these estimates as "lower limits."

4. Mirzaee 1979: 230-33. 1940 figure estimated from census data, 1950, 1955, 1960 figures from vital registration data, corrected for presumed underreporting of neonatal mortality with a method devised by Sullivan (1972).

5, 6. Mirzaee 1979: 35. Derived using specified life table from life expectancy at birth in the specified year. Simple mean of male and female rates. Source of life expectancy estimate not provided.

7. Chow and Hsu 1960: 23. Based on "recent field studies" (recent in 1960) by JCRR and Department of Civil Affairs. Mean of "field studies" in three townships.

# Table 6b: Taiwan: Infant Mortality Estimates, 1960-2006

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | DGBAS | Mirzaee | Sullivan | Wen | US Cens |
|  | **Source** | Vital reg. | Corrected vital reg. | Corrected vital reg. | Survey | Various |
|  | **Note** | **1** | **2** | **3** | **4** | **5** |
|  | 1960 | 32.4 | 54 |  |  |  |
|  | 1961 | 32.7 |  | 55.2 |  |  |
|  | 1962 | 31.3 |  | 51.7 |  |  |
|  | 1963 | 28.4 |  | 48.7 |  |  |
|  | 1964 | 25.5 |  | 45.6 |  |  |
|  | 1965 | 23.7 | 44 | 43.5 |  |  |
|  | 1966 | 22.1 |  | 39.3 |  |  |
|  | 1967 | 21.1 |  | 41.0 |  |  |
|  | 1968 | 21.3 |  | 38.7 |  |  |
|  | 1969 | 19.5 |  |  |  |  |
|  | 1970 | 17.4 | 35 |  |  |  |
|  | 1971 | 16.0 |  |  |  |  |
|  | 1972 | 16.4 |  |  |  |  |
|  | 1973 | 16.2 |  |  |  |  |
|  | 1974 | 14.1 |  |  |  |  |
|  | 1975 | 13.9 | 29 |  |  |  |
|  | 1976 | 12.9 |  |  |  |  |
|  | 1977 | 12.4 |  |  |  |  |
|  | 1978 | 11.3 |  |  |  |  |
|  | 1979 | 11.0 |  |  |  |  |
|  | 1980 | 11.0 |  |  |  |  |
|  | 1981 | 10.1 |  |  |  |  |
|  | 1982 | 9.0 |  |  |  |  |
|  | 1983 | 8.3 |  |  |  |  |
|  | 1984 | 7.6 |  |  |  |  |
|  | 1985 | 7.4 |  |  |  |  |
|  | 1986 | 6.6 |  |  |  |  |
|  | 1987 | 5.6 |  |  |  |  |
|  | 1988 | 6.2 |  |  |  |  |
|  | 1989 | 6.1 |  |  | 10.2 |  |
|  | 1990 | 5.9 |  |  |  | 18.5 |
|  | 1991 | 5.4 |  |  |  | 14.9 |
|  | 1992 | 5.6 |  |  |  | 11.9 |
|  | 1993 | 5.3 |  |  |  | 9.5 |
|  | 1994 | 5.7 |  |  |  | 8.7 |
|  | 1995 | 7.4 |  |  |  | 8.3 |
|  | 1996 | 7.5 |  |  | 8.0 | 7.9 |
|  | 1997 | 7.1 |  |  |  | 7.5 |
|  | 1998 | 7.1 |  |  |  | 7.3 |
|  | 1999 | 7.2 |  |  |  | 7.2 |
|  | 2000 | 7.0 |  |  |  | 7.0 |
|  | 2001 | 6.3 |  |  |  |  |
|  | 2002 | 5.9 |  |  |  |  |
|  | 2003 | 5.3 |  |  |  |  |
|  | 2004 | 5.9 |  |  |  |  |
|  | 2005 | 5.5 |  |  |  |  |
|  | 2006 | 5.5 |  |  |  |  |

**Notes to Table 6b**

1. Data for 1960 to 1970 from Taiwan. DGBAS 1975: 36; data for 1971-1976 from Taiwan. DGBAS 2001: 28; Data for 1977-2006 from Taiwan. DGBAS 2007: 28. Vital registration data in Taiwan are widely regarded as suffering from severe underregistration (Sullivan 1972, Mirzaee 1979: 29-35), estimated in the 1980s to be 70 percent one study (Chen et al. 1998: 291) and 46-96 percent in another (Wen, Tsai, and Tsai 1992: 223). Two other studies reported in Knöbel, Yang, and Ho (1994: 818-19) found that "the real infant mortality is twice the figure reported officially." The Taiwanese government recognized that infant deaths were underreported prior to 1994, and attributes the apparent rise in the infant mortality rate from 1994 to 1995 to "the implementation of a more efficient and accurate birth [sic?] registration system," with the result that "the discrepancy has now been corrected" (Taiwan. GIO 2000).

2. Mirzaee 1979: 233-240. Based on vital registration statistics corrected for presumed underreporting of neonatal deaths and misclassification of infant deaths as deaths of children 1 year of age, according to a method developed by Sullivan (1972) that is described in Web Appendix A1, p. 22.

3. Sullivan 1972: 35. Based on vital registration statistics corrected for underreporting of neonatal deaths and misclassification of infant deaths as deaths of children 1 year of age. Correction method described in Web Appendix A1, p. 22.

4. Wen et al. 2002: 149. 1989 figure based on 15-17 May 1989 survey of 1637 women and 1646 live births throughout Taiwan, equal to about 93 percent of all live births during the survey period (Chen et al. 1998: 291). 1996 figure based on 12-16 February 1996 survey of 3,623 women throughout Taiwan (Wen et al. 2002: 149).

5. United States. Bureau of the Census (2002). "Combines data from country sources (especially censuses and surveys) with IPC's [Census Bureau, International Programs Center] estimates and projections."

# Table 7: South Korea: Infant Mortality Estimates, 1960-2000

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Hill et al. 1999 | UNDP 1998 | OECD 2002 | Koo 1998 | US Census | WB 2001 | UNDY 2000 | Census '70-'85 | KNFS | MoHW |
| **Source** | Census Survey | Un-known | Un-known | Un-known | Various | Various | Various | Census | Survey | Survey |
| **Note** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| 1960 | 90 | 69 |  | 71 |  | 82 |  |  | 58 |  |
| 1961 |  |  |  | 71 |  |  |  |  | 54 |  |
| 1962 |  |  |  | 71 |  | 70 |  |  | 55 |  |
| 1963 |  |  |  | 71 |  |  | 70 |  | 53 |  |
| 1964 |  |  |  | 71 |  |  |  | 68 | 54 |  |
| 1965 | 64 | 62 |  | 59 |  | 63 |  |  | 51 |  |
| 1966 |  |  |  | 59 |  |  |  | 54 | 50 |  |
| 1967 |  |  |  | 59 |  | 58 |  |  | 49 |  |
| 1968 |  |  |  | 59 |  |  | 58 | 44 | 49 |  |
| 1969 |  |  |  | 59 |  |  |  | 40 | 48 |  |
| 1970 | 43 | 53 | 45 | 40 |  | 46 |  |  | 45 |  |
| 1971 |  |  |  | 40 |  |  |  | 34 | 38 |  |
| 1972 |  |  |  | 40 |  | 38 |  |  | 33 |  |
| 1973 |  |  |  | 40 |  |  | 38 | 25 |  |  |
| 1974 |  |  |  | 40 |  |  |  | 25 |  |  |
| 1975 | 24 | 41 |  | 32 |  | 33 |  |  |  |  |
| 1976 |  |  |  | 32 |  |  |  | 21 |  |  |
| 1977 |  |  |  | 32 |  | 30 |  |  |  |  |
| 1978 |  |  |  | 32 |  |  | 30 | 15 |  |  |
| 1979 |  |  |  | 32 |  |  |  | 16 |  |  |
| 1980 | 16 | 17 | 17 | 24 |  | 26 |  | 15 |  |  |
| 1981 |  |  |  | 24 |  |  |  | 11 |  |  |
| 1982 |  |  |  | 24 |  | 23 |  |  |  |  |
| 1983 |  |  |  | 24 |  |  | 23 | 8 |  |  |
| 1984 |  |  |  | 24 |  |  |  | 8 |  |  |
| 1985 | 11 | 13 |  | 15 |  | 18 |  |  |  |  |
| 1986 |  |  |  | 15 |  |  |  |  |  |  |
| 1987 |  |  |  | 15 |  | 14 |  |  |  |  |
| 1988 |  |  |  | 15 |  |  | 14 |  |  |  |
| 1989 |  |  |  | 15 |  |  |  |  |  |  |
| 1990 | 8 | 13 | 12 | 11 | 10 | 12 |  |  |  |  |
| 1991 |  |  |  | 11 | 10 |  |  |  |  |  |
| 1992 |  |  |  | 11 | 10 | 11 |  |  |  |  |
| 1993 |  |  |  | 11 | 9 |  | 11 |  |  | 10 |
| 1994 |  |  |  | 11 | 9 |  |  |  |  |  |
| 1995 | 6 | 10 |  | 9 | 9 | 10 |  |  |  |  |
| 1996 |  |  | 8 | 9 | 8 |  |  |  |  |  |
| 1997 |  |  |  | 9 | 8 | 9 |  |  |  |  |
| 1998 |  |  |  | 9 | 8 |  |  |  |  |  |
| 1999 |  |  |  | 9 | 8 | 8 |  |  |  |  |
| 2000 |  |  |  |  | 8 |  |  |  |  |  |

**Notes to Table 7**

1. Hill et al. 1999: 34. Based on knotted regression line fitted to estimates from 1978-79 life tables; indirect estimates (West model) from censuses of 1970, 1975, 1980, and 1985; 1971 Fertility-Abortion Survey; 1974 Korean National Fertility Survey; and 1988 "Special Survey." The indirect estimates from surveys and censuses on which Hill et al.'s figures are based are derived in part from interviews with women aged 15-19 and 40+. The Hill et al. estimate for 1960 reflects interviews with women aged 40+ from the 1970 census and the 1974 Korean National Fertility Survey, which are excluded from subsequent columns.

2. UNDP-Korea 1998: Chapter 6, Table 6.10.

3. OECD 2002. Original Source: OECD. OECD Health Data. Paris: OECD, 2001.

4. Koo 1998: 244. Primary source reported to be the South Korean Health Ministry.

5. United States. Bureau of the Census (2002). "Combines data from country sources (especially censuses and surveys) with IPC's [Census Bureau, International Programs Center] estimates and projections."

6. World Bank (2001). World Development Indicators on CD-ROM. Washington, DC: World Bank.

7. United Nations (2000). Estimates prepared by the Population Division of the United Nations. Basis unknown.

8. United Nations 1992: 286-287. Estimates from censuses of 1970, 1975, 1980, and 1985. Indirect estimates, West model. Figures based on survey responses of 15-19 and 40+ year-olds excluded (thus all based on interviews with women aged 20-39). Figures for 1969 and 1974 represent the mean of two estimates, one from each of two consecutive censuses.

9. Korean National Fertility Survey. Direct estimates as reported in Kwon 1986: 13.

10. KIHSWA 2002. Based on a survey reported in Korea, Republic of, Ministry of Health and Welfare and Korea Institute for Health and Social Affairs (1996). Infant Mortality Rate and Causes of Death of 1993 Birth Cohort in Korea.

# Table 8a: Thailand: Infant Mortality, 1960-2000: Various Sources

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sour.** | Hill et al. 1999 | UN WPP 1994 | WHO SEA 2001 | WB HNP | WB WTab 1991 | US Cens. | Thai Cens.1970 | Thai Cens.1980 | Kan-chan. 1987 | UN SYAP 1996 | Thai SY 2001 |
| **Type** | Var. | Var. | Var. | Var. | Var. | Var. | Cens. | Cens. | Vit Rg | Vit Rg | Vit Rg |
| **Note** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| 1960 | 103 | 103 |  |  |  |  |  |  | 48.9 |  |  |
| 1961 |  |  |  |  |  |  |  |  | 51.0 |  |  |
| 1962 |  |  |  |  |  |  | 98 |  | 44.7 |  |  |
| 1963 |  |  |  |  |  |  |  |  | 37.9 |  |  |
| 1964 |  |  |  |  |  |  | 87 |  | 37.8 |  |  |
| 1965 | 86 | 90 |  |  |  |  |  |  | 31.2 |  |  |
| 1966 |  |  |  |  |  |  | 78 | 69 | 33.5 | 34 |  |
| 1967 |  |  |  |  |  |  | 67 |  | 27.9 | 28 |  |
| 1968 |  |  | 84 |  |  |  |  |  | 26.5 | 27 |  |
| 1969 |  |  |  |  | 76.4 |  | 71 | 63 | 26.2 | 26 |  |
| 1970 | 74 | 75 |  | 73 | 72.6 |  |  |  | 25.5 | 26 |  |
| 1971 |  |  |  |  | 68.8 |  |  | 57 | 22.5 | 23 |  |
| 1972 |  |  |  | 65 | 65.0 |  |  |  | 27.0 | 27 |  |
| 1973 |  |  | 65 |  | 61.7 |  |  |  | 25.7 | 22 |  |
| 1974 |  |  |  |  | 58.3 |  |  | 52 | 26.1 |  |  |
| 1975 | 62 | 61 |  | 60 | 55.0 |  |  |  | 26.0 |  |  |
| 1976 |  |  |  |  | 54.0 |  |  | 47 | 25.5 | 26 |  |
| 1977 |  |  |  | 56 | 53.0 |  |  |  | 16.2 | 16 |  |
| 1978 |  |  | 56 |  | 50.0 |  |  | 44 | 16.6 | 17 |  |
| 1979 |  |  |  |  | 47.0 |  |  |  | 14.2 | 14 |  |
| 1980 | 45 | 50 |  | 49 | 44.0 |  |  |  | 13.3 | 13 |  |
| 1981 |  |  |  |  | 41.0 |  |  |  | 12.5 | 13 |  |
| 1982 |  |  |  | 44 | 38.0 |  |  |  | 12.4 | 12 |  |
| 1983 |  |  | 44 |  | 36.6 |  |  |  | 12.4 | 12 |  |
| 1984 |  |  |  |  | 35.1 |  |  |  |  | 11 |  |
| 1985 | 36 | 42 |  | 42 | 33.7 |  |  |  |  |  |  |
| 1986 |  |  |  |  | 32.2 |  |  |  |  | 10 |  |
| 1987 |  |  |  | 41 | 30.8 |  |  |  |  | 11 |  |
| 1988 |  |  | 39 |  | 29.8 |  |  |  |  | 9 |  |
| 1989 |  |  |  | 39 | 28.8 |  |  |  |  | 9 |  |
| 1990 | 34 | 38 |  | 37 |  | 43 |  |  |  | 8 |  |
| 1991 |  |  |  | 35 |  | 42 |  |  |  | 8 |  |
| 1992 |  |  |  | 34 |  | 41 |  |  |  | 8 |  |
| 1993 |  |  | 32 |  |  | 38 |  |  |  | 7 |  |
| 1994 |  |  |  |  |  | 37 |  |  |  |  |  |
| 1995 | 32 | 35 |  | 31 |  | 36 |  |  |  | 7 |  |
| 1996 | 31 |  |  |  |  | 35 |  |  |  |  | 6 |
| 1997 |  |  |  | 29 |  |  |  |  |  |  | 4 |
| 1998 |  |  | 30 |  |  |  |  |  |  |  | 5 |
| 1999 |  |  |  | 28 |  |  |  |  |  |  | 7 |
| 2000 |  |  |  |  |  |  |  |  |  |  | 6 |

# Table 8b: Thailand: Infant Mortality, 1960-2000: Survey Data

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Surv. Pop Chg | Surv. Pop Chg '65, '74 | Surv. Pop Chg '74-6 | Surv. Fertil. '75 indir. | Surv. Fertil. '75 direct | Contr Prev. Surv. 1981 | Contr Prev. Surv. 1984 | Surv. Pop Chg '85-6 | DHS1987 | DHS1987 direct | DHS1987 indir. | Surv. Pop Chg '89 indir. |
| **Note** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** |
| 1960 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1961 |  |  |  | 98 |  |  |  |  |  |  |  |  |
| 1962 |  |  | 102 |  |  |  |  |  |  |  |  |  |
| 1963 |  |  |  |  | 91 |  |  |  |  |  |  |  |
| 1964 | 84.3 | 84 | 92 | 108 |  |  |  |  |  |  |  |  |
| 1965 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1966 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1967 |  |  | 80 | 82 |  |  |  |  |  |  |  |  |
| 1968 |  |  |  |  | 83 |  |  |  |  |  |  |  |
| 1969 |  |  | 76 | 83 |  | 95 |  |  |  |  |  |  |
| 1970 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1971 |  |  | 64 | 72 |  |  |  | 73 |  |  |  |  |
| 1972 |  |  |  |  |  | 90 | 86 |  |  |  |  |  |
| 1973 |  |  | 64 | 70 | 65 |  |  |  |  |  | 72 |  |
| 1974 |  |  |  |  |  | 70 |  | 63 | 55 | 55 |  |  |
| 1975 | 51.8 | 56 |  |  |  |  | 66 |  |  |  |  | 61 |
| 1976 |  |  |  |  |  | 68 |  |  |  |  | 65 |  |
| 1977 |  |  |  |  |  | 60 | 63 | 56 |  |  |  | 57 |
| 1978 |  |  |  |  |  |  |  |  |  |  | 52 |  |
| 1979 |  |  |  |  |  | 51 | 49 | 47 | 41 | 41 |  |  |
| 1980 |  |  |  |  |  |  | 50 |  |  |  |  | 43 |
| 1981 |  |  |  |  |  |  | 41 |  |  |  | 47 |  |
| 1982 |  |  |  |  |  |  |  | 40 |  | 35 |  |  |
| 1983 |  |  |  |  |  |  |  | 34 |  |  | 33 | 42 |
| 1984 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1985 |  |  |  |  |  |  |  |  | 35 |  | 41 | 31 |
| 1986 | 40.7 |  |  |  |  |  |  |  |  |  |  |  |
| 1987 |  |  |  |  |  |  |  |  |  |  |  | 29 |
| 1988 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1989 | 38.8 |  |  |  |  |  |  |  |  |  |  |  |
| 1990 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1991 | 34.5 |  |  |  |  |  |  |  |  |  |  |  |
| 1992 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1993 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1994 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1995 | 26.1 |  |  |  |  |  |  |  |  |  |  |  |
| 1996 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1997 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1998 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1999 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |  |

**Notes to Tables 8a and 8b**

1. Hill et al. 1999: 192.

2. Centre for International Health Information 1996a. Original Source: United Nations, Department of International Economic and Social Affairs, World Population Prospects1994 (Tape). New York, NY: United Nations, 1994.

3. WHOSEA 2001. "1968"=1965-1970, "1972"=1970-1975, and so on. Original source: United Nations, Department of International Economic and Social Affairs, World Population Prospects, 1996 Revision. New York, NY: United Nations, 1996.

4. World Bank 2001/02.

5. Kiranandana and Tontisirin 1992: 20. Original source either World Bank, World Tables, 1990-1991 (Washington, DC: World Bank) or Kiranandana, T., et al. (1989), "Mortality and Morbidity Profiles of the Thai Population." Bangkok: Chulalongkorn University [in Thai].

6. United States. Bureau of the Census 2002.

7. United Nations 1992: 318. Indirect estimates based on "West" model. Estimates from 15-19 year olds and from 40+ year olds omitted.

8. United Nations 1992: 320. Indirect estimates based on "West" model. Estimates from 15-19 year olds omitted.

9. Kanchanaraksa 1987: 15 (Table 2.15).

10. United Nations (1976, 1986-87, 1996). 1985 figure given as "10.8/9.5." Figure for 1995 from UNDP-Thailand (1999), Statistical Annex Table 3. The "Introduction to Statistical Annex" pages of UNDP-Thailand (1999) notes that the IMR given in Table 4, Col. 3 for Whole Kingdom and Bangkok is for 1995, even though the IMRs for the individual changwats are for 1997.

11. Thailand. NSO 2001. Population and Labor Statistics, Table 1.40.

12. Thailand. NSO 2002a: Table 4. "1965"=1964-65; "1975"=1974-76. The 1964-65 survey excluded the Bangkok-Thonburi metropolis.

13. Knodel and Chamratrithirong 1978. Original data from Surveys of Population Change. "1965"=1964-65; "1975"=1974-76. The 1964-65 survey excluded the Bangkok-Thonburi metropolis.

14-19. United Nations 1992: 319-321. Indirect estimates based on "West" model. Estimates from 15-19 year olds omitted.

20. Tsuya et al 1993: 317. Original data from Thailand Demographic and Health Survey of 1987. "1974"=1972-76; "1979"=1977-81; "1985"=1982-87.

21. United Nations 1992: 321. Direct estimates. "1974"=1972-76; "1979"=1977-81; "1985"=1982-87.

22-23. United Nations 1992: 321. Indirect estimates based on "West" model. Estimates from 15-19 year olds omitted.

# Table 9: Indonesia: Infant Mortality, 1960-2000

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Hill et al. 1999 | UN WPP 1994 | WB CD 2001 | WB Nehru | Fertility survey 1976 | DHS surveys | UN '92, 1971 census | UN '92, 1980 census | UN '92, 1990 census |
| **Source** | Various | Various | Various | Various | Survey | Survey | Census | Census | Census |
| **Note** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **7** | **8** |
| 1960 | 128 |  | 138 |  | 117 |  |  |  |  |
| 1961 |  |  |  |  | 108 |  |  |  |  |
| 1962 |  | 133 | 133 |  | 150 |  |  |  |  |
| 1963 |  |  |  |  | 119 |  | 126 |  |  |
| 1964 |  |  |  |  | 112 |  |  |  |  |
| 1965 | 121 |  | 128 |  | 115 |  | 126 |  |  |
| 1966 |  |  |  |  | 112 |  |  |  |  |
| 1967 |  | 124 | 124 |  | 103 |  | 128 |  |  |
| 1968 |  |  |  |  | 96 |  |  |  |  |
| 1969 |  |  |  |  | 106 |  | 159 |  |  |
| 1970 | 104 |  | 118 |  | 81 |  |  |  |  |
| 1971 |  |  |  |  | 84 |  |  |  |  |
| 1972 |  | 114 | 114 |  | 92 |  |  | 98 |  |
| 1973 |  |  |  |  | 105 |  |  |  |  |
| 1974 |  |  |  |  | 96 |  |  | 96 |  |
| 1975 | 94 |  | 109 |  |  |  |  |  |  |
| 1976 |  |  |  |  |  |  |  | 95 |  |
| 1977 |  | 105 | 105 |  |  |  |  |  |  |
| 1978 |  |  |  |  |  |  |  | 101 |  |
| 1979 |  |  |  |  |  |  |  |  |  |
| 1980 | 79 |  | 90 |  |  |  |  |  |  |
| 1981 |  |  |  |  |  |  |  |  |  |
| 1982 |  | 90 | 80 |  |  |  |  |  | 74 |
| 1983 |  |  |  |  |  |  |  |  |  |
| 1984 |  |  |  |  |  |  |  |  | 66 |
| 1985 | 70 |  | 75 |  |  | 70 |  |  |  |
| 1986 |  |  |  |  |  |  |  |  | 67 |
| 1987 |  | 75 | 72 |  |  |  |  |  |  |
| 1988 |  |  |  |  |  |  |  |  | 74 |
| 1989 |  |  |  |  |  |  |  |  |  |
| 1990 | 62 |  | 60 | 64 |  |  |  |  |  |
| 1991 |  |  |  |  |  |  |  |  |  |
| 1992 |  |  | 55 |  |  | 57 |  |  |  |
| 1993 |  |  |  | 58 |  |  |  |  |  |
| 1994 |  |  |  |  |  |  |  |  |  |
| 1995 | 50 |  | 46 |  |  | 46 |  |  |  |
| 1996 | 48 |  |  | 56 |  |  |  |  |  |
| 1997 |  |  | 44 |  |  |  |  |  |  |
| 1998 |  |  |  |  |  |  |  |  |  |
| 1999 |  |  | 42 | 46 |  |  |  |  |  |
| 2000 |  |  |  | 44 |  |  |  |  |  |

**Notes to Table 9**

1. Hill et al. (1999). Derived from the under-5 mortality rate using the Coale-Demeny "north" family of models. Based on United Nations 1992: 158. Estimates in this publication draw on indirect estimates from the September 1971 census (40-44 yr-old women, reference date March 1960, north model, IMR was 129, u5MR 219), and on direct estimates from the Indonesia Fertility Survey of April-May 1976, which gave a figure of 121 for IMR and 208 for u5mr for 1961-66.

2. Macro International (1999). Original data from United Nations, World Population Prospects. "1962"=1960-65, "1967"=1965-70, "1987"=1985-90, and so on.

3. World Bank 2001.

4. Nehru (2001). Statistical Annex, Table 1. Original data from Central Bureau of Statistics.

5. Direct estimates. NRC 1987: 33. Figures are for Java and Bali only, but the source asserts that the figures for these islands are about same as those for Indonesia as a whole. The data are taken from pregnancy histories. Original source: B. Supraptilah (1982), Evaluation of the Indonesian Fertility Survey 1976. World Fertility Survey Scientific Report No. 38. London: World Fertility Survey. Rates for 1955-59 are 118, 153, 118, 120, and 112 per 1000 respectively.

6. Direct (?) estimates. "1985" (=1982-87): Macro International 1989: 292; "1992" (=1990-94): Macro International 1996: 122; "1995" (=1992-97): Macro International 1999: 257.

7. Indirect estimates based on "North" model. Estimates derived from 15-19 year olds and from 40+ year olds omitted. United Nations (1992): 158-59.

8. Indirect estimates. Hill et al. 1999b.

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