Population Trends in Developing Countries

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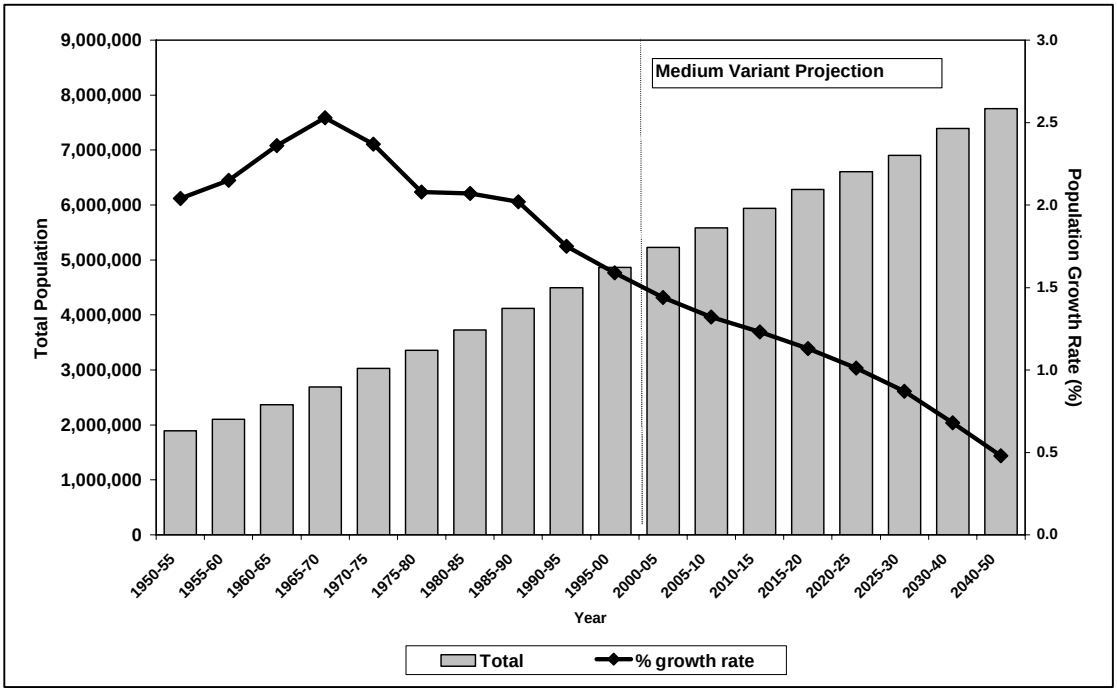
At the beginning of the twenty-first century, the global population had exceeded 6 billion; it took just 12 years for the population to increase from 5 to 6 billion. Developing countries[1] currently account for 80 per cent of the world's population and 61 per cent of the global total is accounted for by Asia alone, driven by the population giants China and India. The global annual rate of population increase peaked at 2.04 per cent per year in the late 1960s, and had declined to 1.33 per cent per year by 1999. Developing region population is currently growing at a rate of 1.59 per cent per year (Figure 1), and growth rates in Africa still exceed 2.3 per cent per year, the highest growth rate of any major area.

Figure 1: Population Trends, Less Developed Regions, 1950-2050



The absolute annual increase in global population peaked at 86 million people per year in the late 1980s, and is currently 78 million people per year. Ninety seven per cent of this population increase takes place in the less developed regions. Behind these "statements of account" of global population lies a multitude of regional and individual country population trends. In the following discussion, the approach will be descriptive, focusing on the three demographic variables of fertility, mortality and migration.

Data sources

A consideration of detailed population trends in developing countries must take into account the data available for analysis. There are three main sources of demographic data: censuses, vital registration (e.g.: birth and death registration) and surveys (e.g.: World Fertility Survey (WFS), Demographic and Health Surveys (DHS)). Cleland states that pre-1945 "studies of the demography of less developed countries hardly existed" (1996:433). Over the last 5 decades, considerable advances have been made in the collection of demographic data in developing countries, although vital registration continues to be very deficient (both in terms of coverage and quality). For some countries, particularly those with recent or ongoing conflicts, estimates of population data continue to be little more than educated guesswork. Publications such as the United Nations World Population Prospects and Demographic Yearbook provide country-level comparable data sets with which to work, although there are still concerns about data validity and reliability for some countries[2].

Age and sex structure

Many developing countries are experiencing very rapid changes in the relative numbers of children, working age population and older persons. Less developed countries have

[1] Africa, Latin America and the Caribbean, Asia (excluding Japan) and Melanesia, Micronesia and Polynesia

tended to be characterised by relatively youthful age structures. For example, children under the age of 15 currently account for one third of less developed region populations, and 42% of least developed[3] populations. Mainly as a result of declining fertility these proportions have declined significantly since the mid-1960s (Table 1). By 2050 it is estimated that children will account for only 20% of less developed populations[4].

Table 1: Percentage of population aged under 15 years, 1950-2000

Year	World	Major Region		Geographical Region		
		Less Developed	Least Developed	Africa	Asia	Latin America & Caribbean
1950	34.3	37.8	41.3	42.5	36.6	40.0
1955	35.6	39.3	41.8	42.8	38.1	41.0
1960	36.9	40.7	42.7	43.5	39.4	42.2
1965	37.7	41.8	43.4	44.2	40.4	42.8
1970	37.4	41.8	44.3	44.7	40.3	42.4
1975	36.9	41.3	44.9	45.0	39.9	41.3
1980	35.2	39.3	44.9	44.8	37.7	39.6
1985	33.5	37.1	45.0	44.6	34.9	37.9
1990	32.4	35.6	44.5	44.3	33.2	36.0
1995	31.2	34.3	43.4	43.6	31.8	33.7
2000	29.7	32.5	42.1	42.5	29.9	31.6

As the proportions accounted for by children decline, there has been an accompanying increase in the proportions of elderly (aged 60 years and above) (Table 2). People aged 60 and over currently account for less than 8 per cent of the population in less developed regions. In reality this means 33 million oldest-old people (aged 80 years and older) are currently estimated to be living in less developed countries (Mirkin and Weinberger, 2000).

[2] This overview of population trends will use the most recent World Population Prospects (1998 revision), a source which is readily available in most reference libraries.
[3] The grouping "Least Developed" uses the framework as defined by the United Nations General Assembly, as of 1998 and includes 48 countries, of which 33 are in Africa, 9 in Asia, 1 in Latin America and the Caribbean, and 5 in Oceania. They are included in the Less Developed regions.
[4] UN Medium Variant projections

Table 2: Percentage of population aged 60 years and older, 1950-2000

Year	World	Major Region		Geographical Region		
		Less Developed	Least Developed	Africa	Asia	Latin America & Caribbean
1950	8.1	6.4	5.4	5.1	6.7	5.9
1955	8.1	6.3	5.2	5.0	6.7	6.1
1960	8.1	6.2	5.1	4.9	6.5	6.2
1965	8.2	6.1	5.0	4.9	6.4	6.3
1970	8.4	6.1	5.1	5.0	6.5	6.4
1975	8.5	6.1	5.0	4.9	6.6	6.5
1980	8.6	6.3	5.0	5.0	6.8	6.6
1985	8.8	6.6	4.9	4.9	7.2	6.8
1990	9.2	6.9	4.9	4.9	7.6	7.1
1995	9.6	7.3	4.8	4.9	8.2	7.4
2000	10.0	7.7	4.9	5.0	8.8	7.9

The proportions of elderly are predicted to continue to increase, and by 2050 it is estimated that 3 per cent of the population in less developed regions will be aged 80 years or older. The speed of the ageing of the populations in these areas is more rapid than has occurred in developed regions, mainly due to the rapidity of the fertility decline. Improvements in post-childhood mortality have also added to the process of population ageing in less developed countries.

There are profound implications for the care and support of elderly, particularly in contexts where resources and civil institutions are already limited. Because women tend to live longer than men, issues of long-term care and support are especially acute for women. Demographic dependency ratios[5] provide a simple measure of the relative sizes of the economically active and inactive populations. With increasing ageing in developing regions, the Elderly Dependency Ratio is projected to increase by almost three times between 2000 and 2050. However, this trend must be placed against a background of declining Child Dependency Ratios. The overall effect is therefore one of declining Net Dependency Ratios over the next five decades in developing regions.

[5] Net Dependency Ratio = number of children aged below 15 years and adults aged 65 years or older per 100 people of working age; Child Dependency Ratio = number of children aged below 15 years per 100

Mortality

Life expectancy at birth is one of the "benchmark" indicators of development[6], and in developing countries it increased from 40.9 years in 1950 to 63.3 years by 2000, a remarkable and rapid achievement. The difference in longevity between the more and the less developed regions also decreased over this period, from 25.7 years to 11.6 years. There are still major regional disparities in life expectancy at birth, from 48.4 years in sub-Saharan Africa to 70.4 years in Latin America and the Caribbean. Sierra Leone, following nearly two decades of conflict, has the dubious honour of being the country with the lowest life expectancy, at 37.2 years.

Livi-Bacci states that "Reduced mortality and establishment of the chronological age-linked succession of death are prerequisites to development" (1992:152). Improvements in mortality generally occur first at younger ages, particularly the first 12 months of life. The Infant Mortality Rate (IMR)[7] in less developed regions is seven times higher than that recorded for more developed regions, at 63/1,000 and 9/1,000, respectively. Improvements in early age mortality have been achieved throughout the developing world (Table 3) during the second half of the Twentieth Century due to a combination of health interventions (including disease control, immunisation, Oral Rehydration Therapy) and broader socio-economic development (including nutrition and parental education). Sub-Saharan Africa still continues to lag behind other major world regions, with an IMR of 93/1,000.

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people of working age; Elderly Dependency Ratio = number of people aged 65 years or older per 100 people of working age

[6] The calculation of life expectancy at birth is heavily biased by levels of infant mortality. In populations with high levels of infant mortality, life expectancy at birth provides a very poor representation of the age at which people are likely to die.

[7] The number of deaths during a year of live-born infants before their first birthday, divided by the number of live births in the year, and usually expressed per 1,000.

Table 3: Trends in Infant Mortality Rates, 1950-2000 (expressed per 1,000 live births).

Year	World	Major region		Geographical region		
		Less developed	Least developed	Africa	Asia	Latin America & Caribbean
1950-1955	155	178	194	179	180	126
1955-1960	139	160	179	166	162	113
1960-1965	117	134	166	153	131	101
1965-1970	102	115	154	143	110	91
1970-1975	93	104	146	131	98	81
1975-1980	87	98	138	120	94	69
1980-1985	78	87	128	110	83	57
1985-1990	69	76	116	99	72	48
1990-1995	62	68	108	94	63	40
1995-2000	57	63	99	87	57	36

The impact of improvements in early age mortality extends far beyond a contribution to an increase in life expectancy; it has profound implications for fertility through a range of mechanisms[8] (Preston, 1978).

Maternal mortality[9] continues to be a major issue for teenage and adult women in developing countries, despite initiatives such as Safe Motherhood (1987) and the ICPD[10] "Programme of Action" (1994). It is estimated that globally, a woman dies of maternal causes every minute, with an estimated 585,000 maternal deaths annually. Ninety nine per cent of these deaths are in developing countries (Ganges and Long, 1998), with concomitant negative implications for the survival of any existing children.

Mention must be made of the HIV/AIDS epidemic, with an estimated 33.6 million infected individuals at the end of 1999. Ninety five per cent of infected people live in developing countries, and it is likely that this proportion will continue to rise. The region most severely affected by HIV/AIDS is sub-Saharan Africa, which accounts for approximately 70 per cent

[8] Including the "insurance" effect (the hypothetical result of parents choosing to have more births than their desired number of children due to a fear that some children will die), interruption of lactation, the "replacement" effect (the replacement of dead children by subsequent births) and societal supports for fertility

[9] A maternal death is defined as a death during pregnancy, childbirth, or 6 weeks *postpartum*. It therefore also includes deaths attributable to induced abortion.

[10] International Conference on Population and Development, Cairo.

of global HIV/AIDS cases. The demographic impacts of the HIV/AIDS epidemic are many and complex. Twentieth century increases in life expectancy are predicted to reverse as a direct result of HIV/AIDS. For example, life expectancy at birth in Botswana rose from 42.5 years in 1950 to 60.4 years in 1990, but is predicted to decline to 47.4 years by 2000. HIV/AIDS will also have an indirect effect on morbidity and mortality through the spread of "opportunistic" diseases such as tuberculosis (UNAIDS, 1997).

Future trends in adult mortality will depend upon changes in health technology and expenditure, lifestyle, disease patterns and economic development (and reversal). For example, the recent rapid rise[11] of tobacco smoking in many developing countries will have an impact upon adult mortality patterns. Garenne's (1996) study of mortality trends in Africa includes changing diets (leading to obesity and diabetes), chemical-resistant disease development, migration (and its role in communicable disease spread), road traffic accidents, HIV/AIDS (and associated opportunistic diseases such as TB), conflict and urbanisation (though its effect on disease ecology) as important future influences on developing country mortality levels.

Fertility

Pre-1960, there was little evidence of any fertility decline in developing countries, and the Total Fertility Rate (TFR)[12] was estimated at 6.16 children per woman for all developing regions (1950-55). Countries such as Argentina and Uruguay, which had TFRs of less than 3.5 children per woman by 1950, were the exception rather than the rule. The TFR for all developing regions was estimated at 3.00 at the end of the Twentieth century, representing a decline of more than fifty per cent since the 1950s (Table 4). It must be

[11] Cigarette consumption per adult increased by 60% between 1970-72 and 1990-92 in all developing countries (UNDP, 1999)

remembered, however, that much of the decline in fertility in the developing world can be accounted for by the dramatic decline in fertility in China alone.

Table 4: Trends in Total Fertility Rates, 1950-2000

Year	World	Major region		Geographical region		
		Less developed	Least developed	Africa	Asia	Latin America & Caribbean
1950-1955	4.99	6.16	6.54	6.58	5.91	5.89
1955-1960	4.92	5.99	6.54	6.68	5.63	5.94
1960-1965	4.95	6.01	6.59	6.78	5.62	5.97
1965-1970	4.91	6.01	6.67	6.75	5.69	5.55
1970-1975	4.48	5.43	6.71	6.60	5.09	5.03
1975-1980	3.92	4.65	6.60	6.52	4.22	4.49
1980-1985	3.58	4.15	6.50	6.37	3.70	3.86
1985-1990	3.34	3.79	6.03	5.97	3.39	3.35
1990-1995	2.93	3.27	5.37	5.47	2.85	2.97
1995-2000	2.71	3.00	5.05	5.06	2.60	2.70

Extreme heterogeneity in fertility levels and trends, between and within regions and countries, cannot be ignored. Sub-Saharan Africa is the world region with the highest overall levels of fertility, with little evidence of sustained fertility declines beyond Kenya, Botswana and Zimbabwe. In some countries, substantial fertility decline has not yet been recorded. For example, TFRs in Yemen remained virtually unchanged at 7.6 children per woman from the 1950s to the mid 1990s[13]. In contrast, rapid and marked fertility declines have occurred elsewhere, particularly in Asia. For example, between 1970 and 1995 the TFR in Bangladesh fell from 7.02 to 3.40 children per woman.

Explanations for the decline in fertility in developing countries cannot rely on single variable explanations. In terms of the proximate determinants of fertility (Bongaarts and Potter, 1984), increased contraceptive prevalence is generally agreed to be the main cause of the fertility decline. The proportion of couples using modern contraception has

[12] Total Fertility Rates (TFR) are the most commonly used indicator of fertility. TFRs will therefore be used throughout this discussion, and represent the number of children a woman would have during her lifetime if she were to experience the fertility rates of the period at each age.

[13] A recent decline in fertility has been recorded in the 1997 Yemen Demographic and Health Survey, with a TFR of 6.5.

increased dramatically, from approximately 1 in every 10 couples in the 1960s to 1 in 2 couples by 1999 (Black, 1999). Other contributory proximate determinants include rising age at marriage for women and increased rates of induced abortion. Broader socio-economic changes such as rising levels of female education and employment and increased urbanisation have contributed to the fertility decline in developing countries.

Migration

Migration[14] is very important in determining population (size and composition) at the local level. The speed and scale with which population movements can take place means that net migration can far outweigh fertility and mortality changes in sub-national areas. Much of the rapid urbanisation of many developing country populations may be accounted for by rural-urban migration. Migration flow data (both international and national) are notoriously difficult to obtain (International Migration Review, 1987). Globally, it is estimated that developing countries contribute just over half (54.7 per cent) of the international migrant population (Zlotnik, 1998). Internal population movements (both voluntary and involuntary) have profound implications for populations. For example, refugees and internally displaced persons tend to have little or no access to healthcare provision, and the result can be increased morbidity and mortality (Gardner and Blackburn, 1996). Conflict-related population migration continues to be a major contributor to national population levels in many developing countries[15].

[14] Migration refers here to population movements involving a permanent or semi-permanent change of usual residence. Mobility refers to "All phenomena involving the displacement of individuals" (Pressat, 1985:148)
[15] See www.unhcr.ch for up-to-date information.

Guide to further reading

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