

# COUNTRY DEMOGRAPHIC PROFILES

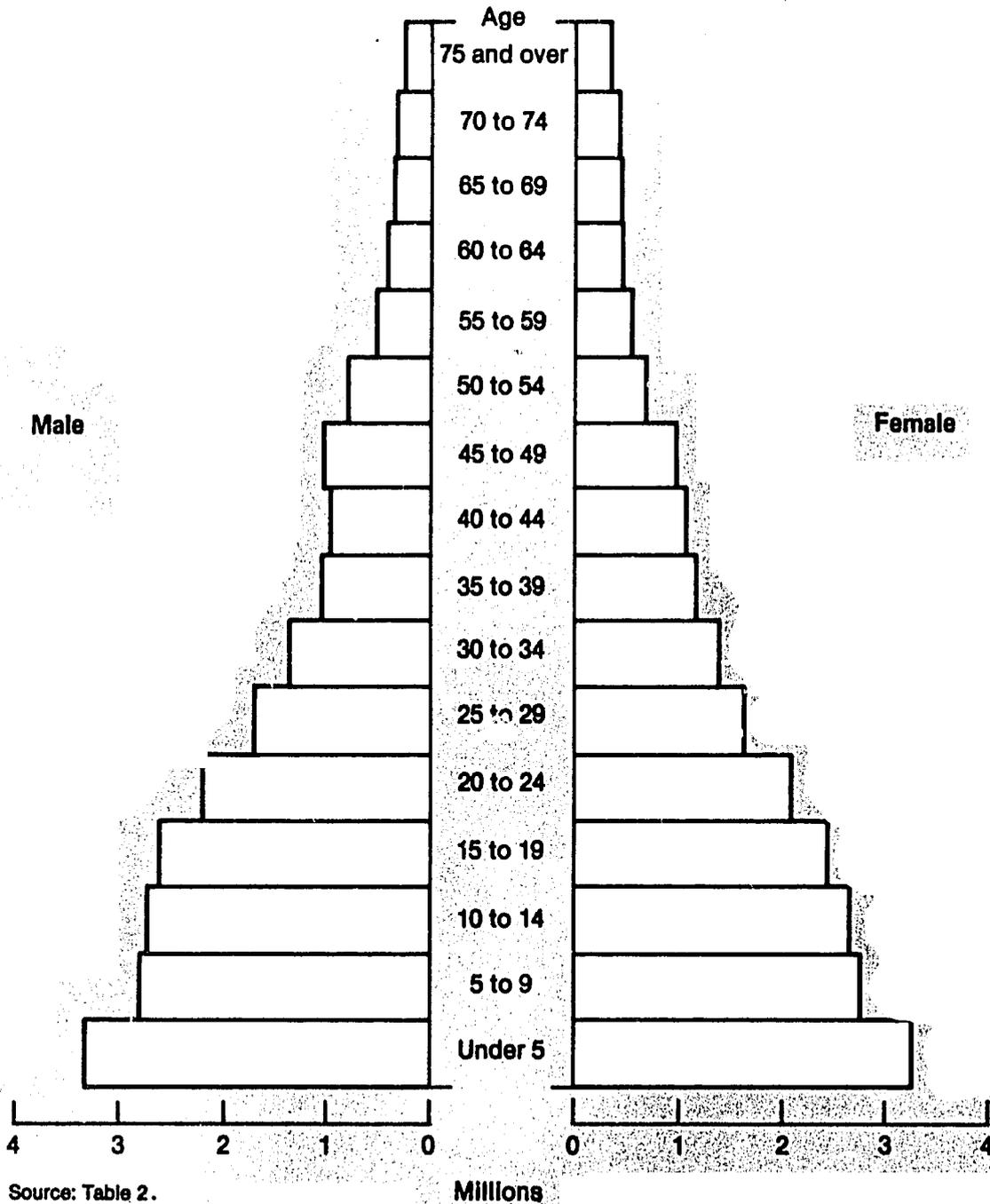


# TURKEY

U.S. Department of Commerce  
BUREAU OF THE CENSUS

ISP-DP-25  
Issued August 1980

**FIGURE 1. Projected Population, by Age and Sex: July 1, 1979**



Source: Table 2.

Millions

# **TURKEY**

by Peter O. Way



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**ACKNOWLEDGMENTS**

Country 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. **Roger G. Kramer**, and **Sylvia D. Quick** also provided assistance and valuable suggestions during the preparation of this profile.

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

The author wishes to extend sincere appreciation to **Dr. Mithat Çoruh**, Director, Institute of Population Studies, Hacettepe University, Ankara; **Dr. Nusret H. Fişek**, Director, Institute of Community Medicine, Hacettepe University; **Dr. Miroslav Macura**, Economic Institute, Belgrade; **Dr. Frederic C. Shorter**, Population Council, Cairo; and **Dr. Robert Lapham**, Committee on Population and Demography, National Academy of Sciences, Washington, D.C. for their helpful comments and suggestions.

These reports are prepared under a Resources Support Services Agreement with the Development Support Bureau, Agency for International Development.

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.

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#### Symbols used in tables

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

W



# Turkey

## HIGHLIGHTS

Turkey, with a midyear 1979 population of 44.6 million, is the 19th most populous nation in the world. Geographically, Turkey occupies the area known as Asia Minor and a small section of eastern Europe. Culturally, its heritage is a blend of Europe and the Middle East, together with its own strong traditions. Istanbul, with more than 2.5 million inhabitants, is the largest Turkish city and is heavily influenced by its proximity to the cities of Europe. On the other hand, Turkish villages in the eastern mountains have experienced relatively little change in their pastoral and agrarian economies.

The population of Turkey is characterized by a relatively high rate of growth, estimated at about 2.3 percent in 1979. Recent declines in mortality levels have tended to offset the effect of declining fertility on the growth rate. Substantial labor migration out of Turkey into Europe in the 1960's and early 1970's, however, has limited the rapid growth of population to some extent.

Mortality in Turkey is characterized by an unusual combination of high infant mortality and relatively low levels of adult mortality. Recent data indicate that approximately 1 baby of every 8 born in Turkey will die in the first year of life. This probability is equivalent to the chance a 10-year-old Turkish child has of dying before the 50th birthday.

Turkish fertility has undergone a long and slow decline in the last 25 to 30 years. Factors contributing to this decline probably include the pace of modernization and government efforts since 1965 in the area of family planning. Still, in 1974-75 the country had a crude birth rate of 37 births per 1,000 population, corresponding to a total fertility rate of slightly over 5 children per woman.

In the recent past, Turkey has experienced substantial improvements in literacy and in the proportion of the population completing primary education. In 1975, nearly nine-tenths of the males and two-thirds of the females ages 15 to 24 had completed primary school.

Levels of labor force participation among Turkish women are relatively high, with approximately one-half of the women ages 12 and over classified as economically active. The majority (over 85 percent) of women who do work, however, work as unpaid family workers in the agricultural sector. Likewise, more than 50 percent of the males ages 12 and over are active in agriculture, fishing, forestry, or hunting.

The Turkish population, nonetheless, is urbanizing at a rapid rate. The number of cities with more than 100,000

inhabitants increased from 32 to 36 between 1970 and 1975. In the same period, the population living in such places increased by more than one-third as a consequence of the growth of the population of the cities and the four new cities entering this size category. As a result, more than 1 of every 5 persons in Turkey was living in cities of 100,000 or more inhabitants in 1975.

## INTRODUCTION

This profile of the population of Turkey 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. Adjusted total populations, by sex, are provided for census years from 1950 to 1975. An adjusted distribution of the population, by age and sex, is given for the last 2 census years, as well as for 1979. Projections of the number of women of childbearing age are shown for each year 1976 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 expectancies 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 on past migration trends. Other related items are included such as number and size of households; educational attainment; and labor force by industry, occupation, and status.

## SOURCES AND QUALITY OF DATA

Turkey is one of the few countries in the world which conducts quinquennial censuses. Data for the Turkey profile were obtained primarily from the censuses of October 22, 1950; October 23, 1960; October 24, 1965; October 25, 1970; and October 26, 1975, the 1966-67 Turkish Demographic Survey, and the 1974-75 Turkish Demographic Survey.

Registration of vital events in Turkey has been conducted since 1884, although the registration is used mainly as a security measure rather than as source for population statistics. Registration of births and deaths is incomplete, especially in the rural areas. Statistics on births have been published since 1972 for areas where health services are

nationalized, but they are not reliable because of severe underreporting. Death statistics are published only for provincial and district centers.

An examination of the age-sex distributions from the various quinquennial censuses suggests that age reporting has improved substantially from census to census in the time period under consideration. Considerable digit preference remains, however, even in the 1975 census.

By applying selected analytical techniques to the age-sex data, census age distributions were adjusted for possible age misreporting and for net coverage error (see the census evaluation section in the Technical Notes in the appendix). Estimates of the net (percent) underenumeration of the population under age 5, and of the total population based on the adjustment of the population under 5, are shown below for each of the last 4 census years:

Year and sex	All ages	0 to 4 years
<b>1960</b>		
Both sexes . . . . .	2.5	14.3
Male . . . . .	2.3	13.2
Female . . . . .	2.7	15.5
<b>1965</b>		
Both sexes . . . . .	2.4	14.5
Male . . . . .	2.3	13.9
Female . . . . .	2.6	15.2
<b>1970</b>		
Both sexes . . . . .	1.1	7.2
Male . . . . .	1.2	7.4
Female . . . . .	1.1	7.1
<b>1975</b>		
Both sexes . . . . .	1.2	8.3
Male . . . . .	1.1	7.8
Female . . . . .	1.3	8.8

The first Turkish Demographic Survey began field operations in several provinces in 1965. The stated purpose was to provide the government with "reliable and current natality and mortality statistics on a regional and nationwide basis" (Turkey Ministry of Health and Social Welfare, 1970, p. 1). National coverage was achieved in 1967 and in some areas

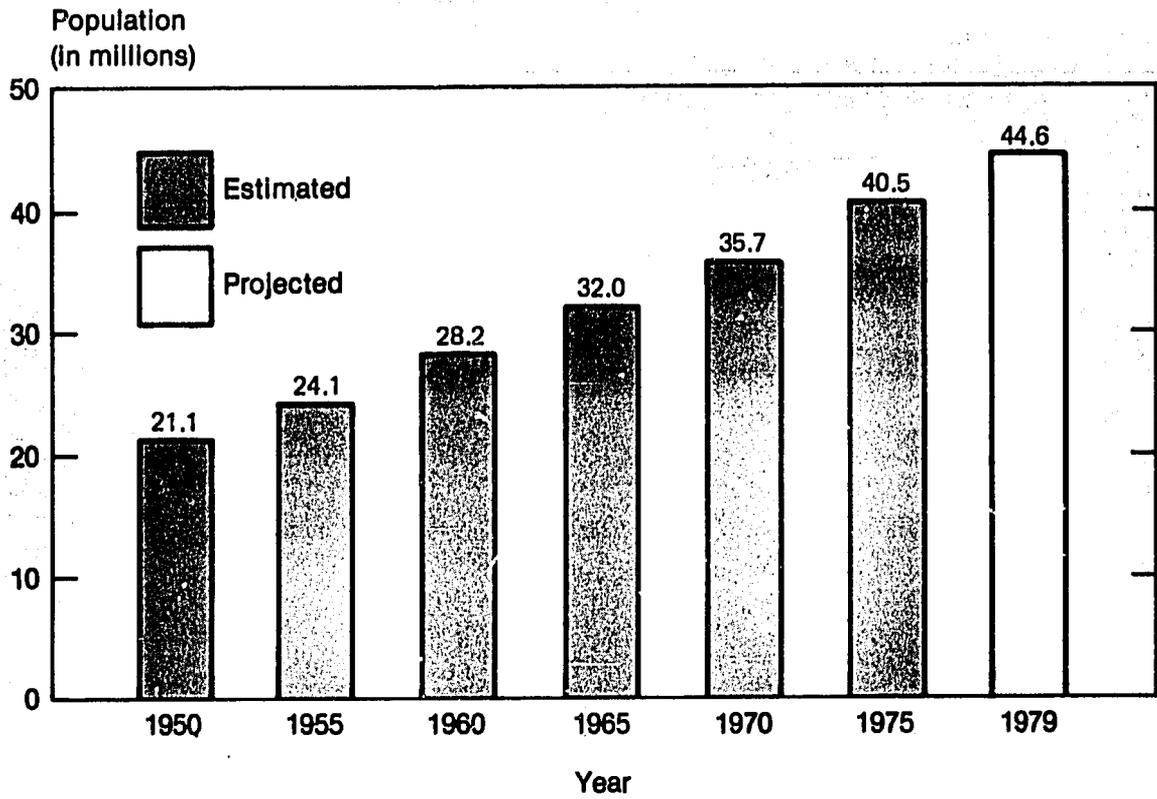
the enumeration continued into 1968. The survey was organized as a dual record system, utilizing continuous registration of vital events and a periodic enumeration. Data on births and deaths, as well as socioeconomic characteristics of the population, are available for Turkey as a whole corresponding to a reference date of midyear 1967. The Turkish Demographic Survey was reinstated using a similar methodology in 1974, and data are available for the nation as a whole for the 12 month period from December 1, 1974 to November 30, 1975.

Three other large-scale surveys also have been taken in Turkey between 1960 and 1975. These are the 1963 National Survey on Population, the 1968 Survey on Family Structure and Population Problems, and the 1973 Survey of Population Structure and Population Issues. These surveys were conducted by the Hacettepe University Institute of Population Studies. The 1963 survey was a single-round retrospective survey of currently-married women under the age of 45, their husbands, and community leaders. It was primarily a survey of family planning knowledge, attitudes, and practices (KAP), although a series of demographic questions was also included. The 1968 survey was similar to the 1963 survey. It was a single-round retrospective KAP survey of currently-married women under the age of 45, their husbands, and household members. The 1973 survey was a multi-purpose household survey, also conducted in a single round.

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

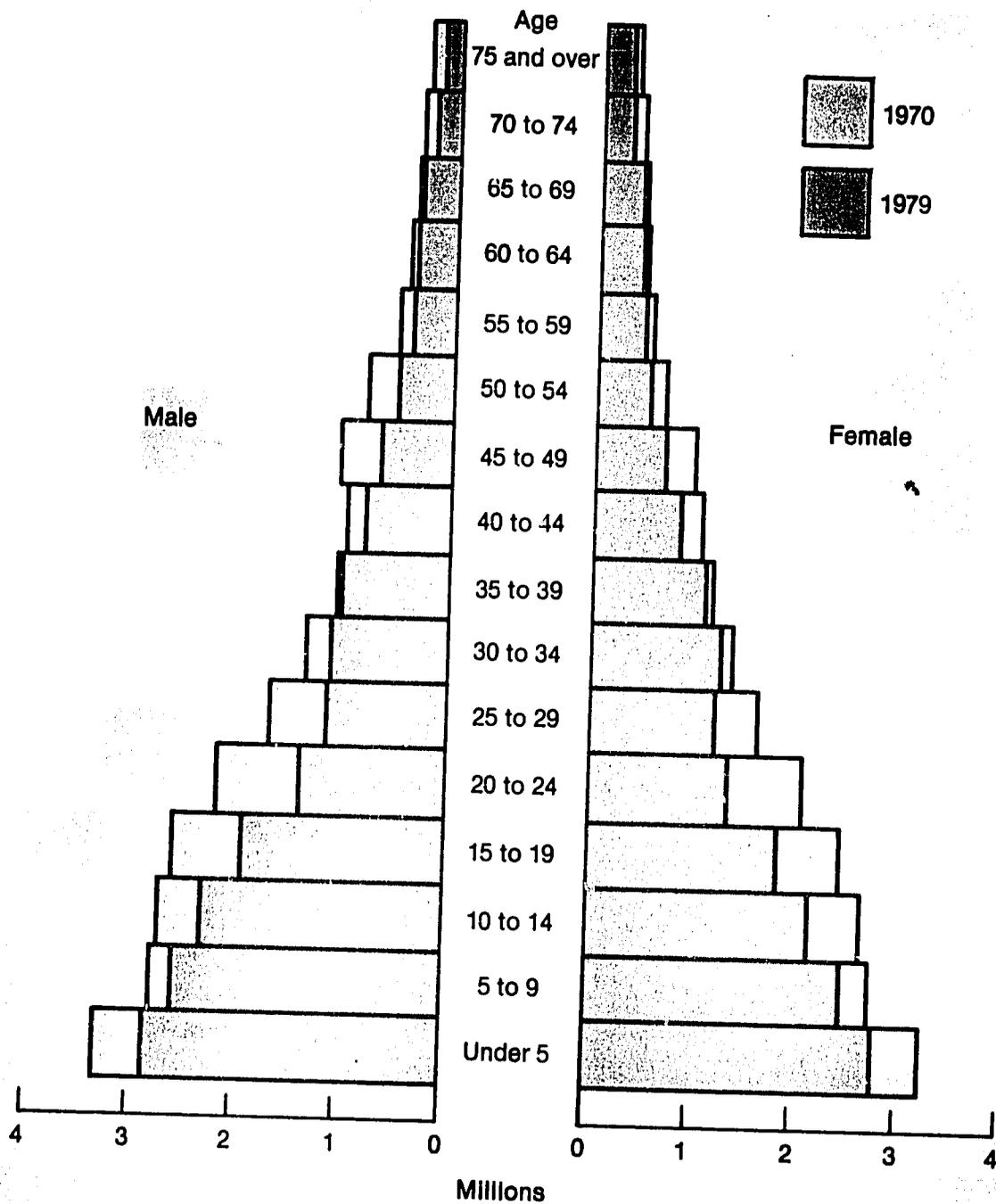
The user should recognize that in many instances, although the estimates are the best that can be prepared on the basis of available information, they are only tentative and new observations may well lead to different conclusions. The user is urged to consider all data in the context of source notes 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.

**FIGURE 2.**  
**Estimates and Projections of Midyear Population:**  
**Selected Years, 1950 to 1979**



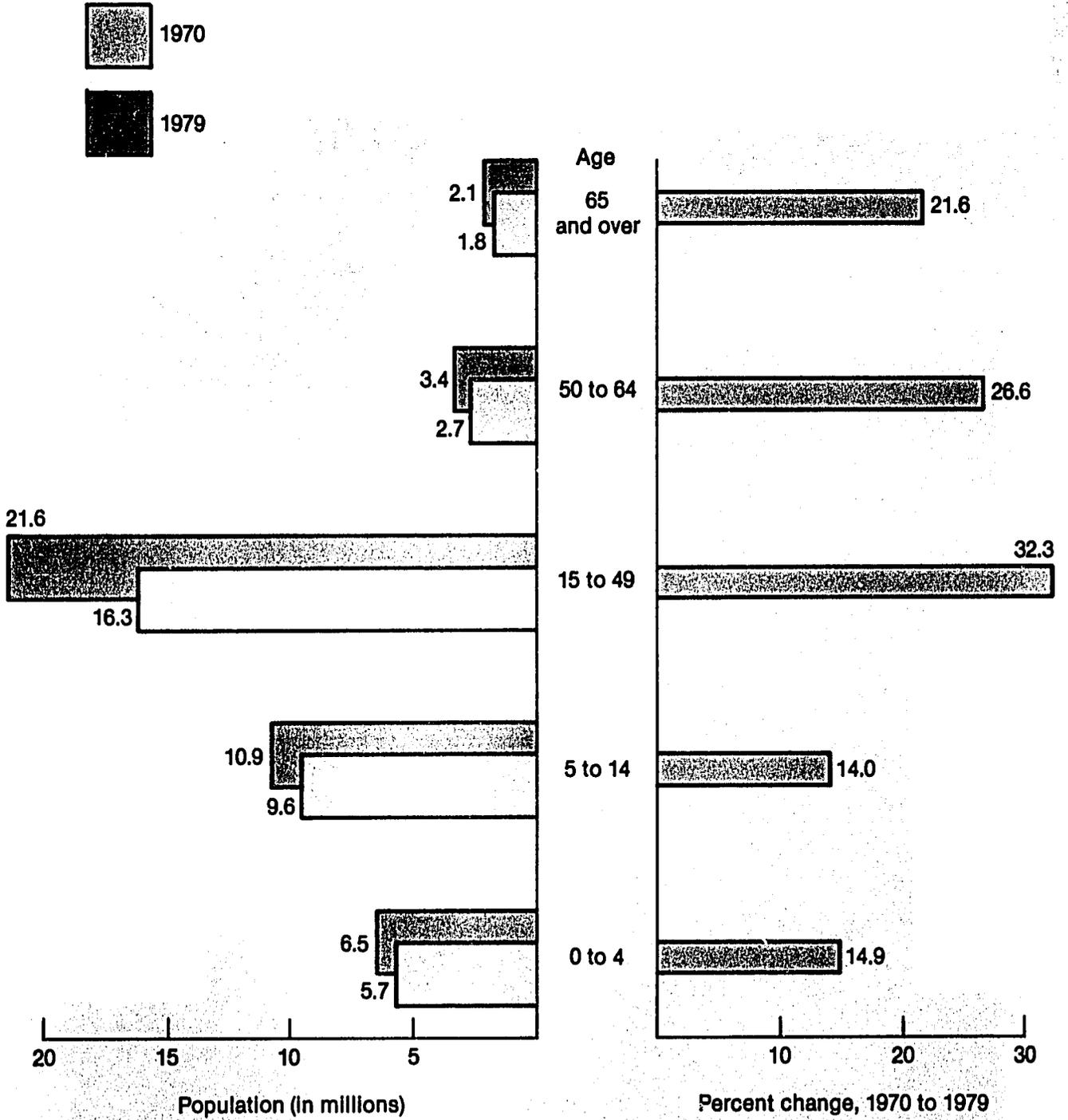
Source: Table 1.

**FIGURE 3.**  
**Adjusted Population, by Age and Sex:**  
**1970 and 1979**



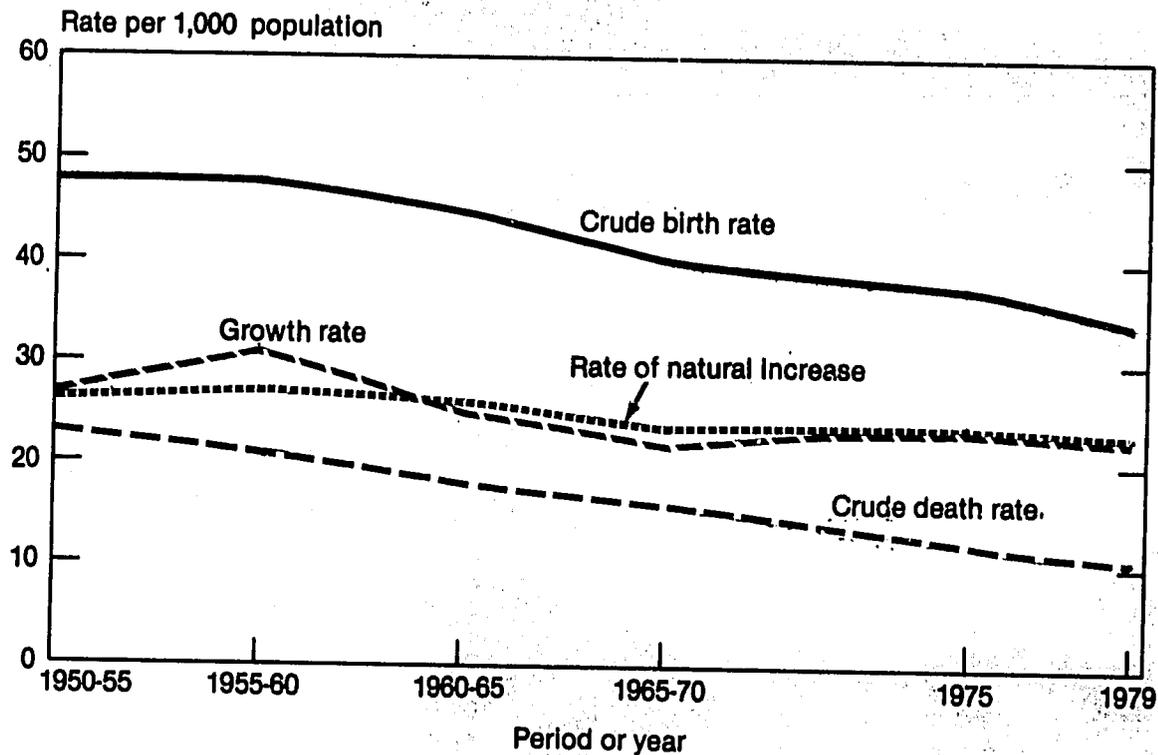
Source: Table 2 and appendix table A-2.

**FIGURE 4.**  
**Population and Percent Change, by Broad**  
**Age Group: 1970 to 1979**



Source: Table 2 and appendix table A-2.

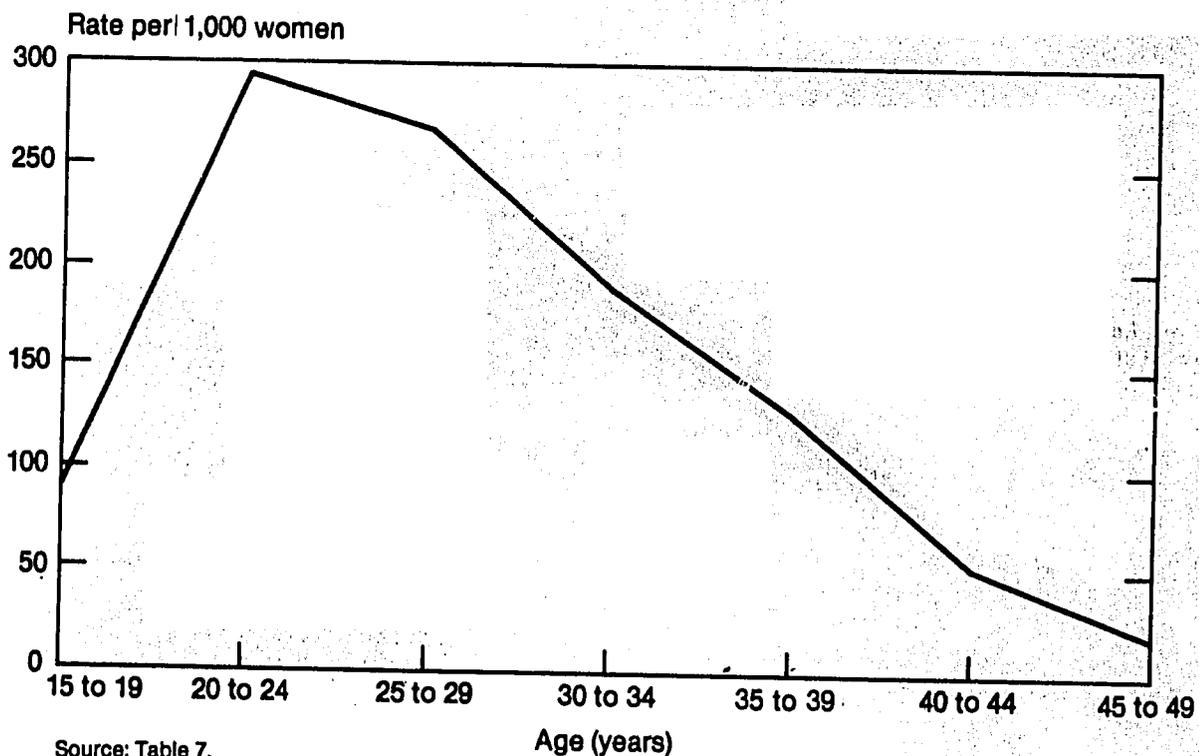
**FIGURE 5.**  
**Estimated and Projected Vital Rates:**  
**1950 to 1979**



Note: Rates for 1979 are projected based on the middle projection series.

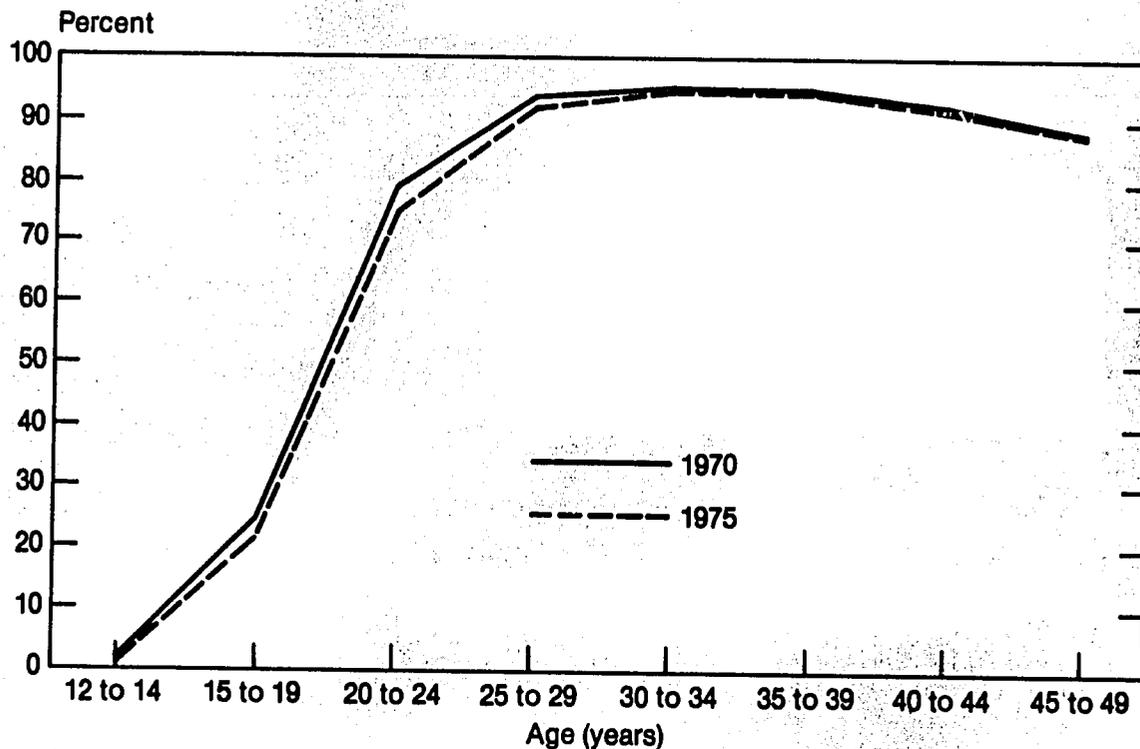
Source: Table 3.

**FIGURE 6.**  
**Estimated Age-Specific Fertility Rates: 1974-75**



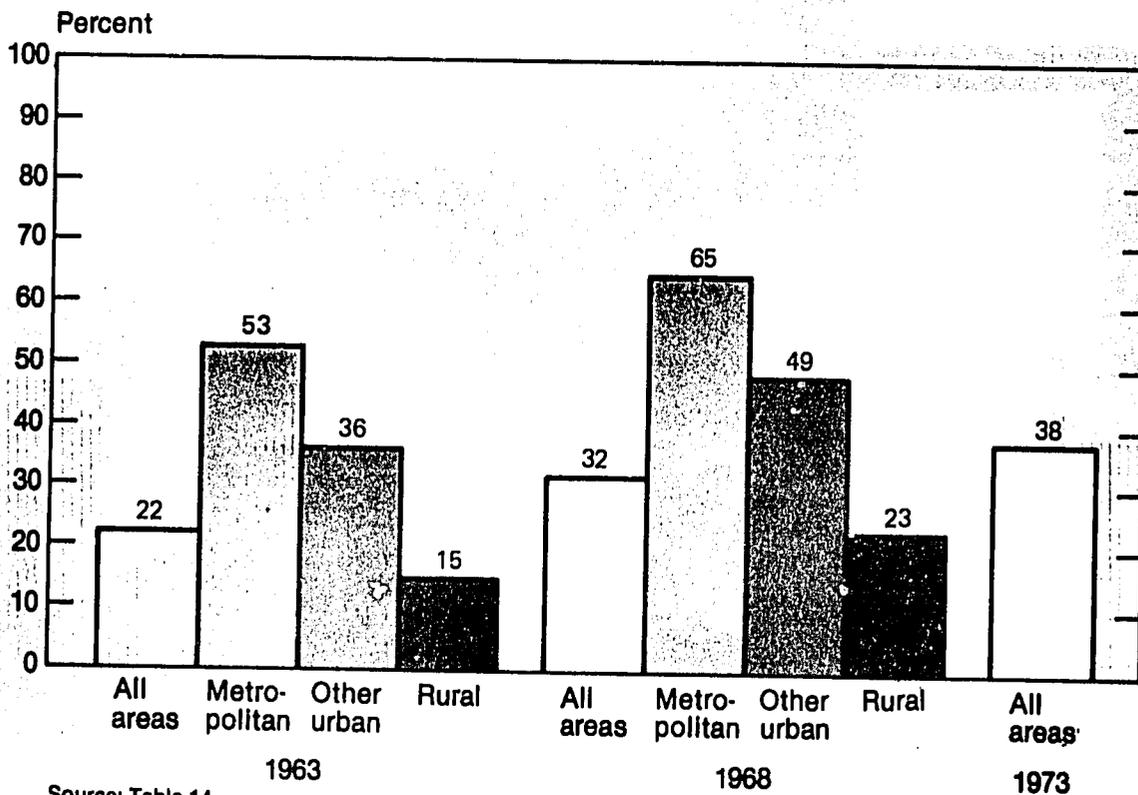
Source: Table 7.

**FIGURE 7.**  
**Percent of Women Currently Married,**  
**by Age: 1970 and 1975**



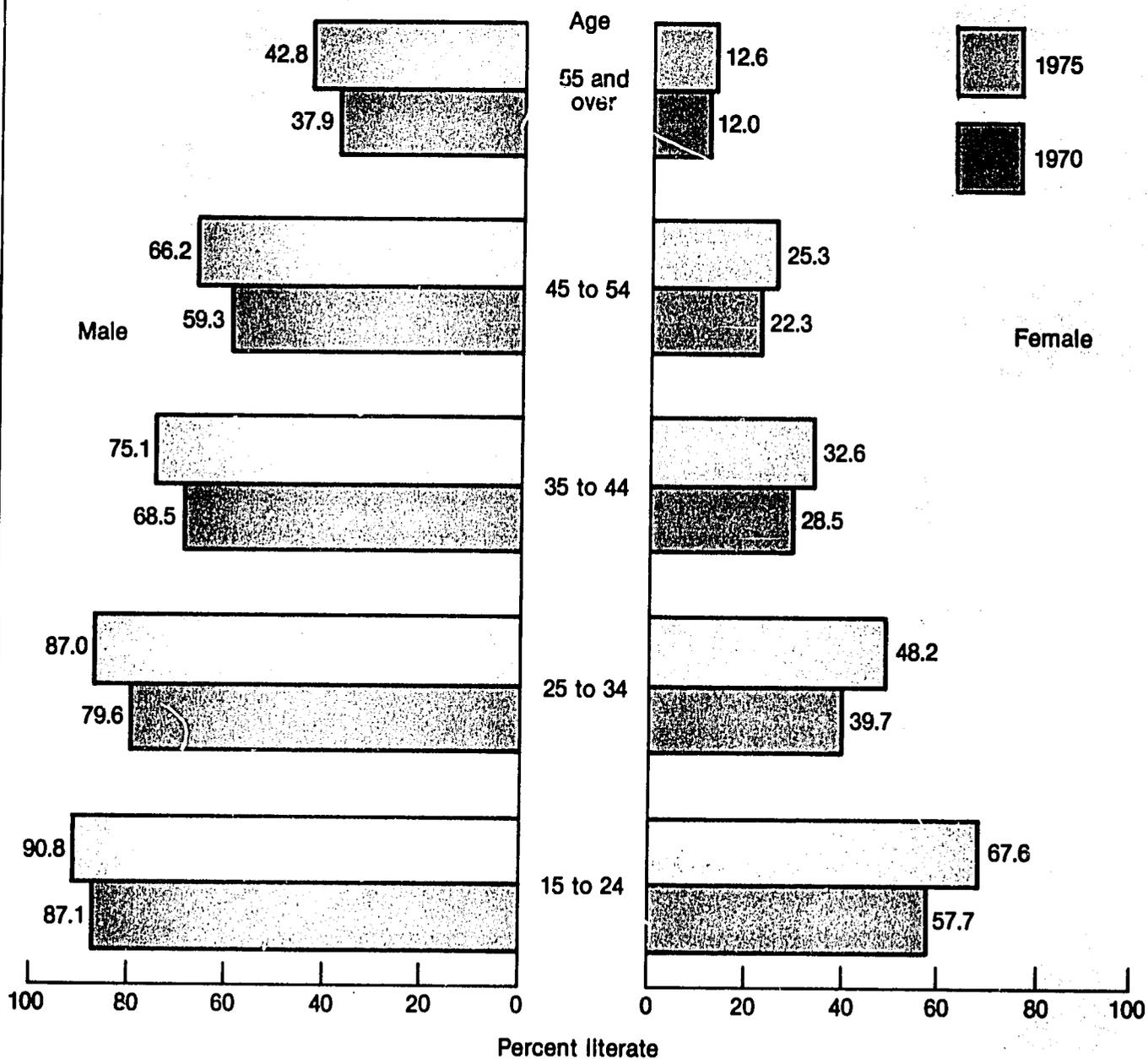
Source: Table 11.

**FIGURE 8.**  
**Prevalence of Contraceptive Use for**  
**Currently Married Women Ages 15 to 44**  
**Years, by Area of Residence: 1963, 1968, and 1973**



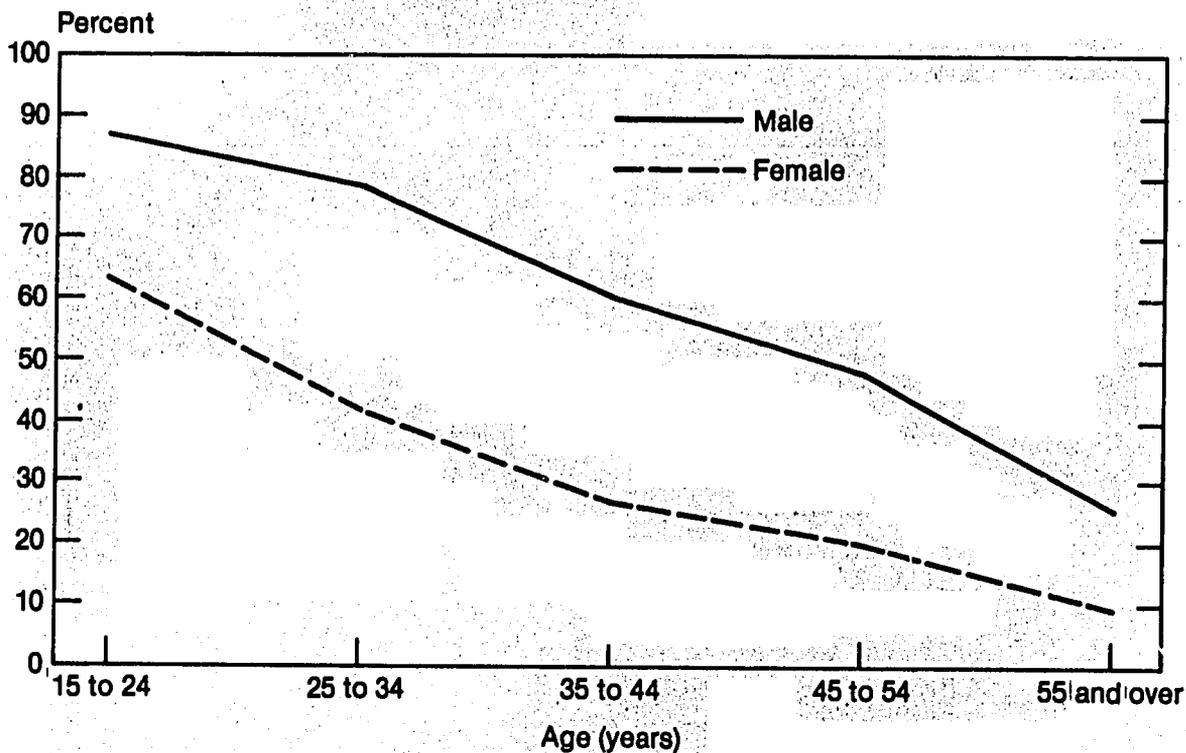
Source: Table 14.

**FIGURE 9.**  
**Percent Literate, by Broad Age Group and Sex: 1970 and 1975**



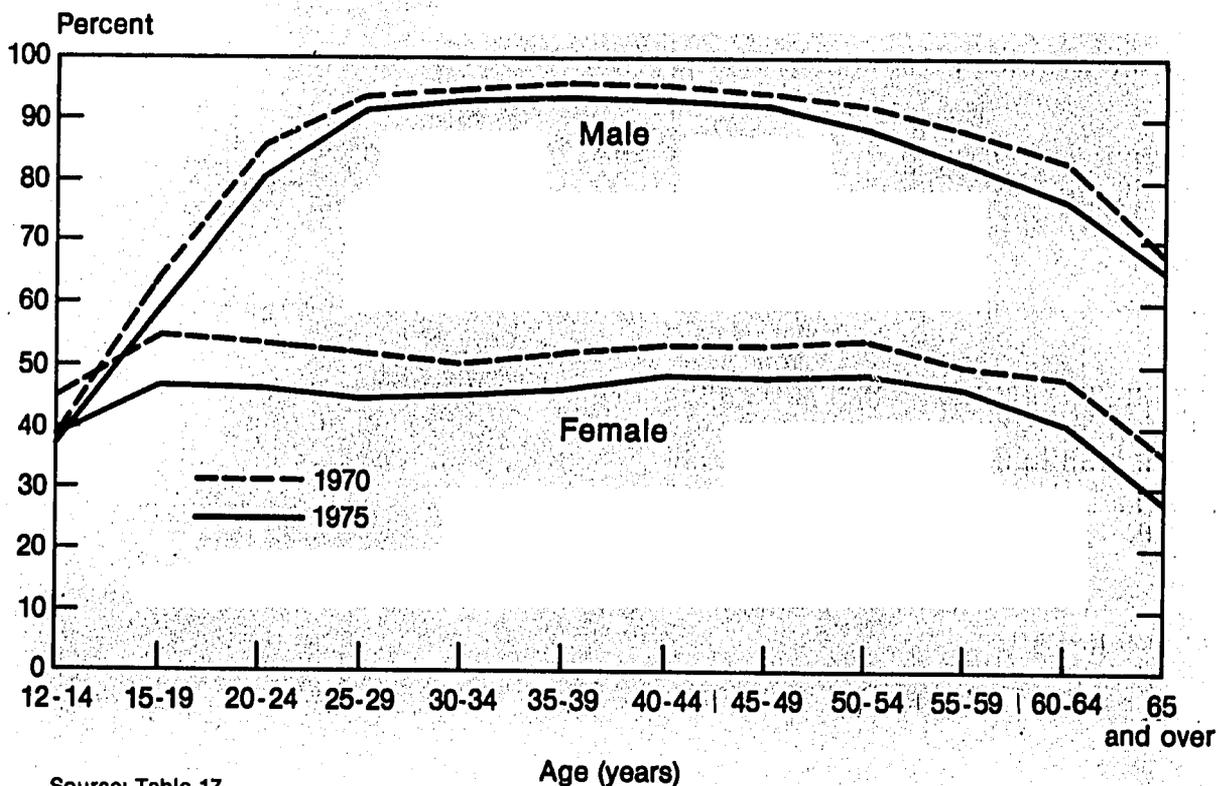
Source: Table 15.

**FIGURE 10.**  
**Percent of Population Who Have Completed Primary School,**  
**by Broad Age Group and Sex: 1975**



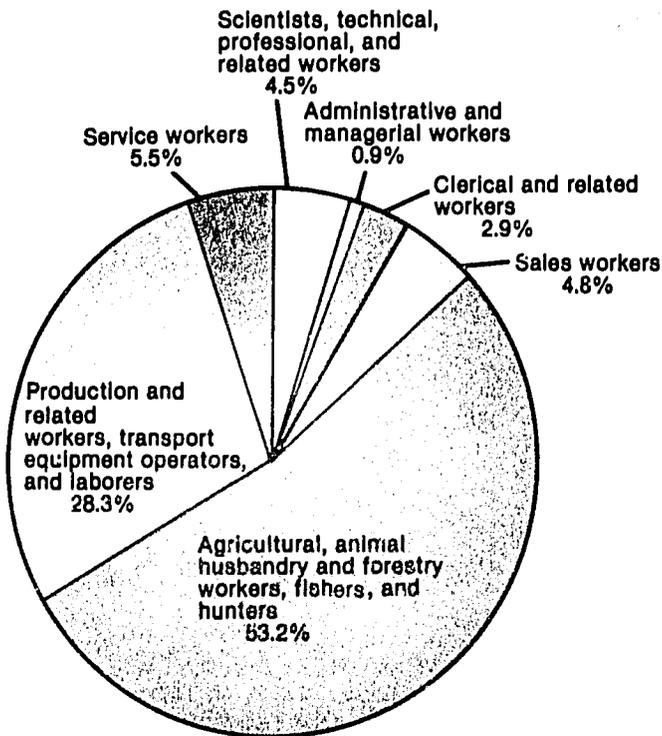
Source: Table 16.

**FIGURE 11.**  
**Percent Economically Active, by Age**  
**and Sex: 1970 and 1975**

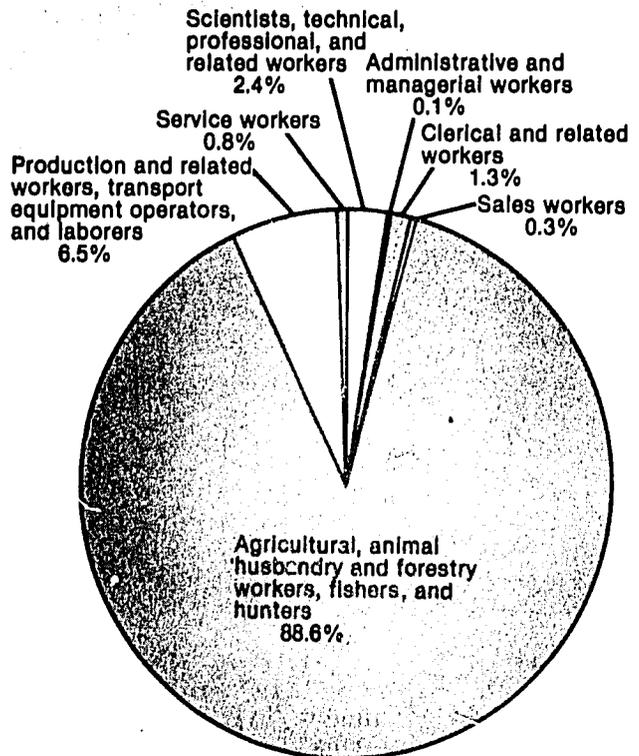


Source: Table 17.

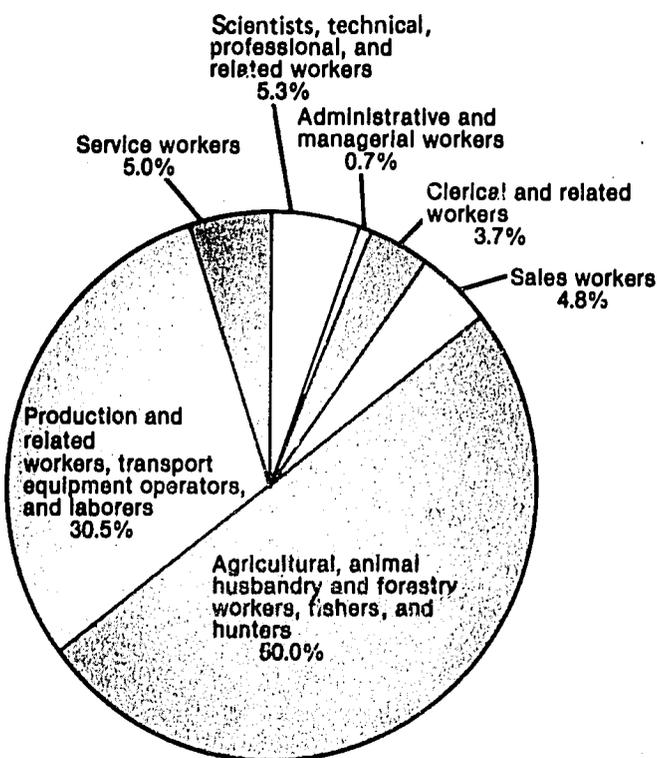
**FIGURE 12.**  
**Distribution of Labor Force, by Sex and Occupation: 1970 and 1975**



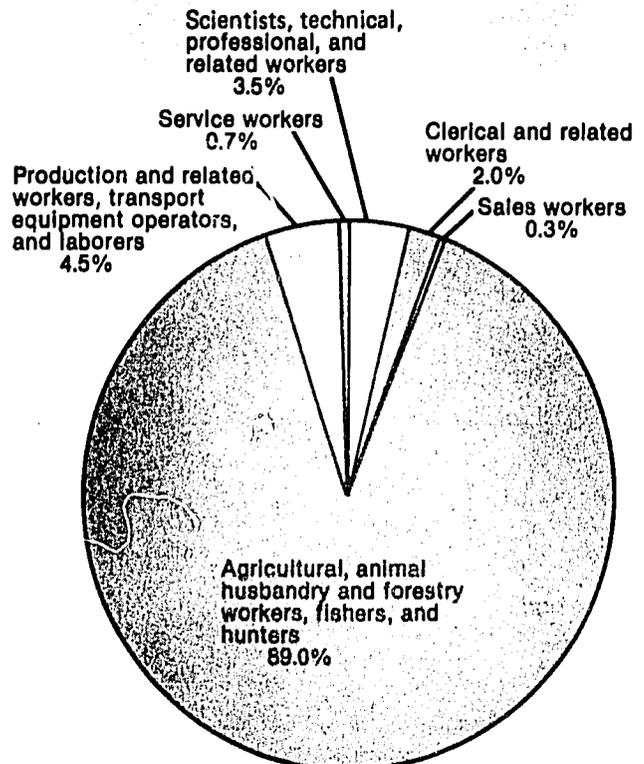
**1970  
Male**



**1970  
Female**



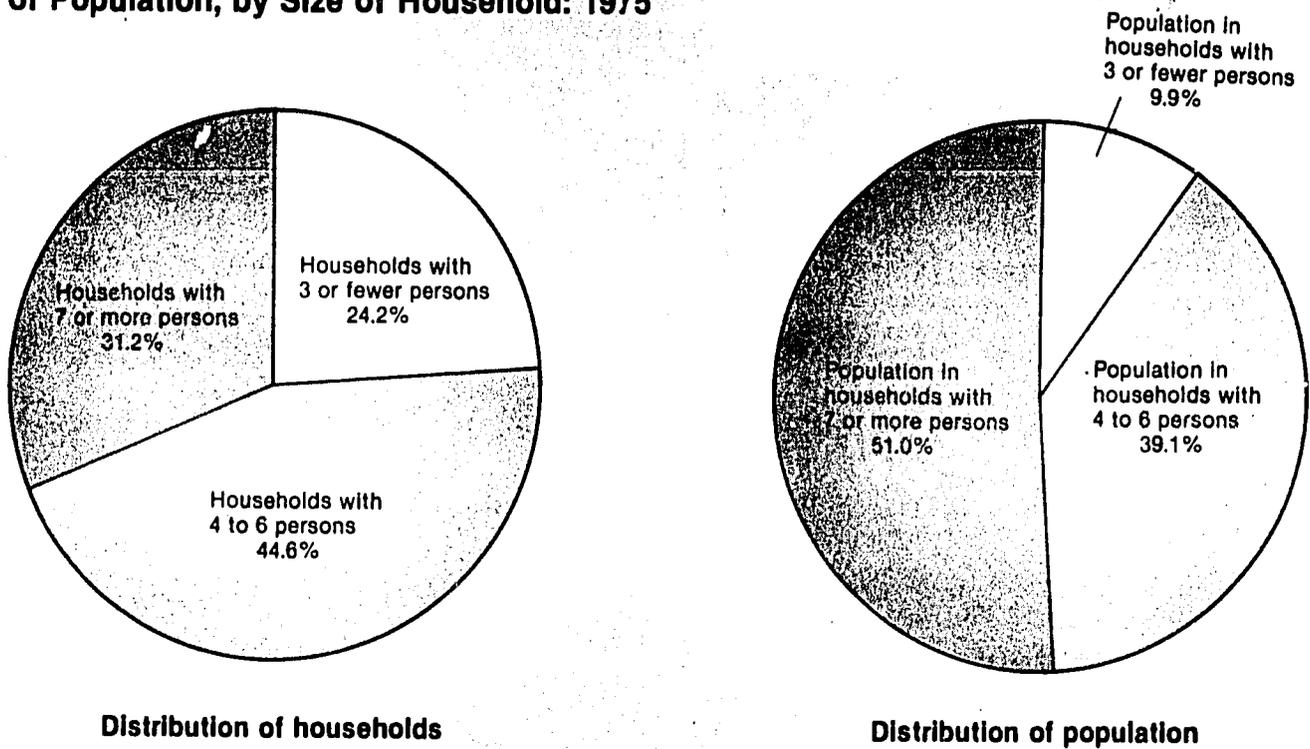
**1975  
Male**



**1975  
Female**

FIGURE 13.

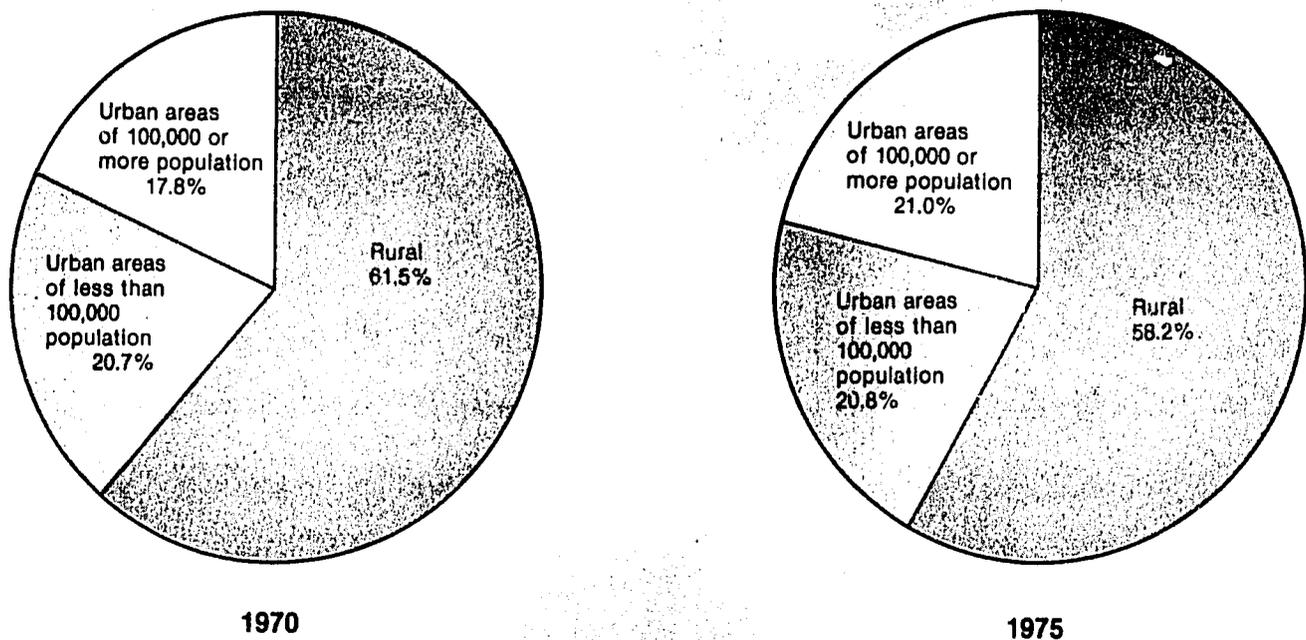
**Percent Distribution of Households and of Population, by Size of Household: 1975**



Source: Table 21.

FIGURE 14.

**Percent Distribution of Population, by Urban and Rural Residence and Size of Urban Area: 1970 and 1975**



Source: Table 22.

## 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).

**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.

**Chandrasekaran-Deming technique.** A statistical procedure used to estimate the number of vital events missed by the two independent data-gathering operations of a dual record system.

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

**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.

**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 midperiod population). Also called crude death rate.

**Dual record system.** A method of obtaining estimates of vital statistics which employs the simultaneous collection of reports of vital events by two independent data-gathering operations.

**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, and the widowed, divorced, or separated.

**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.

**Matched and unmatched events.** The total number of vital events recorded in a dual record system derived as the sum of events recorded by both systems (matched events), plus events recorded only by the first system and those recorded only by the second system (unmatched events).

**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.

**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.

**Postenumeration survey.** A survey used for checking the coverage and accuracy of a population census by independently reenumerating a sample of the population after the census.

**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.

**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.

**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.

**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**

(Population 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.....	21,122	1963.....	30,509	1976.....	41,514
1951.....	21,669	1964.....	31,227	1977.....	42,519
1952.....	22,236			1978.....	43,535
1953.....	22,831	1965.....	31,951	1979.....	44,561
1954.....	23,464	1966.....	32,678		
		1967.....	33,411		
1955.....	24,145	1968.....	34,165	AVERAGE ANNUAL	
1956.....	24,877	1969.....	34,937	GROWTH RATE <sup>1</sup>	
1957.....	25,671			1950-55.....	2.7
1958.....	26,506	1970.....	35,743	1955-60.....	3.1
1959.....	27,356	1971.....	36,604	1960-65.....	2.5
		1972.....	37,542	1965-70.....	2.2
1960.....	28,217	1973.....	38,525	1970-75.....	2.5
1961.....	29,030	1974.....	39,524	1975-79.....	2.4
1962.....	29,789	1975.....	40,521		

<sup>1</sup>The 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 1975 estimates are based on the 1950, 1955, 1960, 1965, 1970, and 1975 censuses adjusted for underenumeration and estimated fertility, mortality, and migration trends for the period. The 1970 and 1975 censuses were adjusted for net underenumeration of 1.1 and 1.2 percent, respectively, based on techniques of demographic analysis. Enumerated and adjusted census populations for the other census years are shown in appendix table A-3. See the census evaluation section of the Technical Notes in the appendix for a detailed discussion of the methods used.

The 1976 to 1979 population figures were projected by the component method. The base of the projections was the 1975 estimated midyear population, by age and sex. Fertility, mortality, and migration assumptions were as follows:

**Fertility:** The 1974-75 total fertility rate (5.21) estimated from the 1974-75 Turkish Demographic Survey (Turkey SIS, no date b) was assumed to decline to 4.62 in 1979, a drop of 11 percent. For further details see table 7, appendix table A-7, and the fertility section of the Technical Notes in the appendix.

**Mortality:** Life expectancy at birth was assumed to increase from 55 to 58 years for males and from 58 to 61 years for females from 1974-75 to 1979 (see appendix table A-5 and the mortality section of the Technical Notes in the appendix for further discussion).

**Migration:** Net international migration was assumed to be nil from 1975 to 1979 (see the international migration section of the Technical Notes in the appendix for discussion).

**Table 2. Estimated and Projected Population, by Age and Sex: October 1975 and Midyear 1979**

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

Age	Adjusted census, October 1975 <sup>1</sup>			Projected population, midyear 1979		
	Both sexes	Male	Female	Both sexes	Male	Female
<b>POPULATION</b>						
All ages.....	40,839	20,728	20,111	44,561	22,608	21,953
0 to 4 years.....	5,929	3,010	2,919	6,513	3,310	3,203
5 to 9 years.....	5,481	2,806	2,676	5,526	2,802	2,724
10 to 14 years.....	5,193	2,700	2,494	5,367	2,754	2,613
15 to 19 years.....	4,542	2,362	2,179	5,028	2,616	2,411
20 to 24 years.....	3,516	1,819	1,697	4,278	2,223	2,055
25 to 29 years.....	2,901	1,478	1,423	3,305	1,706	1,599
30 to 34 years.....	2,316	1,127	1,190	2,729	1,380	1,349
35 to 39 years.....	2,067	1,008	1,059	2,188	1,058	1,131
40 to 44 years.....	2,124	1,088	1,035	2,019	992	1,027
45 to 49 years.....	1,781	918	863	2,030	1,042	987
50 to 54 years.....	1,144	578	566	1,593	816	777
55 to 59 years.....	945	469	475	1,007	503	504
60 to 64 years.....	872	426	446	848	416	432
65 to 69 years.....	927	448	479	785	377	408
70 to 74 years.....	562	263	299	749	354	395
75 years and over.....	537	228	309	595	256	339
<b>PERCENT</b>						
All ages.....	100.0	100.0	100.0	100.0	100.0	100.0
0 to 4 years.....	14.5	14.5	14.5	14.6	14.6	14.6
5 to 9 years.....	13.4	13.5	13.3	12.4	12.4	12.4
10 to 14 years.....	12.7	13.0	12.4	12.0	12.2	11.9
15 to 19 years.....	11.1	11.4	10.8	11.3	11.6	11.0
20 to 24 years.....	8.6	8.8	8.4	9.6	9.8	9.4
25 to 29 years.....	7.1	7.1	7.1	7.4	7.5	7.3
30 to 34 years.....	5.7	5.4	5.9	6.1	6.1	6.1
35 to 39 years.....	5.1	4.9	5.3	4.9	4.7	5.2
40 to 44 years.....	5.2	5.3	5.1	4.5	4.4	4.7
45 to 49 years.....	4.4	4.4	4.3	4.6	4.6	4.5
50 to 54 years.....	2.8	2.8	2.8	3.6	3.6	3.5
55 to 59 years.....	2.3	2.3	2.4	2.3	2.2	2.3
60 to 64 years.....	2.1	2.1	2.2	1.9	1.8	2.0
65 to 69 years.....	2.3	2.2	2.4	1.8	1.7	1.9
70 to 74 years.....	1.4	1.3	1.5	1.7	1.6	1.8
75 years and over.....	1.3	1.1	1.5	1.3	1.1	1.5

<sup>1</sup>For unadjusted census figures see appendix table A-1.

Source: See table 1 and 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)
<b>ESTIMATED</b>				
1950-55.....	48	23	2.6	2.7
1955-60.....	48	21	2.7	3.1
1960-65.....	45	18	2.6	2.5
1965-70.....	40	16	2.4	2.2
1975.....	37	12	2.4	2.4
<b>PROJECTED</b>				
1979.....	33-36	11	2.2-2.4	2.2-2.4

Note: See appendix table A-4 for alternate estimates of vital rates.

Source: Crude birth and death rates for the periods 1950-55 to 1965-70 were estimated at the U.S. Bureau of the Census based on a reverse-survival procedure (see fertility and mortality section of the Technical Notes in the appendix).

Crude birth and death rates for 1975 are based on the application of age-specific fertility and age-sex-specific death rates, estimated from the 1974-75 Turkish Demographic Survey, to the adjusted midyear 1975 population (see tables 5 and 7, and the mortality and fertility sections of the Technical Notes in the appendix for a detailed discussion of the procedures used).

The range in vital rates for 1979 is implied by alternate component population projections from 1975 to 1979 based on the 1975 midyear population, by age and sex, three projections of the trend of fertility, and one projection of the trend of mortality (see appendix tables A-5 and A-7 and the Technical Notes in the appendix). Net international migration was assumed to be nil from 1975 to 1979. A crude birth and death rate of 34 and 11 per 1,000 population, respectively, and a growth rate of 2.3 percent for 1979 are consistent with the population series in table 1.

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. Differences between the growth rate and the rate of natural increase are due to the effect of net international migration. (See the international migration section of the Technical Notes in the appendix and appendix tables A-9, A-10, and A-11 for information on migration patterns.)

**Table 4. Estimated Infant Mortality Rates and Life Expectancies at Birth, by Sex: 1967 and 1974-75**

Year or period	Infant deaths per 1,000 live births			Life expectancy at birth (years)		
	Both sexes	Male	Female	Both sexes	Male	Female
1967.....	156	164	147	52	50	54
1974-75.....	125	131	118	57	55	58

Note: Projected life expectancies at birth for 1979 are given in appendix table A-5.

Source: Infant mortality rates were obtained from 1967 and 1974-75 life tables calculated at the U.S. Bureau of the Census based on data from the 1966-67 and the 1974-75 Turkish Demographic Surveys (see below). Rates for both sexes were calculated assuming a sex ratio at birth of 1.05.

Life expectancies at birth for 1967 and 1974-75 were derived from life tables calculated at the U.S. Bureau of the Census. These life tables were based on smoothed age-specific death rates estimated from the 1966-67 and 1974-75 Turkish Demographic Surveys (Turkey Ministry of Health and Social Welfare, 1970; and Turkey SIS, no date b). Age-specific death rates for 1967 were based on deaths, by age, recorded by the dual record system inflated to the total deaths estimated using the Chandrasekaran-Deming technique. Age-specific death rates for 1974-75 were based on the average of survey and register deaths, by age, from the dual record system for the period December 1974 through November 1975, inflated to the total deaths for that period estimated using the Chandrasekaran-Deming technique. A sex ratio at birth of 1.05 was assumed in the calculation of the life expectancies for both sexes. See the mortality section of the Technical Notes in the appendix for further discussion.

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

Sex and age interval (x to x+n)	$1,000 n q_x$	$l_x$	$n d_x$	$n L_x$	$1,000 n m_x$	$e_x$
MALE						
0 to 1 year.....	131.3	100,000	13,130	90,678	144.8	55.2
1 to 5 years.....	53.6	86,870	4,656	334,968	13.9	62.5
5 to 10 years.....	12.9	82,214	1,062	408,414	2.6	62.0
10 to 15 years.....	7.0	81,152	566	404,344	1.4	57.8
15 to 20 years.....	11.4	80,586	921	400,625	2.3	53.2
20 to 25 years.....	11.9	79,664	950	395,946	2.4	48.8
25 to 30 years.....	13.9	78,714	1,094	390,834	2.8	44.3
30 to 35 years.....	15.4	77,620	1,194	385,113	3.1	39.9
35 to 40 years.....	21.8	76,426	1,663	377,971	4.4	35.5
40 to 45 years.....	28.6	74,763	2,137	368,470	5.8	31.2
45 to 50 years.....	39.2	72,626	2,848	356,007	8.0	27.1
50 to 55 years.....	51.6	69,777	3,603	339,880	10.6	23.1
55 to 60 years.....	86.1	66,175	5,699	316,625	18.0	19.2
60 to 65 years.....	116.3	60,475	7,034	284,791	24.7	15.8
65 to 70 years.....	173.9	53,441	9,295	243,968	38.1	12.5
70 to 75 years.....	253.3	44,146	11,181	192,777	58.0	9.6
75 to 80 years.....	391.6	32,965	12,910	132,549	97.4	7.0
80 years and over.....	1,000.0	20,055	20,055	99,840	200.9	5.0
FEMALE						
0 to 1 year.....	118.0	100,000	11,803	91,856	128.5	58.3
1 to 5 years.....	49.5	88,197	4,366	341,102	12.8	65.0
5 to 10 years.....	10.0	83,830	834	417,066	2.0	64.4
10 to 15 years.....	6.5	82,996	538	413,637	1.3	60.0
15 to 20 years.....	10.4	82,458	861	410,139	2.1	55.4
20 to 25 years.....	11.4	81,597	933	405,653	2.3	50.9
25 to 30 years.....	11.9	80,664	962	400,915	2.4	46.5
30 to 35 years.....	14.9	79,702	1,187	395,543	3.0	42.0
35 to 40 years.....	18.8	78,515	1,478	388,882	3.8	37.6
40 to 45 years.....	23.7	77,038	1,827	380,620	4.8	33.3
45 to 50 years.....	31.0	75,211	2,332	370,221	6.3	29.0
50 to 55 years.....	42.1	72,878	3,068	356,721	8.6	24.9
55 to 60 years.....	68.6	69,810	4,787	337,085	14.2	20.9
60 to 65 years.....	93.4	65,024	6,075	309,932	19.6	17.2
65 to 70 years.....	141.3	58,949	8,327	273,926	30.4	13.7
70 to 75 years.....	215.9	50,622	10,928	225,788	48.4	10.6
75 to 80 years.....	328.5	39,694	13,038	165,873	78.6	7.8
80 years and over.....	1,000.0	26,656	26,656	143,701	185.5	5.4

Note:  $x$  = Exact age at beginning of age interval, in years.  
 $n$  = Length of age interval, in years.  
 $1,000 n q_x$  = Number of deaths occurring between age  $x$  and age  $x+n$  per 1,000 persons alive at age  $x$ ; calculated as  $\frac{n d_x}{l_x} \times 1,000$ .  
 $l_x$  = Number of persons living at age  $x$ .  
 $n d_x$  = Number of deaths occurring between age  $x$  and age  $x+n$ .  
 $n L_x$  = Number of persons living between age  $x$  and age  $x+n$ .  
 $1,000 n m_x$  = Number of deaths occurring between age  $x$  and age  $x+n$  per 1,000 persons living between age  $x$  and age  $x+n$ ; calculated as  $\frac{n d_x}{n L_x} \times 1,000$ .  
 $e_x$  = Average number of years of life remaining for those alive at age  $x$ .

See appendix table A-6 for estimated life table values, by sex, for 1967.

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

**Table 6. Estimated and Projected Number of Women of Childbearing Age: 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
<b>ESTIMATED</b>								
1975.....	9,377	2,163	1,685	1,412	1,181	1,051	1,028	857
<b>PROJECTED</b>								
1976.....	9,675	2,239	1,767	1,456	1,218	1,062	1,034	901
1977.....	9,971	2,305	1,860	1,498	1,259	1,079	1,033	937
1978.....	10,265	2,361	1,959	1,544	1,304	1,102	1,029	966
1979.....	10,560	2,411	2,055	1,599	1,349	1,131	1,027	987
1980.....	10,855	2,457	2,142	1,667	1,395	1,163	1,030	1,001
1981.....	11,150	2,497	2,217	1,749	1,439	1,199	1,041	1,008
1982.....	11,446	2,533	2,283	1,842	1,481	1,241	1,059	1,007
1983.....	11,745	2,567	2,340	1,940	1,527	1,285	1,082	1,004
1984.....	12,047	2,595	2,390	2,036	1,582	1,331	1,111	1,002
1985.....	12,352	2,619	2,436	2,122	1,649	1,376	1,143	1,006

Source: 1975--Based on the adjusted 1975 census population (see table 2) moved to midyear.

1976-85--Projected based on the estimated 1975 midyear population. 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 58 years in 1975 to 64 years in 1985.

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

**Table 7. Estimated Age-Specific Fertility Rates and Selected Derived Measures: 1974-75**

Age	Births per 1,000 women	Derived measures	1974-75
15 to 19 years.....	88	Total fertility rate	
20 to 24 years.....	294	per woman.....	5.21
25 to 29 years.....	268	Gross reproduction	
30 to 34 years.....	189	rate per woman.....	2.54
35 to 39 years.....	127	Net reproduction rate	
40 to 44 years.....	54	per woman.....	2.03
45 to 49 years.....	21	Sex ratio at birth.....	1.05

Note: Projected total and age-specific fertility rates for 1979 are given in appendix table A-7. Alternate estimates of total and age-specific fertility rates are given in appendix table A-8.

Source: The total and age-specific fertility rates reported in the 1974-75 Turkish Demographic Survey (TDS) based on births in the 12 months preceding the survey were inflated to correspond to the total births estimated by the Chandrasekaran-Deming technique for the period December 1974 - November 1975 (Turkey SIS, no date b). For further discussion, see fertility section of the Technical Notes in the appendix.

The gross reproduction rate is based on the total fertility rate and the sex ratio at birth.

The net reproduction rate was calculated using the age-specific fertility rates, the sex ratio at birth, and  $L_n$  values for females from the corresponding life table (see table 5).

The sex ratio at birth was assumed to be 1.05 (United Nations, 1967, p. 23). Births, by sex, recorded in the 1974-75 TDS based on a retrospective question on births in the 12 months preceding the survey imply a sex ratio at birth of 1.07.

**Table 8. Ever-Married 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 1975**

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

Year and age	Total	Number of children ever born								Average number of children ever born per ever-married woman	Average number of children surviving per ever-married woman	
		0	1	2	3	4	5	6	7 or more			
1970												
Ever-married women, 15 to 49 years.....	6,148	987	708	871	835	723	588	467	970		3.6	2.8
15 to 19 years.....	429	253	121	39	10	4	-	-	-		0.6	0.5
20 to 24 years.....	1,067	279	306	261	132	57	22	10	-		1.5	1.3
25 to 29 years.....	1,078	146	131	234	224	164	100	54	25		2.7	2.2
30 to 34 years.....	1,088	111	53	132	177	178	153	116	169		4.1	3.2
35 to 39 years.....	1,064	81	38	91	134	149	146	131	294		4.9	3.8
40 to 44 years.....	871	69	34	70	97	106	104	98	292		5.3	4.0
45 to 49 years.....	552	46	26	45	60	64	63	59	190		5.3	3.9
1975 <sup>1</sup>												
Ever-married women, 15 to 49 years.....	7,067	914	890	1,115	1,003	837	656	525	1,127		3.6	2.9
15 to 19 years.....	464	250	145	49	13	3	2	1	1		0.7	0.6
20 to 24 years.....	1,293	300	394	335	166	61	22	9	7		1.6	1.3
25 to 29 years.....	1,294	127	177	314	279	191	109	54	42		2.8	2.3
30 to 34 years.....	1,057	71	59	154	189	177	146	111	150		4.0	3.3
35 to 39 years.....	1,113	62	42	112	154	168	152	137	286		4.9	3.9
40 to 44 years.....	1,038	59	37	86	114	133	134	118	358		5.4	4.2
45 to 49 years.....	808	45	36	65	89	102	93	95	284		5.5	4.2

<sup>1</sup>Figures are from a 1-percent sample tabulation of census returns. Excludes 11,701 ever-married women of unknown age.

Source: Census data as reported in Turkey SIS, 1977b, tables 22 and 23; 1976, table 5; and 1979, table 24.

**Table 9. Average Number of Children Ever Born and Children Surviving, by Age of Woman: 1970 and 1975<sup>1</sup>**

Age	1970		1975 <sup>1</sup>	
	Average number of children ever born per woman	Average number of children surviving per woman	Average number of children ever born per woman	Average number of children surviving per woman
All women, 15 to 49 years.....	2.7	2.1	2.7	2.2
15 to 19 years.....	0.1	0.1	0.1	0.1
20 to 24 years.....	1.2	1.0	1.2	1.0
25 to 29 years.....	2.5	2.1	2.6	2.2
30 to 34 years.....	3.8	3.0	3.9	3.2
35 to 39 years.....	4.8	3.7	4.8	3.8
40 to 44 years.....	5.1	3.9	5.3	4.1
45 to 49 years.....	5.2	3.8	5.4	4.1

<sup>1</sup>Figures are from a 1-percent sample tabulation of census returns.

Source: Estimated at the U.S. Bureau of the Census by applying the percent of females ever married from the censuses (see table 11) to the average number of children ever born and children surviving for ever-married women (see table 8). This assumes that single women have had no children. The census data are reported in Turkey SIS, 1977b, tables 9, 22, and 24; 1976, tables 1 and 5; and 1979, table 24.

**Table 10. Distribution of Births, by Order of Birth: 1966-67**

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

Birth order	Number	Percent distribution
All orders.....	1,159	100.0
1st birth.....	211	18.2
2nd birth.....	187	16.2
3rd birth.....	169	14.6
4th birth.....	152	13.1
5th birth.....	129	11.1
6th birth.....	104	9.0
7th birth.....	83	7.2
8th birth.....	53	4.6
9th birth.....	31	2.7
10th birth and over.....	39	3.3
Median birth order.....	3.6	(X)

Note: Data exclude 32,718 births of unknown order.

Source: Figures are from the 1966-67 Turkish Demographic Survey as reported in Turkey Ministry of Health and Social Welfare, 1970, table 16.

**Table 11. Population Ages 12 Years and Over, by Marital Status, Age, and Sex: 1970 and 1975**

(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	Married	Widowed	Divorced or separated	Total	Single	Married	Widowed	Divorced or separated
<b>1970<sup>1</sup></b>										
<b>Male</b>										
Total, 12 years and over.....	11,425	4,192	6,948	228	58	100.0	36.7	60.8	2.0	0.5
12 to 14 years.....	1,302	1,292	10	(Z)	(Z)	100.0	99.2	0.8	(Z)	(Z)
15 to 19 years.....	1,880	1,687	190	2	1	100.0	89.7	10.1	0.1	0.1
20 to 24 years.....	1,457	841	610	2	4	100.0	57.7	41.9	0.2	0.3
25 to 29 years.....	1,086	196	882	3	6	100.0	18.0	81.2	0.3	0.5
30 to 34 years.....	991	64	916	4	7	100.0	6.4	92.5	0.4	0.7
35 to 39 years.....	1,096	37	1,044	7	8	100.0	3.4	95.3	0.6	0.7
40 to 44 years.....	900	24	860	9	7	100.0	2.7	95.6	1.0	0.8
45 to 49 years.....	634	14	605	9	6	100.0	2.2	95.4	1.5	0.9
50 to 54 years.....	443	10	416	13	4	100.0	2.1	93.9	3.0	1.0
55 to 59 years.....	488	9	451	22	5	100.0	1.8	92.5	4.6	1.1
60 to 64 years.....	464	8	414	38	4	100.0	1.7	89.3	8.1	0.9
65 years and over.....	685	12	549	118	6	100.0	1.7	80.3	17.2	0.9
<b>Female</b>										
Total, 12 years and over.....	11,248	2,849	7,294	1,025	81	100.0	25.3	64.8	9.1	0.7
12 to 14 years.....	1,172	1,150	21	1	(Z)	100.0	98.1	1.8	0.1	(Z)
15 to 19 years.....	1,710	1,282	422	4	3	100.0	74.9	24.7	0.2	0.2
20 to 24 years.....	1,327	260	1,053	6	8	100.0	19.6	79.4	0.4	0.6
25 to 29 years.....	1,139	62	1,061	9	8	100.0	5.4	93.1	0.8	0.7
30 to 34 years.....	1,115	27	1,063	17	8	100.0	2.4	95.3	1.5	0.7
35 to 39 years.....	1,081	17	1,025	30	9	100.0	1.6	94.8	2.8	0.8
40 to 44 years.....	884	13	812	51	9	100.0	1.5	91.8	5.7	1.0
45 to 49 years.....	560	8	492	53	6	100.0	1.5	87.9	9.5	1.2
50 to 54 years.....	494	7	398	83	6	100.0	1.3	80.6	16.8	1.2
55 to 59 years.....	432	5	326	94	6	100.0	1.2	75.6	21.8	1.3
60 to 64 years.....	515	6	312	190	7	100.0	1.2	60.5	36.9	1.4
65 years and over.....	818	12	308	487	11	100.0	1.4	37.7	59.5	1.4
<b>1975<sup>2</sup></b>										
<b>Male</b>										
Total, 12 years and over.....	13,606	5,162	8,135	252	58	100.0	37.9	59.8	1.8	0.4
12 to 14 years.....	1,551	1,535	14	2	-	100.0	99.0	0.9	0.1	-
15 to 19 years.....	2,300	2,104	191	4	1	100.0	91.5	8.3	0.2	(Z)
20 to 24 years.....	1,821	1,070	744	3	4	100.0	58.8	40.8	0.2	0.2
25 to 29 years.....	1,445	266	1,169	4	7	100.0	18.4	80.9	0.3	0.5
30 to 34 years.....	1,086	67	1,009	3	7	100.0	6.2	92.9	0.3	0.6
35 to 39 years.....	1,029	37	980	7	6	100.0	3.6	95.2	0.7	0.6
40 to 44 years.....	1,089	26	1,046	9	9	100.0	2.3	96.0	0.8	0.8
45 to 49 years.....	899	16	866	12	5	100.0	1.8	96.3	1.3	0.6
50 to 54 years.....	651	12	619	13	6	100.0	1.9	95.1	2.0	0.9
55 to 59 years.....	387	6	364	13	3	100.0	1.6	94.1	3.5	0.8
60 to 64 years.....	514	8	465	38	4	100.0	1.6	90.4	7.3	0.7
65 years and over.....	835	15	668	144	8	100.0	1.8	80.1	17.3	0.9
<b>Female</b>										
Total, 12 years and over.....	13,333	3,742	8,338	1,155	97	100.0	28.1	62.5	8.7	0.7
12 to 14 years.....	1,437	1,418	17	2	(Z)	100.0	98.7	1.2	0.1	(Z)
15 to 19 years.....	2,147	1,684	458	4	3	100.0	78.4	21.3	0.2	0.1
20 to 24 years.....	1,703	410	1,276	8	9	100.0	24.1	74.9	0.5	0.5
25 to 29 years.....	1,387	94	1,270	12	12	100.0	6.8	91.5	0.9	0.9
30 to 34 years.....	1,094	37	1,031	17	9	100.0	3.4	94.2	1.6	0.8
35 to 39 years.....	1,137	24	1,069	34	10	100.0	2.1	94.0	3.0	0.9
40 to 44 years.....	1,060	22	968	61	9	100.0	2.1	91.3	5.7	0.9
45 to 49 years.....	822	14	721	75	12	100.0	1.7	87.8	9.1	1.5
50 to 54 years.....	641	10	528	96	7	100.0	1.5	82.4	15.0	1.1
55 to 59 years.....	390	6	290	91	4	100.0	1.5	74.3	23.2	0.9
60 to 64 years.....	547	8	338	194	7	100.0	1.5	61.7	35.4	1.3
65 years and over.....	967	16	373	563	15	100.0	1.7	38.5	58.2	1.6

<sup>1</sup>Excludes 286,934 males and 319,698 females of unknown marital status and/or age.<sup>2</sup>Figures are from a 1-percent sample tabulation of census returns. Excludes 110,006 males and 101,504 females of unknown age and/or marital status.

Source: Census data as reported in Turkey SIS, 1977b, table 16; and 1976, table 2.

**Table 12. Legal Age at Marriage and Age at Which Specified Percent of the Population is Ever Married, by Sex: 1960, 1965, 1970, and 1975**

Measure	1960		1965		1970		1975	
	Male	Female	Male	Female	Male	Female	Male	Female
Minimum legal age at marriage.....	17	15	17	15	17	15	17	15
Age at which 25 percent of the population is ever married.....	19	17	20	18	20	18	21	18
Age at which 50 percent of the population is ever married.....	23	19	23	19	23	19	23	20
Age at which 75 percent of the population is ever married.....	26	21	26	21	26	21	26	22

Source: Legal age at marriage is from United Nations, 1972, table 36; 1978, table 24; and personal communication with the Embassy of Turkey, Washington, D.C.

The age at which the specified percent of the population is ever married was derived at the U.S. Bureau of the Census by fitting a Makeham curve to data from the 1960, 1965, 1970, and 1975 censuses (Turkey SIS, no date a, table 2c; 1969a, table 24; 1977b, table 16; and 1976, table 2).

**Table 13. Number of Acceptors of Contraception in the National Family Planning Program, by Method: 1965 to 1974**

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

Methods	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
All methods.....	5	33	47	68	77	66	54	52	59	67
Oral contraceptives.....	-	-	-	9	17	8	4	5	12	13
IUD's.....	5	33	47	59	60	57	50	47	44	44
Other methods.....	-	-	-	-	-	-	-	-	3	10

Source:

1965-66 -- Nortman, 1971, table 13.

1967 -- Nortman, 1972, table 13.

1968 -- Nortman, 1973, table 13.

1969 -- Nortman, 1974, table 16.

1970 -- Nortman, 1975, table 16.

1971-74 -- Nortman and Hofstatter, 1976, table 16.

**Table 14. Prevalence of Contraceptive Use for Married Women, Ages 15 to 44 Years, by Area of Residence: 1963, 1968, and 1973**

(In percent. For meaning of symbols, see text)

Area of residence	1963	1968	1973
All areas....	22	32	38
Metropolitan.....	53	65	(NA)
Other urban.....	36	49	(NA)
Rural.....	15	23	(NA)

Source: Data for 1963 and 1968 are from the National Survey on Population and the Survey on Family Structure and Population Problems, respectively, as reported in Özbey and Shorter, 1970, table 3.

Data for 1973 are from the Survey of Population Structure and Population Issues as reported in Nortman and Hofstatter, 1976, table 23.

**Table 15. Population Ages 15 Years and Over, by Literacy, Broad Age Group, and Sex:  
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
<b>1970<sup>1</sup></b>									
Total, 15 years and over.....	20,718	11,110	53.6	10,369	7,359	71.0	10,350	3,751	36.2
15 to 24 years.....	6,546	4,781	73.0	3,421	2,978	87.1	3,125	1,803	57.7
25 to 34 years.....	4,446	2,613	58.8	2,127	1,693	79.6	2,319	920	39.7
35 to 44 years.....	4,035	1,965	48.7	2,038	1,396	68.5	1,997	569	28.5
45 to 54 years.....	2,182	894	41.0	1,102	654	59.3	1,080	241	22.3
55 years and over.....	3,509	856	24.4	1,681	637	37.9	1,828	219	12.0
<b>1975<sup>2</sup></b>									
Total, 15 years and over.....	24,001	14,455	60.2	12,072	9,317	77.2	11,929	5,139	43.1
15 to 24 years.....	7,992	6,362	79.6	4,130	3,751	90.8	3,862	2,611	67.6
25 to 34 years.....	5,014	3,398	67.8	2,530	2,201	87.0	2,484	1,196	48.2
35 to 44 years.....	4,320	2,310	53.5	2,119	1,592	75.1	2,201	718	32.6
45 to 54 years.....	3,018	1,398	46.3	1,551	1,027	66.2	1,467	371	25.3
55 years and over.....	3,656	988	27.0	1,741	746	42.8	1,915	242	12.6

<sup>1</sup>Excludes 3,931 males and 4,798 females of unknown age.

<sup>2</sup>Figures are based on a 1-percent sample tabulation of census returns. Excludes 80,205 males and 55,896 females of unknown literacy status and/or age.

Note: Literacy is defined as the ability to read and write Roman letters (Turkey SIS, 1972, p. x).

Source: Census data as reported in Turkey SIS, 1977b, table 18; and 1976, table 4.

**Table 16. Population Ages 15 Years and Over Who Have Completed School, by School Level, Broad Age Group, and Sex: 1970 and 1975**

(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
<b>1970<sup>1</sup></b>							
<b>Both Sexes</b>							
Total, 15 years and over...	20,512	8,821	43.0	1,039	5.1	276	1.3
15 to 24 years.....	6,443	4,193	65.1	370	5.7	30	0.5
25 to 34 years.....	4,410	2,109	47.8	333	7.6	123	2.8
35 to 44 years.....	4,015	1,434	35.7	175	4.4	59	1.5
45 to 54 years.....	2,167	596	27.5	86	4.0	35	1.6
55 years and over.....	3,477	489	14.1	75	2.2	29	0.8
<b>Male</b>							
Total, 15 years and over.....	10,266	5,840	56.9	704	6.9	194	1.9
15 to 24 years.....	3,369	2,664	79.1	244	7.2	21	0.6
25 to 34 years.....	2,110	1,382	65.5	218	10.3	77	3.7
35 to 44 years.....	2,027	1,012	49.9	123	6.1	44	2.2
45 to 54 years.....	1,094	427	39.0	64	5.8	29	2.7
55 years and over.....	1,665	355	21.3	55	3.3	23	1.4
<b>Female</b>							
Total, 15 years and over.....	10,246	2,981	29.1	335	3.3	82	0.8
15 to 24 years.....	3,073	1,529	49.8	126	4.1	9	0.3
25 to 34 years.....	2,300	727	31.6	115	5.0	46	2.0
35 to 44 years.....	1,988	422	21.2	52	2.6	15	0.7
45 to 54 years.....	1,073	169	15.7	23	2.1	6	0.6
55 years and over.....	1,811	134	7.4	20	1.1	6	0.3
<b>1975<sup>2</sup></b>							
<b>Both Sexes</b>							
Total, 15 years and over...	23,966	12,569	52.4	1,604	6.7	333	1.4
15 to 24 years.....	7,987	6,026	75.4	689	8.6	48	0.6
25 to 34 years.....	4,998	3,012	60.3	495	9.9	149	3.0
35 to 44 years.....	4,314	1,866	43.3	205	4.8	65	1.5
45 to 54 years.....	3,014	1,039	34.5	131	4.3	42	1.4
55 years and over.....	3,653	626	17.1	83	2.3	29	0.8
<b>Male</b>							
Total, 15 years and over.....	12,045	8,024	66.6	1,107	9.2	266	2.2
15 to 24 years.....	4,127	3,586	86.9	445	10.8	32	0.8
25 to 34 years.....	2,517	1,971	78.3	355	14.1	119	4.7
35 to 44 years.....	2,114	1,279	60.5	151	7.1	55	2.6
45 to 54 years.....	1,548	744	48.1	97	6.2	35	2.2
55 years and over.....	1,738	444	25.6	60	3.5	25	1.4
<b>Female</b>							
Total, 15 years and over.....	11,921	4,545	38.1	497	4.2	67	0.6
15 to 24 years.....	3,860	2,439	63.2	245	6.3	16	0.4
25 to 34 years.....	2,481	1,041	42.0	140	5.6	30	1.2
35 to 44 years.....	2,200	587	26.7	55	2.5	10	0.4
45 to 54 years.....	1,466	295	20.1	35	2.4	7	0.5
55 years and over.....	1,915	182	9.5	23	1.2	5	0.3

<sup>1</sup>Excludes 136,943 males and 142,282 females of unknown level of education and/or age.

<sup>2</sup>Figures are based on a 1-percent sample tabulation of census returns. Excludes 80,205 males and 55,898 females of unknown level of education and/or age.

Note: Primary education is defined as completing at least 5 years of primary school; secondary education is defined as having graduated from secondary school (completed 3 years of middle school and 3 years of high school); and higher education as having graduated from a college or university.

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: Census data as reported in Turkey SIS, 1977b, table 19; and 1976, table 4.

Table 17. Economically Active Population, by Age and Sex: 1970 and 1975

(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
1970 <sup>1</sup>						
Total, 12 years and over.....	11,708	9,304	79.5	11,563	5,811	50.3
12 to 14 years.....	1,339	522	38.9	1,214	546	45.0
15 to 19 years.....	1,924	1,224	63.6	1,770	963	54.4
20 to 24 years.....	1,496	1,277	85.3	1,355	719	53.1
25 to 29 years.....	1,108	1,032	93.1	1,154	598	51.9
30 to 34 years.....	1,019	962	94.4	1,165	589	50.5
35 to 39 years.....	1,117	1,067	95.5	1,097	570	51.9
40 to 44 years.....	921	877	95.2	900	477	53.1
45 to 49 years.....	645	612	94.9	564	298	52.9
50 to 54 years.....	457	420	91.9	516	276	53.6
55 to 59 years.....	497	438	88.0	440	220	50.0
60 to 64 years.....	476	395	83.0	530	252	47.6
65 years and over.....	708	480	67.8	858	302	35.1
1975 <sup>2</sup>						
Total, 12 years and over.....	13,656	10,398	76.1	13,388	5,905	44.1
12 to 14 years.....	1,564	584	37.3	1,449	563	38.8
15 to 19 years.....	2,307	1,371	59.4	2,155	1,006	46.7
20 to 24 years.....	1,828	1,466	80.2	1,710	787	46.0
25 to 29 years.....	1,448	1,324	91.4	1,391	620	44.5
30 to 34 years.....	1,089	1,010	92.7	1,096	496	45.3
35 to 39 years.....	1,031	961	93.2	1,139	523	46.0
40 to 44 years.....	1,091	1,013	92.7	1,063	520	48.9
45 to 49 years.....	901	829	92.1	824	397	48.2
50 to 54 years.....	653	578	88.6	644	315	48.9
55 to 59 years.....	388	320	82.5	391	181	46.3
60 to 64 years.....	516	396	76.8	551	224	40.7
65 years and over.....	840	545	64.9	974	272	27.9

<sup>1</sup>Excludes 3,931 males of unknown age of whom 2,168 were economically active, and 4,798 females of unknown age of whom 1,238 were economically active.

<sup>2</sup>Figures are based on a 1-percent sample tabulation of census returns. Excludes 60,205 males of unknown age of whom 38,299 were economically active, and 46,501 females of unknown age of whom 7,500 were economically active.

Note: The economically active population in 1970 and 1975 comprised all persons 12 years of age and over, who, during the week preceding the census: worked to earn income in money or in kind; had a job but did not work because of illness, leave, or other reasons; or were seeking work.

Source: Census data as reported in Turkey SIS, 1977b, tables 8 and 29; and 1976, tables 3 and 12.

**Table 18. Distribution of Labor Force, by Sex and Industry: 1970 and 1975**

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

Year and industry	Population			Percent		
	Both sexes	Male	Female	Both sexes	Male	Female
<b>1970<sup>1</sup></b>						
Total classified workers.....	14,810	9,052	5,758	100.0	100.0	100.0
Agriculture, forestry, hunting, and fishing.....	10,230	5,031	5,200	69.1	55.6	90.3
Mining and quarrying.....	111	107	4	0.7	1.2	0.1
Manufacturing.....	1,288	998	290	8.7	11.0	5.0
Construction.....	431	422	9	2.9	4.7	0.2
Electricity, gas, and water.....	15	14	1	0.1	0.2	(z)
Wholesale and retail trade, restaurants, and hotels.....	673	646	27	4.5	7.1	0.5
Transport, storage, and communication....	360	344	16	2.4	3.8	0.3
Financing, insurance, real estate, and business services.....	146	115	31	1.0	1.3	0.5
Community, social, and personal services.	1,557	1,376	181	10.5	15.2	3.1
<b>1975<sup>2</sup></b>						
Total classified workers.....	15,672	9,840	5,832	100.0	100.0	100.0
Agriculture, forestry, hunting, and fishing.....	10,483	5,226	5,256	66.9	53.1	90.1
Mining and quarrying.....	109	104	4	0.7	1.1	0.1
Manufacturing.....	1,244	1,039	204	7.9	10.6	3.5
Construction.....	447	441	6	2.9	4.5	0.1
Electricity, gas, and water.....	16	16	1	0.1	0.2	(z)
Wholesale and retail trade, restaurants, and hotels.....	819	780	39	5.2	7.9	0.7
Transport, storage, and communication....	512	496	17	3.3	5.0	0.3
Financing, insurance, real estate, and business services.....	176	134	42	1.1	1.4	0.7
Community, social, and personal services.	1,866	1,602	264	11.9	16.3	4.5

<sup>1</sup>Excludes 254,638 males and 54,301 females whose activities were not adequately defined.<sup>2</sup>Figures are based on a 1-percent sample tabulation of census returns. Excludes 596,932 males and 80,504 females whose activities were not adequately defined.

Note: See table 17 for the definition of economically active.

Source: Census data as reported in Turkey SIS, 1977b, table 35; and 1976, table 12.

**Table 19. Distribution of Labor Force, by Sex and Occupation: 1970 and 1975**

(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
1970						
Total classified workers.....	15,119	9,306	5,813	100.0	100.0	100.0
Scientists, technical, professional, and related workers.....	555	415	140	3.7	4.5	2.4
Administrative and managerial workers....	85	80	5	0.6	0.9	0.1
Clerical and related workers.....	346	273	73	2.3	2.9	1.3
Sales workers.....	463	446	17	3.1	4.8	0.3
Agricultural, animal husbandry and forestry workers, fishers, and hunters..	10,102	4,949	5,153	66.8	53.2	88.6
Production and related workers, transport equipment operators, and laborers.....	3,010	2,632	378	19.9	28.3	6.5
Service workers.....	557	510	47	3.7	5.5	0.8
1975 <sup>1</sup>						
Total classified workers.....	16,349	10,436	5,913	100.0	100.0	100.0
Scientific, technical, professional, and related workers.....	761	557	204	4.7	5.3	3.5
Administrative and managerial workers....	77	75	3	0.5	0.7	(2)
Clerical and related workers.....	509	390	119	3.1	3.7	2.0
Sales workers.....	517	499	17	3.2	4.8	0.3
Agricultural, animal husbandry and forestry workers, fishers, and hunters..	10,476	5,214	5,262	64.1	50.0	89.0
Production and related workers, transport equipment operators, and laborers.....	3,446	3,179	268	21.1	30.5	4.5
Service workers.....	563	523	41	3.4	5.0	0.7

<sup>1</sup>Figures are based on a 1-percent sample tabulation of census returns.

Note: See table 17 for the definition of economically active.

Source: Census data as reported in Turkey SIS, 1977b, table 29; and 1976, table 9.

**Table 20. Distribution of Agricultural and Nonagricultural Workers, by Status and Sex: 1970 and 1975**

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

Sex and status	1970 <sup>1</sup>				1975 <sup>2</sup>			
	Agricultural		Nonagricultural		Agricultural		Nonagricultural	
	Population	Percent	Population	Percent	Population	Percent	Population	Percent
<b>BOTH SEXES</b>								
Total classified workers.....	10,230	100.0	4,579	100.0	10,476	100.0	5,176	100.0
Employers and workers on own account.....	2,961	28.9	1,146	25.0	2,955	28.2	1,296	25.0
Salaried employees and wage earners.....	602	5.9	3,315	72.4	324	3.1	3,698	71.5
Unpaid family workers.....	6,668	65.2	119	2.6	7,197	68.7	182	3.5
<b>MALE</b>								
Total classified workers.....	5,031	100.0	4,021	100.0	5,221	100.0	4,601	100.0
Employers and workers on own account.....	2,717	54.0	996	24.8	2,822	54.1	1,215	26.4
Salaried employees and wage earners.....	401	8.0	2,960	73.6	241	4.6	3,282	71.3
Unpaid family workers.....	1,913	38.0	65	1.6	2,158	41.3	104	2.2
<b>FEMALE</b>								
Total classified workers.....	5,200	100.0	558	100.0	5,255	100.0	575	100.0
Employers and workers on own account.....	244	4.7	150	26.8	132	2.5	81	14.1
Salaried employees and wage earners.....	200	3.9	355	63.6	83	1.6	416	72.3
Unpaid family workers.....	4,755	91.4	54	9.6	5,039	95.9	78	13.6

<sup>1</sup>Excludes 254,638 males and 54,301 females whose activity was not adequately defined.<sup>2</sup>Figures are from a 1-percent sample tabulation of census returns. Excludes 614,330 males and 83,605 females of unknown status and/or sector.

Note: See table 17 for the definition of economically active.

Source: Census data as reported in Turkey SIS, 1977b, table 37; and 1976, table 14.

**Table 21. Distribution of Households, by Number of Persons: 1970 and 1975**

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

Persons per household	1970				1975 <sup>1</sup>			
	Households		Population in households		Households		Population in households	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All households.....	6,262	100.0	35,605	100.0	7,123	100.0	40,198	100.0
1 person.....	183	2.9	183	0.5	272	3.8	272	0.7
2 persons.....	547	8.7	1,094	3.1	660	9.3	1,319	3.3
3 persons.....	643	10.3	1,928	5.4	793	11.1	2,379	5.9
4 persons.....	894	14.3	3,577	10.0	1,127	15.8	4,509	11.2
5 persons.....	970	15.5	4,850	13.6	1,034	15.4	5,472	13.6
6 persons.....	872	13.9	5,230	14.7	958	13.4	5,748	14.3
7 persons.....	671	10.7	4,700	13.2	725	10.2	5,074	12.6
8 persons.....	482	7.7	3,856	10.8	507	7.1	4,052	10.1
9 persons.....	309	4.9	2,785	7.8	332	4.7	2,988	7.4
10 persons or more.....	691	11.0	7,403	20.8	655	9.2	8,384	20.9
OTHER HOUSEHOLD MEASURES								
Mean number of persons per household.....	5.7	(X)	(X)	(X)	5.6	(X)	(X)	(X)
Median number of persons per household.....	5.4	(X)	(X)	(X)	5.1	(X)	(X)	(X)

<sup>1</sup>Figures are from a 1-percent sample tabulation of census returns.

Note: A household is defined as one person or a group of persons with or without a family relationship; who live in the same house or in the same part of a house; who share their meals, earnings, and expenditures; who take part in the management of the household; and who render services to the household.

Source: Census data as reported in Turkey SIS, 1977b, table 47; and 1976, table 19.

**Table 22. Population, by Urban and Rural Residence and Size of Urban Area: 1970 and 1975**

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

Area	1970			1975		
	Number	Population	Percent of total country	Number	Population	Percent of total country
Total country.....	(X)	35,605,176	100.0	(X)	40,347,719	100.0
Urban areas.....	638	13,691,101	38.5	638	16,869,068	41.8
Urban areas with 100,000 or more inhabitants.....	32	6,333,976	17.8	36	8,486,260	21.0
Urban areas with 20,000-99,999 inhabitants.....	95	3,857,309	10.8	115	4,732,261	11.7
Urban areas with 10,000-19,999 inhabitants.....	118	1,610,241	4.5	137	1,868,690	4.6
Urban areas with less than 10,000 inhabitants.....	393	1,889,575	5.3	350	1,781,857	4.4
Rural areas.....	(X)	21,914,075	61.5	(X)	23,478,651	58.2

Note: Urban areas are defined as cities whose areas fall within the municipal boundaries of province and district centers.

Source: Census data as reported in Turkey SIS, 1977b, tables 4 and 6; and 1977c, tables 23 and 26.

Table 23. Provincial Population, Growth Rates, and Migration Data

Province	1970 population (in thousands)	1975 population (in thousands)	Average annual growth rate, 1970-75 (percent) <sup>1</sup>	1970 population born outside province (percent)
Adana.....	1,035	1,240	+3.6	19.3
Adiyaman.....	304	347	+2.7	3.6
Afyon (A. Karahisar).....	542	579	+1.3	4.6
Agri.....	290	330	+2.6	9.0
Amasya.....	307	323	+1.0	13.4
Ankara.....	2,042	2,585	+4.7	42.2
Antalya.....	577	669	+3.0	8.7
Artvin.....	226	228	+0.2	8.2
Aydin.....	565	610	+1.5	19.3
Balikesir.....	750	789	+1.0	13.0
Bilecik.....	139	137	-0.3	11.9
Bingöl.....	178	211	+3.4	7.8
Bitlis.....	185	218	+3.3	8.6
Bolu.....	404	429	+1.2	9.3
Burdur.....	210	223	+1.2	8.0
Bursa.....	848	962	+2.5	22.6
Çanakkale.....	361	369	+0.5	13.5
Çankırı.....	261	265	+0.3	4.2
Çorum.....	518	548	+1.1	3.9
Denizli.....	511	561	+1.9	6.6
Diyarbakır.....	581	651	+2.3	13.2
Edirne.....	316	341	+1.5	24.1
Elazığ.....	377	418	+2.1	16.0
Erzincan.....	276	284	+0.5	14.8
Erzurum.....	685	747	+1.7	11.9
Eskişehir.....	459	495	+1.5	24.8
Gaziantep.....	607	716	+3.3	10.9
Giresun.....	452	464	+0.5	4.5
Gümüşhane.....	282	294	+0.8	7.1
Hakkâri.....	102	126	+4.2	7.1
Hatay.....	591	744	+4.6	10.5
Isparta.....	300	323	+1.5	10.0
İçel.....	591	715	+3.8	15.0
İstanbul.....	3,019	3,905	+5.1	63.4
İzmir.....	1,427	1,674	+3.2	38.9
Kars.....	660	707	+1.4	7.6
Kastamonu.....	447	438	-0.4	6.3
Kayseri.....	599	677	+2.5	10.5
Kırklareli.....	257	268	+0.9	27.6
Kırşehir.....	215	233	+1.6	6.4
Kocaeli.....	385	478	+4.3	36.1
Konya.....	1,280	1,422	+2.1	8.7
Kütahya.....	440	470	+1.3	9.4
Malatya.....	511	575	+2.3	7.9
Manisa.....	806	872	+1.6	19.8
Maraş.....	529	641	+3.9	7.4
Mardin.....	453	520	+2.7	3.8
Muğla.....	369	401	+1.7	7.2
Muş.....	234	267	+2.6	12.3
Nevşehir.....	230	249	+1.6	5.3
Niğde.....	408	463	+2.5	4.7
Ordu.....	609	664	+1.7	4.1
Rize.....	316	336	+1.3	6.9
Sakarya.....	459	496	+1.5	24.3
Samsun.....	821	906	+2.0	14.0
Sırt.....	321	382	+3.5	11.9
Sinop.....	266	268	+0.1	3.7
Sivas.....	732	742	+0.3	9.4
Tekirdağ.....	303	320	+1.1	24.6
Tokat.....	541	599	+2.0	5.6
Trabzon.....	659	719	+1.7	4.5
Tunceli.....	157	165	+0.9	5.9
Urfa.....	538	597	+2.1	5.9
Uşak.....	208	230	+2.0	6.5
Van.....	326	386	+3.4	11.0
Yozgat.....	464	500	+1.5	4.6
Zonguldak.....	744	836	+2.3	16.5

<sup>1</sup>A plus sign (+) denotes net increase, a minus sign (-) net decrease.

Source: Census data as reported in Turkey SIS, 1977b, tables 5 and 15; and 1977c, table 25.

**Table 24. Foreign-Born Population, by Country of Birth: 1970**

Country of birth	Foreign-born population
All countries.....	891,422
Bulgaria.....	255,147
Yugoslavia.....	254,790
Greece.....	201,123
Romania.....	60,398
Soviet Union.....	17,825
United States.....	17,179
Federal Republic of Germany.....	11,107
Saudi Arabia.....	7,886
Cyprus.....	6,378
Iran.....	6,283
Other countries.....	51,054
Unknown country of birth.....	2,252
Foreign-born population as percent of total population.....	2.5

Source: Census data as reported in Turkey SIS, 1977b, table 14.

## Appendix

### Technical Notes

#### SUMMARY

The demographic data presented in this profile cover primarily the period 1950 to 1979. Since national vital registration data for this period are not available, fertility and mortality estimates have been based on information from the 1950, 1955, 1960, 1965, 1970, and 1975 censuses, and the 1966-67 and 1974-75 Turkish Demographic Surveys. After an analysis of available census and survey information, fertility and mortality estimates were derived, and the censuses taken from 1950 to 1975 were evaluated.

#### MORTALITY

The two Turkish Demographic Surveys (TDS) provide the most complete and extensive data on the levels and patterns of mortality in Turkey. Although the surveys differ substantially in organization and implementation, they are both based on the concept of the dual record system, involving continuous registration and periodic—generally biannual—enumeration (see Chanlett, 1971; and Adlakha, 1975). Since the methods of data collection were similar, mortality estimates derived from these surveys are likely to have a high degree of comparability.

#### 1967 Estimates

Age-sex-specific death rates ( ${}_n m_x$  values) are available for 1967 from the 1966-67 TDS (Turkey Ministry of Health and Social Welfare, 1970), based on matched and unmatched deaths. An examination of the reported  ${}_n m_x$  values disclosed that, while they generally formed an acceptable pattern of mortality by age, some irregularities did exist. In order to reduce these fluctuations, the logarithms of the  ${}_n m_x$  values for 5-year age groups between the ages of 15 and 79 years were smoothed using a 3-point moving average. The smoothed rates yielded expectations of life at birth for both sexes that were only 0.3 percent different from those resulting from the unsmoothed rates.

These smoothed  ${}_n m_x$  values were then inflated to correspond to the level of mortality implied by the total number of deaths estimated through the Chandrasekaran-Deming technique. Life tables by sex were computed for midyear 1967 based on these smoothed and inflated  ${}_n m_x$  values (see appendix table A-6). The resulting life expectancies at birth for males and females were 50 and 54 years, respectively.

As others (Adlakha, 1972; and Demeny and Shorter, 1968) have noted, the observed pattern of mortality rates for Turkey differs substantially from any of the regional patterns of the Coale-Demeny (1966) model life tables. For a given life expectancy at birth, the Turkish pattern appears to have a higher level of infant and child mortality than any region of corresponding Coale-Demeny model life tables.

#### 1974-75 Estimates

The 1974-75 report of the Turkish Demographic Survey does not provide data on deaths in the same form as that found in the 1966-67 report. For the 1974-75 survey, deaths were only available for both sexes combined and for 5-year age groups up to age 64, with an additional age group of 65 years and over (Turkey SIS, no date b). Furthermore, the deaths recorded by continuous registration and by the biannual surveys were reported separately, with no indication of how many of these deaths were recorded by both systems. Hence, the average of the deaths recorded by the registration and by the enumeration process was used to obtain the pattern of deaths by age. Age-specific death rates were then calculated using the average deaths and the survey population.

A graph of these rates, however, indicated that the 5-year  ${}_n m_x$  values fluctuated considerably. Therefore, the logarithms of the 5-year  ${}_n m_x$  values for the age groups 15-19 to 55-59 were smoothed using a 5-point moving average. Since data on deaths occurring to persons ages 65 and over were not available by individual 5-year age groups, the pattern of the progression in the  ${}_n m_x$  values found in the 1967 data was applied to the 1974-75 data to provide suitable death rates for the older age groups. Since deaths were not tabulated by sex for 1974-75, the relationship of male to female rates found in the 1967 data was used to estimate the  ${}_n m_x$  rates, by sex, for 1974-75. Finally, the rates were inflated proportionally to correspond to the total number of deaths estimated for the survey period based on the Chandrasekaran-Deming technique.

The resulting life tables show an improvement in the expectation of life in Turkey of about 0.6 years per year between 1967 and 1975. It is interesting to note high levels of infant mortality in relation to adult mortality in Turkey. The mortality pattern of the 1974-75 TDS life table for males was compared to a Coale-Demeny model life table of a similar level of life expectancy based on the east region (the

region which most closely approximates mortality in Turkey). The life table for Turkey had an infant mortality level 15 percent higher and a level of adult mortality (i.e., between ages 10 and 50) 9 percent lower than the model life table.

### 1950 to 1965 Estimates

As noted above, direct measures of mortality in Turkey prior to 1967 are not available. Fortunately, however, Turkey's series of censuses dating back to 1935 at 5-year intervals can be used to provide estimates of mortality in earlier periods. Based on an analysis of these censuses using cumulative survival rates and the Coale-Demeny model life tables from the east region (see United Nations, 1967, for a description of the methodology), levels of mortality for census periods back to the 1935-40 period were estimated. The east region was selected since it provided the closest fit to the 1967 TDS empirical life table. The findings from this analysis substantiated a similar analysis by Demeny and Shorter (1968) of Turkish adult mortality for the 1935-60 period.

Since this procedure generates estimates primarily of adult rather than infant or child mortality, and since the Turkish mortality pattern appears to have relatively higher levels of infant mortality than do the Coale-Demeny model life tables, infant mortality for periods from 1950 to 1965 estimated by Macura (1975a, table 5) was accepted for mortality from birth to age 1. The Coale-Demeny east region model life table selected through the procedure described above was accepted as representative of mortality at ages 5 years and over. Finally, mortality from exact ages 1 to 5 years was interpolated between the infant and adult mortality levels through a logit procedure. These life tables were later used in the evaluation of the censuses (see census evaluation section).

### Projections

The observed increase in life expectancy at birth between the demographic surveys of 1966-67 and 1974-75 is similar in magnitude to that experienced by other countries in the region. It is also consistent with improvements in health conditions and facilities in Turkey as well as with general economic development. For the population projections it was assumed that the increase in life expectancy at birth for each sex over the period 1967-75 would continue linearly to 1979. Life expectancies at birth for each sex for 1974-75 and 1979 are given in appendix table A-5.

## FERTILITY

The available information for estimating fertility levels includes children-ever-born data, by age of mother, from four sources—the 1970 and 1975 censuses and the 1966-67 and 1974-75 Turkish Demographic Surveys. Prior to 1970, data on children ever born were not collected in the census. Data on births by age of mother during a 12-month period are also available from each of the demographic surveys. These surveys were based on the concept of the dual record system, involving continuous registration and biannual enumeration.

### Estimates prior to 1970

With the exception of the results from the 1966-67 Turkish Demographic Survey, there is a scarcity of data from which fertility estimates can be derived for the period prior to 1970. However, since patterns and levels of mortality for this period had already been established, it was possible to obtain estimates of period birth rates using a reverse-survival method applied to the 1950 to 1975 census populations. Because the censuses were taken at 5-year intervals, several alternative estimates could be obtained for a given period.

Crude birth rate (CBR) estimates for each of the intercensal periods were obtained through the reverse survival of three age groups: (1) the population ages 0 to 4 years at the end of the intercensal period; (2) the population ages 5 to 9 years enumerated in the census 5 years after the end of the intercensal period; and (3) the population ages 10 to 14 years from the census 10 years after the end of the intercensal period. The birth rates derived from reverse surviving the 0 to 4 age group were consistently lower than those derived from the other two age groups, suggesting a tendency for the population ages 0 to 4 years to be underenumerated in each census. The CBR's resulting from the reverse survival of the population ages 5 to 9 years and 10 to 14 years in the two succeeding censuses, on the other hand, showed a high degree of similarity.

Due to these findings, it was decided to accept the CBR's based on the reverse survival of the population ages 5 to 9 from the census taken 5 years after the end of the intercensal period in question. Compared to estimates based on the population ages 10 to 14, these estimates should be slightly less sensitive to assumptions concerning mortality and migration. The estimated CBR's for the periods from 1950-55 to 1965-70 are presented in table 3. It should be mentioned that the estimated CBR for the 1965-70 period obtained through this technique was only slightly higher (less than 1 per 1,000 population) than the estimated CBR reported in the 1966-67 Turkish Demographic Survey.

These estimates of fertility compare favorably with estimates made by other investigators (see appendix table A-4 for alternate estimates of the CBR). Demeny and Shorter (1968) estimated a CBR of 44 to 46 (depending on the assumption of infant mortality used) for the period around 1960, and a CBR of 45 to 47 for the 1955-60 intercensal period. Alpay and Shorter (1969) estimated a CBR of 44 for the early 1960's, while Shorter and Tekçe (1974) estimated a level of 46.7 for the 1950-55 intercensal period. Again these estimates are in line with those derived using the reverse-survival method.

### Evaluation of 1967 Fertility Estimates

The 1966-67 Turkish Demographic Survey report (Turkey Ministry of Health and Social Welfare, 1970) provides estimates of births for calendar year 1967 based on both the continuous registration and the biannual enumeration. (The reference period actually varied from May 1966 - April 1967 to May 1967 - April 1968, depending on the area of enumeration.)

Age-specific fertility rates presented in the survey report (which imply a total fertility rate of 5.30 per woman) were based on matched plus unmatched births. However, the 1967 estimate of total births as reported in the survey is based on a 6-percent adjustment of the matched and unmatched births using the Chandrasekaran-Deming technique (Chandrasekar and Deming, 1949). The reported age-specific fertility rates, therefore, were proportionally increased by this 6-percent factor with a resulting total fertility rate (TFR) of 5.63 per woman (see appendix table A-8).

The adjusted age-specific fertility rates were applied to a female population derived by interpolating the 1965 and 1970 censuses to midperiod. The resulting number of births derived from these rates was 6 percent lower than that implied by the corresponding period crude birth rate estimated from the reverse survival of the population ages 5 to 9 enumerated in the 1975 census. In fact, the births estimated using the adjusted 1967 TDS age-specific fertility rates differed by only 1 percent from those implied by the corresponding period crude birth rate estimated from the reverse survival of the population ages 0 to 4 enumerated in the 1970 census. It was decided not to accept the age-specific fertility rates from the 1967 TDS, since birth rates derived from the population ages 0 to 4 reflect the underenumeration in that age group and therefore tend to underestimate fertility. An additional consideration in this decision was that the CBR of 38 estimated for the 1965-70 period using these fertility rates and the interpolated mid-period population was too low relative to the trend in crude birth rates up to that period.

The Brass fertility technique (Brass and Coale, 1968) was applied to data from the 1967 TDS on children ever born, by age of mother. The resulting TFR's were 6.44 based on the  $P_2/F_2$  ratio, and 6.19 based on the  $P_3/F_3$  ratio. This procedure appeared to overestimate fertility. The crude birth rates implied by these TFR's were 44 and 45, a level not consistent with mortality levels and intercensal growth.

Consequently, fertility based on the reverse survival of the 1975 census population ages 5 to 9 was accepted for the 1965-70 period. The total fertility rate of 5.98 implied by the period crude birth rate was consistent with Shorter and Demeny's (1968, p. 48) total fertility rate estimates of 6.19 to 6.44 for around 1960 when one considers the modest increase in the proportion of the female population using family planning between 1963 and 1968 (see table 13), and relatively minor changes in patterns of marriage (see table 12).

### 1975 Estimates

The data on children born in the preceding 12-month period, by age of the mother, as recorded in the 1974-75 Turkish Demographic Survey (TDS) were proportionally adjusted to a level consistent with the total number of births estimated through the Chandrasekaran-Deming technique. The resulting total fertility rate of 5.21 obtained using the adjusted births was accepted.

When the Brass fertility technique was applied to the 1974-75 survey information, total fertility rates of 4.94 and

5.08 were obtained using the  $P_2/F_2$  and  $P_3/F_3$  ratios, respectively. The Arriaga fertility technique (Arriaga and Anderson, 1976) was also used to estimate fertility from children-ever-born data from the 1966-67 TDS, the 1974-75 TDS, and the 1970 and 1975 censuses. This technique produced a TFR of 5.41 for 1974-75. Although the results obtained by these two techniques were judged to be less reliable than those using adjusted births from the surveys, the levels obtained are generally supportive of the TFR's accepted for this period.

### Projections

Fertility assumptions for 1976 to 1979 (see appendix table A-7) were made considering the trend of decline in estimated total fertility rates from 1965-70 to 1975.

For the upper projection series, the estimated 1974-75 TFR of 5.21 was assumed to decline to 4.81 in 1979 — a drop of 7.7 percent. The projected 1979 TFR is based on the assumption that the rate of decline in the TFR from 1975 to 1979 was the same as that estimated between the implied 1965-70 fertility rates and the 1975 rates.

The 1979 fertility rate of 4.44 for the lower projection was obtained by assuming that the decline between 1975 and 1979 would occur at twice the annual rate of change estimated between 1965-70 and 1975. This represents a 14.8 percent decline in the TFR.

For the middle projection series, a 1979 TFR of 4.62 was obtained by averaging the 1979 TFR's from the low and the high series. This represents an 11.2 percent decrease in the TFR over the 4-year period.

Age-specific fertility rates pertaining to each TFR were estimated using the 1974-75 age pattern of fertility and assuming a proportional reduction in fertility for all age groups.

### INTERNATIONAL MIGRATION

A prominent feature of Turkish international migration patterns since the early 1960's has been the flow of temporary labor migrants to the Federal Republic of Germany (West Germany). In magnitude, this temporary movement far outweighs permanent migration. The most comprehensive documentation of this flow is available from official Federal Republic of Germany statistics (see appendix table A-10) particularly since they are based on residence rather than formal or permanent immigration. Although there is some Turkish labor migration to other European countries, the Turkish movement to West Germany represents the vast majority of total movement.

The net movement of Turkish population, especially males, to West Germany in the late 1960's and early 1970's was impressive—reaching a peak net annual rate of 4.2 per 1,000 population in 1973. Recent data on the total Turkish population in the Federal Republic of Germany indicates that this group represents an estimated 2 percent of the 1977 population of West Germany (Federal Republic of Germany Der Bundesminister für Arbeit und Socialordnung, 1978b). There appears to have been a decrease in the net movement of Turkish workers to West Germany in the mid-1970's as

the demand for Turkish labor has leveled off or even declined. Given current economic trends, increasing demand for skilled rather than unskilled labor, and the number of Turkish workers already in West Germany, it does not appear likely that there will be a sizeable increase in the demand for Turkish labor in West Germany in the near future. A more likely pattern would be a steady or slightly declining number of Turkish workers in West Germany.

Data from the 1970 West German census (appendix table A-11) indicate that Turkish migrants appear to be somewhat older than is typical for migrants. Although males do predominate, there is evidence that a sizeable number of Turkish families were living in West Germany at the time of this census.

Population movements of importance to Turkey prior to 1960 include the immigration of a substantial number of eastern Europeans following political changes in that region after the Second World War. Worthy of note is the recorded immigration of more than 150,000 Bulgarians in 1950 and 1951 and more than 100,000 Yugoslavs in the 1955-60 period. Official Turkish immigration and refugee figures are presented in appendix table A-9.

### Projections

Turkish migration to the Federal Republic of Germany is primarily determined by the West German demand for labor rather than by the supply of Turkish workers willing to migrate. As was mentioned above, a likely future pattern might be a steady or even declining number of Turkish workers in West Germany. For this reason, it was assumed that there would be no net international migration after 1975.

### CENSUS EVALUATION

Although population counts have been taken in Turkey since the 16th century, the first census providing demographic information on such characteristics as age, sex, and marital status was taken in 1927. A second census was taken in 1935, and one has followed every 5 years since that date.

The census questionnaire has always been short, and limited to basic questions that can be asked in an interview of less than 6 minutes. As a result, opportunities to ask more complex questions such as retrospective questions on fertility and mortality have been limited. Nevertheless, retrospective questions on fertility and mortality were introduced in the 1970 census and repeated in 1975.

Since census procedures and methodology have undergone only minimal change during the history of the Turkish census, results of the 10 censuses are generally comparable. Nevertheless, improvements or variations in census quality over time may make comparisons problematic. The lack of postenumeration surveys, moreover, limits the extent to which these censuses may be independently evaluated. Consequently, the evaluation is based on a demographic analysis using estimates of fertility and mortality.

Using the mortality estimates previously derived (see section on mortality), the population from each census was reverse survived 5 years into the past; that is, up to the time of the previous census. At this time, the enumerated census population 5 years and over was compared to the reverse-survived population 5 years and over from the later census. For each census, the relative difference in these two populations was less than 1.8 percent. In every case the direction of this difference—positive or negative—was that expected on the basis of available information patterns in international migration (see section on international migration). However, due to a lack of detailed migration data, no age-sex analysis of the impact of migration on the population enumerated in each census could be performed.

A preliminary examination of the age distribution of the population enumerated in the censuses of 1950 through 1975 showed that age misstatement was common, with a preference noted for ages ending in 0 and 5. Since the Turkish age distribution has been influenced both by migration and by the effect of World War II and earlier disturbances, a strong smoothing of the age distribution was not felt to be appropriate. The population in 10-year groups ages 10 and over was therefore accepted and 5-year age groups were obtained through a splitting formula (Arriaga, 1968). This process was aimed at reducing the effect of age misstatement without modifying the reported census age structure in 10-year age groups. The population ages 5 to 9 was accepted without further adjustment.

Consequently, the analysis of census coverage error was restricted to the population ages 0 to 4. The technique used to estimate this population was based on the census populations ages 5 and over which had been accepted as complete. First, it was necessary to estimate births for the intercensal periods through 1970. This was accomplished using a formula based on the total population 5 years prior to the census, the population ages 5 and over at the time of the census, and the period birth rate (Arriaga, 1970, p. 115). Estimates of the total populations 5 years prior to each census were derived by reverse surviving the census populations. Period crude birth rates were those obtained by reverse surviving the enumerated population ages 5 to 9 (see fertility section). The births were then survived to provide estimates of the population ages 0 to 4 at the census date. The resulting adjusted figures suggest varying levels of under-enumeration of the population ages 0 to 4 in the Turkish censuses (see section on sources and quality of the data).

Since age-specific fertility rates could be applied to the period 1970 to 1975 (see section on fertility), the 1975 census was not evaluated according to the method used for the 1970 and earlier censuses. Rather, the census population was reverse survived 5 years and then projected forward to the census date using the appropriate age-specific fertility and age-sex-specific survival rates. The projected population ages 0 to 4 was accepted as the adjusted census population of this age group.

**Table A-1. Enumerated Census Population, by Age and Sex:  
October 1975**

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

Age	Both sexes	Male	Female
All ages.....	40,198	20,417	19,780
0 to 4 years.....	5,403	2,757	2,646
5 to 9 years.....	5,446	2,787	2,660
10 to 14 years.....	5,210	2,721	2,490
15 to 19 years.....	4,463	2,307	2,155
20 to 24 years.....	3,538	1,828	1,710
25 to 29 years.....	2,839	1,448	1,391
30 to 34 years.....	2,186	1,089	1,096
35 to 39 years.....	2,170	1,031	1,139
40 to 44 years.....	2,155	1,092	1,063
45 to 49 years.....	1,725	901	824
50 to 54 years.....	1,296	653	644
55 to 59 years.....	779	388	391
60 to 64 years.....	1,066	516	551
65 to 69 years.....	722	352	370
70 to 74 years.....	558	261	297
75 years and over.....	534	226	307
Unknown age.....	107	60	47

Source: Figures are from a 1-percent sample tabulation as reported in Turkey SIS, 1976, table 1. A final census figure of 40,347,719 is reported in Turkey SIS, 1977c, table 22, but the age-sex distribution is not available.

**Table A-2. Enumerated and Adjusted Census Population, by Age and Sex: October 1970**

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

Age	Enumerated			Adjusted		
	Both sexes	Male	Female	Both sexes	Male	Female
All ages.....	35,605	18,007	17,598	36,015	18,219	17,796
0 to 4 years.....	5,255	2,661	2,594	5,666	2,874	2,792
5 to 9 years.....	5,093	2,610	2,483	5,095	2,611	2,484
10 to 14 years.....	4,530	2,363	2,167	4,461	2,325	2,136
15 to 19 years.....	3,695	1,924	1,770	3,765	1,963	1,802
20 to 24 years.....	2,851	1,496	1,355	2,746	1,412	1,335
25 to 29 years.....	2,262	1,108	1,154	2,368	1,193	1,175
30 to 34 years.....	2,184	1,019	1,165	2,344	1,135	1,208
35 to 39 years.....	2,214	1,117	1,097	2,056	1,001	1,055
40 to 44 years.....	1,821	921	900	1,666	858	808
45 to 49 years.....	1,209	645	564	1,365	708	657
50 to 54 years.....	973	457	516	1,024	516	509
55 to 59 years.....	937	497	440	887	439	448
60 to 64 years.....	1,006	476	530	821	400	421
65 to 69 years.....	641	322	319	826	399	428
70 to 74 years.....	486	221	265	486	221	266
75 years and over.....	439	165	273	439	165	273
Unknown age.....	9	4	5	-	-	-

Source: Enumerated population as reported in Turkey SIS, 1977b, table 8. For a description of the adjustment of the census, see the census evaluation section of the Technical Notes.

**Table A-3. Enumerated and Adjusted Census Populations, by Sex: Census Years, 1950 to 1975**

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

Year	Enumerated			Adjusted		
	Both sexes	Male	Female	Both sexes	Male	Female
October 1950.....	20,947	10,527	10,420	21,290	10,676	10,613
October 1955.....	24,065	12,233	11,831	24,371	12,355	12,016
October 1960.....	27,755	14,164	13,591	28,469	14,497	13,972
October 1965.....	31,391	15,997	15,394	32,178	16,378	15,800
October 1970.....	35,605	18,007	17,598	36,015	18,219	17,796
October 1975.....	40,348	20,493	19,854	40,839	20,728	20,111

## Source:

1950-1970 -- Enumerated census data as reported in Turkey SIS, 1977c, table 29.

1975 -- Enumerated population for both sexes as reported in Turkey SIS, 1977c, table 22. The sex distribution from a 1-percent sample tabulation (see appendix table A-1) was used to estimate the male and female populations.

For a description of the adjustment of the censuses, see the census evaluation section of the Technical Notes.

**Table A-4. Alternate Estimates of Vital Rates, from Selected Sources: Selected Periods, 1950 to 1975**

(For meaning of symbols, see text)

Source and year	Births per 1,000 population	Deaths per 1,000 population	Rate of natural increase <sup>1</sup> (percent)
<b>Shorter and Tekçe</b>			
1950-55.....	47	21	2.6
1955-60.....	45	18	2.7
1960-65.....	41	15	2.6
1965-70.....	38	13	2.6
<b>1966-67 Turkish Demographic Survey</b>			
1967.....	40	15	2.5
<b>1973 Survey of Population Structure and Population Issues</b>			
1972-73.....	30	(NA)	(NA)
<b>Bulutay and Şahinkaya</b>			
1973-74.....	28-41	(NA)	(NA)
<b>1974-75 Turkish Demographic Survey</b>			
1974-75.....	34-37	11-12	2.3-2.5

<sup>1</sup>Rates of natural increase were calculated from unrounded crude birth and death rates and may not equal the difference between the crude birth and death rates shown due to rounding.

**Source:**

Shorter and Tekçe -- Based on an analysis of census data for the period 1950 to 1970 (Shorter and Tekçe, 1974).

1966-67 Turkish Demographic Survey -- Based on results of the dual record system (registered and enumerated events) adjusted by the Chandrasekaran-Deming technique (Turkey Ministry of Health and Social Welfare, 1970, table 14).

1973 Survey of Population Structure and Population Issues -- Based on an analysis of pregnancy history data from the survey (HIPS, 1978, p. 70).

Bulutay and Şahinkaya -- Based on an analysis of preliminary results of the 1974-75 Turkish Demographic Survey. The lower estimate is based on births in the 12 months preceding the survey and was considered by the authors to be an underestimate of the actual level. The higher estimate is the result of the application of the Brass fertility technique to data on children ever born by age of mother from the survey using the pattern of births as reported for the preceding 12 months. The authors considered this estimate to be an overstatement of the true birth rate in the population due to biases in the estimation procedure (Bulutay and Şahinkaya, 1975, pp. 8-12).

1974-75 Turkish Demographic Survey -- Based on results of the dual record system (Turkey SIS, no date b, tables 19 and 22). The lower estimates of the crude birth rate and the crude death rate are based on matched and unmatched events in the 12-month reporting period. The higher estimates are based on the adjustment of these data by the Chandrasekaran-Deming technique.

**Table A-5. Estimated and Projected Life Expectancies at Birth:  
1974-75 and 1979**

Year	Life expectancy at birth (years)		
	Both sexes	Male	Female
<b>ESTIMATED</b>			
1974-75.....	56.7	55.2	58.3
<b>PROJECTED</b>			
1979.....	59.1	57.6	60.7

Source: Life expectancies at birth for 1974-75 were derived from life tables generated at the U.S. Bureau of the Census (see table 5). The 1979 life expectancies were calculated based on an extrapolation of 1967-75 trends, by sex (see table 5 and appendix table A-6). Figures for both sexes assume a sex ratio at birth of 1.05.

Table A-6. Estimated Life Table Values, by Sex: 1967

Sex and age interval (x to x+n)	$1,000 q_{n x}$	$l_x$	$d_{n x}$	$L_{n x}$	$1,000 m_{n x}$	$e_x$
<b>MALE</b>						
0 to 1 year.....	163.6	100,000	16,360	88,384	185.1	50.5
1 to 5 years.....	65.8	83,640	5,500	319,781	17.2	59.3
5 to 10 years.....	13.9	78,140	1,086	387,983	2.8	59.4
10 to 15 years.....	9.0	77,053	690	383,541	1.8	55.2
15 to 20 years.....	11.9	76,363	911	379,538	2.4	50.7
20 to 25 years.....	14.4	75,452	1,086	374,545	2.9	46.3
25 to 30 years.....	18.3	74,366	1,363	368,421	3.7	41.9
30 to 35 years.....	20.3	73,003	1,481	361,310	4.1	37.6
35 to 40 years.....	25.2	71,521	1,801	353,104	5.1	33.4
40 to 45 years.....	35.4	69,720	2,466	342,438	7.2	29.2
45 to 50 years.....	48.8	67,255	3,281	328,073	10.0	25.1
50 to 55 years.....	69.5	63,974	4,446	308,755	14.4	21.3
55 to 60 years.....	97.5	59,528	5,804	283,130	20.5	17.7
60 to 65 years.....	141.3	53,724	7,589	249,646	30.4	14.3
65 to 70 years.....	210.3	46,135	9,702	206,419	47.0	11.3
70 to 75 years.....	303.3	36,433	11,050	154,541	71.5	8.6
75 to 80 years.....	462.4	25,383	11,738	97,572	120.3	6.3
80 years and over.....	1,000.0	13,645	13,645	62,467	218.4	4.6
<b>FEMALE</b>						
0 to 1 year.....	147.5	100,000	14,749	89,823	164.2	53.6
1 to 5 years.....	60.6	85,251	5,169	327,171	15.8	61.8
5 to 10 years.....	11.4	80,082	916	398,119	2.3	61.8
10 to 15 years.....	8.5	79,166	670	394,155	1.7	57.4
15 to 20 years.....	11.4	78,496	898	390,236	2.3	52.9
20 to 25 years.....	13.9	77,598	1,079	385,295	2.8	48.5
25 to 30 years.....	16.4	76,520	1,252	379,467	3.3	44.1
30 to 35 years.....	18.8	75,267	1,417	372,795	3.8	39.8
35 to 40 years.....	22.2	73,851	1,643	365,145	4.5	35.6
40 to 45 years.....	29.1	72,207	2,099	355,789	5.9	31.3
45 to 50 years.....	38.2	70,108	2,682	343,836	7.8	27.2
50 to 55 years.....	55.9	67,426	3,769	327,710	11.5	23.2
55 to 60 years.....	77.8	63,658	4,956	305,899	16.2	19.4
60 to 65 years.....	113.6	58,702	6,672	276,831	24.1	15.8
65 to 70 years.....	171.0	52,030	8,898	237,908	37.4	12.5
70 to 75 years.....	259.7	43,133	11,203	187,656	59.7	9.6
75 to 80 years.....	390.0	31,930	12,453	128,515	96.9	7.0
80 years and over.....	1,000.0	19,477	19,477	96,258	202.3	4.9

Note:

- x = Exact age at beginning of age interval, in years.  
n = Length of age interval, in years.  
 $1,000 q_{n x}$  = Number of deaths occurring between age x and age x+n per 1,000 persons alive at age x; calculated as  $\frac{d_{n x}}{l_x} \times 1,000$ .  
 $l_x$  = Number of persons living at age x.  
 $d_{n x}$  = Number of deaths occurring between age x and age x+n.  
 $L_{n x}$  = Number of persons living between age x and age x+n.  
 $1,000 m_{n x}$  = Number of deaths occurring between age x and age x+n per 1,000 persons living between age x and age x+n; calculated as  $\frac{d_{n x}}{L_{n x}} \times 1,000$ .  
 $e_x$  = Average number of years of life remaining for those alive at age x.

See table 5 for estimated life table values, by sex, for 1974-75.

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

**Table A-7. Estimated and Projected Total and Age-Specific Fertility Rates: 1974-75 and 1979**

Age	Estimated, 1974-75	Projected, 1979		
		High series	Intermediate series	Low series
Age-specific fertility rates (per 1,000 women)				
15 to 19 years.....	88	81	78	75
20 to 24 years.....	294	271	261	251
25 to 29 years.....	268	247	238	228
30 to 34 years.....	189	175	168	161
35 to 39 years.....	127	118	113	108
40 to 44 years.....	54	50	48	46
45 to 49 years.....	21	19	18	18
Total fertility rate (per woman).....	5.21	4.81	4.62	4.44

Source:

1974-75--See table 7.

1979--See the fertility section of the Technical Notes.

**Table A-8. Alternate Estimates of Total and Age-Specific Fertility Rates, from Selected Sources: 1967, 1973, and 1974-75**

Year	Total fertility rate (per woman)	Age-specific fertility rate (per 1,000 women)						
		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
1967a.....	5.30	181	268	260	209	150	60	33
1967b.....	5.63	186	285	276	222	159	64	35
1973.....	4.66	61	240	255	168	149	52	7
1974-75.....	3.79	64	214	195	138	93	40	15

<sup>1</sup>Includes estimated fertility rate of 0.5 births per 1,000 women ages 10 to 14.

Source:

1967a -- Total and age-specific fertility rates are based on matched and unmatched births recorded in the 1966-67 Turkish Demographic Survey (Turkey Ministry of Health and Social Welfare, 1970, table 16).

1967b -- Rates based on results of the 1966-67 Turkish Demographic Survey (see 1967a) adjusted by the Chandrasekaran-Deming technique.

1973 -- Rates based on pregnancy history data collected in the 1973 Survey of Population Structure and Population Issues (HIPS, 1978, p. 72).

1974-75 -- Total and age-specific fertility rates are based on marital fertility rates reported in the 1974-75 Turkish Demographic Survey for ever-married women resulting from a retrospective question on births in the 12 months preceding the survey (Turkey SIS, no date b, table 14). These rates were adjusted at the U.S. Bureau of the Census to correspond to the total female population in each age group.

**Table A-9. Immigrants and Refugees to Turkey: Selected Periods, 1950 to 1976**

Status	1950-54	1955-59	1960-64	1965-69	1970-74	1975	1976
Immigrants.....	170,413	141,218	29,913	18,198	40,524	575	2,544
Refugees.....	592	58	369	6,629	4,777	1,180	715

Source: Immigration and refugee data as reported in Turkey CSO, 1961, table 57; Turkey SIS, 1969b, table 51; 1974, table 63; and 1977, table 70.

**Table A-10. International Migration of the Turkish Population  
as Reported by the Federal Republic of Germany:  
1960 to 1975**

(For meaning of symbols, see text)

Year	Emigrants	Immigrants <sup>1</sup>	Net migrants <sup>2</sup>
1960.....	1,309	3,947	+2,638
1961.....	1,681	9,120	+7,439
1962.....	3,850	17,946	+14,096
1963.....	6,529	31,395	+24,866
1964.....	14,193	71,780	+57,587
1965.....	23,075	72,893	+49,818
1966.....	40,791	60,909	+20,118
1967.....	54,456	33,564	-20,892
1968.....	28,193	80,272	+52,079
1969.....	32,129	151,762	+119,633
1970.....	42,811	177,646	+134,835
1971.....	61,278	187,666	+126,388
1972.....	(NA)	(NA)	(NA)
1973.....	87,595	250,347	+162,752
1974.....	111,401	161,430	+50,029
1975.....	149,114	99,169	-49,945

<sup>1</sup>Includes short-term immigrants.

<sup>2</sup>A plus sign (+) indicates net immigration of Turkish population into the Federal Republic of Germany, a minus sign (-) indicates net emigration from the Federal Republic of Germany.

Note: Data on emigrants are deletions from population registers and correspond to declarations of intention to give up residence. Data on immigrants are entries in the population registers and correspond to arrivals taking up residence.

Source: United Nations, 1978, table 29.

**Table A-11. Turkish Population Residing in the Federal Republic  
of Germany, by Age and Sex: 1970**

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

Age	Both sexes	Male	Female
All ages.....	429.4	305.6	123.8
Under age 15.....	58.9	30.8	28.1
15 to 19 years.....	19.3	9.5	9.8
20 to 24 years.....	44.5	20.5	24.1
25 to 29 years.....	92.3	70.0	22.3
30 to 39 years.....	173.1	143.5	29.6
40 to 49 years.....	35.0	27.4	7.5
50 to 59 years.....	4.1	2.8	1.3
60 to 64 years.....	0.9	0.5	0.4
65 years and over..	1.3	0.6	0.7

Source: Federal Republic of Germany census data as reported in Federal Republic of Germany Statistisches Bundesamt Wiesbaden, 1974, pp. 28-29.

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