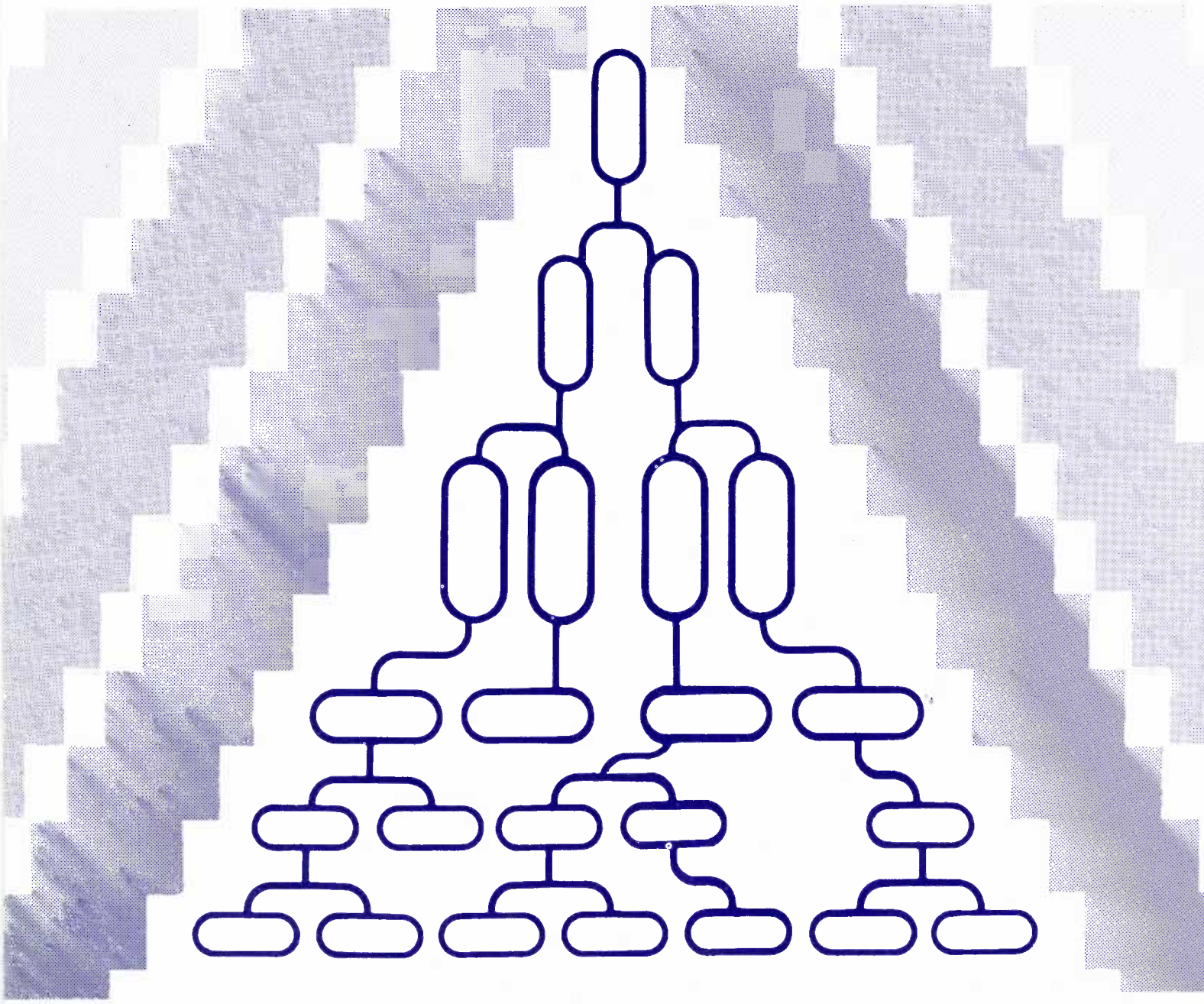
CASE STUDIES IN POPULATION POLICY:

Brazil



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Department of International Economic and Social Affairs

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CASE STUDIES IN POPULATION POLICY:

Brazil

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NOTE

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PREFACE

This publication is one in a series of country case studies being prepared by the Population Division of the Department of International Economic and Social Affairs of the United Nations Secretariat that focus on selected issues in the formulation, implementation and evaluation of population policies in various developing and developed countries.

The objective of the series is to present broadly comparative, issue-oriented case studies that illustrate the myriad approaches countries have pursued in implementing, formulating and evaluating their population policies. The specific issues addressed include the manner by which policies, programmes and targets aim to influence demographic variables directly or indirectly, how they have been formulated, and the extent to which they have been implemented in relation to one another and to other social, economic and political goals. Emphasis is placed on the problems encountered and the strategies undertaken to resolve the problems. It is hoped that this series will be useful to persons responsible for population programmes and policies and, in general, for the sharing of experiences among countries in the formulation, implementation and evaluation of population policies.

The population policy overview for Brazil presented on pages 1-6 of this publication is taken from World Population Policies, volume I (United Nations publication, Sales No. E.87.XIII.4). The main body of the report was drafted by Maria Helena F. T. Henriques, as a consultant to the United Nations. The views and opinions expressed are those of the consultant and do not necessarily reflect those of the United Nations. The estimates and projections presented in the population policy overview may differ from those presented in the main body of the publication, owing to demographic assessments, subsequent adjustments and differences of time reference. Special acknowledgement is due to the United Nations Population Fund for its support of project INT/84/P08, which made possible the preparation of this publication.

To date, reports issued in the Case Studies in Population Policy series are:

MALAYSIA	(ST/ESA/SER.R/80)
KUWAIT	(ST/ESA/SER.R/82)
NIGERIA	(ST/ESA/SER.R/83)

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Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

Reference to "dollars" ($) indicates United States dollars, unless otherwise stated.

The term "billion" signifies a thousand million.

Annual rates of growth or change refer to annual compound rates, unless otherwise stated.

A hyphen between years (e.g., 1984-1985) indicates the full period involved, including the beginning and end years; a slash (e.g., 1984/1985) indicates a financial year, school year or crop year.

A point (.) is used to indicate decimals.

The following symbols have been used in the tables:

Three dots (...) indicate that data are not available or are not separately reported.

A dash (--) indicates that the amount is nil or negligible.

A hyphen (-) indicates that the item is not applicable.

A minus sign (-) before a number indicates a deficit or decrease, except as indicated.

Details and percentages in tables do not necessarily add to totals because of rounding.

10.5 Brazilian cruzados = $U.S. 1 as of 1985.

POPULATION POLICY OVERVIEW

DEMOGRAPHIC INDICATORS	CURRENT PERCEPTION
SIZE/AGE STRUCTURE/GROWTH Population: 1985 2025 (thousands) 135 564 245 809 0-14 years (%) 36.4 24.6 60+ years (%) 6.6 13.8 Rate of: 1980-85 2020-25 growth 2.2 1.0 natural increase 22.2 10.0	The rate of growth is considered satisfactory.
MORTALITY/MORBIDITY 1980-85 2020-25 Life expectancy 63.4 72.1 Crude death rate 8.4 7.6 Infant mortality 70.6 29.8	Levels and trends of mortality are viewed as unacceptable.
FERTILITY/NUPTIALITY/FAMILY 1980-85 2020-25 Fertility rate 3.8 2.3 Crude birth rate 30.6 17.6 Contraceptive prevalence rate 65.3 (1986) Female mean age at first marriage 22.6 (1980)	Levels and trends of fertility are satisfactory, both in relation to population growth and family well-being.
INTERNATIONAL MIGRATION 1980-85 2020-25 Net migration rate 0.0 0.0 Foreign-born population (%) 1.0 (1980)	Levels and trends of immigration and emigration are considered not significant and satisfactory.
SPATIAL DISTRIBUTION/URBANIZATION Urban 1985 2025 population (%) 72.7 89.0 Growth rate: 1980-85 2020-25 urban 3.7 1.2 rural -1.3 -0.7	Patterns of spatial distribution are perceived as partially appropriate. Major concerns are the concentration of population in large metropolises, e.g., São Paulo and Rio de Janeiro, and the absence of growth centres to stimulate development in peripheral regions.

GENERAL POLICY FRAMEWORK

Overall approach to population problems: The Government has not adopted an explicit policy to modify fertility or population growth. Initially, this related to the Government's positive perception of the benefits of population growth and a large population size. Now, it is largely related to Brazil's gradual transition to more moderate levels of fertility and population growth. The Government desires to restrict immigration, although not for demographic reasons, and to modify population distribution, largely as a means of achieving national integration.

Importance of population policy in achieving development objectives: While the topic of population has not been overlooked by the Government, which has included detailed population projections in its sectoral plans, population policy has been regarded as a sensitive issue. Although there was a new round of policy discussions in 1981, the Government remains cautious in regard to population issues. In 1984, a decree establishing a National Population Commission had been drafted, but no action had been taken as of late 1985. The appointment of a Commission for the Study of Human Reproductive Rights in 1985 may herald the beginnings of a major commitment to a national population programme.

INSTITUTIONAL FRAMEWORK

Population data systems and development planning: The main sources of demographic data are the nine censuses, the most recent of which was conducted in 1980. A nationwide system of vital registration was not established until 1974. Since comprehensive vital registration data are still lacking in many areas, researchers have relied on indirect techniques to derive estimates of fertility and mortality. The Brazilian Institute of Geography and Statistics (Fundação Instituto Brasileiro de Geografiá e Estatistíca) is the major organization responsible for collecting and analysing demographic data. Over the years, however, other government entities and agencies, including the State Government of São Paulo, the North-East Development Agency, and the Amazon Development Agency, have studied demographic matters. The most recent available development plan is the Third National Development Plan (III Plano Nacional de Desenvolvimento), 1980-1985. In late 1985 the National Development Plan for the period 1986-1990 had not yet been formally approved.

Integration of population within development planning: Although the National Planning Agency has integrated population factors in development planning in Brazil through the use of economic-demographic models, there is no formal institutional arrangement to ensure such integration.

POLICIES AND MEASURES

Changes in population size and age structure: The Government has no policy to influence natural increase or population growth, although socio-economic policies such as employment creation, export growth, revitalization of agriculture and development of new energy resources are expected to affect growth. Of primary concern are the regional differentials in rates of population growth. The Government has set no numerical goals, as it believes that the appropriate growth rate to be that which corresponds to the sum total of the free and well-informed decision of those couples and individuals who aim at planning their reproductive life. The results of the 1980 census - indicating a gradual slowdown of population growth are likely to reinforce this position. Nevertheless, Brazil recently implemented programmes to provide information and the means to exercise individual decisions with respect to family size, which are being incorporated into public health services at federal, state, and municipal levels. Concerning social security legislation, a national pension scheme covers employed persons in industry and commerce, domestic servants, and the urban self-employed, while special systems exist for students, public employees, rural workers and employers.

Mortality and morbidity: The Government has expressed concern over mortality differentials among different income groups and geographic areas, as well as over infant mortality, infectious and parasitic diseases and malnutrition. The Government seeks to redress inequalities in the health care system. Attempts are being made to improve resource use and allocation, and service coverage. Recently, the Government's policy has been to decentralize health services while expanding the national programme and integrating federal, state and municipal programmes. The Northeast has been chosen as a priority area both for implementing the national programme and for the establishment of local centres. National strategies already implemented include the establishment of mini-health posts and health centres to bring basic health and sanitation activities to communities in the Northeast of less than 20,000 inhabitants. In 1979 the extension of these centres to the rest of the country was legally established as a national objective. Programmes are also underway to promote maximum utilization of existing public sector facilities and to extend coverage to rural and semi-urban areas. Basic nutrition is also of considerable concern. The Government considers that improved nutritional status depends largely on reducing the cost of basic foods and on a better income distribution. Family planning and child-spacing are encouraged through programmes of maternal and child health.

Fertility and the family: In a dramatic shift from its previous position of neutrality regarding family planning, and its earlier pro-natalism, the first Government-promoted family planning programme was announced in 1984. While not viewed as a panacea for social and economic problems, it is seen as an indepensable tool of development policy. The family planning programme, which is a component of a maternal and child health programme, will be implemented initially in the Northeast and then gradually extended to other areas. Currently all forms of birth control are legal, including sterilization. It is no longer illegal to advertise contraceptives. Abortion is illegal except to save the mother's life.

International migration: In 1980 the Government enacted a strict new immigration law, chiefly in response to concern over the presence of political exiles from neighbouring countries. In 1978, the Government changed its position on refugees and withdrew from the Geneva-based Intergovernmental Committee for Migration (ICM), citing Brazil's lack of need for immigrants and ICM's shift in focus from resettling European migrants to placing South East Asian refugees. The country has never experienced large-scale emigration.

Spatial distribution/Urbanization: Since the mid 1970s Brazil has stated the objective of deconcentrating the population of its large metropolitan areas and stimulating economic growth in peripheral regions. The National Urban Development Council mapped out a national urban development policy for the 1980-85 period. Guidelines included: reducing uncontrolled growth in some metropolitan areas; guiding investment to medium-sized cities in order to raise their relative growth rates and initiate a process of urban deconcentration; stimulating economic activity and job creation in small and medium-sized cities; alleviating urban poverty; and increasing accessibility to urban services. In late 1986, citing both national security and development objectives, the Government decided to set up small army bases along its borders as a way of drawing settlers to those remote regions.

Status of women and population: The minimum legal age at marriage for women is 16 years.

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SELECTED SOURCES

The information contained in the overview is based on the continuous monitoring of population policies undertaken by the Population Division of the Department of International Economic and Social Affairs of the United Nations Secretariat, as part of its work programme.

Except where otherwise noted, the demographic estimates and projections are based on the tenth round of global demographic assessments undertaken by the Population Division. The various demographic indicators are derived from data that were available to the United Nations generally by the end of 1985; therefore, the figures supersede those that were previously published by the United Nations.

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Contraceptive prevalence rate

United Nations. Recent Levels and Trends of Contraceptive Use as Assessed in 1987. Forthcoming.

Female mean age at first marriage

United Nations. World Population Trends and Policies: 1987 Monitoring Report (Sales No. E.88.XIII.3).

Foreign-born population

United Nations. Demographic Yearbook, 1983 (Sales No. 84.XIII.1).

INTRODUCTION

In Latin America, Brazil stands out because of its size and population and because its language and culture are distinct from the predominantly Spanish origins of the continent.

Its 8.5 million square kilometres make it the fifth largest country in the world in area, following the Union of Soviet Socialist Republics, the United States of America, China and Canada. With a population of approximately 135 million in 1985, Brazil ranks sixth among the more populated countries of the world. It has, however, the fastest population growth rate of the six most populated countries.

In the past 40 years, Brazil has experienced a deep yet incomplete transformation. Despite a profound demographic transition towards lower mortality and fertility, and substantial economic growth, enormous social and economic inequalities persist, especially between geographic regions.

After 20 years of military government and having endured a serious recession during the first four years of the 1980s, Brazil's annual per capita income was $US 1,720 in 1984. The country has a highly diversified economy, many natural resources, substantial areas of uncultivated land and a sizeable consumer market. At the same time, Brazil shares many characteristics of the underdeveloped world: an extremely uneven income distribution, low literacy rates, surprisingly low rates of secondary education and a high dependency on foreign credit and technology.

A. The current demographic situation in a historical context: a brief summary

Brazil, as opposed to most other Latin American countries, was originally a settlement colony. Lacking the precious metals for which other Latin American countries were exploited, Brazil's model of colonization required products for export to be grown rather than mined. This in turn required a demographic policy to supply the manpower needed for the new export crops. The solution adopted was to combine free men, mainly Europeans, with slave populations - both indigenous Indians and later Africans. To protect political stability, the Europeans always outnumbered the slaves.

During the colonial period, various export industries - sugarcane, gold, cotton, coffee and rubber - grew and then went through cycles of prosperity and depression. In periods of depressed demand for

exports, large numbers of people were forced out of wage labour and into subsistence agriculture. Natural growth, even though encouraged, was low because of high mortality levels. In periods of high demand for exports, labour migration then became key to fulfilling manpower needs. Up to 1850, the migration of slaves played this role. For example, the massive transfer of slaves from the north-east to the centre and south enabled the growth of coffee plantations in the states of Rio de Janeiro, São Paulo and Minas Gerais. From 1880 onwards, the high mortality level prevailing among the slaves coupled with different forms of partial freedom granted to them, caused a slave-labour shortage that led the coffee plantation owners to press the Government to offer incentives for European immigration. In response, Europeans and small numbers of Asians immigrated, with some impact on the total rate of growth up to the 1930s (see table 1).

The demographic basis of this new period was quite different from the one existing during the colonial, imperial and early republican years. In previous periods, the succession of economic cycles had, over the years, created a large rural population dependent on subsistence agriculture. The industrial take-off of the 1930s, however, led to rapid city growth organized around a limited urban market, vast natural resources, and an unprecedented internal migration from a poverty-stricken countryside.

Beginning in the 1940s, concrete steps were taken to accelerate the modernization of the Brazilian economy, though with many pauses and adjustments. In basic industries, complete import substitution was achieved, while public investments in infrastructure and production and continuous efforts towards industrial growth led to a greatly increased share of industrial goods among the exports and a sharply reduced dependence on agricultural exports.

Beginning in 1967 and continuing through 1973, an unusually favourable set of international trade conditions combined with the availability of external credit to allow 11 per cent growth in gross national product for six consecutive years. The Government controlled wages, improved its methods of tax collection, and created new agricultural exports such as soy beans. These developments enabled the country to maintain 9 per cent annual growth in gross national product throughout the period 1974-1979 despite the negative impacts of the increase in oil prices, the world crisis in the commodities market and the acceleration of inflation. The 1980s, however, have seen the end of the inexpensive foreign credit that enabled the Government to subsidize agriculture and industry during difficult years, and have seen Brazil enter a period of serious recession.

This economic transformation has been accompanied by profound demographic changes. Mortality started to decline during the 1940s in response to better sanitation levels and the import of drugs to control infectious and communicable diseases and by the 1950s had declined 35 per cent (see table 2) thereby initiating a period of unprecedented natural growth. This has been accompanied by very rapid urban growth: in 1940, 68 per cent of the population was rural, but by 1980 almost the same percentage was living in urban areas. The high levels of natural growth that existed in rural areas could not counteract the heavy outmigration to the cities. Already in the 1950s, the annual rate of growth of the rural population was as low as 1.57 per cent, dropping to 0.57 per cent in the 1960s and becoming negative thereafter. The rural depopulation between 1940 and 1980 had two principal causes. First, subsistence agriculture produced insufficient surplus to cover the growing urban demand for food; in response, agriculture became more capital intensive and efficient, requiring a smaller agricultural labour force, leading to heavy rural-urban migration. Second, rural fertility began declining sometime after commencement of the urban decline that began in the centre-south region around 1965.

The fast and heavy exodus from rural areas has simultaneously provoked a depopulation of rural areas and the transfer of unskilled labour into urban areas. As a result of fertility decline, the base of the age pyramid shrunk and for the first time in the demographic history of Brazil, the population at working ages is growing faster than the population as a whole. Providing employment for the urban masses while improving their skills is therefore a major challenge facing the present Government.

Another major challenge is solving the problem of widespread poverty. During the golden years of economic growth, the prevailing philosophy was "to let the cake expand and then to distribute it". In the view of many Brazilians, "the cake" has yet to be properly distributed. In 1985, some 44 per cent of the labour force were receiving less than the minimum wage, at a time when the real value of the minimum wage was about $68 per month (Lima, 1986).

Mortality and fertility levels are still high by international standards, with pronounced geographic, rural-urban and socio-economic differentials. These differentials are so extreme that Brazilianists often speak of a double population system. On one side, the modern urban elite of the centre-south enjoy living and demographic standards comparable to existing ones in developed countries. On the other side, the poor, the rural population and almost the whole north-east region live in poverty. The question facing policy makers is how to bring these two populations together.

B. Population policy issues

Until recently, Brazil's policy makers typically considered population matters as a given fact not requiring intervention, and felt that sooner or later population growth levels would adjust themselves to development requirements. Nowadays, there is a growing awareness that the interactions between development and the many facets of population growth pose problems that are neither simple nor easily solved.

The high fertility levels that prevailed for so long carried an implicit high potential for growth which was unleashed when mortality declined. Because high growth coexisted with persistent social and economic inequality, the number of people targetted by the Government poverty alleviation measures is at present over 40 million. There are massive numbers of chronically malnourished children, drop-outs from school, infant deaths and under-employed men and women, to mention a few of the groups needing attention.

The children of the years of highest population growth are now in the labour force, which is now growing at a rate close to 3 per cent a year. During the past 30 years, the labour force has shifted from rural to urban, and the industrial and service sectors have come to account, respectively, for 24.4 and 45.7 per cent of all employment. The relative importance of employment in the agricultural sector has declined greatly over the period. On the other hand, the number of persons employed in industry and construction has multiplied by five during the past 30 years. In the same period, employment directly or indirectly linked to government activities also grew fivefold, and female labour force participation has more than doubled, from 14.6 per cent in 1950 to more than 30 per cent in 1985 (Faria, 1986).

These changes in occupational structure reflect massive modernization. But the picture is incomplete if one leaves aside the dimension of wages and unemployment. In 1985, a year of high economic growth, 44 per cent of the labour force was receiving less than the minimum wage ($US 68) per month. In 1986, the new Government defined three times the minimum wage as being the threshold below which families would become eligible for poverty alleviation programmes. Those earning less than the minimum wage have been found to be preponderantly unemployed or underemployed: of the 44 per cent receiving less than the minimum wage, it has been estimated that about 3 per cent were employed full time and 41 per cent were either unemployed or underemployed. Lima (1986) estimated that even with high anticipated growth rates in gross national product of 7 per cent for the period 1987-1989 and 4 per cent for the 1990s, it is to be expected that unemployment combined with underemployment (defined as existing among individuals earning less than the minimum wage) would exist among 36.9 per cent of the labour force in 1990 and then decline to 31.1 per cent by the year 2000.

Another population-related issue is that of providing pensions to workers who leave the working ages and move into retirement. The social security fund has generated consistent deficits and is marked by profound inequalities in the provision of benefits (Oliveira and others, 1985).

The changes to age structure caused by the recent fertility decline carries several implications for government planners. The fertility decline is reducing the number of school entrants thereby modifying the profile of educational needs. It implies alterations in the demand for health services. It also implies increased social security costs, but, on the other hand, it produces an improved balance between working and non-working ages by reducing the dependency ratio. The fertility decline offers an opportunity to the Government to reduce chronic malnutrition, to improve health services, and to widen educational opportunities. Whether or not this opportunity will be taken will depend very much on the priorities of the Government in allocating scarce resources among competing groups, sectors and regions.

While the fertility decline surpassed all expectations, mortality decline occurred rather slowly. National life expectancy improved by 28 per cent during the period 1940-1970, but the pace of improvement varied considerably among geographical regions and socio-economic groups. Using 1970 census data Carvalho (1978) has estimated a difference of 12 years in the life expectancy between north-easterners earning the minimum wage and those earning four or more times the minimum wage; the difference was greater than 20 years when a poor north-easterner was compared to a São Paulo inhabitant earning four or more times the minimum wage. For the same date, McGreevey and others (1986) estimated that by eliminating as causes of death, tuberculosis, other infectious and parasitic diseases, flu, pneumonia and bronchitis, diarrhea and post partum mortality, the life expectancy at birth would increase by 7 years in the north-east and by 4.5 years in the south-east region.

An analysis of death certificates indicates that malnutrition is the most frequent contributing cause of infant deaths. According to the 1975 National Family Expenditure Survey, there were at least 50 per cent more undernourished children aged 0 to 5 in the north-east than in Brazil as a whole. Between the ages of 1 and 2, typically the weaning period, the gap amounted to 100 per cent. The survey also showed that malnutrition was more frequent in urban than in rural areas. The north-east cities had much higher malnutrition than other Brazilian cities, with 48.7 per cent of their population consuming at least 400 calories less than the recommended daily minimum.

Thus, the persistence of high mortality in many segments of the population constitutes a formidable population problem for policy makers. Reductions in mortality, however, will quite possibly result in a minor though transitional increase in the rate of growth.

The implications of population change for spatial distribution are more difficult to specify. Since the adopted development model is one of concentrating economic activities to achieve economies of scale, it is natural to expect economics to dominate migration decisions.

C. Philosophy towards economic and social intervention

Government policy in Brazil has concentrated largely on economic growth. Prior to the 1930s the lack of government action in the social field was such that Santos (1981) stated "... of all government elementary obligations, there is not a single dimension of the Brazilian State that may be singled out as having fulfilled the weakest criterion of equity". The early years following 1930 were largely oriented towards the modernization of the economy and the maximization of production though there was limited government intervention in the form of social programmes benefiting urban workers. The right to social security, including health benefits was institutionalized for urban workers. Indeed, social security agencies financed out of social security contributions became the single most important source for health care. During this period, the Government shifted the emphasis from preventive medicine in the form of improving sanitation levels towards a curative approach, [1/] leaving large numbers of people without coverage.

The new Government elected in January of 1985 has shifted considerably away from the traditional laissez-faire approach towards social policies. It committed itself to two major goals: to re-initiate development by means of a policy that would lead to growth and not recession and to initiate social programmes to reduce poverty.

A lengthy social diagnosis has been incorporated in the 1986-1989 National Development Plan. The diagnosis identifies several priorities for action. The main priorities are: (1) to decrease hunger, poverty and unemployment [2/] through milk distribution and food supplementation programmes to pre-schoolers, pregnant and nurturing mothers, through a school-lunch programme and through the distribution of basic foods at subsidized prices; (2) to assure universal access to health care and reduce income differences in the quality of the health services; (3) to reduce endemic diseases through providing medicines and vaccinations; (4) to improve sanitation levels in poor urban areas; and (5) to improve housing, education and agricultural production in the north-east.

Another poverty-alleviation measure was provided in the Cruzado Plan of February 1986, which adjusted the minimum wage to recover its purchasing power to 1978 levels, and increased real wages by about

15 per cent. The Cruzado II Plan announced after the November 1986 elections, however, increased taxes and removed controls over some prices, implying a decrease in consumption levels.

These efforts to alleviate poverty are new and reflect a shift towards greater intervention in social policy, which can be expected to reduce social inequalities and mortality differentials. It is less clear how the new intervention will affect fertility and spatial distribution.

I. THE DEMOGRAPHIC SETTING AS IT RELATES TO SOCIO-ECONOMIC DEVELOPMENT AND POPULATION POLICY

A. Historical demographic trends

Like the majority of its Latin American counterparts, Brazil has experienced high population growth in the past century. During the past 100 years the population growth level has consistently exceeded 2 per cent a year. While it took Brazil over four centuries to reach a population of 50 million by 1950, the doubling of that number was achieved in only 23 years, owing to the acceleration in natural growth caused by mortality decline.

Until the 1920s, international immigration had a significant effect on the total population growth (see table 1). The decade of the 1940s came as a breaking point in Brazilian demographic history with the beginning of the mortality decline, due to the impact of new techniques for the control of infectious and communicable diseases, as well as better sanitation levels.

Table 1. Total population, annual rate of total, natural and migratory growth, 1872-1980

Dates	Population (thousands)	Rate of growth (percentage) Total	Natural	Migratory
1872	9 930	2.06	1.79	0.27
1890	14 334	2.42	1.85	0.57
1900	18 200	2.09	1.88	0.21
1920	27 500	2.04	1.91	0.13
1940	41 236	2.34	2.32	0.02
1950	51 944	3.05	3.05	-
1960	70 119	2.89	2.89	-
1970	93 139	2.48	2.48	-
1980	119 099	2.48	2.48	-

Source: Committee for International Cooperation in National Research in Demography, La Population du Brésil, (Paris 1975), table 17, p. 28; and G. Martine and L. Camargo, "Crescimento e distribuição da população brasileira: tendências recentes" in Revista Brasileira de Estudos Populacionais, vol. 1, No. 1/2 (January/December 1984), table 1, p. 100.

During the period 1940-1970, the high fertility levels associated with moderate mortality levels produced a youthful age pyramid. By 1970, 42 per cent of the population was younger than 15 years, while only 5 per cent was older than 60. The 30 years of high natural growth gave Brazil a high inertia to grow, with large numbers of future potential parents coming into the population.

Even though natural growth was higher in rural areas, urban growth surpassed rural growth because of heavy migration from the countryside to the cities. 3/ This migration no doubt contributed to the small decrease in birth rates up to 1970 (see table 2) as migrants adapted more urban fertility levels.

From 1970 onwards, Brazil embarked on a consistent fertility decline and thus entered the second phase of its demographic transition. The components of natural growth, shown in table 2, point to a decline of 15 per cent in the birth rate between the periods 1960-1970 and 1970-1980, lowering the rate of natural growth despite a continuing decline in mortality. This decline in fertility was matched by a reduction in the rate of urban growth that dropped to 4.44 per cent, while with the continuation of the rural exodus, rural population declined in absolute terms (-0.62 per cent in the period 1970-1980).

Table 2. Crude birth rate and death rate: 1890-1980

Dates	Crude rates per thousand	
	Birth	Death
1890-1900	46.0	27.8
1900-1920	45.0	26.4
1920-1940	43.5	24.8
1940-1950	44.4	20.6
1950-1960	43.3	13.4
1960-1970	37.7	9.6
1970-1980	32.1	7.2

Source: G. Martine and L. Camargo, "Crescimento e distribuçãõ da População brasileira: tendências recentes" in Revista Brasileira de Estudos Populacionais, vol. 1, No. 1/2 (January/December 1984), table 3, p. 102; M. de M. Moreira, L. M. da Silva and R. McLaughlin, "Perfil de Brasil", Estudio de Población (New York, Population Council, October 1978), table 1, p. 8.

The pace of mortality decline is described by trends in life expectancy and infant mortality, as shown in table 3. The mortality indicators in table 3 are shown by region, [4/] and indicate that mortality and fertility changes were not evenly distributed in the country.

Table 3. Life expectancy at birth and infant mortality rate for Brazil and regions, 1950-1980

Brazil and regions	Census dates			
	1950	1960	1970	1980
A. Life expectancy at birth				
Brazil	48.9	52.4	57.5	62.6
Rio de Janeiro	53.0	57.6	62.6	66.5
São Paulo	53.2	58.3	62.5	67.7
South	56.8	60.4	62.1	68.1
Minas Gerais/Espirito Santo	51.8	55.4	59.4	63.8
North-east	40.8	42.8	47.3	53.9
Brasilia	-	54.6	61.6	67.1
North/centre-west	51.5	56.1	60.1	66.1
B. Infant mortality rate (per thousand live births)				
Brazil	130	119	98	86
Rio de Janeiro	114	99	79	70
São Paulo	112	97	79	64
South	100	90	75	63
Minas Gerais/Espirito Santo	118	107	91	79
North-east	164	157	137	116
Brasilia	-	110	83	67
North/centre-west	119	105	88	72

Source: T. W. Merrick, "A população brasileira a partir de 1945" in A Transição Incompleta, E. Bacha, and H. S. Klein, (eds.) (Paz e Terra, Rio de Janeiro, 1986), table 2, p. 35.

In spite of a mortality decline of almost 30 per cent, the Brazilian life expectancy at birth of 63.4 years during the period 1980-1985 was still much lower than the average of 73.1 years observed in the more developed countries in the period 1980-1985, and was lower than the average of 64.2 years observed for Latin America as a whole (United Nations, 1986). The north-east, even though accelerating its pace of mortality decline, remains a high mortality region with a life expectancy of only 53.9 years, almost 10 years lower than the national average.

An important factor in preventing life expectancy at birth from rising more quickly is the high infant mortality level. In all of Latin America, only Bolivia and Haiti have infant mortality rates higher than the Brazilian level of 86 infant deaths per thousand births. During the past 30 years the decline in the Brazilian infant mortality rate was approximately 34 per cent; it was higher than that in the most developed regions of the country, but was less than 30 per cent in the north-east, where the infant mortality rate was 116 per thousand, at the beginning of the 1980s. Thus the rate which was 80 per cent higher in the north-east than in Rio de Janeiro, São Paulo or the south (see table 3).

With the exception of a few states, vital statistics are poor in quality and in coverage. Because of this, mortality and fertility indicators are usually derived through indirect techniques. These techniques assume that the subgroups to which the estimates apply are closed populations, making it difficult to explore fertility and mortality differentials other than by geographic location. Bearing this limitation in mind, all applications of indirect techniques to mortality estimates by socio-economic groups have shown sizeable differentials. Carvalho and Wood (1980) divided the population into four income groups and found an excess of 12 years in the life expectancy of the higher in comparison to the lower income groups using 1970 census data. Merrick (1983) used similar methods and found that the probability of surviving through the first years of life is much higher among households with piped water.

The still moderately high levels of mortality reflect the deficiencies in the ways through which Brazilian society controls health. Low income levels prevent many families from getting adequate nutrition, [5/] pre-conditioning children to chronic malnutrition, a condition that impairs treatment for minor illnesses. Low income also impedes access to health services, even at government clinics and hospitals, which have increasingly moved to a curative rather than a preventive approach. The question of adequacy of health policy is fundamental, and is addressed in chapter II.

High fertility has led to periods of rapid population growth and a youthful population. As table 4 illustrates, fertility remained fairly stable up to 1960, but between 1960 and 1970 began a small decline in the more developed areas (Rio de Janeiro, São Paulo, the southern region and Minas Gerais). When urban and rural fertility were compared, it became clear that this early decline was an urban phenomenon. The surveys of the Pesquisa Nacional de Amostras Domiciliares during the 1970s provided indications of a continuing fertility decline and this was conclusively corroborated by the 1980 census. Between 1950 and 1970 national fertility, as measured by the total fertility rate, dropped 8 per cent, and between 1960 and 1970 it declined by a further 25 per cent. During the 1970s the drop in fertility became a general phenomenon touching all regions of the country. The decline was smallest in São Paulo (23 per cent), probably because of its lower initial level, and was largest in Minas Gerais and Espirito Santo (40 per cent) and the southern states (37 per cent). The decline had a more urban face and the north-east finished the decade of the 1970s with a total fertility rate of 5.71, more than twice the Rio de Janeiro value (2.65).

Table 4. Total fertility rates for Brazil and regions, 1950-1980

Brazil and regions	Total fertility rates			
	1950	1960	1970	1980
Brazil	6.32	6.18	5.83	4.33
Rio de Janeiro	4.42	4.34	3.91	2.65
São Paulo	4.52	4.49	4.07	3.13
South	5.96	5.75	5.48	3.47
Minas Gerais/Espirito Santo	6.90	6.98	6.31	4.11
North-east	7.52	7.50	7.58	5.71
Brasilia	-	-	5.52	3.63
North/centre-west	7.14	7.32	7.08	5.07

Source: T. W. Merrick, "A população brasileira a partir de 1945" in A Transição Incompleta, E. Bacha and H. S. Klein (eds.), (Paz e Terra, Rio de Janeiro, 1986), table 5, p. 43.

The causes for the acceleration of the fertility decline in the period 1970-1980 period are not yet fully understood, mainly because Brazil lacked the proper data - fertility surveys - to provide complete

answers. Census data and local surveys, however, have helped to clarify some issues. By assembling such data, Merrick and Berquo (1983) investigated the plausibility of changes in the proximate determinants of fertility during the decade of the 1970s. These covered marriage related factors, post-partum infertility, breastfeeding, contraceptive use and the incidence of abortion. No significant change was observed either in the mean age at marriage which remained around 23 years or in the proportion single (which remained around 37 per cent). The same conclusion applied to lactation and post-partum abstinence patterns. The only factors that proved to be important were changes in abortion and contraceptive use. Because abortion is illegal, reliable information on its frequency is difficult to find. On the other hand, scattered maternal and child health surveys showed that circa 1980 high levels of efficient contraception use were found in the south (66 per cent), São Paulo (62 per cent) and the capital cities of the north-east (54 per cent). It is indicated, therefore, that higher and more efficient contraception was the most important factor in the fertility decline. A question that remains unanswered is why Brazilian women started to become better contraceptive users. Two theoretical explanations immediately come to mind. The first presents Brazil as a classical case of response to modernization, where the increases in per capita income, growing urbanization, reduction in the agricultural labour force and increases in female labour force participation all combined to decrease the demand for children. On the other hand, Carvalho, Paiva and Sawyer (1981) suggest that the fertility decline had two causes: a structural cause referred to as "an intensification of the proletarianization process" and a cyclical cause, namely, the deterioration in the living conditions of substantial segments of the population. The action of these two forces would have led middle and low social strata to modify their reproductive behaviour. The middle stratum would have curtailed its fertility to increase consumption made possible through access to easy credit during the years of the economic boom. The low stratum, drawn from rural areas, would have experienced increasing costs of rearing children because products bought in shops supplanted home-made ones, and would have encountered new monetary costs for housing and transportation that were non-existent in the rural areas where they came from.

As Martine (1984) points out, the fertility decline of the 1970s coincided with the incorporation of the responsible parenthood concept into the Second National Development Plan, and with the activities of private organizations, mainly the Sociedade Civil de Bem-Estar Familiar No Brasil (BEMFAM), to diffuse birth control information and to distribute contraceptives. At the same time, the diffusion of "modern" values congenial to smaller family sizes through the media and the availability of new and more efficient contraceptives provided, respectively, the motivation and the means for the fertility decline. Whatever the weight of all these factors might have been, it is clear that the forces that led fertility to decline have persisted, as the slope of the decline has increased in recent years.

While mortality and fertility are fundamental in shaping population dynamics, a discussion of demographic trends would be incomplete without a description of changes in the spatial distribution of Brazil's population. To deal with this theme, we use a classification of areas suggested by Martine (1984). The classification divided Brazil into four regions: (a) the Industrial Nucleus, formed by Rio de Janeiro and São Paulo states; (b) the Former Frontier, including states where frontier occupation has been completed, namely, Paraná, Maranhão, Goiás and Mato Grosso do Sul states; (c) the New Frontier, formed by the northern region and the state of Mato Grosso, where frontier occupation through private or public settlement projects is still taking place; and (d) Emigration Areas, which includes the north-eastern region (with the exclusion of Maranhao state) and the states of Minas Gerais, Espirito Santo, Santa Catarina and Rio Grande do Sul, which have all become suppliers of migrants.

This classification is applied in table 5, which shows population growth and net migration in each region. The most striking feature in table 5 is the consistent population loss in the Emigration Areas to the Industrial Nucleus and the New Frontier. Various forces no doubt contributed to this interregional flow, but the main factors are probably the cyclical droughts of the north-east and the creation of industrial poles in the centre-west and centre-south which have drawn migrants in substantial numbers. The Industrial Nucleus intensified its power of attraction mainly because of growth in São Paulo, since Rio de Janeiro has been declining in economic importance since the 1970s.

Another striking feature in table 5 is the significant net emigration from the Former Frontier after 1970. Martine (1984) states that the emigration is due to the combined action of two factors: the movement of squatters from marginal land and the process of agricultural modernization that accelerated after 1966. The first has to do with the fact that most of the frontier occupation in Brazil is conducted by agricultural workers, most of whom are squatters. They either produce for their own subsistence or combine subsistence with the production of a commercial surplus. As land acquires value or loses its productivity they are forced off. The modernization of agriculture, on the other hand, implies an increase in the price of land, the substitution of capital intensive crops for labour intensive ones, the adoption of machinery and industrial inputs, the concentration of property, the change in the relations of production and the reduction in the numbers of small producers and other categories of agricultural labour. The operation of these two factors reduced the capacity of the Former Frontier to absorb population.

Table 5. Population growth, spatial distribution of growth and net migration balances for selected regions, 1940-1980

Indicators by regions	1940/1950	1950/1960	1960/1970	1970/1980
Annual rate of growth				
Industrial Nucleus	2.5	3.5	3.3	3.1
Former Frontier	4.0	5.9	4.2	2.0
New Frontier	2.1	3.4	3.8	5.3
Emigration Areas	2.1	2.1	2.3	1.9
Brazil	2.4	3.0	2.9	2.5
Percentage of total growth				
Industrial Nucleus	28.2	31.0	31.8	37.0
Former Frontier	15.6	22.1	20.2	11.5
New Frontier	3.7	4.6	5.8	10.9
Emigration Areas	52.5	41.6	40.6	38.1
Brazil	100.0	100.0	100.0	100.0
Net migratory balance				
Industrial Nucleus	388 900	767 200	1 626 000	2 980 000
Former Frontier	570 300	1 509 200	857 500	-1 294 000
New Frontier	-14 500	120 200	276 100	876 300
Emigration Areas	-944 700	-2 396 600	-2 759 600	-2 562 600

Source: G. Martine and L. Camargo "Crescimento e distribuição de população brasileira: tendências recentes" in Revista Brasileira de Estudos Populacionais, vol. 1, No. 1/2 (January/December 1984), table 7, p. 119.

Notes: Industrial Nucleus - Rio de Janeiro and São Paulo;

Former Frontier - Paraná, Maranhão, Goiás, and Mato Grosso do Sul;

New Frontier - Northern region and Mato Grosso;

Emigration Areas - North-east region (excluding Maranhão state), Minas Gerais, Espirito Santo, Santa Catarina and Rio Grande do Sul.

Table 5 suggests that substantial numbers of people have migrated from the Former Frontier to the New Frontier region. The New Frontier's annual growth rate increased from 3.8 per cent in the 1960s to 5.3 per cent a year in the 1970s and its share of national growth doubled in the same period, reaching 10.9 per cent; finally, its net migratory balance was a positive 876,300. Even so the New Frontier is absorbing much less labour than the Industrial Nucleus.

Earlier it was noted that the rural-urban distribution changed from predominantly rural to predominantly urban during the period 1940-1980, with 68 per cent of the country's population living in urban places by 1980. Rural out-migration has consistently grown in absolute terms; in the 1960s it encompassed 13.5 million persons and in the 1970s there were 15.6 million. During the past decade the New Frontier was the only region where rural growth was positive. The rise in urbanization so intimately associated with industrialization has clearly led to a redistribution of the population not only between rural and urban areas but also by size of locality. In fact, as shown in table 6, the changes in the spatial distribution of the population during the past four decades have been in the direction of an increasing concentration of urban population in larger cities. The percentage of the population living in places of 100,000 to 500,000 inhabitants almost doubled during the decade of the 1970s and the percentage of the population living in cities larger than 500,000 reached 31.5 per cent of the total in the same period.

Table 6. Percentage of the population by size of locality, 1940-1980

Locality	1940	1950	1960	1970	1980
Rural areas	68.8	63.8	55.0	44.1	32.4
Up to 10,000	12.6	12.2	12.4	9.6	10.0
10,000-20,000	2.6	2.9	3.9	5.3	4.0
20,000-50,000	2.2	3.2	4.5	5.4	6.5
50,000-100,000	2.0	2.5	2.7	3.5	4.6
100,000-500,000	4.1	4.3	5.4	6.1	11.0
500,000 and over	7.7	11.1	16.2	26.1	31.5

Source: G. Martine and L. Camargo, "Crescimento e distribuição de população brasileira: tendências recentes" in Revista Brasileira de Estudos Populacionais, vol. 1, No. 1/2 (January/December 1984), table 11, p. 129.

It is thus clear that Brazil experienced in the past 40 years not one but several demographic transitions. Mortality declined, the face of society was changed from a rural to an urban one and, finally, the reproductive process slowed its pace and became increasingly under control.

B. Current demographic trends

The available demographic information for the first five years of the decade of the 1980s comes mainly from the PNAD survey in 1984, provided by Westinghouse and BEMFAM, which is the first national level maternal and child health survey for Brazil, and which provides information on recent fertility, child mortality and contraceptive use.

Table 7 presents total fertility rates for 1980 and 1984 by macro-region. In comparing the macro-regions in table 7 with the ones employed in table 6, one should note that the south-east region includes the industrial and developed Rio de Janeiro and São Paulo states together with Minas Gerais and Espirito Santo. The survey did not cover the rural north, because it is so sparsely populated.

From table 7 one sees that the fertility decline recorded in the censuses between 1970 and 1980 continued between 1980 and 1984, though with some narrowing in differentials between regions. In 1984, the south-east had the lowest fertility, with an average of 2.96 children per woman, while the north-east, with the highest total fertility rate, remained well above 6 children per woman. For the first time in Brazilian demographic history, rural fertility decline was greater than the urban decline. Urban total fertility rates by 1984 were close to 3 children per woman except in the north and north-east where they were closer to 4. While urban fertility ranged between 3 and 4 children, the spread in rural fertility was more pronounced. The smallest rural total fertility rate occurred in the south (3.62) while in the northeast the total fertility rate was still close to 6.5. The rural-urban differentials were quite sizeable. They ranged from a low of 30 per cent in the south, to a high of 85 per cent in the north-east. So, even though the fertility decline was heavy throughout the 1970 decade and persisted during the early 1980s, Brazilian fertility levels are still high by international standards and ample room exists for further declines, especially in rural areas.

Underlying the fertility decline is the transition to a high level of highly effective contraceptive use. As table 8 shows, the current use level in 1986 (for women aged 15-44 and in a marriage or consensual union) was 65.3 per cent for the whole country. In the more developed areas of Rio de Janeiro, São Paulo and the southern states, more than 70 per cent of women were using contraceptives. A very significant feature

Table 7. Total fertility rates for Brazil and macro-regions, 1980 and 1984

Brazil and macro-regions	1980			1984		
	Total	Urban	Rural	Total	Urban	Rural
Brazil	4.35	3.63	6.40	3.53	3.03	5.32
North	6.45	5.24	8.04	-	4.04	-
North-east	6.13	4.94	7.66	4.96	4.00	6.47
South-east	3.45	3.17	5.46	2.96	2.70	4.99
South	3.63	3.20	4.55	3.04	2.79	3.62
Central-west	4.51	3.97	5.98	3.38	3.06	4.57

Source: Luiz Antonio P. de Oliveira and Nadja Loureiro P. de Silva, "Tendências da fecundidade nos primeros anos da década de 80", in Anais do V Encontro Nacional de Estudos Populacionais (Aguas de Sao Pedro, October 1986), p. 215.

of the table is that sterilization was the most prevalent of all methods in all regions except the south. In the Amazon states (north and centre-west regions) 42 per cent of the women were sterilized. In all regions over 50 per cent of the women were either sterilized or on the pill.

The size and speed of fertility decline has caused some Brazilian demographers to caution against premature aging of the population. Some recent population projections by Hakkert, however, indicate this possibility is far away in the future. Even assuming relatively rapid fertility decline, to a total fertility rate of 2.0 children by the period 1995-1999, the projections show only 8.3 per cent of the population aged 65 and older by the year 2020 (Hakkert, 1986). This is a lower proportion of the elderly than is currently found in the United States.

While there is clear evidence of continuing fertility decline, the same cannot be said about mortality. A recent paper using vital registration data has indicated a stall or even a rise in infant mortality in Brazil during the period 1977-1984 which included the economic crisis and north-eastern drought (Becker and Lechtig, 1986).

Table 8: Percentages currently using contraception among women aged 15-44 and currently married (or in consensual union) by region and method of contraception, Brazil, 1986

Method of contraception	Brazil	Rio de Janeiro	São Paulo	South	Minas Gerais and Espirito Santo	North-east	North and central-west
Percentage using any method	65.3	70.6	72.7	72.6	61.6	53.0	63.1
Sterilization							
Female	27.3	33.6	31.5	18.3	25.1	25.3	42.0
Male	0.8	0.2	2.0	0.5	0.6	0.2	1.2
Pill	25.0	25.2	24.7	39.6	23.1	17.4	13.5
Coitus interruptus	5.0	3.1	6.6	7.5	2.9	4.2	1.9
Natural methods	4.3	5.3	3.4	3.7	5.5	4.5	3.5
Condom	1.6	1.8	3.2	1.4	2.0	0.4	0.7
IUD	0.9	1.1	0.7	1.4	1.8	0.4	0.5
Douche	0.5	0.4	0.7	0.2	0.6	0.5	0.0

Source: Brazil, Demographic and Health Survey, 1986.

This is contradicted by another recent paper which used data from the PNAD fertility survey in 1984 and indicated that the proportion dying before age 1 declined from 87.9 per thousand in 1980 to 68.1 in 1984 (Simoes and Oliveira, 1986). The second paper is less credible, however, since the childhood mortality data from the survey have not yet been sufficiently evaluated to show that the downward trend is real and not a consequence of under-reported childhood mortality. In the absence of an evaluation that convincingly supports the validity of the survey, one is more inclined to believe the vital statistics data. More work needs to be done before firm conclusions about the recent trend can be reached.

Regardless of any aberrations in the mortality trend in the very recent past, however, there are several reasons for expecting substantial further decline in Brazilian mortality over the next few

decades. First, there are regions of very high mortality in Brazil where lost cost interventions can produce rapid declines in mortality. Second, the social and health programmes recently proposed in 1986 should, if implemented, precipitate a fairly rapid pace of mortality decline. 6/ Third, the long-run regional trend in mortality for Latin America as a whole seems to be progressing towards a life expectancy in excess of 70 years for both sexes.

II. REVIEW OF THE POPULATION POLICY SITUATION

A. Evolution of policy

1. Policy towards fertility and population growth

The Government of Brazil has never explicitly intervened to influence fertility and population growth. Prior to the 1970s, as Merrick points out, this lack of intervention had a pro-natalist tone, motivated by: (a) the position of the Roman Catholic Church regarding reproduction and the family; (b) a nationalistic feeling that rapid population growth would assist Brazil in becoming a world economic and political power; (c) traditional views that considered Brazil to be underpopulated vis-à-vis the size of its territory and its vast natural resources; (d) a lack of enthusiasm for suggestions from the United States and other developed countries that Brazil might consider limiting its population growth; and (e) an exaggerated optimism concerning the prospects for sustained economic expansion (Merrick, 1986, p. 64).

The official statement of Brazil to the United Nations World Population Conference, held at Bucharest in 1974 implied a major shift away from the unqualified optimism and pro-natalism that had dominated for so long. While it emphasized that Brazil was underpopulated relative to its ultimate carrying capacity, it noted that in the short term "it has been found essential for the rate of demographic growth not to exceed the rate of growth of employment opportunities". The statement went on to say that there would be no need for government intervention to lower the rate of population growth, since anticipated rises in wages for the lower income sector of the population would "have a regulating effect on the rate of population growth, which is already declining".

Consistent with the past policy of non-intervention in matters affecting fertility, the Brazilian statement at Bucharest said that birth control decisions by individual couples were not matters for state interference. In a major break with the past, however, the statement added that "birth control measures should not be a privilege reserved for families that are well off...it is the responsibility of the State to provide the information and the means that may be required by families of limited incomes".

From subsequent events it is evident that despite the position taken at Bucharest there was resistance in many quarters to the concept of implementing a comprehensive federally supported family planning programme. The second National Development Plan (covering the period 1975-1979 and published in 1976), refrained from recommending any

federal support for family planning programmes, and called only for an assessment of the social and economic impact of demographic factors (Merrick, 1983).

In 1977, the Government announced a rather restricted family planning programme aimed at low-income women with "high health risk pregnancies" (defined as occurring among unmarried women below age 20), which operated between 1978 and 1981 with a small budget of $US 3.3 million, capable of covering only a limited clientele. At a press conference in Mexico in 1978, President Geisel made several remarks in favour of family planning. At the first meeting with his cabinet after assuming office in March 1979, President Figueiredo stated, "In the present situation of Brazil, the success of social development programmes depends in large part on family planning, but always respecting the couple's freedom of choice...It is the role of the Government to extend this knowledge to all families". Later in 1979 the advertising of contraceptives was legalized. The Federal Ministry of Health subsequently convened a commission to recommend a course of action for the provision of family planning services by the Government.

In 1980, several members of state legislatures formed the Group of Parliamentarians for the Study of Population and Development, which has since functioned at the federal, state and municipal levels to promote the adoption of a more intensive population programme to provide lower income Brazilians with better access to contraceptives (Population Crisis Committee, 1985). In December 1982, the Group of Parliamentarians acted as hosts to the Western Hemisphere Conference of Parliamentarians in Brasilia, with extensive coverage in the Brazilian media.

In March 1983, President Figuereido asked the National Congress to consider the population issue and establish guidelines. In June 1983, the Minister and Chief of the Armed Forces spoke out publicly on the "utmost importance" of a national family planning programme, and the Navy announced its decision to implement its own programme at a symposium attended by three Cabinet Ministers (Navy, Armed Forces and Health), as well as more than 100 leaders from different fields. On the other hand, a group of opposition politicians were seeking to revoke the legal status of a leading private family planning organization, and undercurrents of opposition to family planning were expressed by a number of Government, intellectual and religious leaders. Many Brazilian politicians at the time avoided taking public positions on the family planning issue.

As a compromise, the Minister of Health announced in 1983 the Women's Integral Health Care programme, which was intended to be politically neutral with respect to the debate on the need for controlling fertility, and which was to be gradually implemented

starting in the north-east in 1984 and covering the whole country by 1988. The Minister of Health strongly emphasized that family planning was only one component of a wider programme that offered a full range of maternal and child health services, and that family planning should not be seen as a solution to social and economic problems. The programme started slowly and was largely superseded in 1986 when the Instituto Nacional de Medecina e Previdência (INAMPS), the major public health agency responsible for the provision and financing of health services, was given the additional responsibility of distributing free contraceptives throughout Brazil, both through its own facilities and through all other agencies receiving financial support from INAMPS. There are indications, however, that the programme had made little headway as of early 1987 (Kendall, 1987).

In 1984 at the International Conference on Population at Mexico City, the Minister of Health, chief of the Brazilian delegation, endorsed the views expressed 10 years before at the Bucharest Conference, and reiterated the Government's commitment towards providing family planning information and supplies through the public health system.

The continuing lack of decisive federal support for a nationwide family planning programme during the earlier post-Bucharest period was accompanied by official recognition and approval of private family planning organizations by a number of state and municipal governments. The first of the private organizations, the Sociedade Civil de Ben-Estar Familiar No Brasil (BEMFAM), was founded in 1965 as a non-profit organization by a group of physicians who were disturbed by the high rate of abortion. In 1967, BEMFAM became an affiliate of the International Planned Parenthood Federation (IPPF) and in 1971 became a full member (Population Crisis Committee, 1985). In 1973, BEMFAM contracted with the Rio Grande do Norte, a poor state in the north-east, to provide contraceptives through a system of family planning clinics (Population Crisis Committee, 1985). Since then, BEMFAM has contracted with seven other states and many counties for similar programmes, and has implemented community-based systems of training doctors in performing female sterilization while initiating distribution of contraceptives to low-income couples. As of 1985 BEMFAM operated more than 100 clinics. In 1975, the Centre for Research and Integrated Woman and Child Services (CPAIMC), another private organization, joined BEMFAM in family planning activities. A geographic division of labour has since developed between these two organizations: BEMFAM covered the north and north-east regions, while CPAIMC specialized in the Rio de Janeiro-São Paulo axis. While BEMFAM and CPAIMC have been the major actors in the sphere of providing family planning, a dozen or so other private organizations advocating or providing family planning have come into being during the past two decades (Population Crisis Committee,

1985). In addition to private organizations, physicians and pharmacists have played an important role in distributing contraceptive supplies and information.

During the 1970s and 1980s, feminist movements have acted as important pressure groups advocating individual freedom of choice on the number of children a woman wants to have, without coercive interference from the State or private organizations. They have urged the Government to adopt direct responsibility for providing access to information, education and adequate contraceptive means, and pushed for more liberal abortion laws. 7/ There are indications that the Congress elected in November 1985 may give these issues attention when drafting the new Constitution.

The women's movement has succeeded in obtaining representation at various levels of Government. The first is the Commissao dos Direitos Reprodutivos (Committee on Reproductive Rights) that acts as an advisory board to the Minister of Health and is composed of representatives from various ministries. Among its activities, there is a working group to study modern contraceptive methods (mainly implants) and their consequences to the woman's health. In addition, in the Ministry of Health there is the Grupo de Saude de Mulher (Group on Woman's Health) to follow-up on maternal and child health activities. At the Ministry of Justice, the Conselho Nacional de Defesa dos Direitos da Mulher (National Council for the Defense of Women's Rights) is concerned with legal aspects in the field of reproduction.

2. Spatial distribution

Prior to the mid 1970s, the Government of Brazil had taken various actions affecting population distribution which included the movement of the capital to Brasilia located in the hinterland, the building of the transamazon and the Belem-Brasilia highways, and the establishment of a public settlement programme in the Amazon. These actions showed concerns with the concentration of the population along the coastline and the isolation of the Amazon region. From an economic and political point of view, these actions also represented an effort to enlarge the market by conquering new spaces and adding population to the market-oriented economy while alleviating the population pressure on the rural north-east region.

At the 1974 Conference at Bucharest, the Government of Brazil said it would adopt the measures necessary to balance the growth of different regions, to incorporate the wide open spaces of the country into the economic process, and to promote the harmonious growth of the rural and urban sectors. This policy was re-affirmed at the 1984 Conference at Mexico City.

Subsequent to the Conference at Bucharest, the Ministry of Internal Affairs published a series of guidelines for a national migration policy (Ministerio do Interio, 1976). The document was produced by a number of competent specialists in the field and conceived the migration policy as embodied into a more general population, employment, national integration and occupation policy. The policy goals were as follows:

(a) To rationalize the spatial population distribution to allow for a decline of the migratory flows to the metropolitan areas, to promote the occupation of the frontier areas and to avoid rural exodus in critical areas;

(b) To design ways to absorb the migrant labour force;

(c) To reduce the difficulties confronted by the migrants in their place of destination.

To achieve these objectives, the Government was advised to promote the growth of intermediate-size cities, to improve services in the periphery of the metropolitan areas, to intensify the process of agricultural frontier expansion, to improve the agricultural system of production aiming at better labour utilization, to provide assistance to recent and needy migrants and to re-direct the migration flows through the creation of employment in the places of migratory destination.

It is difficult to evaluate the success of the spatial redistribution policy. The discussion of migration policy led to the creation of the Centros de Triagem de Migrantes (Centres for Migrant Evaluation), aiming at directing needy migrants to room and board as well as to employment opportunities. This in turn led to the creation of the Sistema Nacional de Informaçoes sobre Emprego (National System of Information on Employment), that acting in urban areas tried to put together employment opportunities and unemployed people. These two agencies appear to have had little impact on re-directing migrants, however. The goal of the development of intermediate-size cities may have come closer to being realized, although not necessarily as a direct result of policy interventions. As can be seen in table 6, there was a significant increase between 1970 and 1980 in the share of the total population living in cities with between 100,000 and 500,000 inhabitants, from 6.1 per cent in 1970 to 11 per cent in 1980.

3. Mortality and health

At the 1974 World Population Conference, the Government of Brazil announced it would implement measures to decrease mortality, particularly infant mortality, and at the 1984 Conference it expressed concern at the persistence of wide differentials in infant mortality.

Since 1974 the spread of mortality decline has been somewhat slower in Brazil than in other Latin American countries. The decline has probably been impeded by several factors, including the uneven distribution of health services, an emphasis on curative rather than preventive medicine and the persistence of poverty. Around 1976 it became clear that Brazil was experiencing an economic crisis, and health policy suffered from an erosion of funds for public health and social services. 8/

Several structural barriers have impeded universal access to publicly financed health services, which are intended to serve lower income groups in particular. First, the services are heavily concentrated geographically. In 1985 the number of consultations per person in the south-east (2.34) was twice as great as those registered in the north-east (1.19), a region with far more health problems. The wide differences in availability of care is closely associated with differences in the magnitude of spending. Second, because a heavy share of expenditures comes from INAMPS, an agency mainly supported through the social security taxes on labour, the health budget has been linked to employment levels. Third, the public health budget has subsidized to a large extent the private sector, through low-interest loans to build private hospitals and clinics and through direct payments for services performed at private facilities. Fourth, in many instances, physicians who work in public institutions have other employment in the private sector to which they frequently divert patients, leaving the public facilities with low occupancy rates. Fifth, there is a tendency for exaggeration in the use of auxiliary services for diagnosis and therapy. 9/

Two recent plans have addressed these problems. The Plano de Reorientacao da Assistencia a Saude (Plan for the Re-orientation of Health Assistance) was initiated in 1982 with six objectives: (a) priority to primary health care and outpatient assistance; (b) integration of the various health agencies into a single system; (c) elimination of the over-capacity in some public hospitals and clinics; (d) fixed budgetary limits for medical assistance; (e) changes in compensation to the private sector for services; and (f) rationalization of highly specialized services, such as dialysis and medical treatment abroad. The second plan, entitled Acoes Integradas de Saude (Integrated Health Actions), on the other hand, promoted a new relationship between health agencies by giving more power to those of the state and municipality levels of government.

Additional concern for health issues has been expressed by the Government elected in November 1985, which has committed itself to several new programmes. One of these is a food supplementation programme aimed at children in public schools and at pregnant and

lactating mothers. 10/ Another concern is the promotion of the universalization of health services together with enhancing the control of communicable diseases, such as Chagas disease and malaria.

While the 20 years of military Government in Brazil may not have been sufficiently responsive to the welfare needs of the majority of Brazilians, the Government elected in 1985 appears more committed in this direction, and has indicated that it regards the provision of family planning and health services as being necessary for social equity and human rights.

B. Evaluation

Over the years, the Government has generally not produced for public inspection the indicators necessary to evaluate its programmes. Even in programmes of major magnitude, as in the case of the settlement policy in the Amazon, action was taken on a pragmatic basis and without evaluation of the steps pursued. At various times the Government was attacked, either for alleged misuse of funds or for alleged failure of a specific policy to achieve the stated objectives, but this public reaction did not succeed in promoting evaluation as a tool for programme management.

The current Government may be leaning towards a modification of this approach. The announcement of concerns in the social sphere was followed by a lengthy social diagnosis not only of current social problems but also of existing social programmes and policies that were intended to alleviate them. These evaluations, prepared by competent government specialists in each area, were incorporated in the Social Priorities 1986 document that provides guidelines for action. In addition, there is a need to develop indicators to evaluate the success of the measures taken.

Pressures for fast and effective solutions to social problems may have led the Government into publicly committing itself to do too much at the same time. A critical obstacle that consistently impedes the implementation of new measures - for example, in the social security area - is the lack of funds for their implementation. Measures that have matured into concrete plans and for which funds have been allocated are reviewed in the next section.

III. FOCUS ON CURRENT POPULATION POLICY CONCERNS

The Plano de Metas (Targets Plan) for the period 1986-1989 describes the main government commitments in the social sphere for the near future. Counting on an average growth rate of 7 per cent a year of the gross national product, the economic aims are to: (a) create 6.6 million new job opportunities to accommodate the newcomers (approximately 1.4 million every year) and the current unemployed; (b) implement irrigation and land reform programmes in the north-east hoping they will foster its economic growth and enlarge its job opportunities; (c) provide better wages to the 4.5 million workers who receive less than the minimum wage; (d) increase the provision of electrical energy by 32.5 per cent; (e) enlarge the domestic production of petroleum to over 70 per cent of domestic consumption; (6) increase the production of natural gas by 66 per cent of its current level; and (f) repair, build or pave a total of 89.5 thousand kilometres of highways.

The core of the social measures contemplated by the plan is in the nutrition area. It is specifically stated that the Government will implement: (a) food supplementation programmes to cover 15.9 million pregnant or lactating mothers and children; (b) the distribution of one liter of milk per day to 10 million needy children; (c) a programme providing school lunches for 34 million children aged 7-14 years and their siblings aged 4-6; (d) free public education to all 25.4 million children aged 7-14; and (e) the building of 1.7 million new homes.

The estimated financial requirements to fulfil these obligations is $638.2 billion cruzados (approximately $US 46.2 billion) over the plan period. These investments will raise public investments as a proportion of the gross national product from 17.6 to 21 per cent. This tremendous effort, in the absence of foreign loans, will depend on the domestic saving capacity. An attempt to increase domestic savings is contained in the recent Cruzado II Plan, whose effects are yet to be seen.

IV. CONCLUSIONS

In Brazil, the objectives and consequences of policies and measures affecting population are often far from clear because of long periods of military government, which fostered a political climate in which there was an absence of public debate and a lack of mechanisms for programme review and evaluation.

Early concerns with population matters can be inferred from the encouragement of immigration, both of unskilled labour, entrepreneurs with capital and skilled manpower, which was no doubt motivated by a desire to promote population growth.

Efforts to colonize new frontiers are likely to have been motivated by the desire not only to promote population growth but also to enhance national security, for economic expansion and, at times, to absorb excess labour.

The 1930s saw the first governmental programmes at least motivated in part by a desire to promote health and reduce mortality, though they were largely focused on the health care and social security of urban industrial employees - to the exclusion of other urban residents and the rural population. The more general philosophy of relying on economic expansion while downplaying social equity has been a dominant thread throughout most of Brazil's history, and it was not until recently that universal provision of basic health care has become a central priority of the Government.

Up until the 1970s the Government implicitly favoured rapid population growth and was pro-natalist. The first unmistakable indications of an overall fertility decline came with the 1970 census. No pro-natalist measures followed on these indications. Instead, the Brazilian delegation to the 1974 World Population Conference endorsed the principle of free choice in reproductive matters, and the principle that the poorest of families should have access to modern contraception. To implement this principle, the Government subsequently gave official sanction to the activities of private family planning agencies, along with very limited support for family planning distribution through the public health system. Marked socio-economic differentials persisted in access to modern contraceptives, however, and in 1986 the new civilian government greatly increased the commitment of effort to provide access to contraception.

The official attitude of the Government of Brazil towards population growth and towards fertility is that the levels are satisfactory and do not require intervention, a public attitude which has remained consistent throughout the years. In principle, fertility decisions are left up to individual Brazilians.

The population related actions taken so far by the new Government appear to reflect a genuine concern for social and population matters and are a response to long-standing needs for better health care, nutrition and social equity. It will be some time, however, before the effects of these actions become manifest.

Notes

1/ In 1949, 12.9 per cent of all health expenditures were devoted to hospital care and 87.1 per cent were spent on preventive health; in 1982 the situation reversed, 84.6 went to hospitals and the remainder was left to preventive medicine (Paim, 1986).

2/ A welfare payment to the unemployed, a long awaited measure, was instituted in March 1986. Its value depends on the previous working history of the individual and the benefit has an upper limit of two times the minimum wages per month. To reduce unemployment, the Government aims at a 6 per cent a year rate of growth in the gross national product in order to absorb the fast growing labour supply.

3/ According to the Instituto Brasileiro de Geografia e Estatística (IBGE) (Anuário Estatístico do Brasil, 1985) urban rates of population growth for the periods 1940-1950, 1950-1960 and 1960-1970 were 3.84, 5.24 and 5.22 per cent, respectively. For these same periods, rural rates of growth reached only 1.58, 1.57 and 0.57, respectively.

4/ The regional classification is the one adopted by the yearly national surveys (Pesquisa Nacional de Amostras Domiciliares - PNAD) initiated in Brazil during the latter part of the 1960s. Rio de Janeiro and São Paulo are the most traditionally advanced states. Together with the southern region they form the areas of higher standards of living. Minas Gerais and Espirito Santo represent transition areas between the former and the highly impoverished north-east. Brasilia, the capital, is a high income enclave in a low-income region. Finally, the north and centre-west regions encompass the Amazon states.

5/ The World Bank, in its Human Resources Special Report on Brazil, cites the Enquereito Nacional de Espesa Familiar (ENDEF) (nutrition and budgetary survey of PNAD in 1974) to establish that only 42 per cent of the population under 17 receive adequate nutrition; in the north-east this percentage drops to 32 per cent (World Bank, 1979).

6/ As far as infant mortality is concerned, these expectations have a sound basis. The 1986 Demographic and Health Survey reported high immunization levels for children younger than five years. The

reported percentage of these children vaccinated against polio was 84.8 per cent for the whole of Brazil, varying between 74.9 per cent in the north-east and 96.2 per cent in São Paulo; diphtheria, pertussis and tuberculosis immunizations covered 79.3 per cent of all children and again São Paulo and the north-east had the highest (95.8) and the lowest value (63.0), respectively. Finally, for measles, the immunization levels were very close to those for polio.

7/ Abortion is illegal in Brazil. According to the current law it may be performed to save the pregnant woman's life or in cases of rape. However, the legal barriers to establish these two grounds are such that they rarely allow for a legal abortion. A law was passed in Rio de Janeiro to make physicians follow the letter of the law but it was revoked two months later. However, illegal abortion is widely practised. Women who can afford it can obtain an abortion performed in private under safe conditions at a high cost. The vast majority of women cannot afford to procure an abortion from a qualified physician, and are subject to high risk abortions, with substantial numbers hospitalized with complications.

8/ Brazil has spent approximately $US 3-4 billion annually on health and nutrition services since the 1970s. Most of that total (80 to 90 per cent) has been oriented to financing medical and hospital care for the beneficiaries of INAMPS, the social security institute responsible for the provision and financing of health services. The remainder of the budget is left for primary health care and basic nutrition.

9/ See Landmann (1982) for further views on this subject.

10/ Seven federal programmes offer food assistance or a subsidy. They are listed as follows (McGreevey, 1986, p. 24).

Acronym	Ministry	Target group
PSA	Health	Pregnant and lactating mothers, infants
PNAE	Education	School children
PAP/PROAB	Agriculture/Health	Poor neighbourhoods
PCA	Social Security	Children in day care centres
LEITE	Planning	Children in poor families
PAT	Labour	Workers in designated companies
-	Finance	Farmers who grow wheat

For a detailed description of each programme, consult the mentioned reference.

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GLOSSARY

Contraceptive prevalence rate: percentage currently using contraception; usually based on married or sexually active couples with women in the reproductive age.

Crude birth rate: the number of births in a year per 1,000 mid-year population.

Crude death rate: the number of deaths in a year per 1,000 mid-year population.

Dependency ratio or age dependency ratio: the ratio of the combined child population under 15 years of age and adult population 65 years and over to the population of intermediate age per 100.

Foreign-born population: persons born outside the country or area in which they were enumerated at the time of the census.

General fertility rate: the annual number of births divided by the mid-year population of women aged 15 to 49 years multiplied by 1,000.

Gross reproduction rate: a measure of the reproduction of a population expressed as an average number of daughters to be born to a cohort of women during their reproductive age, assuming no mortality and a fixed schedule of age-specific fertility rates. More specifically, it is the sum of age-specific fertility rates for the period multiplied by the proportion of the total births of girl babies.

Infant mortality rate: the probability of dying between birth and age 1 multiplied by 1,000; commonly calculated as the number of deaths of infants under one year of age in any given calendar year divided by the number of births in that year and multiplied by 1,000.

Life expectancy at birth: a life-table function to indicate the expected average number of years to be lived by a newly born baby, assuming a fixed schedule of age-specific mortality rates.

Mean age at first marriage (females): the average age at which women marry for the first time.

Median age: the age which divides the population into two groups of equal size, one of which is younger and the other of which is older.

Natural rate of increase: the difference between the crude birth rate and the crude death rate, expressed per 1,000 mid-year population.

Net migration: the difference between gross immigration and gross emigration.

Net migration rate: the difference between gross immigration and gross emigration per 1,000 of the mid-year population.

Net reproduction rate: a refined measure of the reproduction of population expressed as an average number of daughters that a cohort of newly born girl babies will bear during their lifetime, assuming fixed schedules of age-specific fertility and mortality rates. In other words, it is the measure of the extent to which a cohort of newly born girls will replace themselves under given schedules of age-specific fertility and mortality rates.

Rate of growth: the exponential average annual rate of population growth, expressed as a percentage.

Sex ratio: the number of men per 100 women.

Survival ratio: the probability of surviving from one age to an older one; it is often computed for five-year age groups and a five-year time period.

Total fertility rate: the sum of the age-specific fertility rates over all ages of the child-bearing period; if five-year age groups are used, the sum of the rates is multiplied by 5. This measure gives the approximate magnitude of "completed family size", that is, the total number of children an average woman will bear in her lifetime, assuming no mortality.

Urban population: population living in areas defined as urban by national authorities.