

COUNTRY DEMOGRAPHIC PROFILES

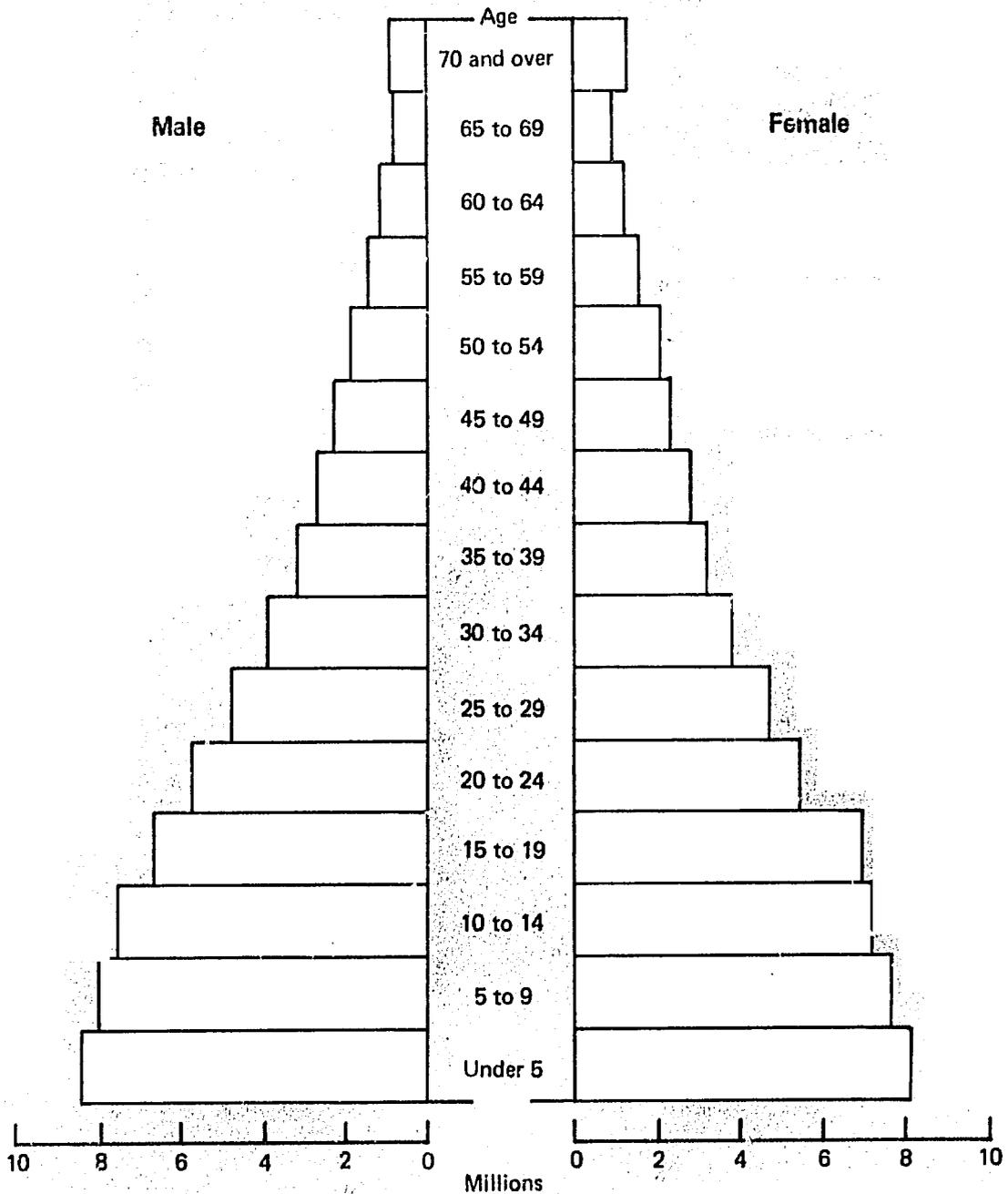


U.S. Department of Commerce
BUREAU OF THE CENSUS

ISP-DP-19
Issued January 1981

BRAZIL

Population of Brazil, by Age and Sex: July 1, 1979



Projection based on Brazil's 1970 census of population, as adjusted by the U.S. Bureau of the Census, table 2, this report.

ISP-DP-19
Issued January 1961

Brazil

by Patricia M. Rowe



U.S. Department of Commerce
Philip M. Klutznick, Secretary
Courtenay M. Siater,
Chief Economist

BUREAU OF THE CENSUS
Daniel B. Levine,
Acting Director



BUREAU OF THE CENSUS
Daniel B. Levine, Acting Director
Meyer Zitter, Assistant Director
for International Programs

INTERNATIONAL DEMOGRAPHIC DATA CENTER
Samuel Baum, Chief

ACKNOWLEDGMENTS

County Demographic Profiles is a series of reports which brings together a variety of demographic data for selected countries of the world, and usually includes data for both a recent census year and the current period. This report was prepared in the Data Evaluation Branch, International Demographic Data Center, Bureau of the Census, under the supervision of Eduardo E. Arriaga, Special Assistant for International Demographic Methods.

The map was prepared in Geography Division. It was designed by Steven J. Vogel and Betty L. Adamek, and constructed by Fred W. Fricker.

The author wishes to extend sincere appreciation to colleagues at the Brazil Fundação Instituto Brasileiro de Geografia e Estatística; Hania Zlotnick of the Committee on Population and Demography, National Academy of Sciences; Thomas Merrick of Georgetown University; and Richard Irwin of the Population Division, U.S. Bureau of the Census; as well as to colleagues at other institutions, for data, assistance, and valuable comments provided during the preparation of this profile.

Users of this report are invited to send their comments to the Chief, International Demographic Data Center, Bureau of the Census, Washington, D.C. 20233.

Contents

	Page
Map	V
Highlights	1
Introduction	1
Sources and quality of data	1
Glossary	3

DETAILED TABLES

Table	
1. Estimates and projections of midyear population and period growth rates: 1950 to 1979	6
2. Estimated and projected population, by age and sex: September 1970 and midyear 1979	7
3. Estimated and projected vital rates: selected years, 1950 to 1979	8
4. Estimated infant mortality rates and life expectancies at birth, by sex: 1960 and 1974-75	9
5. Estimated life table values, by sex: 1974-75	10
6. Estimated and projected number of women of childbearing age: 1970, and 1975 to 1985	11
7. Estimated age-specific fertility rates and selected derived measures: 1950, 1960, 1970, 1972-73, and 1976-77	12
8. Women ages 15 to 49 years, by number of children ever born, average number of children ever born, and average number of children surviving: 1970 and 1976	13
9. Population ages 15 years and over, by marital status, age, and sex: 1970 and 1976	14
10. Legal age at marriage and age at which specified percent of the population is ever married, by sex: 1960, 1970, and 1976	15
11. Population ages 15 years and over, by literacy, broad age groups, and sex: 1960, 1970, and 1976	15
12. Population ages 5 to 19 years enrolled in school, by age and sex: 1970 and 1976	16
13. Population ages 15 years and over who have completed school, by broad age groups, sex, and school level: 1960 and 1970	17
14. Economically active population, by age and sex: 1960 and 1970	18
15. Distribution of labor force, by sex and industry: 1960 and 1970	19
16. Distribution of labor force, by sex and occupation: 1960 and 1970	20
17. Distribution of agricultural and nonagricultural workers, by status and sex: 1960, 1970, and 1976	21
18. Distribution of households, by number of persons: 1960, 1970, and 1976	22
19. Population, by urban and rural residence: 1960, 1970, and 1976	22
20. Population, by urban and rural residence and size of urban locality: 1960	23
21. State, territory, and federal district population, growth rates, and migration data: 1960 and 1970	24
22. Foreign-born population, by country of birth: 1970	25

APPENDIX

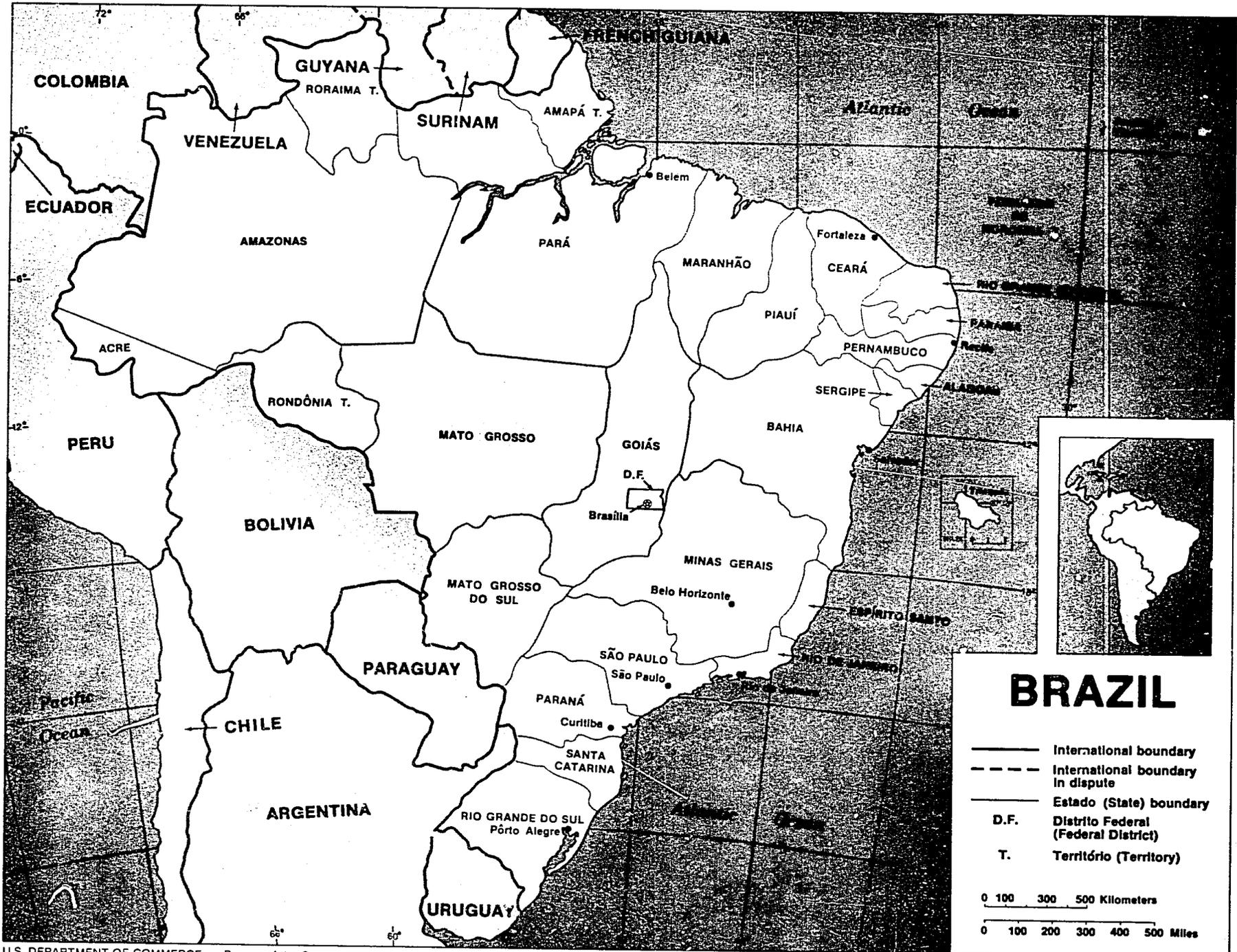
Technical notes	26
-----------------------	----

APPENDIX TABLES

Table	Page
A-1. Enumerated and adjusted census population, by age and sex: July 1950	30
A-2. Enumerated census population, by age and sex: September 1970	30
A-3. Estimated and projected total fertility rates and life expectancies at birth: selected periods, 1970 to 1979	31
A-4. Estimated and projected total and age-specific fertility rates: 1976-77 and 1979	32
A-5. Alternate estimates of total fertility rates from selected sources: selected periods, 1930 to 1977	32
A-6. Alternate estimates of crude birth rates from selected sources: selected periods, 1930 to 1970	33
A-7. Estimated and projected life expectancies at birth, by sex: selected periods, 1974-75 to 1979 ..	33
A-8. Alternate estimates of life expectancy at birth from selected sources: selected periods, 1930 to 1970	34
A-9. Women ages 15 to 49 years, by number of children ever born, average number of children ever born, and average number of children surviving: 1960	34
A-10. Population ages 15 years and over, by marital status, age, and sex: 1960	35
A-11. Number of acceptors of contraception in BEMFAM program, by method: selected years, 1966 to 1978	36
A-12. Percent of currently married women ages 15 to 44 years currently using contraception, by method, age, and residence for the states of São Paulo and Piauí	36
A-13. Economically active population, during the week of November 22 to 28, by age and sex: 1976	37
A-14. Economically active population, by age and sex: 1976	38
A-15. Regional population, growth rates, and migration data	39
A-16. Persons of foreign citizenship, by country: 1960	40
Major sources	41

Symbols Used in Tables

- Represents zero.
- NA Data not available.
- X Not applicable.
- Z Less than 500 or less than 0.05 percent.



Brazil

HIGHLIGHTS

Brazil has the largest population in Latin America with a projected midyear 1979 population of 119 million. In 1953, slightly more than a quarter century ago, Brazil had only half as many inhabitants. Brazil's rapid population growth rate has recently started to slow down as a consequence of a faster decline in fertility than mortality. Fertility is estimated to have started decreasing around 1965 and the population growth rate is calculated to have dropped from 2.9 percent in 1965 to 2.7 percent in 1970. Results from the 1976 and 1977 National Household Sample Surveys show a continuing decline in fertility and the growth rate. However, the decline in the growth rate in the future may not be as fast as the decline in fertility since mortality is also expected to fall. Mortality in Brazil is still high compared to other advanced countries of the area.

The age structure of the population is still young. However, due to the decline in fertility, those under age 15 comprised only 40 percent of the population in 1979 as compared to more than 43 percent in 1970.

Illiteracy is still high in Brazil, although it is declining. In 1970, 34 percent of the population ages 15 years and over were unable to read and write compared to less than 24 percent of the same age group in 1976. Younger generations have a higher proportion literate than older generations. The level of educational attainment also improved from 1960 to 1970. Sex differentials in educational attainment are also diminishing. Although males had higher educational attainment levels than females during the past, the differential has practically vanished among younger generations.

As Brazil entered into a process of rapid industrialization after 1960, the percent of the total labor force engaged in agriculture dropped from 55 to 45 percent during the period 1960 to 1970. By 1976 only 36 percent of the total labor force was engaged in agriculture.

The large cities of Brazil have experienced rapid population growth. São Paulo and Rio de Janeiro each has passed the mark of 7 million residents. In 1960, only 45 percent of the population lived in urban areas, however, by 1970, this percentage had increased to 56 percent.

INTRODUCTION

This profile of the population of Brazil contains tables of selected demographic information, including size of population, and estimates of fertility and mortality. Specifically, annual estimates of total population are shown beginning in

1950. An adjusted distribution of the population, by age and sex, is given for the census years 1950 and 1970, as well as for 1979. Projections of the number of women of child-bearing age are shown for each year from 1975 to 1985.

Fertility measures shown in the profile include crude birth rates, age-specific fertility rates, and gross and net reproduction rates. Mortality is shown in terms of crude death rates, life expectancy at birth, infant mortality rates, and other life table functions by age and sex.

Also presented is summary information on family planning, urban population, marital status, and some data from which past migration can be inferred. Other related items are included such as number and size of households; educational attainment; school enrollment; and labor force by industry, occupation, and status.

SOURCES AND QUALITY OF DATA

This profile was based primarily on data obtained from the September 1, 1940, July 1, 1950, September 1, 1960, and September 1, 1970 population censuses, the 1972, 1973, 1976, and 1977 National Household Sample Surveys (Pesquisa Nacional por Amostra de Domicílios) conducted by the Fundação Instituto Brasileiro de Geografia e Estatística, and the vital registration system.

Data received by July 1, 1980, were taken into consideration in preparing this profile. Since that time, Brazil conducted a Population Census in September 1980; preliminary results give a total enumerated population of about 115 to 118 million. Also, in the summer of 1980, Contraceptive Prevalence Surveys were conducted in the northeastern states of Bahia, Paraíba, Pernambuco, and Rio Grande de Norte. Results from these surveys should be available in 1981. Data from the 1978 and 1979 National Household Sample Surveys (PNAD's) have not yet become available.

Examination of the age-sex distribution from the complete enumeration of the 1940, 1950, and 1970 censuses and comparison of various indices implies that age reporting has improved significantly from census to census. However, the various indices computed for the 1960 census are not consistent with the results from other years. This inconsistency may be due to the fact that the 1960 tabulations are based on a sample of the census returns (which may not be representative of the total country) rather than age misreporting being worse in this census.

By applying analytical techniques to the age-sex data of the 1950 and 1970 censuses, the census distributions were

adjusted for possible age misreporting and net coverage error (see the discussion on census evaluation in the Technical Notes in the appendix, table 2 for the 1970 adjusted census population, and appendix table A-1 for the 1950 adjusted census population). The estimates of net (percent) underenumeration for both the total population and the population under age 10, by sex, in 1950 and 1970 are shown below:

Sex and age	1950	1970
Both sexes		
All ages	2.8	3.1
Under age 10	4.7	7.2
Male		
All ages	2.0	3.2
Under age 10	4.2	7.8
Female		
All ages	3.6	3.0
Under age 10	5.1	6.5

The age-sex distribution of the 1960 population census was not used in the analytical process to evaluate the 1950 and 1970 censuses because of its known deficiencies. The final 1960 census results were delayed and by the time of publication in the mid-1970's only questionnaires from a 25-percent sample and tabulations for some of the states were available. Therefore, the final results were a mixture of these two data sources. However, based on the method used to evaluate the 1950 and 1970 censuses the implied underenumeration of the 1960 census is 2.6 percent. See the discussion on census evaluation in the Technical Notes in the appendix.

While Brazil has had a compulsory vital registration system since 1889, it was never strictly enforced, and registration is not complete. Until recent years the Ministry of Justice was responsible for tabulating the vital registration, which had been of poor quality. In 1971, the Brazilian Institute of Geography and Statistics was charged with the official task of compiling vital statistics and the tabulation of vital statistics has been improving in recent years. See the discussions on fertility and mortality in the Technical Notes in the appendix.

National Household Sample Surveys (PNAD) were conducted in 1972, 1973, and each year from 1976 to 1979 by the Fundação Instituto Brasileiro de Geografia e Estatística (IBGE). These were single-round retrospective surveys collecting demographic, social, and economic data. A larger survey, the National Survey of Household Expenditure (ENDEF), was also conducted by IBGE in 1974-75. Information collected from this survey on food consumption and nutrition provides the potential for research into the relationship between nutrition and child survival. Results from the 1978 and 1979 PNAD's, as well as the 1974-75 ENDEF were

not available at the time this profile was prepared. It should be noted that the available results from the PNAD's may not be representative of the country as a whole, since all of Region VII (see appendix table A-15 for states and territories in this region) was excluded from the 1972 PNAD and the rural areas of this region were excluded in the 1973, 1976, and 1977 PNAD's. Brazil is currently negotiating with the World Fertility Organization in London to conduct the first comprehensive national survey specifically designed to investigate various dimensions of fertility behavior.

The information on family planning in this profile is based on data from the Sociedade Civil de Bem-Estar Familiar do Brasil (BEMFAM) and results from the Contraceptive Prevalence Surveys conducted in 1978 in the state of São Paulo and in 1979 in the state of Piauí (see appendix tables A-11 and A-12). Unfortunately, the available data on acceptors and users of contraceptives from these two sources relate to only portions of Brazil and therefore are not necessarily representative of the country as a whole. BEMFAM operates two different programs, clinical and community-based distribution. As of 1978 there were 77 clinics, all of which were located in the states bordering the east coast of Brazil. The community-based distribution program is located in the northeastern states of Alagoas, Paraíba, Pernambuco, Piauí, and Rio Grande do Norte, and the southeastern state of Paraná. Data from the Contraceptive Prevalence Surveys are available for only two states; the southeastern state of São Paulo, the most developed state in Brazil, and the northeastern state of Piauí, one of the least developed. Four more Contraceptive Prevalence Surveys are scheduled to be conducted in the summer of 1980 in the northeastern states of Bahia, Paraíba, Pernambuco, and Rio Grande do Norte. When results from these surveys become available we should have a better perspective on contraceptive use in Brazil, particularly in the northeastern section of the country.

Population data shown in tables 1, 2, and 6, in sections of the Technical Notes of the appendix, and in appendix table A-1 are adjusted figures based on adjusted 1950 and/or 1970 census populations. Other population figures in the profile are unadjusted numbers as reported in the given sources.

The user should recognize that in many instances, although the estimates are the best that can be prepared on the basis of available information, they are only tentative and new observations may well lead to different conclusions. The user is urged to consider all data in the context of the source notes which describe how the figures were derived. Complete documentation, including worksheets and other notes on all sources considered, is maintained in the International Demographic Data Center. The user who has special interest in the data is invited to correspond with the International Demographic Data Center for further details as well as to offer comments.

Glossary

(Following are definitions of terms as used in the tables and the notes of the reports in the profile series)

Age pattern of fertility. The percent distribution of a set of age-specific fertility rates. It expresses the relative contribution of each age group to total fertility.

Age-sex-specific death rate. The average annual number of deaths to a given sex in a given age group during a specified period of time per 1,000 persons in the same sex and age group (based on midperiod population).

Age-specific fertility rate. The average annual number of births to women in a given age group during a specified period of time per 1,000 women in the same age group (based on midperiod population).

Age-specific marital fertility rate. The average annual number of births to married women in a given age group during a specified period of time per 1,000 married women in the same age group (based on midperiod population).

Arretx fertility technique. A method of estimating age-specific fertility rates for an intercensal period based on the observed change in the number of children ever born to each 5-year age cohort of women during the period.

Arriaga fertility technique. A method of estimating age-specific fertility rates based on the observed change in the number of children ever born by age of mother, for two or more points in time.

Birth rate. The average annual number of births during a specified period of time per 1,000 persons (based on midperiod population). Also called crude birth rate.

Brass fertility technique. A method of adjusting age-specific fertility rates based on an assumed relationship between these rates and the average number of children ever born per woman in 5-year age groups.

Brass growth balance equation method. A procedure for estimating the completeness of death registration based on the relationship between the age-sex distribution of both registered deaths and the population.

Brass mortality technique. A method of estimating the level of infant and child mortality based on information on

children ever born and children surviving provided by women in 5-year age groups, and on an assumed relationship between certain life table values and the proportion of children ever born who are still surviving.

Child(hood) mortality. Mortality during the early childhood years, sometimes up to age 10 or 15.

Child survivorship techniques. Various techniques used to estimate the level of infant and child mortality based on data on children ever born and children surviving (e.g., see mortality techniques developed by Brass, Feeney, Sullivan, and Trussell).

Children ever born. The number of live births to a woman, regardless of whether the children are currently living or dead, or living with or away from the mother. At times, data may be collected or reported only for women of a specific group, e.g., ever-married women.

Children surviving. The number of children ever born to a woman who are still alive at the time of the inquiry, regardless of whether the children are currently living with or away from the mother. At times, data may be collected or reported only for women of a specific group, e.g., ever-married women.

Coale-Demeny regional model life tables. See model life table.

Coale-Trussell model fertility schedules. A set of model age-specific fertility schedules that can be used to estimate patterns of fertility.

Cohort. A group of individuals who experience the same event in the same time period, such as birth or marriage in the same year.

Component method. A method of estimating or projecting a population in which separate components of population change (fertility, mortality, and migration) are used. This method may be used to derive the total population or population by specific characteristics (e.g., age and sex).

Crude birth rate. See birth rate.

Crude death rate. See death rate.

Death rate. The average annual number of deaths during a specified period of time per 1,000 persons (based on mid-period population). Also called crude death rate.

De facto population. A concept under which individuals are attributed to the geographic area where they were actually located at the time of the enumeration.

De jure population. A concept under which individuals are attributed to a geographic area by virtue of their usual place of residence, whether or not they were actually located in that area at the time of the enumeration.

Empirical life table. A life table derived from the observed frequency of death in an actual population.

Ever-married women. All women who are now, or who have been, married. The category includes the currently married, those living in consensual unions, and the widowed, divorced, or separated.

Feeney mortality technique. A method of estimating the trend in infant mortality based on information on children ever born and children surviving provided by women in 5-year age groups, and on assumed relationships between certain life table values and the proportion of children ever born who are still surviving.

Gross reproduction rate. The average number of daughters born per woman in a group of women passing through the childbearing years and experiencing a given set of age-specific fertility rates. This rate implicitly assumes that all the women live to the end of the childbearing years. (See also net reproduction rate.)

Growth rate. The average annual percent change in the population calculated assuming exponential growth. This change results from a surplus (or deficit) of births over deaths and the balance of migrants entering and leaving the country.

Hyphen versus "to" in dates. In this report, a period of years joined by a hyphen, e.g., 1960-64, is used to indicate that the data shown for this period refer to an average for the entire period, and generally is used when data for individual years are not available or data for individual years have been averaged to smooth annual fluctuations. A period of years joined by the word "to", e.g., 1960 to 1964, indicates that data are available for each individual year included within the period.

Incomplete registration. A term used to indicate that the coverage of registered data is less than 90 percent of all vital events.

Infant mortality rate. A measure of the frequency of death between birth and age 1, during a specified period of time. Usually calculated as the number of deaths to infants under 1 year of age per 1,000 live births occurring in the same calendar year.

Life expectancy at birth. The average number of years lived by a birth cohort, exposed to a given set of age-specific death rates.

Life table. A statistical table representing the life history of a hypothetical cohort exposed to a given set of age-specific death rates.

Life table central death rates. Age-specific death rates based on a life table population.

Logit mortality technique. A method of adjusting a specific function in an empirical life table based on an assumed relationship with the same function in a standard (model) life table.

Median age of childbearing. The midpoint age that separates the younger half of all women giving birth in a given year from the older half.

Model life table. A life table not derived from the observed mortality of an actual population. Well-known sets of model life tables include United Nations model life tables and Coale-Demeny regional model life tables.

Mortara fertility technique. A method of estimating age-specific fertility rates based on the difference between the average number of children ever born per woman at each consecutive age or age group.

Net census error. The combination of net underenumeration (or net overenumeration—see net coverage error) and net age misreporting.

Net coverage error. The balance between the number of persons not counted in a census or survey and those improperly counted, expressed as a percentage of the adjusted population. An excess of persons not counted is referred to as net underenumeration, an excess of persons improperly counted as net overenumeration.

Net emigration rate. See net migration rate.

Net immigration rate. See net migration rate.

Net migration rate. The balance between the number of persons entering and leaving a country during a specified period of time per 1,000 persons (based on midperiod population). An excess of persons entering the country is referred to as net immigration, an excess of persons leaving the country as net emigration.

Net reproduction rate. A refinement of the gross reproduction rate that allows for mortality of women from birth to the end of their reproductive years.

New acceptors. Persons accepting methods of contraception from family planning systems, including clients accepting contraceptive services for the first time; clients changing to another service organization; clients changing to a different contraceptive method; and clients resuming acceptance of contraceptive services after a lapse of 1 year or more.

Overenumeration. An enumeration of the population which erroneously counts more persons than actually belong to it.

Projections. A term used to describe population data and vital rates for years since the latest reliable population census figures, complete vital registration data, or sample survey data.

Quasi-stable population analysis. A method of demographic analysis based on a model population which has not been subjected to migration, where fertility has remained constant over a long period of time, and where mortality has been declining (cf. stable population analysis).

Rate of natural increase. The average annual percent change in the population during a specified period of time resulting from a surplus (or deficit) of births over deaths. The natural increase of the population does not include an allowance for net migration (see growth rate).

Registration. A method of continuously recording information on vital events as they occur, through either a civil or a special recording system.

Retrospective question. A question asked in a census or survey which attempts to obtain information about past actions or events rather than about the present status of the respondent or his/her family.

Reverse survival technique. A backward projection (sometimes called "rejuvenation") of the population by age and sex in order to estimate the size and distribution of the population in the past, using age-sex-specific survival ratios for the projection period. Reverse survival may also be used to estimate the number of births in the past.

Sex ratio at birth. The number of male births for each female birth during a specified period of time.

Stable population analysis. A method of demographic analysis based on a model population which has not been subject to migration, and where fertility and mortality have remained constant over a long period of time.

Sullivan mortality technique. A modification of the Brass mortality technique for estimating the level of infant and child mortality. Results from a regression analysis of empirically based fertility and mortality schedules are incorporated into the procedure of converting the proportion of children ever born who are still surviving per woman in given 5-year age groups into precise life table measures.

Survival ratios. The proportion of persons in a given age group who will be alive a specified number of years later.

Symbols. A dash (—) represents zero. The symbol "NA" means data not available, and "X" means not applicable. The symbol "Z" indicates that the value is less than 500 or less than 0.05 percent.

Total fertility rate. The average number of children that would be born per woman if all women lived to the end of their childbearing years and bore children according to a given set of age-specific fertility rates.

Trussell mortality technique. A refinement of the Brass and Sullivan mortality techniques for estimating the level of infant and child mortality. Additional independent variables are included in the regression analysis and Coale-Trussell model fertility schedules are substituted in place of empirical fertility schedules.

Underenumeration. An enumeration of the population which erroneously counts fewer persons than actually belong to it.

Underregistration. The failure to record all vital events which occur during a specified time period in a given population.

Table 1. Estimates and Projections of Midyear Population and Period Growth Rates: 1950 to 1979

(Numbers in thousands. Growth rates, in percent, are from midyear to midyear)

Year or period	Number or percent	Year or period	Number or percent	Year or period	Number or percent
POPULATION		POPULATION--Con.		POPULATION--Con.	
Estimates		Estimates--Con.		Projections	
1950.....	53,443	1963.....	78,317	1976.....	111,094
1951.....	54,996	1964.....	80,667	1977.....	113,748
1952.....	56,603	1965.....	83,093	1978.....	116,441
1953.....	58,266	1966.....	85,557	1979.....	119,175
1954.....	59,989	1967.....	88,050	AVERAGE ANNUAL GROWTH RATE ¹	
1955.....	61,774	1968.....	90,569	1950-55.....	2.9
1956.....	63,632	1969.....	93,114	1955-60.....	3.0
1957.....	65,551	1970.....	95,684	1960-65.....	3.0
1958.....	67,533	1971.....	98,241	1965-70.....	2.8
1959.....	69,580	1972.....	100,797	1970-75.....	2.5
1960.....	71,695	1973.....	103,340	1975-79.....	2.4
1961.....	73,833	1974.....	105,889		
1962.....	76,039	1975.....	108,474		

¹The average annual rate of growth, r , is computed by the exponential formula,

$$r = \frac{1}{n} \ln \frac{p^{t+n}}{p^t}$$

where \ln indicates the natural logarithm, p^{t+n} = the population at the end of the period, p^t = the population at the beginning of the period, and n = time (number of years in the period).

Source: The 1950 to 1970 estimates are based on the results of the 1950 and 1970 population censuses, adjusted for estimated net underenumeration of 2.8 percent and 3.1 percent, respectively, and estimated fertility, mortality, and migration trends for the period. The 1960 population census has an implied underenumeration of 2.6 percent based on the estimated population for September 1, 1960. See the Technical Notes in the appendix for details on the adjustment of the censuses.

The 1971 to 1975 population figures were estimated by the component method based on the 1970 census population, by age and sex, moved to midyear. The midyear 1970 population was annually moved forward to 1975 using estimated age-specific fertility rates for 1970, 1972-73 (low series), and 1976-77 (middle series) and age-sex-specific death rates for 1970 and 1974-75 (see tables 5 and 7 and the Technical Notes in the appendix). Net international migration was assumed to be nil from 1970 to 1975.

The 1976 to 1979 population figures were projected by the component method based on the 1975 mid-year population, by age and sex. Fertility, mortality, and migration assumptions for 1975 to 1979 were as follows:

Fertility: Total and age-specific fertility rates for 1975 were linearly interpolated between the 1972-73 low series and the 1976-77 middle series estimates (see table 7). The 1976-77 total fertility rate of 4.40 was assumed to decline to 4.15 in 1979 (see appendix table A-4 for age-specific fertility rates). For further details, see the discussion on fertility in the Technical Notes in the appendix.

Mortality: Life expectancy at birth was assumed to increase from 58 to 60 years for males and from 63 to 65 years for females from 1975 to 1979 (see table 4 and appendix table A-7 for life expectancies at birth). Also, see the discussion on mortality in the Technical Notes in the appendix).

Migration: Net international migration was assumed to be nil.

Table 2. Estimated and Projected Population, by Age and Sex: September 1970 and Midyear 1979

(Numbers in thousands. Figures may not add to totals due to rounding)

Age	Adjusted census, September 1970 ¹			Projected population, midyear 1979		
	Both sexes	Male	Female	Both sexes	Male	Female
POPULATION						
All ages.....	96,137	47,866	48,271	119,175	59,470	59,704
0 to 4 years.....	15,627	7,955	7,672	16,624	8,473	8,151
5 to 9 years.....	13,812	7,013	6,799	15,670	7,978	7,692
10 to 14 years.....	11,877	6,014	5,863	14,821	7,533	7,287
15 to 19 years.....	10,136	5,115	5,021	13,236	6,708	6,528
20 to 24 years.....	8,425	4,231	4,193	11,300	5,702	5,598
25 to 29 years.....	6,898	3,445	3,453	9,552	4,793	4,759
30 to 34 years.....	5,972	2,965	3,007	7,840	3,909	3,932
35 to 39 years.....	5,120	2,526	2,593	6,409	3,172	3,236
40 to 44 years.....	4,430	2,151	2,279	5,508	2,705	2,803
45 to 49 years.....	3,705	1,788	1,917	4,656	2,261	2,394
50 to 54 years.....	2,952	1,411	1,540	3,940	1,876	2,064
55 to 59 years.....	2,378	1,123	1,254	3,167	1,491	1,676
60 to 64 years.....	1,860	864	996	2,400	1,109	1,291
65 to 69 years.....	1,339	605	734	1,797	811	986
70 years and over.....	1,607	658	949	2,256	948	1,308
PERCENT						
All ages.....	100.0	100.0	100.0	100.0	100.0	100.0
0 to 4 years.....	16.3	16.6	15.9	13.9	14.2	13.7
5 to 9 years.....	14.4	14.7	14.1	13.1	13.4	12.9
10 to 14 years.....	12.4	12.6	12.1	12.4	12.7	12.2
15 to 19 years.....	10.5	10.7	10.4	11.1	11.3	10.9
20 to 24 years.....	8.8	8.8	8.7	9.5	9.6	9.4
25 to 29 years.....	7.2	7.2	7.2	8.0	8.1	8.0
30 to 34 years.....	6.2	6.2	6.2	6.6	6.6	6.6
35 to 39 years.....	5.3	5.3	5.4	5.4	5.3	5.4
40 to 44 years.....	4.6	4.5	4.7	4.6	4.5	4.7
45 to 49 years.....	3.9	3.7	4.0	3.9	3.8	4.0
50 to 54 years.....	3.1	2.9	3.2	3.3	3.2	3.5
55 to 59 years.....	2.5	2.3	2.6	2.7	2.5	2.8
60 to 64 years.....	1.9	1.8	2.1	2.0	1.9	2.2
65 to 69 years.....	1.4	1.3	1.5	1.5	1.4	1.7
70 years and over.....	1.7	1.4	2.0	1.9	1.6	2.2

¹For unadjusted census figures see appendix table A-2.

Source: See table 1 and the discussion on census evaluation in the Technical Notes in the appendix.

Table 3. Estimated and Projected Vital Rates: Selected Periods, 1950 to 1979

Period or year	Births per 1,000 population	Deaths per 1,000 population	Rate of natural increase (percent)	Growth rate (percent)
ESTIMATED				
1950.....	44	16	2.8	2.9
1960.....	43	14	2.9	2.9
1970.....	37	11	2.7	2.7
1972-73.....	35-36	10	2.5-2.6	2.5-2.6
1974-75.....	33-34	9	2.4-2.5	2.4-2.5
PROJECTED				
1976-77.....	31-33	9	2.3-2.4	2.3-2.4
1979.....	30-33	8	2.2-2.4	2.2-2.4

Source: 1950, 1960, and 1970 -- Crude birth and death rates were estimated at the U.S. Bureau of the Census based on estimated midyear populations, by age and sex, estimated age-specific fertility rates (see table 7), and age-sex-specific death rates (see the mortality section in the Technical Notes in the appendix).

1972-73 and 1974-75 -- The estimated range in vital rates is implied by three alternate component population projections from 1970 to 1975 based on the adjusted 1970 census population, two estimates of the fertility trend from 1970 to 1972-73, and three estimates of fertility from 1972-73 to 1975. A single estimate of the trend of mortality was used and net international migration was considered insignificant during the 1970 to 1975 period. The estimates of fertility and mortality are shown in appendix table A-3.

1976-77 and 1979 -- The range in vital rates is implied by three alternate component population projections for the period 1975 to 1979 based on the 1975 estimated populations derived as discussed above. The assumptions of fertility and mortality are shown in appendix table A-3. Net international migration was considered insignificant during the 1975 to 1979 period. A crude birth rate of 31, a crude death rate of 8, and a growth rate of 2.3 for 1979 are consistent with the population series shown in table 1 (the middle projection series).

For all years, rates of natural increase were calculated from unrounded crude birth and death rates. They may not equal the difference between the crude birth and death rates shown due to rounding. The growth rate for 1950 includes an estimate of net international immigration of 0.7 per 1,000 population, based on the foreign-born population reported in the 1950 and 1960 censuses. The growth rates for other years are the same as the rates of natural increase indicating that net international migration was assumed to be insignificant for these years.

For further information on the estimates and projections for the period 1970 to 1979, see table 7, appendix table A-4, and the Technical Notes in the appendix.

Table 4. Estimated Infant Mortality Rates and Life Expectancies at Birth, by Sex: 1960 and 1974-75

Period	Infant deaths per 1,000 live births			Life expectancy at birth (years)		
	Both sexes	Male	Female	Both sexes	Male	Female
1960.....	116	124	107	53	50	55
1974-75.....	84	89	79	60	58	63

Note: Projected life expectancies at birth for 1979 are given in appendix table A-7.

Source: Infant mortality rates for both sexes for 1960 and 1974-75 were estimated by applying the Brass, Sullivan, and Trussell mortality techniques to data from the 1940, 1950, and 1970 censuses and the 1972, 1973, and 1976 National Household Sample Surveys (see discussion on mortality in the Technical Notes in the appendix). The rates by sex were estimated using the ratio of male to female registered infant deaths for the respective years weighted by an assumed sex ratio at birth of 1.05.

Life expectancies at birth for 1960 and 1974-75 were derived from empirical life tables generated at the U.S. Bureau of the Census. The life tables were based on registered deaths adjusted for under-registration, estimated infant mortality rates, the 1960 census population, and the population from the 1976 National Household Sample Survey. Life expectancies for both sexes assume a sex ratio at birth of 1.05.

See the mortality section in the Technical Notes in the appendix for further discussion of mortality estimates.

Table 5. Estimated Life Table Values, by Sex: 1974-75

Sex and age interval (x to x+n)	$1,000 \frac{q}{n} x$	l_x	$\frac{d}{n} x$	L_x	$1,000 \frac{m}{n} x$	${}^o e_x$
MALE						
0 to 1 year.....	89.0	100,000	8,899	93,756	94.9	58.1
1 to 5 years.....	30.9	91,101	2,814	356,729	7.9	62.7
5 to 10 years.....	6.8	88,287	599	439,936	1.4	60.7
10 to 15 years.....	5.1	87,687	445	437,323	1.0	56.1
15 to 20 years.....	8.7	87,242	756	434,318	1.7	51.4
20 to 25 years.....	13.6	86,485	1,180	429,478	2.8	46.8
25 to 30 years.....	17.3	85,306	1,472	422,848	3.5	42.4
30 to 35 years.....	22.8	83,833	1,907	414,399	4.6	38.1
35 to 40 years.....	29.9	81,926	2,446	403,515	6.1	33.9
40 to 45 years.....	38.3	79,480	3,044	389,789	7.8	29.9
45 to 50 years.....	51.1	76,436	3,907	372,410	10.5	26.0
50 to 55 years.....	66.5	72,528	4,824	350,582	13.8	22.2
55 to 60 years.....	95.1	67,704	6,439	322,423	20.0	18.6
60 to 65 years.....	134.9	61,265	8,266	285,660	28.9	15.3
65 to 70 years.....	188.9	52,999	10,011	239,968	41.7	12.4
70 to 75 years.....	264.4	42,988	11,368	186,520	61.0	9.6
75 to 80 years.....	370.2	31,620	11,707	128,833	90.9	7.2
80 years and over.....	1,000.0	19,913	19,913	98,961	201.2	5.0
FEMALE						
0 to 1 year.....	79.0	100,000	7,901	94,367	83.7	63.0
1 to 5 years.....	30.3	92,099	2,793	360,780	7.7	67.4
5 to 10 years.....	5.9	89,306	524	445,218	1.2	65.4
10 to 15 years.....	3.9	88,781	346	443,041	0.8	60.8
15 to 20 years.....	5.8	88,435	515	440,889	1.2	56.0
20 to 25 years.....	8.1	87,920	710	437,828	1.6	51.3
25 to 30 years.....	10.5	87,211	912	433,773	2.1	46.7
30 to 35 years.....	14.8	86,299	1,276	428,302	3.0	42.2
35 to 40 years.....	19.5	85,022	1,655	420,975	3.9	37.8
40 to 45 years.....	25.2	83,368	2,100	411,588	5.1	33.5
45 to 50 years.....	33.2	81,268	2,696	399,599	6.8	29.3
50 to 55 years.....	45.1	78,572	3,541	384,006	9.2	25.2
55 to 60 years.....	65.0	75,031	4,875	362,964	13.4	21.3
60 to 65 years.....	97.7	70,155	6,856	333,637	20.6	17.6
65 to 70 years.....	140.1	63,300	8,867	294,330	30.1	14.2
70 to 75 years.....	200.8	54,433	10,930	244,837	44.6	11.1
75 to 80 years.....	287.8	43,502	12,522	186,207	67.2	8.3
80 years and over.....	1,000.0	30,980	30,980	175,388	176.6	5.7

Note: x = Exact age at beginning of age interval, in years.

n = Length of age interval, in years.

$1,000 \frac{q}{n} x$ = Number of deaths occurring between age x and age x+n per 1,000

persons alive at exact age x $\left(\frac{\frac{d}{n} x}{l_x} \times 1,000 \right)$.

l_x = Number of persons living at exact age x.

$\frac{d}{n} x$ = Number of deaths occurring between age x and age x+n.

L_x = Number of persons living between age x and age x+n.

$1,000 \frac{m}{n} x$ = Number of deaths occurring between age x and age x+n per 1,000

persons living between age x and age x+n $\left(\frac{\frac{d}{n} x}{L_x} \times 1,000 \right)$.

= Average number of years of life remaining for those alive at exact age x.

Source: Calculated at the U.S. Bureau of the Census. See table 4 and the Technical Notes in the appendix.

Table 6. Estimated and Projected Number of Women of Childbearing Age: 1970, and 1975 to 1985

(Midyear population in thousands. Figures may not add to totals due to rounding)

Year	All women, 15 to 49 years	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44 years	45 to 49 years
ESTIMATED								
1970.....	22,357	4,997	4,173	3,437	2,993	2,581	2,268	1,908
1975.....	25,930	5,803	4,958	4,130	3,388	2,936	2,518	2,197
PROJECTED								
1976.....	26,722	5,981	5,117	4,284	3,505	3,007	2,582	2,247
1977.....	27,540	6,164	5,274	4,441	3,637	3,077	2,652	2,295
1978.....	28,383	6,348	5,433	4,599	3,781	3,151	2,727	2,343
1979.....	29,249	6,528	5,598	4,759	3,932	3,236	2,803	2,394
1980.....	30,136	6,698	5,769	4,919	4,085	3,337	2,877	2,451
1981.....	31,042	6,857	5,948	5,079	4,240	3,455	2,949	2,516
1982.....	31,963	7,003	6,132	5,237	4,397	3,587	3,020	2,587
1983.....	32,897	7,138	6,317	5,397	4,556	3,731	3,095	2,662
1984.....	33,840	7,264	6,497	5,562	4,716	3,882	3,181	2,738
1985.....	34,792	7,383	6,668	5,734	4,877	4,036	3,282	2,813

Source:

1970 - Based on the adjusted 1970 census, by age and sex, moved to midyear.

1975 - Estimated by the component method based on the adjusted 1970 census population, by age and sex, moved to midyear, and estimated mortality from 1970 to 1975.

1976 to 1985 - Projected based on the estimated 1975 population, by age and sex. Assumptions were as follows:

Fertility: Assumptions regarding fertility have no effect on the number of women in these ages.

Mortality: Life expectancy at birth for women increased from 60 in 1970 to 63 years in 1975 to 68 years in 1985.

Migration: Net international migration was nil during the projection period.

Table 7. Estimated Age-Specific Fertility Rates and Selected Derived Measures: 1950, 1960, 1970, 1972-73, and 1976-77

(For meaning of symbols, see text)

Age	1950	1960	1970	1972-73		1976-77		
				Upper	Lower	Upper	Middle	Lower
Age-specific fertility rate (per 1,000 women)								
15 to 19 years.....	95	92	82	61	60	61	59	57
20 to 24 years.....	244	252	233	224	218	206	199	192
25 to 29 years.....	273	267	261	262	254	233	225	217
30 to 34 years.....	236	226	214	216	210	196	189	183
35 to 39 years.....	186	197	157	152	148	137	132	128
40 to 44 years.....	113	131	89	76	74	64	62	60
45 to 49 years.....	39	48	29	16	16	14	14	14
DERIVED MEASURES								
Total fertility rate per woman.....	5.93	6.07	5.33	5.04	4.90	4.55	4.40	4.25
Gross reproduction rate per woman.....	2.89	2.96	2.60	2.46	2.39	2.22	2.15	2.08
Net reproduction rate per woman.....	2.18	2.34	2.16	(NA)	(NA)	(NA)	(NA)	(NA)
Sex ratio at birth...	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05

Note: See appendix table A-4 for 1979 projected age-specific fertility rates.

Source: The estimates for 1950, 1960, and 1970 were derived by applying Arriaga's fertility estimation method (Arriaga and Anderson, 1976) to estimated children-ever-born data, by age of mother, for 1950 and 1960 (see the discussion on fertility in the Technical Notes in the appendix) and children-ever-born data, by age of mother, from the 1970 census (Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1973, table 31).

The upper and lower bound estimates of total and age-specific fertility rates for 1972-73 were derived by applying the Brass fertility technique to data from the 1973 National Household Sample Survey (Brazil Fundação Instituto Brasileiro de Geografia e Estatística, no date b). The upper, middle, and lower series estimates of total and age-specific fertility rates for 1976-77 were derived by applying the Brass fertility technique to data from the 1976 and 1977 National Household Sample Surveys (Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1978a, table 12 and no date c). See the discussion on fertility in the Technical Notes in the appendix for details.

The gross reproduction rates were based on the total fertility rates and the sex ratios at birth.

The 1950, 1960, and 1970 net reproduction rates were based on the 1950, 1960, and 1970 estimated age-specific fertility rates, the sex ratios at birth, and L_x values from estimated 1950, 1960, and 1970 female life tables (see discussion of mortality in the Technical Notes in the appendix).

The sex ratios at birth were assumed to be 1.05 (United Nations, 1967, p. 23).

Table 8. Women Ages 15 to 49 Years, by Number of Children Ever Born, Average Number of Children Ever Born, and Average Number of Children Surviving: 1970 and 1976

(Numbers in thousands. Figures may not add to totals due to rounding. For meaning of symbols, see text)

Age	Total	Number of children ever born							Average number of children ever born per woman	Average number of children surviving per woman
		0	1	2	3	4	5	6 or more		
1970¹										
All women, 15 to 49 years.....	22,259	9,761	1,960	2,184	1,846	1,458	1,160	3,890	2.6	2.1
15 to 19 years.....	5,306	4,888	271	104	30	8	3	2	0.1	0.1
20 to 24 years.....	4,309	2,512	624	530	328	173	79	63	1.0	0.8
25 to 29 years.....	3,264	966	388	507	446	351	253	352	2.4	2.1
30 to 34 years.....	2,862	513	231	373	372	323	280	771	3.8	3.2
35 to 39 years.....	2,571	353	172	279	287	258	231	991	4.8	4.0
40 to 44 years.....	2,210	296	151	223	221	198	178	942	5.3	4.3
45 to 49 years.....	1,737	234	124	168	162	146	134	769	5.5	4.3
1976²										
All women, 15 to 49 years.....	26,471	11,457	2,800	2,925	2,266	2,948		4,075	2.4	2.0
15 to 19 years.....	6,217	5,699	365	118	26	8		(2)	0.1	0.1
20 to 24 years.....	5,188	3,065	938	619	328	203		34	0.8	0.7
25 to 29 years.....	4,090	1,284	654	731	535	591		295	2.0	1.8
30 to 34 years.....	3,244	561	316	540	468	664		695	3.4	3.0
35 to 39 years.....	2,995	365	204	387	405	608		1,027	4.5	3.9
40 to 44 years.....	2,576	261	182	297	287	485		1,064	5.2	4.3
45 to 49 years.....	2,162	221	142	233	217	389		960	5.6	4.6

¹Figures are based on data from a 25-percent sample of the 1970 census returns inflated to national totals. Excludes 74,767 women of unknown age of which 34,297 had one or more children.

²Figures are based on data from the 1976 National Household Sample Survey inflated to national totals. Excludes 331,208 women of unknown age of which 34,651 had one or more children. Also excludes the rural areas of region VII (see appendix table A-15 for states and territories in this region).

Note: See appendix table A-9 for data on children ever born from the 1960 census.

Source: Data are from the 1970 census and the 1976 National Household Sample Survey as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1973, tables 28 and 31; and 1978a, tables 12 and 13; respectively.

Table 9. Population Ages 15 Years and Over, by Marital Status, Age, and Sex: 1970 and 1976

(Population in thousands. Figures may not add to totals due to rounding. For meaning of symbols, see text)

Year, sex, and age	Population						Percent					
	Total	Single	Legally married	Consensually married	Widowed	Divorced or separated	Total	Single	Legally married	Consensually married	Widowed	Divorced or separated
1970¹												
MALE												
Total, 15 years and over.....	26,534	10,577	13,928	1,024	563	441	100.0	39.9	52.5	3.9	2.1	1.7
15 to 19 years.....	5,013	4,938	57	12	1	5	100.0	98.5	1.1	0.2	(2)	0.1
20 to 24 years.....	4,087	3,066	893	96	4	27	100.0	75.0	21.9	2.4	0.1	0.7
25 to 29 years.....	3,136	1,162	1,785	138	8	42	100.0	37.1	56.9	4.4	0.3	1.3
30 to 34 years.....	2,812	513	2,089	146	14	49	100.0	18.2	74.3	5.2	0.5	1.8
35 to 39 years.....	2,479	289	1,980	140	20	49	100.0	11.6	79.9	5.7	0.8	2.0
40 to 44 years.....	2,263	199	1,847	130	33	54	100.0	8.8	81.6	5.8	1.4	2.4
45 to 49 years.....	1,785	125	1,472	102	39	48	100.0	7.0	82.4	5.7	2.2	2.7
50 to 54 years.....	1,482	95	1,204	85	53	45	100.0	6.4	81.2	5.7	3.6	3.0
55 to 59 years.....	1,168	66	942	63	59	38	100.0	5.7	80.6	5.4	5.0	3.3
60 years and over.....	2,309	124	1,658	111	333	83	100.0	5.4	71.8	4.8	14.4	3.6
FEMALE												
Total, 15 years and over.....	27,285	9,143	13,827	1,047	2,332	936	100.0	33.5	50.7	3.8	8.5	3.4
15 to 19 years.....	5,305	4,637	562	74	3	29	100.0	87.4	10.6	1.4	0.1	0.6
20 to 24 years.....	4,307	2,189	1,850	168	15	86	100.0	50.8	43.0	3.9	0.3	2.0
25 to 29 years.....	3,262	808	2,151	175	30	97	100.0	24.8	65.9	5.4	0.9	3.0
30 to 34 years.....	2,860	422	2,106	163	59	110	100.0	14.8	73.7	5.7	2.1	3.9
35 to 39 years.....	2,569	277	1,934	150	95	114	100.0	10.8	75.3	5.8	3.7	4.4
40 to 44 years.....	2,208	214	1,605	114	157	119	100.0	9.7	72.7	5.2	7.1	5.4
45 to 49 years.....	1,736	152	1,211	78	194	101	100.0	8.8	69.8	4.5	11.2	5.8
50 to 54 years.....	1,450	129	912	55	265	89	100.0	8.9	62.9	3.8	18.3	6.1
55 to 59 years.....	1,142	95	657	33	287	69	100.0	8.3	57.5	2.9	25.2	6.1
60 years and over.....	2,446	221	840	37	1,227	121	100.0	9.0	34.3	1.5	50.2	5.0
1976²												
MALE												
Total, 15 years and over.....	31,490	12,207	16,561	1,681	599	441	100.0	38.8	52.6	5.3	1.9	1.4
15 to 19 years.....	5,938	5,844	68	20	1	6	100.0	98.4	1.1	0.3	(2)	0.1
20 to 24 years.....	4,882	3,639	1,044	167	4	29	100.0	74.5	21.4	3.4	0.1	0.6
25 to 29 years.....	3,859	1,348	2,230	236	6	39	100.0	34.9	57.8	6.1	0.2	1.0
30 to 34 years.....	3,132	488	2,360	228	8	48	100.0	15.6	75.3	7.3	0.3	1.5
35 to 39 years.....	2,831	281	2,257	222	18	53	100.0	9.9	79.7	7.8	0.6	1.9
40 to 44 years.....	2,529	186	2,070	191	28	54	100.0	7.4	81.9	7.5	1.1	2.1
45 to 49 years.....	2,171	133	1,797	159	33	49	100.0	6.2	82.8	7.3	1.5	2.2
50 to 54 years.....	1,450	153	2,552	251	111	78	100.0	4.9	81.1	8.0	3.5	2.5
60 years and over.....	3,002	134	2,184	208	390	86	100.0	4.5	72.8	6.9	13.0	2.9
FEMALE												
Total, 15 years and over.....	32,808	10,964	16,236	1,652	2,766	1,190	100.0	33.4	49.5	5.0	8.4	3.6
15 to 19 years.....	6,213	5,471	579	120	3	40	100.0	88.1	9.3	1.9	0.1	0.6
20 to 24 years.....	5,185	2,675	2,120	278	10	102	100.0	51.6	40.9	5.4	0.2	2.0
25 to 29 years.....	4,089	1,081	2,577	279	31	122	100.0	26.4	63.0	6.8	0.8	3.0
30 to 34 years.....	3,243	496	2,319	237	60	131	100.0	15.3	71.5	7.3	1.8	4.0
35 to 39 years.....	2,994	314	2,176	228	104	173	100.0	10.5	72.7	7.0	3.5	5.8
40 to 44 years.....	2,576	216	1,865	180	167	148	100.0	8.4	72.4	7.0	6.5	5.7
45 to 49 years.....	2,161	164	1,505	131	229	131	100.0	7.6	69.6	6.1	10.6	6.1
50 to 54 years.....	1,412	243	1,918	127	623	201	100.0	7.8	61.7	4.1	20.0	6.5
60 years and over.....	3,236	304	1,177	71	1,540	143	100.0	9.4	36.4	2.2	47.6	4.4

¹Figures are based on data from a 25-percent sample of the 1970 census returns inflated to national totals. Excludes 33,631 males and 26,652 females of unknown marital status and 65,435 males and 67,661 females of unknown age.

²Figures are based on data from the 1976 National Household Sample Survey inflated to national totals. Excludes the rural areas of region VII (see appendix table A-15 for status and territories in this region). Also excludes 10,912 males and 15,674 females of unknown marital status and 12,246 males and 61,400 females of unknown age.

Note: See appendix table A-10 for data on marital status from the 1960 census.

Source: Data are from the 1970 census and the 1976 National Household Sample Survey as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1973, table 5, p. 12; and 1978a, table 2, pp. 4-5; respectively.

Table 10. Legal Age at Marriage and Age at Which Specified Percent of the Population is Ever Married, by Sex: 1960, 1970, and 1976

Item	1960 ¹		1970 ¹		1976 ²	
	Male	Female	Male	Female	Male	Female
Minimum legal age at marriage.....	18	16	18	16	18	16
Age at which 25 percent of the population is ever married.....	22	19	23	19	23	20
Age at which 50 percent of the population is ever married.....	25	22	26	22	25	23
Age at which 75 percent of the population is ever married.....	29	26	30	27	29	28

¹Figures are based on data from a 25-percent sample of census returns inflated to national totals.

²Figures are based on data from the 1976 National Household Sample Survey which were inflated to national totals. Excludes the rural areas of Region VII (see appendix table A-15 for states and territories in this region).

Source: Legal age at marriage - personal communication with Brazilian Embassy, Washington, D.C., 1979. Percent of population ever married was derived at the U.S. Bureau of the Census by fitting a Makhom curve to data from the 1960 and 1970 censuses and the 1976 National Household Sample Survey (Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 3, pp. 6-7; 1973, table 5, pp. 12-13; and 1978a, table 2, pp. 4-5; respectively).

Table 11. Population Ages 15 Years and Over, by Literacy, Broad Age Groups, and Sex: 1960, 1970, and 1975

(Population in thousands. Figures may not add to totals due to rounding)

Year and age	Both sexes			Male			Female		
	Total population	Literate population		Total population	Literate population		Total population	Literate population	
		Number	Percent of total		Number	Percent of total		Number	Percent of total
1960¹									
Total, 15 years and over.....	40,199	24,249	60.3	19,862	12,841	64.6	20,337	11,409	56.1
15 to 24 years.....	13,425	8,896	66.3	6,451	4,307	66.8	6,974	4,589	65.8
25 to 34 years.....	9,769	6,315	64.6	4,800	3,314	69.0	4,969	3,001	60.4
35 to 49 years.....	7,206	4,186	58.1	3,633	2,339	64.4	3,573	1,846	51.7
50 years and over.....	9,799	4,853	49.5	4,978	2,880	57.9	4,821	1,973	40.9
1970²									
Total, 15 years and over.....	53,730	35,572	66.2	26,497	18,381	69.4	27,232	17,190	63.1
15 to 24 years.....	18,520	13,814	74.6	9,023	6,700	74.3	9,497	7,114	74.9
25 to 34 years.....	12,160	8,426	69.3	5,972	4,316	72.3	6,188	4,110	66.4
35 to 49 years.....	13,166	8,271	62.8	6,586	4,481	68.0	6,580	3,790	57.6
50 years and over.....	9,884	5,060	51.2	4,916	2,883	58.7	4,968	2,177	43.8
1976³									
Total, 15 years and over.....	64,376	48,745	75.7	31,509	24,594	78.1	32,867	24,151	73.5
15 to 24 years.....	22,246	19,118	85.9	10,827	9,185	84.8	11,419	9,934	87.0
25 to 34 years.....	14,339	11,500	80.2	6,995	5,724	81.8	7,344	5,775	78.6
35 to 49 years.....	15,278	10,997	72.0	7,535	5,759	76.4	7,743	5,238	67.6
50 years and over.....	12,513	7,130	57.0	6,152	3,926	63.8	6,361	3,204	50.4

¹Figures are based on data from a sample of the 1960 census returns inflated to national totals. Excludes 30,909 males and 25,318 females of unknown literacy status and 38,316 males and 42,085 females of unknown age.

²Excludes 326,117 males and 340,434 females of unknown literacy status and 31,548 males and 27,691 females of unknown age.

³Figures are based on data from the 1976 National Household Sample Survey which were inflated to the national total. Excludes 472 males and 462 females of unknown literacy status and 8,908 males and 22,850 females of unknown age. Also, excludes the rural areas of region VII (see appendix table A-15 for states and territories in this region).

Note: Literacy is defined as the ability to read and write a short note in any language (Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1973, p. XXX).

Source: Data are from the 1960 and 1970 censuses and the 1976 National Household Sample Survey as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 10; 1973, table 10, pp. 22-23; and 1978a, table 9; respectively.

Table 12. Population Ages 5 to 19 Years Enrolled in School, by Age and Sex: 1970 and 1976

(Population in thousands. Figures may not add to totals due to rounding)

Year and age	Both sexes			Male			Female		
	Total population	Enrolled in school		Total population	Enrolled in school		Total population	Enrolled in school	
		Number	Percent of total		Number	Percent of total		Number	Percent of total
1970 ¹									
Total, 5 to 19 years...	35,572	17,964	50.5	17,730	9,061	51.1	17,842	8,904	49.8
5 to 9 years.....	13,460	5,927	44.0	6,800	2,957	43.5	6,660	2,970	44.6
10 to 14 years.....	11,859	8,240	69.5	5,934	4,170	70.3	5,925	4,070	68.7
15 to 19 years.....	10,253	3,797	37.0	4,995	1,934	38.7	5,258	1,863	35.4
1976 ²									
Total, 5 to 19 years...	39,647	20,469	51.6	19,799	10,142	51.2	19,849	10,327	52.0
5 to 9 years.....	13,742	5,060	36.8	6,963	2,508	36.0	6,778	2,552	37.6
10 to 14 years.....	13,749	10,162	73.9	6,895	5,091	73.8	6,854	5,071	74.0
15 to 19 years.....	12,157	5,247	43.2	5,941	2,543	42.8	6,217	2,704	43.5

¹Figures are based on data from a 25-percent sample of the 1970 census returns inflated to national totals.²Figures are based on data from the 1976 National Household Sample Survey inflated to national totals. Excludes the rural areas of region VII (see appendix table A-15 for states and territories in this region).

Note: Enrollment figures refer to persons attending school at the time of the census/survey excluding those attending special professional and cultural courses (e.g., sewing, dance, language, typing, etc.) and students who have completed a specific level of instruction and have returned to take additional courses at that level. The drop in the total percent of 5 to 9 years old enrolled in school from 1970 to 1976 may be due to sampling error or other problems with the survey data rather than to an actual decline in school enrollment.

Source: Data from the 1970 census and the 1976 National Household Sample Survey as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1973, tables 1 and 11, pp. 2 and 26-29; and 1978a, table 10; respectively.

Table 13. Population Ages 15 Years and Over Who Have Completed School, by Broad Age Groups, Sex, and School Level: 1960 and 1970

(Population in thousands. Figures may not add to totals due to rounding)

Year, sex, and age	Total population	Persons who have completed at least--					
		Primary school		Secondary school		Higher level	
		Number	Percent of total	Number	Percent of total	Number	Percent of total
1960¹							
Both sexes							
Total, 15 years and over.....	40,180	11,110	27.6	2,331	5.8	287	0.7
15 to 24 years.....	13,413	4,216	31.4	735	5.5	11	0.1
25 to 34 years.....	9,766	2,952	30.2	705	7.2	95	1.0
35 to 44 years.....	7,204	1,836	25.5	423	5.9	78	1.1
45 years and over.....	9,797	2,104	21.5	468	4.8	104	1.1
Male							
Total, 15 years and over.....	19,855	5,697	28.7	1,253	6.3	246	1.2
15 to 24 years.....	6,446	2,029	31.5	348	5.4	6	0.1
25 to 34 years.....	4,800	1,516	31.6	377	7.9	76	1.6
35 to 44 years.....	3,632	985	27.1	241	6.6	68	1.9
45 years and over.....	4,978	1,167	23.5	287	5.8	95	1.9
Female							
Total, 15 years and over.....	20,324	5,412	26.6	1,077	5.3	41	0.2
15 to 24 years.....	6,967	2,188	31.4	387	5.5	4	0.1
25 to 34 years.....	4,966	1,436	28.9	328	6.6	19	0.4
35 to 44 years.....	3,572	852	23.8	182	5.1	9	0.3
45 years and over.....	4,820	937	19.4	181	3.8	8	0.2
1970²							
Both sexes							
Total, 15 years and over.....	53,825	17,562	32.6	5,127	9.5	540	1.0
15 to 24 years.....	18,539	7,705	41.6	2,074	11.2	24	0.1
25 to 34 years.....	12,169	4,063	33.4	1,367	11.2	184	1.5
35 to 44 years.....	9,625	2,739	28.5	820	8.5	152	1.6
45 years and over.....	13,492	3,056	22.6	865	6.4	181	1.3
Male							
Total, 15 years and over.....	26,534	8,912	33.6	2,631	9.9	402	1.5
15 to 24 years.....	9,033	3,747	41.5	973	10.8	11	0.1
25 to 34 years.....	5,974	2,092	35.0	707	11.8	123	2.1
35 to 44 years.....	4,790	1,445	30.1	455	9.5	116	2.4
45 years and over.....	6,738	1,628	24.2	495	7.3	152	2.3
Female							
Total, 15 years and over.....	27,290	8,650	31.7	2,496	9.1	138	0.5
15 to 24 years.....	9,507	3,958	41.6	1,101	11.6	13	0.1
25 to 34 years.....	6,195	1,971	31.8	659	10.6	61	1.0
35 to 44 years.....	4,835	1,293	26.8	365	7.6	36	0.7
45 years and over.....	6,754	1,428	21.1	370	5.5	29	0.4

¹Figures are based on data from a 25-percent sample of the 1960 census returns inflated to national totals. Excludes 11,203 males and 10,668 females with unknown level of education and 8,373 males and 7,832 females of unknown age.

²Figures are based on data from a 25-percent sample of the 1970 census returns inflated to national totals. Excludes 79 males and 52 females with unknown level of education and 14,528 males and 12,517 females of unknown age.

Note: Primary school represents the first 5 years of schooling. The secondary school includes two levels; one from grades 6 through 9 and the second from grades 10 through 12. The higher level consists of completing grades 13 through 17 (includes colleges and universities).

Data shown in this table are cumulative. For example, persons completing higher level education are also included in the primary and secondary school categories.

Source: Based on the 1960 and 1970 census data as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, tables 1 and 13, pp. 2 and 23; and 1973, tables 1 and 13, pp. 2 and 38-39; respectively.

Table 14. Economically Active Population, by Age and Sex: 1960 and 1970

(Population in thousands. Figures may not add to totals due to rounding)

Year and age	Male			Female		
	Total population	Economically active		Total population	Economically active	
		Number	Percent of total		Number	Percent of total
1960¹						
Total, 10 years and over...	24,146	18,633	77.2	24,587	4,063	16.5
10 to 19 years.....	7,747	3,499	45.2	7,986	1,198	15.0
20 to 29 years.....	5,538	5,226	94.4	5,944	1,238	20.8
30 to 39 years.....	4,223	4,111	97.3	4,255	721	17.0
40 to 49 years.....	3,053	2,931	96.0	2,903	483	16.6
50 to 59 years.....	1,935	1,748	90.3	1,820	265	14.5
60 to 69 years.....	1,120	857	76.5	1,071	123	11.5
70 years and over.....	530	261	49.3	610	39	6.3
1970²						
Total, 10 years and over...	32,469	23,328	71.8	33,215	6,150	18.5
10 to 14 years.....	5,934	1,136	19.1	5,925	377	6.4
15 to 19 years.....	4,995	3,104	62.1	5,258	1,285	24.4
20 to 24 years.....	4,037	3,576	88.6	4,249	1,217	28.7
25 to 29 years.....	3,173	2,990	94.2	3,331	759	22.8
30 to 34 years.....	2,801	2,712	96.8	2,864	606	21.2
35 to 39 years.....	2,502	2,385	95.3	2,587	527	20.4
40 to 44 years.....	2,288	2,149	93.9	2,247	456	20.3
45 to 49 years.....	1,795	1,656	92.3	1,752	327	18.6
50 to 54 years.....	1,486	1,304	87.7	1,454	240	16.5
55 to 59 years.....	1,160	958	82.6	1,128	160	14.2
60 to 64 years.....	903	664	73.5	888	101	11.4
65 years and over.....	1,393	694	49.8	1,532	97	6.3

¹Figures are based on data from a 25-percent sample of the 1960 census returns inflated to national totals. Excludes 39,841 males and 11,424 females of unknown age from the economically active population and 46,661 males and 48,822 females of unknown age from the total population ages 10 years and over.

²Figures are based on data from a 25-percent sample of the 1970 census returns inflated to national totals. Excludes 63,846 males and 15,216 females of unknown age from the economically active population and 92,804 males and 91,174 females of unknown age from the total population.

Note: Data for 1960 and 1970 are not comparable due to changes in the definition of the economically active population. Furthermore, in 1960 and 1970, persons were not considered economically active if their principal occupation was, for example; housewife, student, retiree, or invalid.

See appendix tables A-13 and A-14 for data on economically active population in 1976.

In 1960 the economically active population comprised all persons 10 years of age and over, who during the 12 months preceding the census: worked for pay or profit in the production of goods or services; were self employed; apprenticed; or worked without pay for the family, a religious group, or a charitable organization. Persons who had a job but were not working at the time of the census were also classified as employed.

The definition of the economically active population in 1970 differed from the 1960 definition in that it included those looking for work for the first time (173,712 males and 45,045 females in 1970).

Source: Based on the 1960 and 1970 census data as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, tables 1 and 19, pp. 2 and 54; and 1973, tables 1, 20, and 21, pp. 2, 80, and 82; respectively.

Table 15. Distribution of Labor Force, by Sex and Industry: 1960 and 1970

(Population in thousands. Figures may not add to totals due to rounding)

Year and industry	Population			Percent		
	Both sexes	Male	Female	Both sexes	Male	Female
1960¹						
Total classified workers...	22,415	18,383	4,031	100.0	100.0	100.0
Agriculture, forestry, hunting, and fishing.....	12,277	11,052	1,225	54.8	60.1	30.4
Mining and quarrying.....	131	128	3	0.6	0.7	0.1
Manufacturing.....	1,938	1,454	483	8.6	7.9	12.0
Construction.....	796	789	7	3.6	4.3	0.2
Electricity, gas, water, and sanitary services.....	75	72	3	0.3	0.4	0.1
Commerce.....	1,691	1,494	198	7.5	8.1	4.9
Transport, storage, and communication.....	1,056	1,014	42	4.7	5.5	1.0
Services.....	4,060	2,034	2,026	18.1	11.1	50.3
Other industries.....	389	346	43	1.7	1.9	1.1
1970²						
Total classified workers...	28,893	22,845	6,048	100.0	100.0	100.0
Agriculture, forestry, hunting, and fishing.....	13,090	11,833	1,258	45.3	51.8	20.8
Mining and quarrying.....	175	172	3	0.6	0.8	0.1
Manufacturing.....	3,242	2,633	609	11.2	11.5	10.1
Construction.....	1,720	1,705	15	6.0	7.5	0.2
Electricity, gas, water, and sanitary services.....	158	150	9	0.5	0.7	0.1
Commerce.....	2,698	2,249	448	9.3	9.8	7.4
Transport, storage, and communication.....	1,244	1,183	62	4.3	5.2	1.0
Services.....	5,997	2,408	3,590	20.8	10.5	59.4
Other industries.....	568	513	55	2.0	2.2	0.9

¹Figures are based on data from a 25-percent sample of the 1960 census returns inflated to national totals. Excludes 289,937 males and 45,552 females whose activities were poorly defined or unknown.

²Figures are based on data from a 25-percent sample of the 1970 census returns inflated to national totals. Excludes 546,755 males and 117,359 females whose activities were poorly defined or unknown, among which are 173,712 males and 45,045 females who were looking for work for the first time.

Note: In 1960 some of the classifications of activities differed from those in 1970, particularly in the extractive and industrial activities. However, since data from the 1960 and 1970 censuses were available in great detail it was possible to adjust the 1960 data so it would be more comparable with the 1970 data.

Refer to table 14 for the definition of economically active.

Source: Based on the 1960 and 1970 census data as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 18; and 1973, table 20; respectively.

Table 16. Distribution of Labor Force, by Sex and Occupation: 1960 and 1970

(Population in thousands. Figures may not add to totals due to rounding. For meaning of symbols, see text)

Year and occupation	Population			Percent		
	Both sexes	Male	Female	Both sexes	Male	Female
1960¹						
Total classified workers.....	21,333	17,492	3,841	100.0	100.0	100.0
Professional, technical, and related workers.....	706	334	372	3.3	1.9	9.7
Administrative, executive, and managerial workers.....	1,821	1,525	296	8.5	8.7	7.7
Clerical and sales workers.....	857	740	117	4.0	4.2	3.0
Farmers, fishermen, hunters, loggers, miners, quarrymen, and related workers	12,069	10,852	1,217	56.6	62.0	31.7
Workers in transport and communication.	907	883	24	4.2	5.0	0.6
Craftsmen, production-process workers, and laborers not classified elsewhere.	3,240	2,589	651	15.2	14.8	16.9
Service, sport, and recreation workers.	1,458	295	1,164	6.8	1.7	30.3
Other occupations.....	275	274	1	1.3	1.6	(2)
1970²						
Total classified workers.....	27,045	21,323	5,722	100.0	100.0	100.0
Professional, technical, and related workers.....	1,387	557	830	5.1	2.6	14.5
Administrative, executive, and managerial workers.....	2,997	2,363	634	11.1	11.1	11.1
Clerical and sales workers.....	1,372	1,122	250	5.1	5.3	4.4
Farmers, fishermen, hunters, loggers, miners, quarrymen, and related workers	12,978	11,726	1,252	48.0	55.0	21.9
Workers in transport and communication.	1,158	1,113	45	4.3	5.2	0.8
Craftsmen, production-process workers, and laborers not classified elsewhere.	4,426	3,752	674	16.4	17.6	11.8
Service, sport, and recreation workers.	2,280	243	2,037	8.4	1.1	35.6
Other occupations.....	449	447	2	1.7	2.1	(2)

¹Figures are based on data from a 25-percent sample of the 1960 census returns inflated to national totals. Excludes 1,181,584 males and 235,871 females whose occupation was poorly defined or not reported.

²Figures are based from a 25-percent sample of the 1970 census returns inflated to national totals. Excludes 2,068,399 males and 443,376 females whose occupation was poorly defined or not reported, among which are 173,712 males and 45,045 females who were looking for work for the first time.

Note: Refer to table 14 for definition of economically active.

Source: Based on the 1960 and 1970 census data as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 24; and 1973, table 26; respectively.

Table 17. Distribution of Agricultural and Nonagricultural Workers, by Status and Sex: 1960, 1970, and 1976

(Population in thousands. Figures may not add to totals due to rounding)

Sex and status	1960 ¹				1970 ²				1976 ³			
	Agricultural		Nonagricultural		Agricultural		Nonagricultural		Agricultural		Nonagricultural	
	Population	Per-cent	Population	Per-cent	Population	Per-cent	Population	Per-cent	Population	Per-cent	Population	Per-cent
BOTH SEXES												
Total classified workers.....	11,825	100.0	10,880	100.0	13,090	100.0	16,458	100.0	14,595	100.0	25,638	100.0
Employers and workers on own account.....	5,658	47.8	2,745	25.2	7,179	54.8	3,261	19.8	5,197	35.6	5,017	19.6
Salaried employees and wage earners.....	2,987	25.3	7,909	72.7	3,330	25.4	12,864	78.2	4,728	32.4	20,062	78.3
Unpaid family workers.....	3,181	26.9	226	2.1	2,581	19.7	333	2.0	4,669	32.0	559	2.2
MALE												
Total classified workers.....	10,650	100.0	7,987	100.0	11,832	100.0	11,551	100.0	11,394	100.0	17,082	100.0
Employers and workers on own account.....	5,395	50.7	2,109	26.4	6,731	56.9	2,521	21.8	4,611	40.5	3,614	21.2
Salaried employees and wage earners.....	2,784	26.1	5,748	72.0	3,115	26.3	8,781	76.0	4,062	35.7	13,135	76.9
Unpaid family workers.....	2,471	23.2	130	1.6	1,987	16.8	250	2.2	2,721	23.9	333	2.0
FEMALE												
Total classified workers.....	1,175	100.0	2,893	100.0	1,258	100.0	4,907	100.0	3,201	100.0	8,555	100.0
Employers and workers on own account.....	263	22.4	636	22.0	449	35.7	740	15.1	587	18.3	1,423	16.4
Salaried employees and wage earners.....	202	17.2	2,161	74.7	215	17.1	4,083	83.2	666	20.8	6,926	81.0
Unpaid family workers.....	710	60.4	96	3.3	594	47.2	84	1.7	1,948	60.9	226	2.6

¹Figures are based on data from a 25-percent sample of the 1960 census returns inflated to national totals. Excludes 721 male and 44 female agricultural workers and 35,152 male and 8,777 female nonagricultural workers of unknown status.

²Figures are based on data from a 25-percent sample of the 1970 census returns inflated to national totals. Excludes 284 male and 28 female agricultural workers and 7,873 male and 983 female nonagricultural workers of unknown status.

³Figures are based on data from the 1976 National Household Sample Survey inflated to national totals. Excludes the rural areas of region VII (see appendix table A-15 for states and territories in this region) and 2,992 male and 1,147 female nonagricultural workers of unknown status.

Note: Data for the 3 years shown are not comparable due to definitional and procedural changes in identifying the economically active population. In the 1960 and 1970 censuses persons were not considered economically active if their principal activity was, for example; housewife, student, retiree, or invalid. Furthermore, in 1970 persons looking for work for the first time were included. The 1976 survey classified persons as economically active if they worked any amount of time for remuneration or 15 hours or more without pay during a reference period regardless of their principal activity. Consequently, the size of the reported labor force increased significantly between 1970 and 1976.

For definitions of the economically active population in 1960 and 1970, see notes to table 14. The 1976 survey used two definitions of economically active, one of which was based on a 1-week reference period, November 22 to 28, 1976. The second definition used a 1-year reference period (November 22, 1975 to November 21, 1976) and also included those persons who were economically active during the week of November 22 to 28, 1976. Note that this table and appendix table A-14 use the 1-year definition and that appendix table A-13 uses the 1-week definition.

In this table, economically active population for 1976 comprised all persons 10 years of age and over, who during a 12 month period (November 22, 1975 to November 21, 1976): worked for pay or profit in the production of goods or services; were self employed; apprenticed; worked without pay 15 hours or more a week for the family, a religious group, or a charitable organization; or were looking for work. Also, included were persons who were economically active during the reference week of November 22 to 28, 1976 (see appendix table A-13).

Source: Based on the 1960 and 1970 censuses and the 1976 National Household Sample Survey as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 19; 1973, table 21; and 1978a, table 37; respectively.

Table 18. Distribution of Households, by Number of Persons: 1960, 1970, and 1976

(Numbers in thousands. Figures may not add to totals due to rounding. For meaning of symbols, see text)

Persons per household	1960 ¹				1970 ¹				1976 ²			
	Households		Population in households		Households		Population in households		Households		Population in households	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All households.....	13,532	100.0	69,243	100.0	18,554	100.0	89,963	100.0	23,130	100.0	106,234	100.0
1 person.....	646	4.8	646	0.9	917	4.9	917	1.0	1,084	4.7	1,084	1.0
2 persons.....	1,592	11.8	3,184	4.6	2,665	14.4	5,329	5.9	3,675	15.9	7,350	6.9
3 persons.....	2,031	15.0	6,094	8.8	3,040	16.4	9,120	10.1	4,207	18.2	12,622	11.9
4 persons.....	2,206	16.3	8,823	12.7	3,006	16.2	12,026	13.4	4,044	17.5	16,176	15.2
5 persons.....	1,841	13.6	9,206	13.3	2,595	14.0	12,976	14.4	3,178	13.7	15,888	15.0
6 persons.....	1,534	11.3	9,206	13.3	1,950	10.5	11,702	13.0	2,353	10.2	14,117	13.3
7 persons.....	1,177	8.7	8,242	11.9	1,456	7.8	10,189	11.3	1,611	7.0	11,280	10.6
8 persons.....	884	6.5	7,070	10.2	1,055	5.7	8,444	9.4	1,166	5.0	9,329	8.8
9 persons.....	611	4.5	5,500	7.9	724	3.9	6,516	7.2	762	3.3	6,860	6.5
10 persons or more.....	1,009	7.5	11,271	16.3	1,146	5.2	12,745	14.2	1,049	4.5	11,527	10.8
OTHER HOUSEHOLD MEASURES												
Mean number of persons per household.....	5.1	(X)	(X)	(X)	4.8	(X)	(X)	(X)	4.6	(X)	(X)	(X)
Median number of persons per household.....	4.7	(X)	(X)	(X)	4.4	(X)	(X)	(X)	4.1	(X)	(X)	(X)

¹Figures are based on data from a 25-percent sample of census returns inflated to national totals.²Figures are based on data from the 1976 National Household Sample Survey inflated to national totals. Excludes the rural areas of region VII (see appendix table A-15 for states and territories in this region).

Note: A household is defined as a group of persons who are either related or economically and/or domestically dependent upon one another and who live together in a whole or part of a house. A person living alone in a separate dwelling would also be considered a household.

Source: Based on the data from the 1960 and 1970 censuses and the 1976 National Household Sample Survey as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 1, p. 112; 1973, table 1, p. 206; and 1978a, tables 1 and 6, pp. 72 and 76; respectively.

Table 19. Population, by Urban and Rural Residence: 1960, 1970, and 1976

(Figures may not add to totals due to rounding)

Subject	1960 ¹		1970		1976 Population
	Population	Percent	Population	Percent	
Total country.....	70,070,457	100.0	93,139,037	100.0	¹ 105,815,689
Urban areas.....	31,303,034	44.7	52,084,984	55.9	67,536,327
Rural areas.....	38,767,423	55.3	41,054,053	44.1	² 38,279,362

¹Figures are based on data from a sample of the 1960 census returns.²Figures are based on data from the 1976 National Household Sample Survey which were inflated to national totals. Excludes the population of rural areas in region VII (see appendix table A-15 for states and territories in this region). In 1970, the rural population of this region was 4,591,730.

Note: The urban areas consist of cities and villages (urban and suburban sections); the rural areas are those outside the borders of the cities and villages. Data on urban and rural areas may not be comparable over time due to changes in the criteria for classifying areas as urban.

Source: Based on data from the 1960 and 1970 censuses and the 1976 National Household Sample Survey as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 1, p. 2; 1972, selected tomos (books), table 1; 1973, table 1, p. 2; and 1978a, table 1, p. 3.

Table 20. Population, by Urban and Rural Residence and Size of Urban Locality: 1960

(Figures may not add to totals due to rounding. For meaning of symbols, see text)

Area	Number	Population	Percent of total country
1960 ¹			
Total country.....	(X)	70,967,185	100.0
Urban areas.....	6,537	31,955,633	45.1
Localities with 100,000 or more inhabitants.....	31	13,309,463	18.8
Localities with 20,000 to 100,000 inhabitants.....	159	6,612,727	9.3
Localities with 2,000 to 20,000 inhabitants.....	1,509	8,775,192	12.4
Localities with less than 2,000 inhabitants.....	4,738	3,258,251	4.6
Rural areas.....	(X)	38,976,247	54.9

¹Based on preliminary census data for a 1.27-percent sample of the 1960 census returns inflated to national totals made shortly after the 1960 census. This sample differs from the sample used in the mid-1970's from which other data for 1960 shown in this profile were derived.

Note: The urban population in the census consists of inhabitants of cities and villages (urban and suburban sections); the rural population in the census consists of all population in areas outside the borders of the cities and villages.

Source: Data from the 1960 census as reported in United Nations, 1963, tables 9 and 11.

Table 21. State, Territory, and Federal District Population, Growth Rates, and Migration Data

State, territory, and federal district	1960 population ¹ (in thousands)	1970 population (in thousands)	Annual growth rate, 1960-70 ² (percent)	1970 native-born population born outside state (percent)
STATE				
Acre.....	158	215	+3.1	12.3
Alagoas.....	1,258	1,588	+2.3	7.3
Amazonas.....	708	955	+3.0	6.9
Bahia.....	5,920	7,493	+2.4	4.0
Ceará.....	3,296	4,362	+2.8	3.4
Espírito Santo.....	1,397	1,599	+1.4	14.3
Goiás.....	1,913	2,939	+4.3	25.8
Guanabara.....	3,248	4,252	+2.7	42.1
Maranhão.....	2,459	2,993	+1.9	14.1
Mato Grosso.....	890	1,597	+5.8	34.2
Minas Gerais.....	9,813	11,487	+1.6	3.6
Pará.....	1,529	2,167	+3.5	8.3
Paraíba.....	2,001	2,383	+1.8	4.8
Paraná.....	4,268	6,930	+4.8	36.8
Pernambuco.....	4,095	5,161	+2.3	5.8
Piauí.....	1,242	1,681	+3.0	7.0
Rio de Janeiro.....	3,363	4,743	+3.4	27.6
Rio Grande do Norte.....	1,146	1,550	+3.0	5.9
Rio Grande do Sul.....	5,367	6,665	+2.2	2.3
Santa Catarina.....	2,118	2,902	+3.2	11.0
São Paulo.....	12,809	17,772	+3.3	21.9
Sergipe.....	752	901	+1.8	5.6
TERRITORY				
Amapá.....	68	114	+5.2	39.0
Fernando de Noronha.....	1	1	-1.1	66.2
Rondônia.....	70	111	+4.6	46.9
Roraima.....	28	41	+3.7	20.3
FEDERAL DISTRICT				
Distrito Federal.....	140	537	+13.4	77.9

¹Figures are based on data from a sample of the 1960 census returns inflated to national totals.

²A plus sign (+) denotes net increase; a minus sign (-), net decrease.

Source: Based on 1960 and 1970 census data as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 32; and 1973, tables 40 and 43; respectively.

Table 22. Foreign-Born Population, by Country of Birth: 1970

Country of birth	Population	Country of birth	Population
All countries.....	1,229,128	U.S.S.R.....	29,319
Portugal.....	437,983	Lebanon.....	24,976
Japan.....	154,006	Paraguay.....	20,025
Italy.....	152,801	Argentina.....	17,213
Spain.....	130,122	Other countries.....	180,675
Germany.....	51,728	Foreign-born population as percent of total population	1.3
Poland.....	30,280		

Note: Includes 146,383 naturalized Brazilians. See appendix table A-16 for persons of foreign citizenship, by country, for 1960.

Source: Based on 1970 census data as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1973, tables 8 and 9, pp. 20-21.

Appendix

Technical Notes

SUMMARY

The demographic data presented in this profile primarily cover the period 1950 to 1979. The main sources of information used were the 1940, 1950, 1960, and 1970 censuses of population and the 1972, 1973, 1976, and 1977 National Household Sample Surveys (Pesquisa Nacional por Amostra de Domicílios (PNAD)). Also, registered deaths were considered in the process of estimating the level of mortality. The available information was used to estimate mortality and fertility, and to evaluate the 1950 and 1970 censuses.

FERTILITY

Estimates

Information for estimating fertility levels includes data on children ever born, by age of mother, from the 1940, 1950, 1960, and 1970 censuses and the 1972, 1973, 1976, and 1977 PNAD Surveys. Data on births during the 12 months prior to the census/survey, by age of mother, were also available from the 1970 census and the four PNAD Surveys.

Previous estimates of fertility made by other researchers were available and these are shown in appendix table A-5. Using children-ever-born data from the 1940 and 1950 censuses and his own method, Mortara (1954, p. 130) prepared fertility estimates for the periods 1930-40 and 1940-50. Fertility estimates for decades between 1930 and 1960 were derived by Carvalho (1974, pp. 406, 408, and 410) by applying Brass' fertility technique to regional children-ever-born data, from the 1940 and 1950 censuses and preliminary results from the 1960 and 1970 censuses. He used a pattern of fertility based on births during the 12 months prior to the census date from the preliminary 1970 census results. Carvalho (1978) also estimated fertility for 1960-1970 by applying Brass' fertility technique to data from the final results of the 1970 census. Arretx (1975, p. 12), using children-ever-born data from the 1950 census and preliminary results from the 1960 and 1970 censuses, estimated fertility for intercensal periods between 1940 and 1970 after adjusting the children-ever-born data. Finally, using final results from the 1970 census, the Instituto Brasileiro de Geografia e Estatístico (IBGE) estimated TFR's of 5.24-5.35 for 1970 (Brazil Fundação IBGE, 1976, p. 537).

Previous estimates of crude birth rates were also available and these are given in appendix table A-6. Crude birth rates

calculated by Mortara and Carvalho were based on their respective fertility estimates, and rates calculated by Arriaga (1970, p. 148) and Merrick (1974, p. 425) were based on reverse surviving various census populations ages 0 to 9 years. At the U.S. Bureau of the Census ([1973], p. 13), Huguet estimated a crude birth rate for 1970 based on an estimated crude death rate and a 1960-70 intercensal growth rate.

Since final results from the 1960 and 1970 censuses and the 1972, 1973, 1976, and 1977 PNAD surveys are now available, previous estimates were reviewed and new estimates were calculated for the period 1950 to 1977.

The Brass fertility technique was applied to the data from the 1970 census and the 1972, 1973, 1976, and 1977 PNAD surveys. In addition, this method was applied to data on children-ever-born from the 1940, 1950, and 1960 censuses¹ using the pattern of fertility from the 1970 census. See appendix table A-5 for results based on application of the Brass fertility technique.

Also, the Arriaga fertility technique was applied to data from the 1940, 1950, 1960, and 1970 censuses and the 1972, 1973, 1976, and 1977 PNAD surveys. Furthermore, crude birth rates for the period 1940 to 1970 were estimated by reverse surviving the population ages 0 to 20 (by single years of age) from the 1960 and 1970 censuses. All estimates indicate that in the mid-1960's a definite downward trend of fertility started in Brazil.

Estimates based on the Arriaga and Brass techniques took into account recent information which became available after 1970. Consequently, the analysis of fertility was concentrated on the results provided by these two techniques.

The estimates from Arriaga's technique were accepted for 1950, 1960, and 1970 rather than results from Brass' technique, since the information on children born during the last 12 months needed for the Brass technique was available only for the 1970 census. The Brass estimates based on the three earlier censuses were obtained by assuming that the pattern of the age-specific fertility rates for the period, 1940-60, was the same as that reported in the 1970 census.

¹ The children-ever-born data, by age of mother, from the 1950 and 1960 censuses were adjusted for exclusion of stillbirths. An estimate of stillbirths, by age of mother, was derived for 1950 and 1960 using the proportion of stillbirths, to total births (still and live births) by age of mother, from the 1940 and 1970 censuses and linear interpolation. This proportion was applied to the children-ever-born data from the 1950 and 1960 censuses in order to derive children ever born alive, by age of mother.

For the period after 1970, Brass' estimates rather than Arriaga's were preferred. Arriaga's technique is affected by the quality of information on children ever born reported by women up to age 40, while fertility estimates using the Brass technique would usually be affected only by the quality of data reported by women up to age 30. Since the reported number of children ever born in the PNAD surveys for women over age 30 seems more complete than the census information, results from applying Arriaga's technique could reflect unrealistic changes of fertility. Therefore, estimates derived from the Brass technique applied to the survey years 1973, 1976, and 1977 were accepted for the period after 1970. Based on the 1973 PNAD survey, a range of variation for the level of fertility was estimated—the result based on the P_2/F_2 ratio was accepted as the lower bound, while the average of the results from P_2/F_2 and P_3/F_3 ratios was accepted as the upper bound. This range pertains to November 1972 to November 1973 (see table 7). Finally, the Brass estimates based on the 1976 and 1977 PNAD surveys were used for establishing another range of variation for the level of fertility during 1976-77. The average of the results from both surveys pertaining to the P_2/F_2 ratios was accepted as the lower bound, and the average of the P_3/F_3 results as the upper bound (see table 7).

Since three series of population projections were made from 1972-73 to 1976-77, the level of fertility accepted for 1976-77 as pertaining to the middle—and recommended—projection was a total fertility rate calculated as the midpoint of the range of variation of the TFR's estimated by the Brass technique.

1979 Projection Assumptions

Fertility assumptions for 1979 (see appendix table A-4) were made considering the trend of decline in the estimated total fertility rates during the 1970's.

For all three series, the 1979 total fertility rates were derived by considering the trend of decline in TFR's from 1970 to 1976-77 (see table 7). For the upper series, the 1976-77 upper-bound TFR (4.55) was assumed to decline to 4.34 for 1979 (a drop of 5 percent). The 1976-77 middle-series TFR (4.40) was assumed to decline to 4.15 for 1979 (a drop of 6 percent). For the low series, the 1976-77 lower-bound TFR (4.25) was assumed to decline to 3.95 for 1979 (a drop of 7 percent).

The 1979 age-specific fertility rates (ASFR's) for all three series were obtained by linear interpolation, using the 1976-77 ASFR's and a set of ASFR's for Argentina (U.S. Bureau of the Census, 1975, p. 24) having a TFR of 2.5. The weights used in the interpolation were calculated by taking into account the respective 1976-77 TFR's, the TFR of 2.5, and the respective 1979 projected TFR. Fertility rates for the intervening years were linearly interpolated from the 1976-77 and 1979 rates for each respective series.

MORTALITY

The sources of information used for estimating mortality were the 1940, 1950, 1960, and 1970 censuses; the 1972,

1973, 1976, and 1977 PNAD surveys; and the registered deaths for various years. As in the case of fertility, there were previous estimates of mortality—Mortara (1954, p. 131), Arriaga (1968, p. 42), Carvalho (1973, pp. 56, 89, and 176; 1978, p. 24), Irwin and Madeira (1975, p. 709), and Huguet (U.S. Bureau of the Census, [1973], p. 13); see table A-8 in the appendix for these estimates. Because of the date when these estimates were prepared, they were not able to use the PNAD survey results and only one of them (Carvalho, 1978) used the final results of the 1970 census. Since information from the PNAD surveys, final results of the 1970 census, and information on registered deaths for recent years are now available, new estimates of mortality from 1950 to 1974-75 were made, as well as a projected estimate for 1979.

The information on deaths was highly incomplete during the past. However, since 1971 when the Brazilian Institute of Geography and Statistics became the responsible agency for compiling vital statistics, the tabulation of death statistics has improved. An evaluation of registered deaths for 1974 and 1975 was made by applying the Brass growth balance equation technique (Brass, 1975) to the average of the 1974 and 1975 deaths, by age and sex, and the population distribution from the 1976 PNAD survey. The evaluation showed that the underenumeration of deaths ages 5 years and over was 16 percent for males and 22 percent for females. Five-year age-sex-specific death rates for ages 5 years and over were calculated based on the adjusted registered deaths and the population from the 1976 PNAD survey. The calculated age-sex-specific death rates were used to obtain the ${}_nq_x$ values of the life table for ages 5 years and over using the Reed and Merrell relationships of these two functions.

Infant mortality rates for 1974-75 were not calculated using registered deaths. Instead, they were indirectly calculated by applying the Brass, Trussell, and Sullivan mortality techniques to data from the 1976 PNAD survey. The respective results of these techniques were averaged to provide the ${}_3q_0$ and ${}_5q_0$ values which were used for obtaining infant mortality rates for both sexes combined. Since the pattern of ${}_nq_x$'s for ages 5 years and over for Brazil was close to the south region of the Coale-Demeny model life tables, the ${}_nq_x$'s of this region were used for selecting a q_0 . The infant mortality estimated by this procedure pertains to a period prior to the survey information; hence, an extrapolation of these rates provided the level of 84 per thousand births for both sexes in 1974-75. Infant mortality rates for each sex were calculated based on the infant mortality level for both sexes, the sex ratio of registered infant deaths, and an assumed sex ratio at birth of 1.05.

Finally, the ${}_nq_x$ for ages 1-4 was calculated by an interpolation process between q_0 , ${}_5q_5$, and ${}_5q_{10}$. The interpolation was done using logits and the relationships of ${}_nq_x$'s, in the south region of the Coale-Demeny model life tables. With this set of ${}_nq_x$'s, other functions of the life table were obtained for 1974-75.

An empirical life table for 1960 was also constructed. Registered deaths for ages 5 years and over were evaluated

by the same technique as for 1974-75. In this case, the 1960 census population and the average of registered deaths for 1959, 1960, and 1961 were used. The underregistration of registered deaths for ages 5 years and over was 44 and 39 percent for males and females, respectively. Even though a high underregistration of deaths was obtained, adjusted deaths were used for obtaining the age-sex-specific death rates. The decision was based on two facts: (a) the values obtained by the application of the Brass growth balance equation technique (Brass, 1975) were close to a straight line; and b) the pattern of mortality for 1960, ages 5 years and over, was similar to the one for 1974-75 (both were close to the south pattern of mortality of the Coale-Demeny regional model life tables). The age-sex-specific death rates were converted into nq_x 's using the Reed and Merrell relationship.

The infant mortality rate for 1959-61 was estimated: (a) by adjusting the infant deaths for both sexes by the same proportion of underregistration found for both sexes for ages 5 years and over; and (b) by estimating births for 1960—using the 1960 census population and the estimated age-specific fertility rates for the same year. Infant mortality rates for each sex were obtained using the same procedure as in 1974-75. Also, nq_x values for ages 1-4 were estimated using exactly the same technique as for 1974-75. Based on the set of nq_x 's, other functions of the 1960 life table were calculated.

Life tables for 1950, 1955, 1965, and 1970 were also constructed for the purposes of evaluating the population censuses of 1950 and 1970. These life tables were constructed using a different technique, since information on both registered deaths and a census or survey population was not available for any of these years. First, infant mortality rates for different years were estimated by applying the Brass, Sullivan, Trussell, and Feeney techniques to information from the 1950 and 1970 censuses and the 1972, 1973, and 1976 PNAD surveys. Taking into account the infant mortality rates from the already calculated life tables for 1959-61 and 1974-75 and the trends of infant mortality rates indirectly estimated using the above-mentioned techniques, infant mortality rates for both sexes for 1950, 1955, 1965, and 1970 were graphically determined. For 1950, 1955, and 1965, the infant mortality rates for both sexes were separated into each sex by accepting the 1959-61 sex differential. For 1970, the 1974-75 sex differential was accepted.

Life tables, by sex, for 1970 were constructed by the following procedure. The nq_x 's from the 1974-75 life tables were adjusted (for each sex and age group) by applying the relative change observed by the nq_x 's from two south region Coale-Demeny model life tables having similar infant mortality rates as those estimated for 1970 and 1974-75.

Life tables, by sex, for 1950, 1955, and 1965 were estimated by the same procedure as for 1970 but taking the nq_x 's of the 1959-61 life tables of the respective sex as a base.

Finally, life tables, by sex, for 1979 were estimated in order to project the population to that year. The life tables were calculated by projecting the trend of life expectancies

at birth for each sex to 1979 based on past trends in mortality. The nq_x values for 1979 were obtained using the assumption that the nq_x values from the 1974-75 life table would have the same relative change up to 1979 as that observed in two south region Coale-Demeny model life tables having life expectancies at birth equal to those estimated for 1974-75 and 1979.

CENSUS EVALUATION

After the estimated historical trends of mortality and fertility were obtained, an evaluation analysis of the size and age-sex composition of the population as enumerated in the 1950 and 1970 censuses was made. The 1960 census population was not included in this analysis because the information for the whole country was based on a sample of the census returns which may not have been representative of the total population.

After moving the July 1, 1950 population to September 1, 1950 (so the 1950 and 1970 populations would be exactly 20 years apart), a cohort analysis, by sex, of the native-born population was made. The analysis showed that the native-born male population presented fewer irregularities in age reporting than the female population. Therefore, it was decided that the census evaluation would be based on the native-born male population. The following steps were taken:

1. The estimated September 1, 1950 native-born population, by age and sex, was smoothed and then projected to 1970 by the component method, using estimated fertility and mortality rates for the period, 1950 to 1970.
2. Estimated survivors of births, by age and sex, to foreign-born females living in Brazil during the 1950 to 1970 period were added to this projected 1970 native-born population.
3. The projected and enumerated native-born male populations for September 1, 1970 were compared: (a) for each 5-year age group; (b) for ages 20 years and over; and (c) for ages 25 years and over. Based on this comparison it was concluded that the 1950 native-born census population ages 5 years and over was underenumerated by 0.9 percent in relation to the population, ages 25 years and over, enumerated in 1970. Hence, the September 1, 1950 smoothed native-born male population ages 5 years and over (obtained in step 1) by 5-year age groups was adjusted for 0.9 percent net underenumeration.
4. The native-born female population ages 5 years and over for September 1, 1950 was obtained using the adjusted native-born male population ages 5 years and over and expected sex ratios, by age, for 1950. The sex ratios were obtained from a population estimated as follows: (a) stable populations for each sex were estimated with the fertility and mortality conditions of 1930 and a sex ratio at birth of 1.05; (b) these populations were destabilized by projecting them up to 1950 using the estimated levels of

mortality and fertility from 1930 to 1950;² and (:) the sex ratios, by age, of this 1950 projected population were assumed to represent the expected sex ratios of the native-born Brazilian population for 1950.

5. The 1950 native-born population, by sex, for ages 0 to 4, was calculated by surviving an estimated number of births from 1945 to 1950 based on: (a) estimated fertility and mortality rates for the period; and (b) 1945 and 1950 female native-born populations at childbearing ages (based on accepting the 1950 population which was estimated in step 4 and reverse surviving to 1945).

The September 1, 1970 native-born population, by age and sex, was estimated as follows:

6. The adjusted native-born population, by age and sex, for September 1, 1950 was projected to September 1, 1970 using the mortality and fertility rates estimated for the 20-year period.

² Fertility was assumed to be constant prior to 1950. For mortality, life tables for 1930, 1935, 1940, and 1945 were estimated by: (a) extrapolation to earlier years of the trend of life expectancies at birth based on life expectancies for the period, 1950 to 1974-75; and (b) estimating a set of nq_x 's using the same technique as explained in the mortality section for deriving the 1950, 1955, 1965, and 1970 nq_x 's.

7. The estimated survivors of births, by age and sex, to the foreign-born female population living in Brazil during the 1950 to 1970 period were added to the populations estimated in step 6.

Finally, after moving the estimated September 1, 1950 population, by age and sex, back to the census date (July 1), the foreigners enumerated in 1950 and 1970 censuses were added to the adjusted native-born populations, by age and sex. The adjusted censuses are presented in table 2 and appendix table A-1.

Although the September 1, 1960 census was not analyzed, it is possible to estimate the implied underenumeration by comparing the census population with a projected population for the same date based on the analysis of the 1950 and 1970 censuses. The estimates of net (percent) underenumeration for 1960 for both the total population and the population under age 10, by sex, are shown below:

Sex	All ages	Under 10 years
Both sexes	2.6	5.8
Male	1.9	5.5
Female	3.2	6.2

Table A-1. Enumerated and Adjusted Census Population, by Age and Sex: July 1950

(In thousands. Figures may not add to totals due to rounding. For meaning of symbols, see text)

Age	Enumerated population			Adjusted population		
	Both sexes	Male	Female	Both sexes	Male	Female
All ages.....	51,944	25,885	26,059	53,443	26,399	27,044
0 to 4 years.....	8,371	4,236	4,135	9,011	4,555	4,456
5 to 9 years.....	7,016	3,561	3,455	7,166	3,603	3,564
10 to 14 years.....	6,309	3,165	3,144	6,274	3,140	3,134
15 to 19 years.....	5,502	2,645	2,858	5,492	2,737	2,755
20 to 24 years.....	4,991	2,384	2,607	4,875	2,399	2,476
25 to 29 years.....	4,132	2,030	2,102	4,201	2,067	2,134
30 to 34 years.....	3,245	1,622	1,623	3,495	1,720	1,775
35 to 39 years.....	3,041	1,524	1,517	2,968	1,462	1,506
40 to 44 years.....	2,389	1,228	1,161	2,531	1,248	1,283
45 to 49 years.....	1,977	1,019	958	2,086	1,023	1,063
50 to 54 years.....	1,585	811	774	1,606	778	827
55 to 59 years.....	1,066	550	516	1,253	597	656
60 to 64 years.....	936	473	463	935	435	500
65 to 69 years.....	515	255	260	668	301	367
70 to 74 years.....	360	165	196	429	180	249
75 to 79 years.....	185	83	102	188	71	117
80 years and over.....	209	81	127	266	82	184
Unknown.....	117	54	63	-	-	-

Source: Enumerated census population is given in Brazil Servico Nacional de Recenseamento, 1953, tables 2 and 4. For a description of the adjustment of the census, see the Technical Notes in the appendix.

Table A-2. Enumerated Census Population, by Age and Sex: September 1970

(In thousands. Figures may not add to totals due to rounding)

Age	Both sexes	Male	Female
All ages.....	93,139	46,331	46,808
0 to 4 years.....	13,812	6,970	6,842
5 to 9 years.....	13,460	6,800	6,660
10 to 14 years.....	11,859	5,934	5,925
15 to 19 years.....	10,253	4,995	5,258
20 to 24 years.....	8,286	4,037	4,249
25 to 29 years.....	6,504	3,173	3,331
30 to 34 years.....	5,665	2,801	2,864
35 to 39 years.....	5,089	2,502	2,587
40 to 44 years.....	4,536	2,288	2,247
45 to 49 years.....	3,547	1,795	1,752
50 to 54 years.....	2,940	1,486	1,454
55 to 59 years.....	2,288	1,160	1,128
60 to 64 years.....	1,791	903	888
65 to 69 years.....	1,217	605	612
70 years and over.....	1,709	788	921
Unknown.....	184	93	91

Source: Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1973, table 1, p. 2.

**Table A-3. Estimated and Projected Total Fertility Rates and Life Expectancies at Birth:
Selected Periods, 1970 to 1979**

(For meaning of symbols, see text)

Year or period	Total fertility rate (per woman)			Life expectancy at birth (years)	
	High series	Middle series	Low series	Male	Female
ESTIMATED					
1970.....	5.33	5.33	5.33	56	60
1972-73.....	5.04	4.90	4.90	57	62
1974-75.....	4.79	4.63	4.56	58	63
1976-77.....	4.55	4.40	4.25	(X)	(X)
PROJECTED					
1979.....	4.34	4.15	3.95	60	65

Source:

Total fertility rates

1970, 1972-73, and 1976-77 -- See table 7.

1974-75 -- Graphically interpolated based on the estimated total fertility rates for 1972-73 and 1976-77.

1979 -- See the fertility section in the Technical Notes in the appendix.

Life expectancies at birth

1970 and 1972-73 -- Linearly interpolated based on estimated life expectancies at birth for 1960 and 1974-75 (see table 4).

1974-75 -- See table 4.

1979 -- See the mortality section in the Technical Notes in the appendix.

Table A-4. Estimated and Projected Total and Age-Specific Fertility Rates: 1976-77 and 1979

Age	Estimated, 1976-77			Projected, 1979		
	Upper	Middle	Lower	Upper	Middle	Lower
Age-specific fertility rates (per 1,000 women)						
15 to 19 years.....	61	59	57	60	58	56
20 to 24 years.....	206	199	192	198	190	182
25 to 29 years.....	233	225	217	223	214	204
30 to 34 years.....	196	189	183	186	177	168
35 to 39 years.....	137	132	128	129	122	116
40 to 44 years.....	64	62	60	59	56	53
45 to 49 years.....	14	14	14	13	13	12
Total fertility rate per woman.....	4.55	4.40	4.25	4.34	4.15	3.95

Source: 1976-77 -- See table 7.

1979 -- See the discussion of fertility in the Technical Notes in the appendix.

Table A-5. Alternate Estimates of Total Fertility Rates from Selected Sources: Selected Periods, 1930 to 1977

(Rates per woman. For meaning of symbols, see text)

Period or year	Estimates derived by--				Year	Brass technique using P/F ratios based on women ages	
	Mortara	Carvalho	Arretx	IBGE		20-24	25-29
1930-40.....	6.5	6.5	(NA)	(NA)	1940	6.02	5.82
1940-50.....	6.1	6.3	5.8	(NA)	1950	6.18	5.76
1950-60.....	(NA)	6.1	5.6	(NA)	1960	6.37	5.90
1960-70.....	(NA)	5.8	5.4	(NA)	1970	5.76	5.88
1970.....	(NA)	(NA)	(NA)	5.2-5.4	1972	5.50	5.75
					1973	4.90	5.18
					1976	4.26	4.64
					1977	4.25	4.47

Source: Mortara - Application of the Mortara fertility technique to children-ever-born data from the 1940 and 1950 censuses (Mortara, 1954, p. 130).

Carvalho - Application of the Brass fertility technique to final data from the 1940, 1950, and 1970 censuses as well as preliminary data from the 1960 and 1970 censuses (Carvalho, 1974, pp. 406, 408, and 410; and 1978, p. 7). For further details, see the discussion of fertility in the Technical Notes in the appendix.

Arretx - Application of the Arretx fertility technique to final data from the 1950 census and preliminary results from the 1960 and 1970 censuses (Arretx, 1975, p. 12).

IBGE - Total fertility rates were estimated using final results from the 1970 census (Brazil Fundação Instituto Brasileiro de Geografia e Estatística (IBGE), 1976, p. 537).

Estimates based on Brass fertility technique - Estimates of total fertility rates for 1940, 1950, 1960, and 1970 were obtained at the U.S. Bureau of the Census by applying the Brass fertility technique to information on children ever born from each census and a pattern of fertility derived from 1970 census data on births occurring in the 12 months prior to the census, by age of mother (United Nations, 1951, table 7; 1960, table 6; Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, tables 1 and 26, pp. 2 and 66; and 1973, table 31). Estimates of total fertility rates for 1972, 1973, 1976, and 1977 were obtained by applying the Brass fertility technique to data from the 1972, 1973, 1976, and 1977 National Household Sample Surveys (Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1978a, table 31; no date a; no date b; and no date c). For further discussion, see fertility section in the Technical Notes in the appendix.

**Table A-6. Alternate Estimates of Crude Birth Rates from Selected Sources:
Selected Periods, 1930 to 1970**

Source and period	Crude birth rate	Source and period	Crude birth rate
Arriaga		Merrick	
1930-34.....	44	1930-40.....	44
1935-39.....	45	1940-50.....	44
1940-44.....	46	1960-70.....	40
1945-49.....	46		
1950-54.....	47	Mortara	
1955-59.....	44	1930-40.....	47
Carvalho		1940-50.....	45
1930-40.....	47	Huguet	
1940-50.....	46	1970.....	38
1960-70.....	42		

Source: Arriaga, 1970, p. 148; Carvalho, 1974, p. 410; Merrick, 1974, p. 425; estimates by Mortara as reported in Carvalho, 1974, p. 410; and estimate by Huguet as reported in U.S. Bureau of the Census, [1973], p. 13. See the discussion on fertility in the Technical Notes in the appendix.

**Table A-7. Estimated and Projected Life Expectancy at Birth, by Sex:
Selected Periods, 1974-75 to 1979**

Period or year	Both sexes	Male	Female
Estimated			
1974-75.....	60	58	63
Projected			
1979.....	63	60	65

Source:

1974-75 -- See notes to table 4.

1979 -- Extrapolated from past trends in mortality (for further details see the discussion on mortality in the Technical Notes in the appendix).

Table A-8. Alternate Estimates of Life Expectancy at Birth From Selected Sources: Selected Periods, 1930 to 1970

Source and period	Life expectancy at birth			Source and period	Life expectancy at birth		
	Both sexes	Male	Female		Both sexes	Male	Female
Carvalho				Mortara			
1930-40.....	41	40	43	1940-50.....	42	39	46
1940-50.....	44	42	45	Irwin and Madeira			
1960-70.....	53	51	56	1960-70.....	59	58	61
Arriaga				Huguet			
1940.....	37	36	37	1970.....	59	57	61
1950.....	43	42	44				
1960.....	56	54	57				

Source: Carvalho - Application of the Brass mortality technique to data from the 1940, 1950, and 1970 censuses to obtain child mortality. The pattern of adult mortality was obtained from various Mexican life tables, used as models (Carvalho, 1973, pp. 86, 89, and 176; and 1978, p. 24).

Arriaga - Application of a stable population technique using the age distribution of the population ages 10 to 59 for 1940, 1950, and 1960, estimated growth rates for each year, and United Nations model life tables (Arriaga, 1968, p. 42).

Mortara - Life expectancy at birth derived using the United Nations model life tables and the 1940 and 1950 census populations (Mortara, 1954, p. 131).

Irwin and Madeira - Application of the Brass mortality technique to data from the 1960 census to obtain child mortality. Adult mortality was obtained by interpolating between two Coale-Demeny west region model life tables chosen based on the results from the Brass technique (Irwin and Madeira, 1975, p. 709).

Huguet - Application of a stable population technique to estimate adult mortality, using the cumulated age distribution of an adjusted population for 1970 and a Coale-Demeny west region model life table. Child mortality was estimated by applying the Brass mortality technique to data from the preliminary results of the 1970 census (U.S. Bureau of the Census, [1973], p. 13).

Table A-9. Women Ages 15 to 49 Years, by Number of Children Ever Born, Average Number of Children Ever Born, and Average Number of Children Surviving: 1960

(Numbers in thousands and may not add to totals due to rounding)

Age	Total	Number of children ever born ¹						Average number of children ever born per woman ¹	Average number of children surviving per woman
		0	1	2	3	4	5 or more		
All women, 15 to 49 years	16,825	7,092	1,548	1,659	1,358	1,104	4,064	2.7	2.1
15 to 19 years.....	3,723	3,404	211	79	21	5	2	0.1	0.1
20 to 24 years.....	3,244	1,720	506	460	289	151	118	1.1	0.9
25 to 29 years.....	2,701	753	312	416	372	308	541	2.5	2.1
30 to 34 years.....	2,266	435	187	275	266	247	855	3.8	3.0
35 to 39 years.....	1,993	315	139	193	186	177	984	4.9	3.8
40 to 44 years.....	1,579	252	105	133	127	123	839	5.5	4.2
45 to 49 years.....	1,321	213	88	103	98	94	725	5.8	4.3

¹Including stillbirths.

Note: Figures are based on data from a 25-percent sample of the 1960 census returns inflated to national totals. Excludes 50,478 women of unknown age of which 21,995 had one or more children.

See table 8 for data on children ever born from the 1970 census and the 1976 National Household Sample Survey.

Source: Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 1, p. 2 and tables 25 and 26, p. 66.

Table A-10. Population Ages 15 Years and Over, by Marital Status, Age, and Sex: 1960

(Population in thousands. Figures may not add to totals due to rounding. For meaning of symbols, see text)

Sex and age	Population						Percent					
	Total	Single	Legally married	Consensually married	Widowed	Divorced or separated	Total	Single	Legally married	Consensually married	Widowed	Divorced or separated
MALE¹												
Total, 15 years and over.....	19,836	7,434	10,838	743	499	322	100.0	37.5	54.6	3.7	2.5	1.6
15 to 19 years.....	3,452	3,405	37	6	(2)	3	100.0	98.6	1.1	0.2	(2)	0.1
20 to 24 years.....	2,992	2,161	743	59	4	25	100.0	72.2	24.8	2.0	0.1	0.8
25 to 29 years.....	2,542	865	1,525	104	10	39	100.0	34.0	60.0	4.1	0.4	1.5
30 to 34 years.....	2,251	380	1,709	105	16	41	100.0	16.9	75.9	4.7	0.7	1.8
35 to 39 years.....	1,971	211	1,593	106	23	39	100.0	10.7	80.8	5.4	1.1	2.0
40 to 44 years.....	1,656	133	1,357	93	35	37	100.0	8.1	82.0	5.6	2.1	2.2
45 to 49 years.....	1,391	89	1,148	79	41	34	100.0	6.4	82.5	5.7	2.9	2.5
50 to 54 years.....	1,109	66	898	63	52	30	100.0	6.0	80.9	5.7	4.7	2.7
55 to 59 years.....	822	42	658	46	52	24	100.0	5.2	80.1	5.5	6.3	2.9
60 years and over.....	1,649	81	1,171	81	266	50	100.0	4.9	71.0	4.9	16.1	3.0
FEMALE²												
Total, 15 years and over.....	20,306	6,249	10,868	752	1,783	655	100.0	30.8	53.5	3.7	8.8	3.2
15 to 19 years.....	3,722	3,172	478	42	2	27	100.0	85.2	12.8	1.1	0.1	0.7
20 to 24 years.....	3,242	1,417	1,611	118	14	82	100.0	43.7	49.7	3.6	0.4	2.5
25 to 29 years.....	2,698	579	1,860	138	30	91	100.0	21.5	68.9	5.1	1.1	3.4
30 to 34 years.....	2,263	309	1,699	119	51	85	100.0	13.6	75.1	5.3	2.3	3.8
35 to 39 years.....	1,990	205	1,511	110	82	82	100.0	10.3	75.9	5.5	4.1	4.1
40 to 44 years.....	1,577	147	1,145	83	127	74	100.0	9.4	72.6	5.3	8.1	4.7
45 to 49 years.....	1,319	110	921	59	164	65	100.0	8.3	69.8	4.5	12.5	4.9
50 to 54 years.....	1,049	95	648	38	215	53	100.0	9.0	61.8	3.6	20.5	5.0
55 to 59 years.....	768	62	437	21	212	37	100.0	8.1	56.9	2.7	27.6	4.8
60 years and over.....	1,678	152	558	24	884	60	100.0	9.1	33.3	1.4	52.7	3.6

¹Excludes 29,446 males of unknown marital status and 38,698 males of unknown age.²Excludes 24,952 females of unknown marital status and 43,617 females of unknown age.

Note: Figures are based on data from a 25-percent sample of the 1960 census returns inflated to national totals. See table 9 for data on marital status from the 1970 census and the 1976 National Household Sample Survey.

Source: Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 3, pp. 6-7.

Table A-11. Number of Acceptors of Contraception in BEMFAM Program, by Method: Selected Years, 1966 to 1978

(In thousands. Figures may not add to totals due to rounding)

Method	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
All methods.....	2	12	19	36	71	111	130	143	185	204	218	214	220
Oral contraceptives..	1	7	11	25	58	90	100	117	171	197	213	208	215
Other.....	1	5	8	10	13	21	29	37	15	7	5	6	5

Note: Data refer to the 'Sociedade Civil de Bem-Estar Familiar do Brasil (BEMFAM) which was founded in 1965. Since 1966 they have been providing contraceptives for family planning. Contraceptives are provided through clinics affiliated with medical institutions. The clinics are located in the states bordering the east coast of Brazil and are usually found in the capital cities of each state. In 1975 BEMFAM started to close down some of its clinics. This was due in part to the community based distribution program which was started in 1973 in the northern state of Rio Grande do Norte. Since this new program was a success it was expanded in 1975 to include the following states; Paraná, Paraíba, Pernambuco, and Alagoas (three states in the north-east and one in the south-east). In 1978 the community based distribution program was accepted by the state of Piauí, located in the north-eastern part of Brazil.

Source: International Planned Parenthood Federation, 1979, p. 253. The data for 1973, 1974, 1975, 1976, 1977, and 1978 include 10,625; 32,137; 66,087; 137,011; 142,825; and 158,900 acceptors in community based distribution programs, respectively.

Table A-12. Percent of Currently Married Women Ages 15 to 44 Years Currently Using Contraception, by Method, Age, and Residence for the States of São Paulo and Piauí

(For meaning of symbols, see text)

State, age, and residence	All methods	Oral contraceptives	Sterilization	Withdrawal	Rhythm	Condom	Other
SÃO PAULO STATE, 1978¹							
Age							
Married women, 15 to 44 years.....	63.9	27.8	16.1	7.3	5.2	6.6	0.9
15 to 19 years.....	42.9	35.4	0.9	0.7	5.2	0.7	-
20 to 24 years.....	60.8	41.2	2.7	5.2	4.0	6.2	1.5
25 to 29 years.....	62.7	35.9	9.5	6.5	2.6	7.8	0.4
30 to 34 years.....	69.0	27.4	20.8	7.1	6.8	5.1	1.8
35 to 39 years.....	72.2	20.2	27.8	6.5	7.7	7.2	2.7
40 to 44 years.....	59.3	11.4	20.8	13.4	4.7	7.8	1.2
Residence							
All areas.....	63.9	27.8	16.1	7.3	5.2	6.6	0.9
São Paulo município.....	63.4	30.0	13.9	5.9	4.5	6.9	2.2
Other urban areas.....	66.0	26.7	18.0	7.3	6.2	7.3	0.5
Rural areas.....	58.6	27.0	14.1	10.5	3.2	3.3	0.5
PIAUI STATE, 1979							
Residence							
All areas.....	30.9	10.0	15.4	2.5	2.6	0.3	
Teresina município.....	44.9	11.7	28.2	0.7	3.4	0.9	
Other areas.....	28.8	9.8	13.5	2.8	2.5	0.3	

¹In São Paulo the majority of current users of contraceptives, 61.2 percent, obtain contraceptives from pharmacies, with only 0.4 percent obtaining contraceptives from BEMFAM.

Note: Neither of these states are representative of the country as a whole. The southeastern state of São Paulo is the most developed state in Brazil and the northeastern state of Piauí is one of the least developed.

Source: Nakamura, Milton S., et. al., 1979, tables 8, 10, and 16; and U.S. Department of Health, Education, and Welfare, Center for Disease Control, 1980, table 11.

Table A-13. Economically Active Population, During the Week of November 22 to 28, by Age and Sex: 1976

(Population in thousands. Figures may not add to totals due to rounding)

Age	Male			Female		
	Total population	Economically active		Total population	Economically active	
		Number	Percent of total		Number	Percent of total
Total, 10 years and over.....	38,396	28,275	73.6	39,677	11,420	28.8
10 to 14 years.....	6,895	1,792	26.0	6,854	796	11.6
15 to 19 years.....	5,941	4,101	69.0	6,217	2,312	37.2
20 to 24 years.....	4,884	4,387	89.8	5,188	2,154	41.5
25 to 29 years.....	3,861	3,720	96.4	4,090	1,511	36.9
30 to 39 years.....	5,964	5,753	96.4	6,239	2,172	34.8
40 to 49 years.....	4,702	4,393	93.4	4,738	1,443	30.4
50 to 59 years.....	3,147	2,647	84.1	3,113	715	23.0
60 to 69 years.....	1,955	1,209	61.8	2,003	264	13.2
70 years and over.....	1,048	274	26.1	1,237	54	4.4

Note: Figures are based on data from the 1976 National Household Sample Survey which were inflated to national totals. Excludes the rural areas of region VII (see appendix table A-15 for states and territories in this region).

Excludes 12,246 males and 61,400 females of unknown age and 8,486 males and 14,344 females economically active of unknown age.

The 1976 survey classified a person as economically active if they worked any amount of time for remuneration or 15 hours or more without pay during a reference period regardless of whether their principal activity was, for example; housewife, student, retiree, or invalid.

The 1976 survey used two definitions of economically active, one of which was based on a one-week reference period, November 22 to 28, 1976. The second definition used a one-year reference period (November 22, 1975 to November 21, 1976) and also included those persons who were economically active during the week of November 22 to 28, 1976. Note that this table uses the one-week definition and that table 17 and appendix table A-14 use the one-year definition.

In this table, economically active population comprised all persons 10 years of age and over, who during the week of November 22 to 28, 1976: were working in an occupation for remuneration and/or who habitually worked 15 hours or more per week without pay, for the family, a religious group, or a charitable institution; or were looking for work.

See table 14 for data on economically active from the 1960 and 1970 censuses and appendix table A-14 for data on persons economically active from the 1976 National Household Sample Survey based on the one-year reference period.

Source: Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1978a, table 15.

Table A-14. Economically Active Population, by Age and Sex: 1976

Age	Male			Female		
	Total population	Economically active		Total population	Economically active	
		Number	Percent of total		Number	Percent of total
Total, 10 years and over.....	38,396	28,471	74.2	39,677	11,742	29.6
10 to 14 years.....	6,895	1,815	26.3	6,854	815	11.9
15 to 19 years.....	5,941	4,143	69.7	6,217	2,377	38.2
20 to 24 years.....	4,884	4,409	90.3	5,188	2,219	42.8
25 to 29 years.....	3,861	3,729	96.6	4,090	1,554	38.0
30 to 39 years.....	5,964	5,773	96.8	6,239	2,225	35.7
40 to 49 years.....	4,702	4,413	93.9	4,738	1,480	31.2
50 to 59 years.....	3,147	2,675	85.0	3,113	738	23.7
60 to 69 years.....	1,955	1,228	62.8	2,003	277	13.8
70 years and over.....	1,048	287	27.4	1,237	56	4.5

Note: Figures are based on data from the 1976 National Household Sample Survey which were inflated to national totals. Excludes the rural areas of region VII (see appendix table A-15 for states and territories in this region).

Excludes 12,246 males and 61,400 females of unknown age and 8,802 males and 15,300 females economically active of unknown age.

The 1976 survey classified a person as economically active if they worked any amount of time for remuneration or 15 hours or more without pay during a reference period whether or not their principal activity was, for example; housewife, student, retiree, or invalid.

The 1976 survey used two definitions of economically active, one of which was based on a 1-week reference period, November 22 to 28, 1976. The second definition used a 1-year reference period (November 22, 1975 to November 21, 1976) and also included those persons who were economically active during the week of November 22 to 28, 1976. Note that this table and table 17 use the one-year definition and that appendix table A-13 uses the 1-week definition.

In this table, economically active population for 1976 comprised all persons 10 years of age and over, who during a 12-month period (November 22, 1975 to November 21, 1976): worked for pay or profit in the production of goods or services; were self employed; apprenticed; worked without pay 15 hours or more a week for the family, a religious group, or a charitable organization; or were looking for work. Also, included were persons who were economically active during the reference week of November 22 to 28, 1976 (see appendix table A-13).

See table 14 for data on economically active from the 1960 and 1970 censuses and appendix table A-13 for data on economically active from the 1976 National Household Sample Survey based on the one-week reference period.

Source: Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1978a, table 36.

Table A-15. Regional Population, Growth Rates, and Migration Data

Region	1970 population (in thousands)	1976 population (in thousands)	Annual growth rate, 1970-76 (percent)	1976 ¹ population born outside region (percent)
I.....	8,995	10,882	3.2	22.8
II.....	17,772	21,680	3.3	20.9
III.....	16,496	20,223	3.4	8.5
IV.....	13,087	14,485	1.7	3.9
V.....	28,112	32,900	2.6	1.0
VI.....	537	853	7.7	71.5
VII ²	3,548	4,852	5.2	16.7

¹Figures are based on data from the 1976 National Household Sample Survey inflated to national totals.

²Population represents urban areas only. In 1970, the rural population of region VII was 4,591,730.

Note: Regions are comprised of the following states and territories (T):

I	Rio de Janeiro	V	Maranhão	VI	Distrito Federal
II	São Paulo		Piauí	VII	Rondônia (T)
III	Paraná		Ceará		Acre
	Santa Catarina		Rio Grande do Norte		Amazonas
	Rio Grande do Sul		Paraíba		Roraima (T)
IV	Minas Gerais		Pernambuco		Pará
	Espírito Santo		Alagoas		Amapá (T)
			Sergipe		Mato Grosso
			Bahia		Goiás

Source: Based on 1970 census data and 1976 National Household Sample Survey data as reported in Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1972, selected tomos (books), table 1 and 1973, table 7, p. 16; and 1978b-h, table 1, p. 3 and table 4, p.7; respectively.

Table A-16. Persons of Foreign Citizenship, by Country: 1960

Country of citizenship	Population ¹
All countries.....	1,252,467
Portugal.....	431,047
Italy.....	187,377
Japan.....	149,138
Spain.....	144,080
Germany.....	52,161
U.S.S.R.....	34,621
Poland.....	27,579
Lebanon.....	23,585
Paraguay.....	17,748
Syria.....	17,404
Argentina.....	15,877
Other countries.....	151,850
Population of foreign citizenship as percent of total population.....	1.8

¹Based on data from a sample of the 1960 census returns inflated to national totals.

Note: See table 22 for the foreign-born population, by country of birth, for 1970.

Source: Brazil Fundação Instituto Brasileiro de Geografia e Estatística, 1977, table 9, p. 14.

Major Sources

- Adlakha, Arjun and Frank Wm. Oechsli. 1973. "Temporal and Regional Variation in Brazilian Natality, 1940-70." *Discussion Paper No. 73-11*. Food Research Institute, Stanford University, Palo Alto.
- Arretx, Carmen. 1975. *Fertility Estimates Derived from Information on Children Ever Born Using Data from Successive Censuses*. Laboratories for Population Statistics. Reprint Series, No. 16. University of North Carolina. Chapel Hill.
- Arriaga, Eduardo E. 1968. *New Life Tables for Latin American Populations in the Nineteenth and Twentieth Centuries*. Population Monograph Series, No. 3. University of California. Berkeley.
- _____. 1970. *Mortality Decline and its Demographic Effects in Latin America*. Population Monograph Series, No. 6. University of California. Berkeley.
- Arriaga, Eduardo E. and Patricia Anderson. 1976. "An Approach for Estimating Fertility from Census and/or Survey Information on Children Ever Born by Age of Mother." Revised version of the paper presented at the annual meeting of the Population Association of America, Montreal. Unpublished.
- Brass, William. 1975. *Methods for Estimating Fertility and Mortality from Limited and Defective Data*. University of North Carolina. Chapel Hill.
- Brass, William, et. al. 1968. *The Demography of Tropical Africa*. Princeton University. Princeton.
- Brazil Centro Brasileiro De Estudos Demographic (CBED). 1976. "Projeção da População Brasileira por Idade e Sexo-Período 1970/2000." *Encontro Brasileiro de Estudos Populacionais*. Rio de Janeiro.
- Brazil Fundação Instituto Brasileiro de Geografia e Estatística. 1972. *Censo Demográfico Brasil VIII Recenseamento Geral—1970 Série Regional*. Vol. I. Tomo (Book) I-XXIV. Rio de Janeiro.
- _____. 1973. *Censo Demográfico Brasil VIII Recenseamento Geral—1970 Série Nacional*. Vol. 1. Rio de Janeiro.
- _____. 1977. *VII Recenseamento Geral de Brasil, Censo Demográfico de 1960—Série Nacional*. Vol. 1. Rio de Janeiro.
- _____. 1978a. *Pesquisa Nacional por Amostra de Domicílios—1976—Brasil*. Vol. 1—Tomo 8. Rio de Janeiro.
- _____. 1978b. *Pesquisa Nacional por Amostra de Domicílios—1976—Região I*. Vol. 1—Tomo 1. Rio de Janeiro.
- _____. 1978c. *Pesquisa Nacional por Amostra de Domicílios—1976—Região II*. Vol. 1—Tomo 2. Rio de Janeiro.
- _____. 1978d. *Pesquisa Nacional Por Amostra de Domicílios—1976—Região III*. Vol. 1—Tomo 3. Rio de Janeiro.
- _____. 1978e. *Pesquisa Nacional por Amostra de Domicílios—1976—Região IV*. Vol. 1—Tomo 4. Rio de Janeiro.
- _____. 1978f. *Pesquisa Nacional por Amostra de Domicílios—1976—Região V*. Vol. 1—Tomo 5. Rio de Janeiro.
- _____. 1978g. *Pesquisa Nacional por Amostra de Domicílios—1976—Região VI*. Vol. 1—Tomo 6. Rio de Janeiro.
- _____. 1978h. *Pesquisa Nacional por Amostra de Domicílios—1976—Região VIII*. Vol. 1—Tomo 7. Rio de Janeiro.

- _____. 1979a. *Pesquisa Nacional por Amostra de Domicílios—1977*. Vol. 2—Tomo 8. Rio de Janeiro.
- _____. no date a. *Pesquisa Nacional por Amostra de Domicílios—1972*. [Rio de Janeiro].
- _____. no date b. *Pesquisa Nacional por Amostra de Domicílios—1973*. Unpublished.
- _____. no date c. *Pesquisa Nacional por Amostra de Domicílios—1977*. Unpublished.
- Brazil Servico Nacional de Recenseamento. 1953. *VI Recenseamento Geral do Brasil, Censo Demográfico de Julho de 1950 Estados Unidos do Brasil*. Rio de Janeiro.
- Carvalho, Jose Alberto Magno. 1973. "Analysis of Regional Trends in Fertility, Mortality, and Migration in Brazil 1940-1970." Thesis, London School of Economics and Political Science. Unpublished.
- _____. 1974. "Regional Trends in Fertility and Mortality in Brazil." *Population Studies*. Vol. 28, No. 3: 401-421.
- _____. 1978. *Fecundidade e Mortalidade no Brasil—1960/1970*. Belo Horizonte.
- Centre d'Etudes de Dynamique de la Population de l'Université de São Paulo and Centre Brésilien d'Analyse et de Planification de São Paulo. 1975. *La Population du Brésil*. National Population Monograph in the CICRED Series. Paris.
- Centro Latinoamericano de Demografía. 1974. "America Latina: Índice de Crecimiento de la Población en el Periodo 1950-2000. Por Países." *Boletín Demográfico*. No. 13. Santiago.
- _____. 1977. *Brasil: Mortalidad y Fecundidad en las Regiones Nordeste y Sudeste 1970*, by Julio M. Rodriguez. Series C, No. 1005. Santiago.
- Coale, Ansley J. and Paul Demeny. 1966. *Regional Model Life Tables and Stable Populations*. Princeton University. Princeton.
- Costa, Manoel Augusto. 1977. *Componentes do Cresciment. Demográfico Urbane, Rural e Total Entre 1960/70*. Instituto de Pesquisas de IPEA. Monografía No. 22. Rio de Janeiro.
- Feeney, Griffith. 1976. "Estimating Infant Mortality Rates from Child Survivorship Data by Age of Mother." *Asian and Pacific Census Newsletter*. Vol. 3, No. 2; 12-16. East-West Population Institute. Honolulu.
- International Labour Office. 1973. *Yearbook of Labour Statistics, 1973*. Geneva.
- International Planned Parenthood Federation. 1974. *Contraceptive Service and Cost Study of Four Latin American Countries 1970-1972*. New York.
- _____. 1975. *1973—Overview-1974, Contraceptive Services, Family Planning Programs, Western Hemisphere Region*. New York.
- _____. 1976. *Overview: 1975, Contraceptive Services of the Family Planning Programs of IPPF in the Western Hemisphere*. New York.
- _____. 1977. *Overview—1976, Contraceptive Services of the Family Planning Programs of the Western Hemisphere*. New York.
- _____. 1978. *Overview—1977, Contraceptive Services of the Family Planning Programs of the Western Hemisphere*. New York.
- _____. 1979. *Report to Donors: 1979 Programme Development and Financial Statements 1978-1980*. London.
- Irwin, Richard and Evelyn Spielman. 1973. "Estimativas e Projeções Preliminares das Taxas de Fecundidade: Brasil, 1970 a 2000." *Revista Brasileira de Estatística*, No. 134. Rio de Janeiro.

- Irwin, Richard and João L. Madeira. 1975. "Dedução de Uma Tábua de Vida Através de Análise Demográfica Brasil, 1960/70." *Revista Brasileira de Estatística*. No. 33. Rio de Janeiro.
- Merrick, Thomas W. 1974. "Interregional Differences in Fertility in Brazil, 1950-1970." *Demography*. Vol. 11, No. 3:423-440.
- Merrick, Thomas W. and Douglas H. Graham. 1979. *Population and Economic Development in Brazil, 1800 to the Present*. Baltimore.
- Morris, Leo. 1979. "The Use of Contraceptive Prevalence Surveys to Provide Data for the Evaluation of Family Planning Programs in Latin America." Paper presented at the annual meeting of the American Statistical Association, Washington, D.C. Unpublished.
- Mortara, Giorgiaio. 1954. "The Development and Structure of Brazil's Population." *Population Studies*. Vol. VII, No. 2: 121-139.
- Nakamura, Milton S., et. al. 1979. *São Paulo State Contraceptive Prevalence Survey PESNI/PUCC/78*. [São Paulo].
- Sullivan, Jeremiah. 1972. "Models for the Estimation of the Probability of Dying between Birth and Exact Ages of Childhood." *Population Studies*. Vol. XXVI, No. 1:79-97.
- Trussell, T. James. 1975. "A Re-estimation of the Multiplying Factors for Determining Childhood Survival." *Population Studies*. Vol. XXIX, No. 1:97-107.
- United Nations. 1951. *Demographic Yearbook 1949-50*. New York.
- _____. 1960. *Demographic Yearbook 1959*. New York.
- _____. 1963. *Demographic Yearbook 1962*. New York.
- _____. 1967. *Methods of Estimating Basic Demographic Measures from Incomplete Data*. Manual IV. ST/SOA/Series A/42. New York.
- U.S. Bureau of the Census. [1973]. *Demographic Estimates Based on the 1970 Population Census of Brazil*, by Jerry Huguet. Research Document No. 5. Washington, D.C.
- _____. 1975. *Projections of the Rural and Urban Populations of Colombia, 1965 to 2000*, by Sylvia Quick and Eduardo Arriaga. International Research Document No. 3. Washington, D.C.
- U.S. Department of Health, Education, and Welfare. Center for Disease Control. 1979. "São Paulo Contraceptive Prevalence Survey: Demographic Measurement", by John E. Anderson. *Working Paper No. 1*. Atlanta.
- _____. 1980. "Demographic Measurement: Contraceptive Prevalence Survey, Piauí State, Brazil 1979", by John E. Anderson. *Working Paper*. Atlanta.

data user

news

U.S. Department of Commerce
BUREAU OF THE CENSUS

Be Informed About Census Statistics... Subscribe to Data User News, the Census Bureau's Monthly Newsletter

Who's reading Data User News?

State and local government planners...librarians...market researchers...business professionals...information specialists...consultants...students...professors....

This monthly newsletter will keep you informed about—

- Census Bureau products and services
- censuses and surveys on the drawing board and estimates and projections in preparation
- highlights of statistics from other Federal agencies
- conferences and workshops

- new Census Bureau reports and guides
- State data centers and other organizations which offer statistical services

Data User News tackles the technical side, too, with—

- detailed information on new data files on tape
- indepth pieces on statistical series and methodologies

Stay informed about Census Bureau reports, products, and services which fit your needs. Subscribe to Data User News for \$ 14 per year.

(please detach here)

ORDER FORM

MAIL TO: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

Enter my subscription to
DATA USER NEWS at \$14 per year
C3.238:

Enclosed is \$ _____ check,
 money order, or charge to my

Deposit Account No.

_____ - _____

Make checks payable
to Superintendent of
Documents



Credit Card Orders Only

Total charges \$ _____ Fill in the boxes below.

Credit Card No. _____

Expiration Date
Month/Year _____

Order No. _____

PLEASE PRINT OR TYPE

Name—First, Last

Company name or additional address line

Street address

City

State

ZIP Code

(or Country)

For Office Use Only

Quantity Charges

..... Enclosed	
..... To be mailed	
..... Subscriptions	
Postage	
Foreign handling	
MMOB	
OPNR	
..... UPNS	
..... Discount	
..... Refund	

44

LIST OF REPORTS

Country Demographic Profiles have recently been published or are forthcoming in the near future (in the ISP-DP series of reports) for the following countries:

- No. 4 - Costa Rica (*Issued August 1977*)
- No. 5 - Ghana (*Issued September 1977*)
- No. 6 - Guatemala (*Issued October 1977*)
- No. 7 - Panama (*Issued November 1977*)
- No. 8 - Sri Lanka (*Issued November 1977*)
- No. 9 - Jamaica (*Issued November 1977*)
- No. 10 - Honduras (*Issued December 1977*)
- No. 11 - Kenya (*Issued January 1978*)
- No. 12 - Republic of China (*Issued February 1978*)
- No. 13 - Chile (*Issued February 1978*)
- No. 14 - Mexico (*Issued September 1979*)
- No. 15 - Thailand (*Issued April 1978*)
- No. 16 - India (*Issued November 1978*)
- No. 17 - Republic of Korea (*Issued June 1978*)
- No. 18 - Indonesia (*Issued May 1979*)
- No. 19 - Brazil (*Issued January 1981*)
- No. 20 - Colombia (*Issued October 1979*)
- No. 21 - Nepal (*Issued November 1979*)
- No. 22 - Malaysia (*Issued November 1979*)
- No. 23 - Morocco (*Issued July 1980*)
- No. 24 - Pakistan (*Issued March 1980*)
- No. 25 - Turkey (*Issued August 1980*)
- No. 26 - Bangladesh
- No. 27 - Botswana
- No. 28 - Liberia

(Reports Nos. 1 and 2, published in 1973, represent earlier versions of Costa Rica and Ghana. Report No. 3 was an earlier version for the Republic of China, and was published in 1974)