



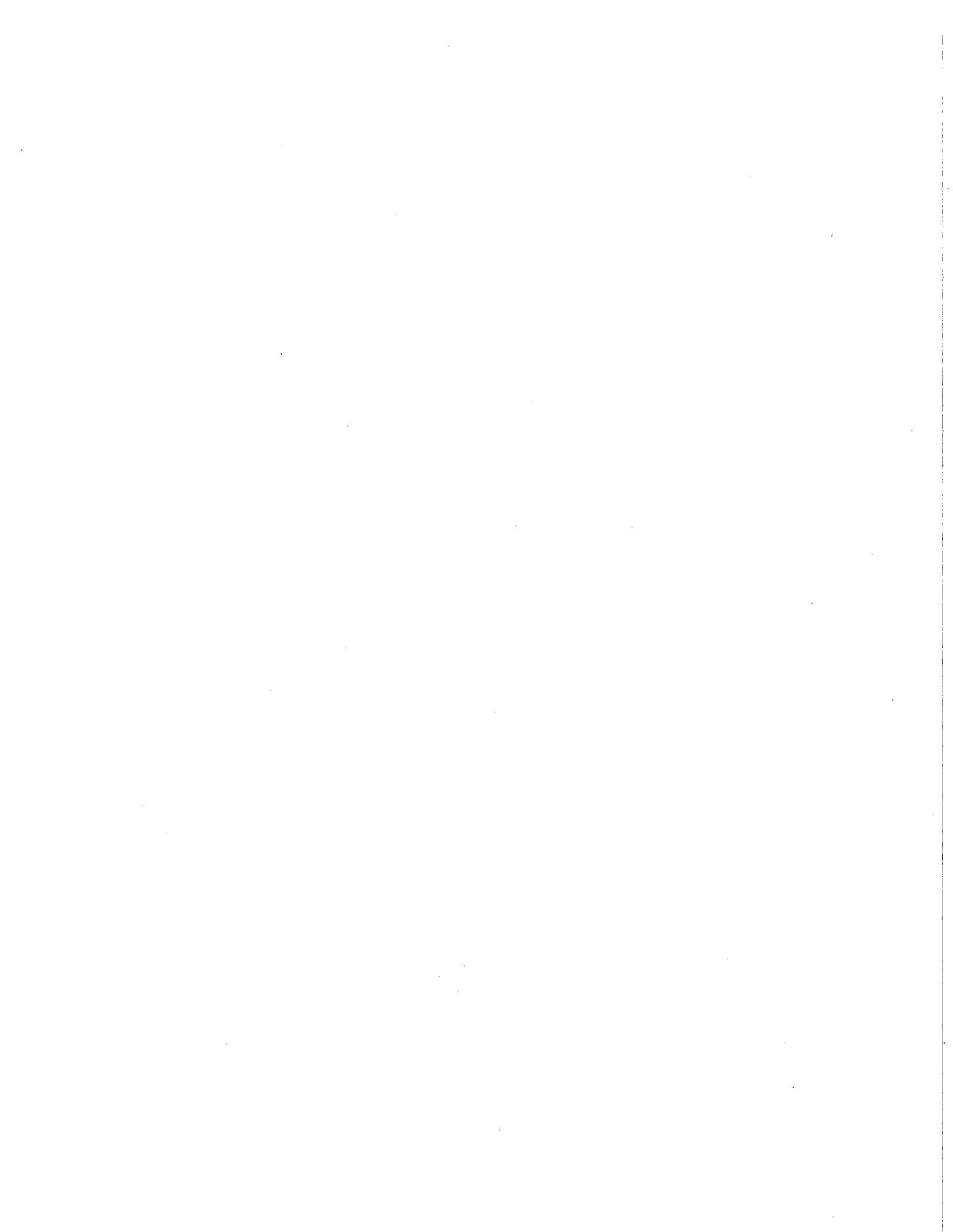
Trends in Demographic, Family Planning, and Health Indicators in Indonesia 1971-1997

Central Bureau of Statistics

State Ministry of Population/
National Family Planning Coordinating Board

Ministry of Health

Demographic and Health Surveys
Macro International Inc.



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Demographic and Health Surveys
Macro International Inc.
Calverton, Maryland, USA

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This report was prepared as part of the worldwide Demographic and Health Surveys (DHS) program, which is designed to collect data on fertility, family planning and maternal and child health. Additional information about the 1997 Indonesia Demographic and Health Survey (IDHS) may be obtained from the Bureau for Demographic and Labor Force Statistics, Central Bureau of Statistics, Jl. Dr. Sutomo 6-8, Jakarta 10710, Indonesia, Telephone: 345-6285; Fax: 384-1545; Center for Population and Family Planning Studies, National Family Planning Coordinating Board, Jl. Permata 1, Halim Perdanakusumah, Jakarta 13650, Indonesia, Telephone: 800-9029; Fax: 800-8535; and Health Ecology Research Center, Institute for Health Research and Development, Ministry of Health, Jl. Percetakan Negara 29, P.O. Box 226, Jakarta 10560, Indonesia, Telephone/ Fax: 424-4226. Additional information about the DHS program may be obtained by writing to: DHS, Macro International Inc., 11785 Beltsville Drive, Calverton, MD 20705, USA (Telephone: 301-572-0200; Fax: 301-572-0999; e-mail: reports@macroint.com).

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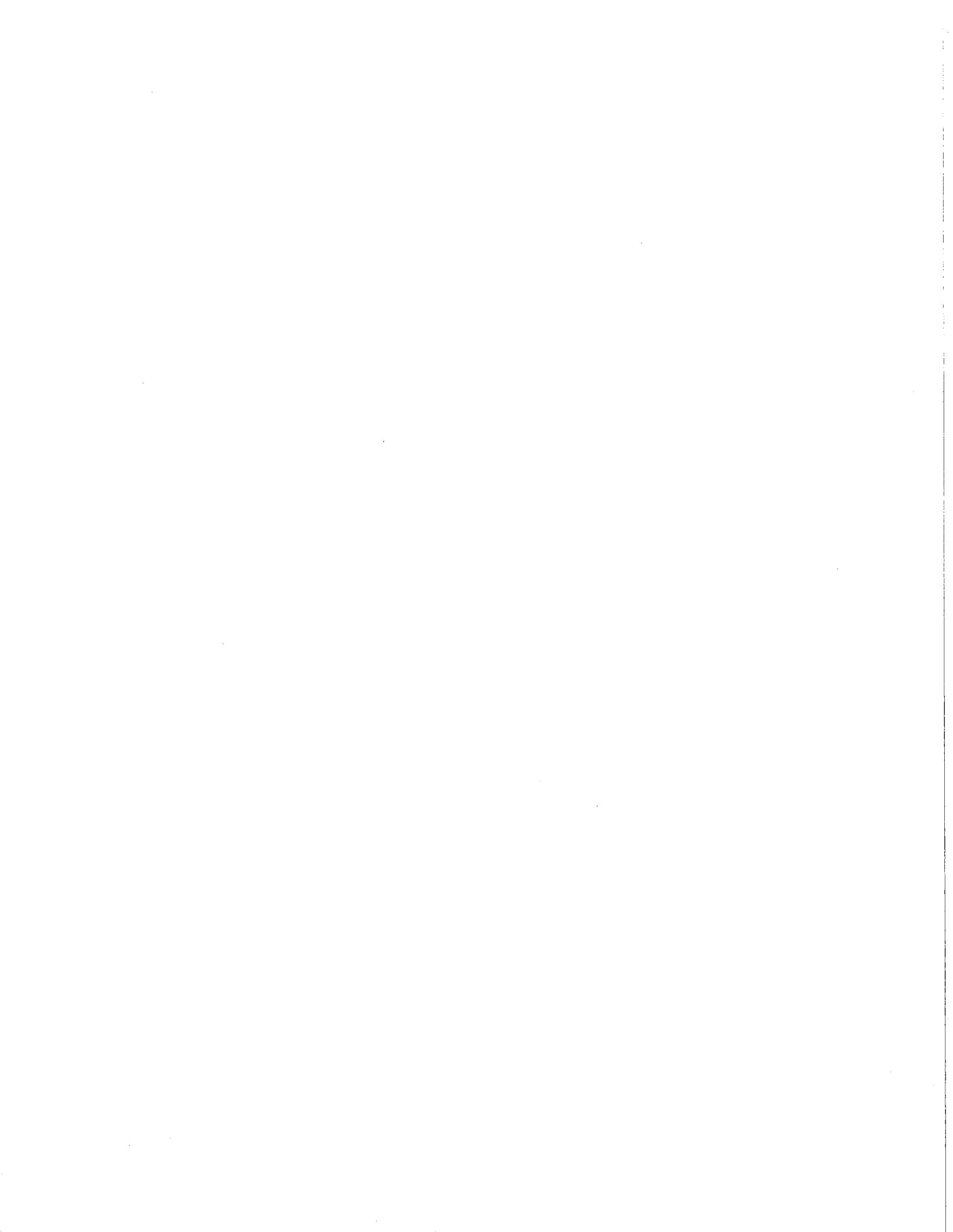
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GLOSSARY

CBS	Central Bureau of Statistics. The implementing agency of population censuses and demographic surveys.
DHS	Demographic and Health Surveys. A worldwide project designed to collect, analyze and disseminate demographic data on fertility, family planning, and maternal and child health. DHS is funded primarily by the United States Agency for International Development.
IDHS	Indonesia Demographic and Health Survey. Surveys implemented by the CBS in 1991, 1994 and 1997. These surveys were designed to provide estimates of important variables at the national and provincial levels, and for urban and rural areas of the three regions according to the family planning program development, namely Java-Bali, Outer Java-Bali I and Outer Java-Bali II. Estimates of selected variables are also available for each of the 27 provinces.
IFS	Indonesia Fertility Survey. Survey was carried out in the six provinces of Java-Bali in 1976. The sample for this survey was drawn from the 1976 Supas sample. The IFS was conducted under the auspices of the World Fertility Survey (WFS) program.
MOH	Ministry of Health
NFPCB	National Family Planning Coordinating Board
NICPS	National Indonesia Contraceptive Prevalence Survey. The first survey in Indonesia carried out under the DHS program in 1987. The NICPS was designed to reflect the regional classification of the family planning program, namely Java-Bali, Outer Java-Bali I, and Outer Java-Bali II. For this reason, some provinces with small populations in Outer Java-Bali regions were excluded from the survey. They are Jambi, East Nusa Tenggara, East Timor, Central Kalimantan, East Kalimantan, Maluku and Irian Jaya.
Supas	Intercensal Population Survey. Survey carried out by the CBS in 1976, 1985 and 1995 mainly to provide population estimates and major demographic and socioeconomic indicators.
Susenas	National Socioeconomic Survey. A large-scale annual household survey carried out by CBS; provided a sampling frame for 1976, 1985 and 1995 Supas surveys, as well as the 1987, 1994 and 1997 DHS surveys.
USAID	United States Agency for International Development



1 Introduction

This report presents important trends in key population, family planning, and health indicators in Indonesia over approximately three decades. This is the second report which presents trends using mainly findings of the Indonesia Demographic and Health Surveys (DHS). The first was published as part of the 1994 IDHS series of reports (CBS et al., 1995). Like the earlier report, this report was prepared with the primary objective of providing information needed by policy makers and program administrators to assess the current situation and to design more effective population, family planning, and maternal and child health programs. In particular, the report addresses the prevailing demographic situation, and describes trends in fertility, family planning, maternal and child health, and infant and child mortality.

Nationally representative demographic data have been collected in Indonesia since 1961, starting with the first population census conducted after Indonesia proclaimed its independence in 1945. The second census was carried out in 1971. Since then, population censuses have been carried out in 1980 and 1990. In the intercensal periods, Intercensal Population Surveys (Supas) were implemented to fill the gap in population data. They were implemented in 1976, 1985 and 1995. The Government of Indonesia has participated in the DHS program four times, in 1987¹, 1991, 1994 and 1997.

Chapter 1 presents a brief description of the current population, family planning and health policies and programs, where targets and goals, as well as achievements are presented. Chapter 2 presents information on the demographic, social and economic setting of the country, to help in understanding the various national and regional trends discussed in the report. The following chapters discuss trends in demographic, family planning and health indicators in the 1971-1997 period.

Although a large body of data are available from the censuses and surveys, this report addresses only those which have a significant influence on the family planning and health programs. The analysis is also limited by the availability of data. Although all of these censuses and surveys were implemented by the Central Bureau of Statistics (CBS), there are differences in the survey methodology, geographic coverage, and estimation methods that may have an impact on the results. Nevertheless, for the purpose of studying trends, estimates based on the population census and surveys are presented alongside those based on the IDHS surveys.

1.1 Population and Family Planning Policies and Programs

Development policies in population include slowing down of the population growth rate and a more balanced distribution across regions, both of which are expected to improve the quality of life of the people. The overall rate of population growth decreased from 2.3 percent in the 1970s to 2.0 percent in the 1980s. By 1997, the annual population growth rate was estimated at 1.5 percent. Transmigration programs were designed to settle people from the overpopulated island of Java to other islands to lessen the burden on land in Java.

A major factor in slowing down population growth was the introduction of family planning programs in 1970. The programs were not initiated simultaneously throughout the country. They began in the six provinces of Java-Bali in the first five-year development plan spanning the period between 1969-70 and 1973-74. In the next five-year development plan, the programs were expanded to include ten other provinces which were classified as the Outer Java-Bali I region. The programs were further expanded to include the

¹The 1987 Indonesia DHS is known as the National Indonesia Contraceptive Prevalence Survey (NICPS).

remaining 11 provinces (grouped as the Outer Java-Bali II region) in the following five-year development plan². Law Number 10 of 1992 and the Broad Guidelines on State Policy issued in 1993 expand the goals of the family planning program to include societal participation in the program by delaying marriage, using contraceptive methods, and improving family welfare.

In the sixth five-year development plan (1994-95 to 1998-99), challenges are expected to continue. By the end of the century, the population is expected to exceed more than 210 million people. To meet these challenges, the government of Indonesia plans to achieve an even slower annual population growth rate of 1.5 percent, and a crude birth rate and crude death rate of 21 and 8 per 1,000 population, respectively.

1.2 Health Priorities and Programs

Health Law No. 23 of 1992 stipulates that the goal of health development in Indonesia is to increase the awareness, willingness, and ability of everyone to live a healthy life. The law emphasizes the decentralization of operational responsibility and authority to the local level as a prerequisite for successful and sustainable development.

In the Second 25-Year Development Plan (1994-2019), economic and human development are identified as the keys to national development and self-reliance. Following the National Guidelines on State Policy issued in 1993, the strategy adopted to improve the health and nutritional status of the population is two-pronged: improve the quality of health services which must become affordable for all; and promote a healthy lifestyle supported by adequate housing and environmental sanitation.

The government puts great emphasis on intersectoral coordination of efforts, joint responsibility of the local government and community, region-specific programs, targeting of vulnerable groups, and support from a strong information and communication program.

² The six provinces in Java-Bali are DKI Jakarta, West Java, Central Java, DI Yogyakarta, East Java, and Bali. Outer Java-Bali I includes Dista Aceh, North Sumatra, West Sumatra, South Sumatra, Lampung, West Nusa Tenggara, West Kalimantan, South Kalimantan, North Sulawesi, and South Sulawesi. The Outer Java-Bali II region includes Riau, Jambi, Bengkulu, East Nusa Tenggara, East Timor, East Kalimantan, Central Kalimantan, Central Sulawesi, South-east Sulawesi, Maluku and Irian Jaya.

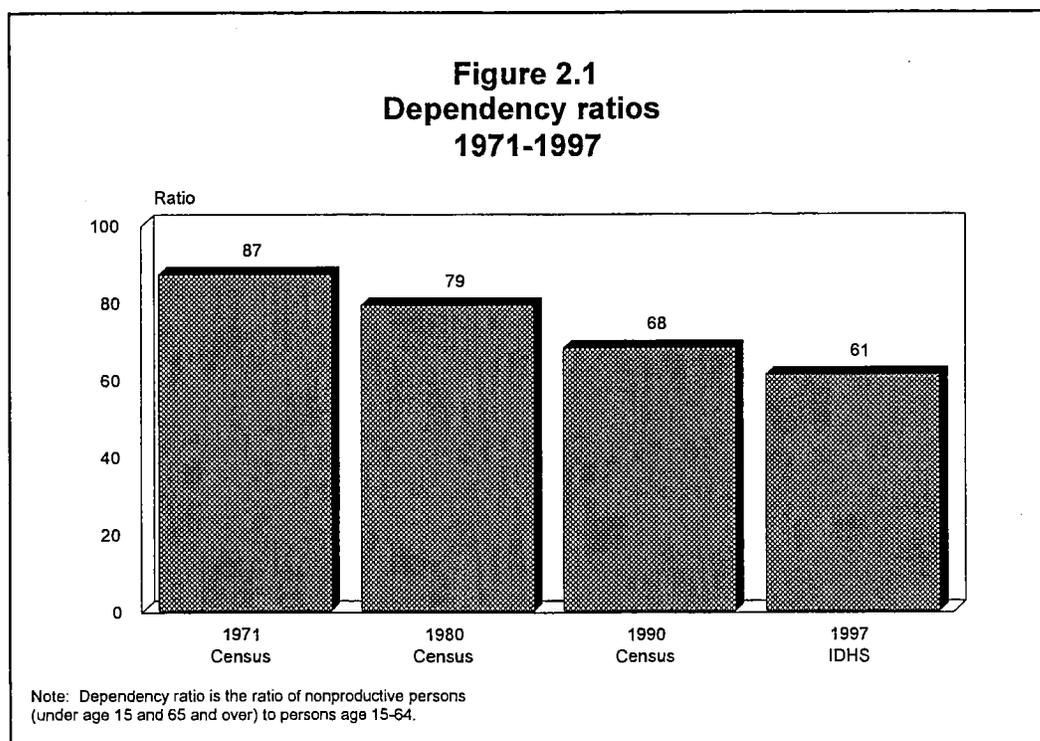
2 Demographic, Social and Economic Indicators

2.1 Population Growth and Geographic Distribution

With an estimated population of 201 million in 1997, Indonesia is the fourth most populous country in the world after the Republic of China, India, and the United States of America. Between 1980 and 1990, the population grew at a rate of 2.0 percent annually. The average annual growth rate is projected to be 1.5 percent, adding approximately 3.1 million to the population every year.

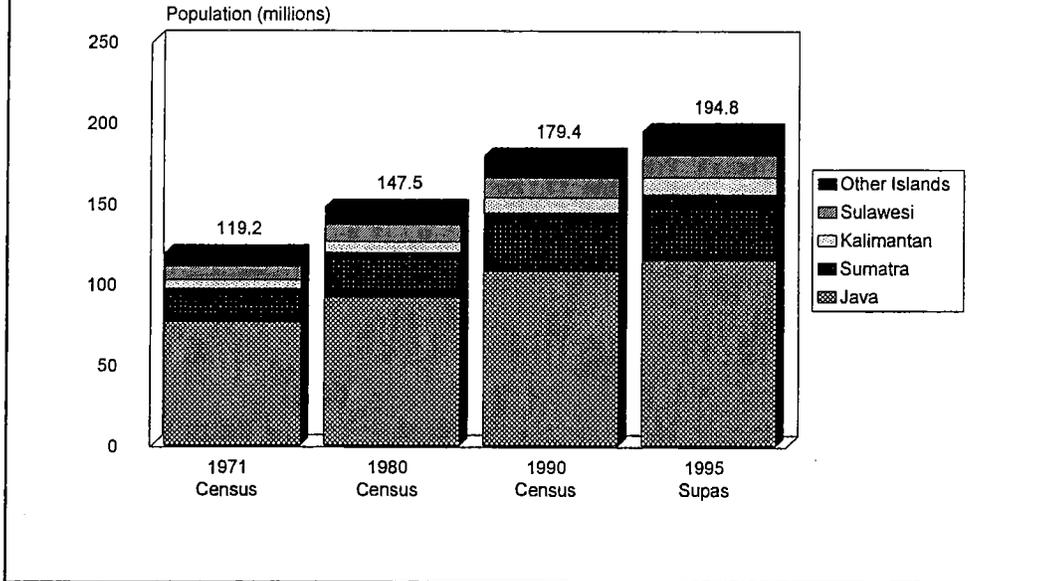
The proportion of the population living in urban areas gradually increased from 17 percent in 1971 to 22 percent in 1980. In 1995, 36 percent of Indonesians, or 72 million people were living in urban areas.

Partly as a result of fertility decline, the percentage of the population under 15 years has declined in the past 26 years from 44 percent in 1971 to 34 percent in 1997. At the same time, the proportion age 15-64 increased, resulting in a decline in the dependency ratio—the number of dependents 0-14 years and 65 years and over for every 100 persons in the 15-64 year age group—from 87 in 1971 to 62 in 1997. The smaller dependency ratios indicate a lessening of the economic burden on persons in the productive age groups who support those in the nonproductive age groups (Figure 2.1).



One characteristic of the Indonesian population which has persisted over the years is the uneven distribution among the more than 13,000 islands. In 1961, 65 percent of the population lived in Java; in 1995, this proportion had declined to 59 percent, which translates to 119 million people. Since Java covers only 7 percent of the country's land area, the population density is 900 persons per square kilometer, making Java one of the most densely populated islands in the world. Over time, while the proportion of people living in Java has decreased, the proportion living on other islands has increased. For example, while 17 percent of the population lived in Sumatra in 1971, that proportion has increased to 21 percent in 1995 (Figure 2.2).

**Figure 2.2
Population Distribution by Island
1971-1997**



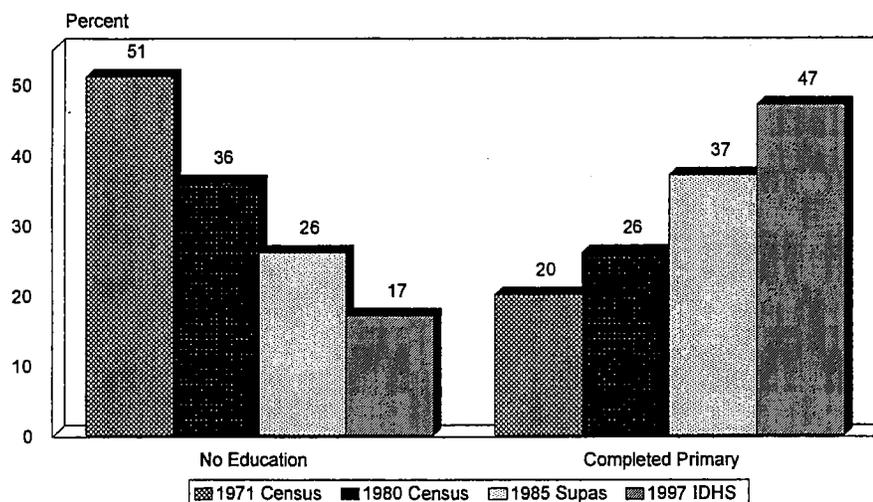
2.2 Social and Economic Indicators

Indonesia has been undergoing rapid economic growth in the past twenty five years, due especially to the export of crude oil and natural gas in the early 1980s. Per capita income increased from US \$50 in 1968 to \$385 in 1986, and to \$1124 in 1996. The country enjoyed rapid economic growth until mid-1997 when the Asian economy collapsed. The value of the currency plummeted, prices increased and unemployment rose dramatically. In addition, parts of the country suffered from relatively long drought and extensive forest fires.

Education, especially of women, is closely associated with other socioeconomic factors such as income and economic activity; as well as demographic and reproductive behavior, including use of contraception, and health care of children. There have been improvements in education throughout the country, among boys as well as girls. Literacy rates for males 10 years and over have risen from 72 percent in 1971 to 90 percent in 1990. The corresponding figures for females are 50 percent and 79 percent. In 1995, virtually all (92 percent) males 10 years and over can read and write; for females the proportion is 83 percent.

In 1971, only about half of Indonesian women had a formal education. By 1997, the proportion had increased to 83 percent. At the same time, women are more than twice as likely to have completed primary education than twenty years earlier. Among women ten years of age and over, the proportion is 47 percent in 1997 compared with 20 percent in 1971 (Figure 2.3).

Figure 2.3
Educational Attainment Among All Women
Age 10 Years and Over, 1971-1997



While there has been no significant change in the labor force participation rates for men since 1971, women's participation in paid employment gradually increased—33 percent in 1971, 39 percent in 1990, and 41 percent in 1995 (Figure 2.4). The most common occupations for women in urban areas are services and wholesale trade, together accounting for two-thirds of women in the work force. In rural areas, about two-thirds of women are engaged in agriculture.

Only a small proportion of households are headed by a woman. The proportion was 16 percent in 1971, 13 percent in 1990, and 13 percent in 1995 (Figure 2.4). Indonesia DHS surveys indicate that urban households are more likely to have a female head than rural households.

2.3 Housing Characteristics and Household Possessions

Potable drinking water and hygienic sanitation facilities are important prerequisites for healthy living. Proper hygiene and sanitation practices can help prevent major childhood diseases such as diarrhea. Improvements in the provision of clean water are recorded. Between 1980 and 1997, the use of piped water for drinking increased from 7 percent to 18 percent (Figure 2.5).

The same pattern applies to the availability of toilet facilities. While one in four households had a private toilet in 1980, in 1997 the proportion has increased to one in two households. Urban households are more than twice as likely as rural households to have a private toilet (not shown).

Electricity has become more widely available in Indonesian households. In 1971, 6 percent of all households in the country had access to electricity. Twenty-six years later, the proportion had increased to 80 percent (Figure 2.6).

Figure 2.4
Female Labor Force Participation Rate and Percentage of
Female-Headed Households, 1971-1997

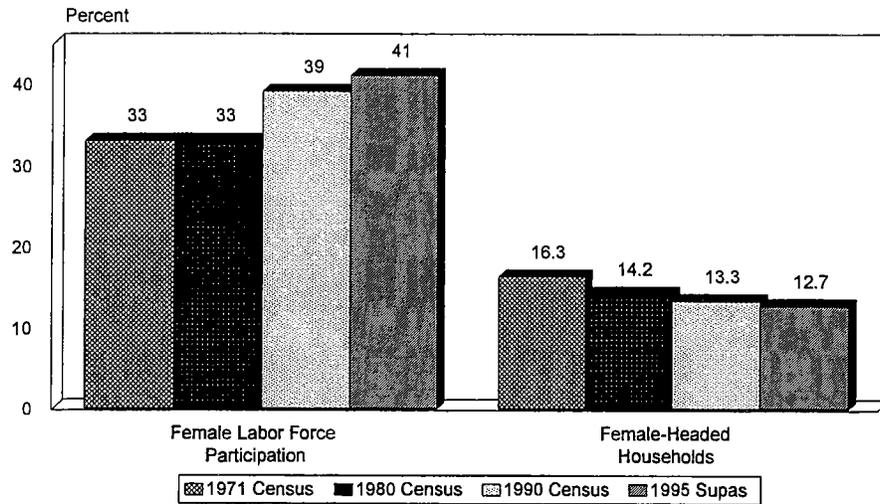
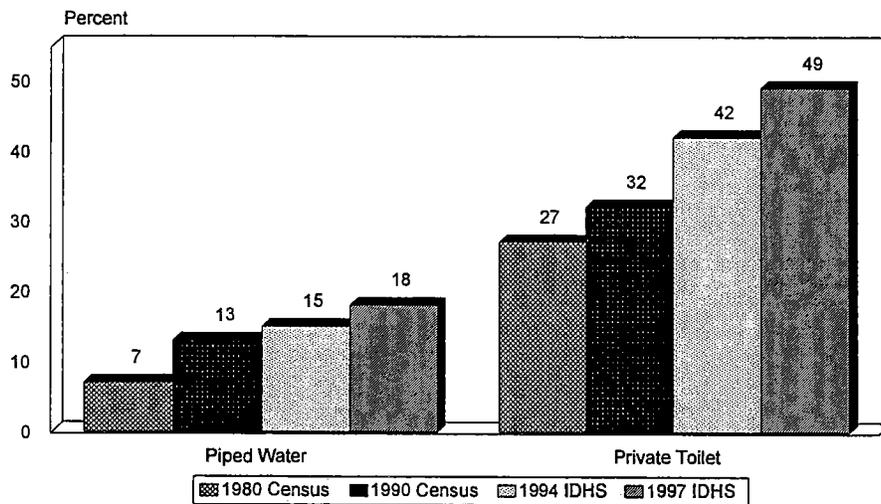
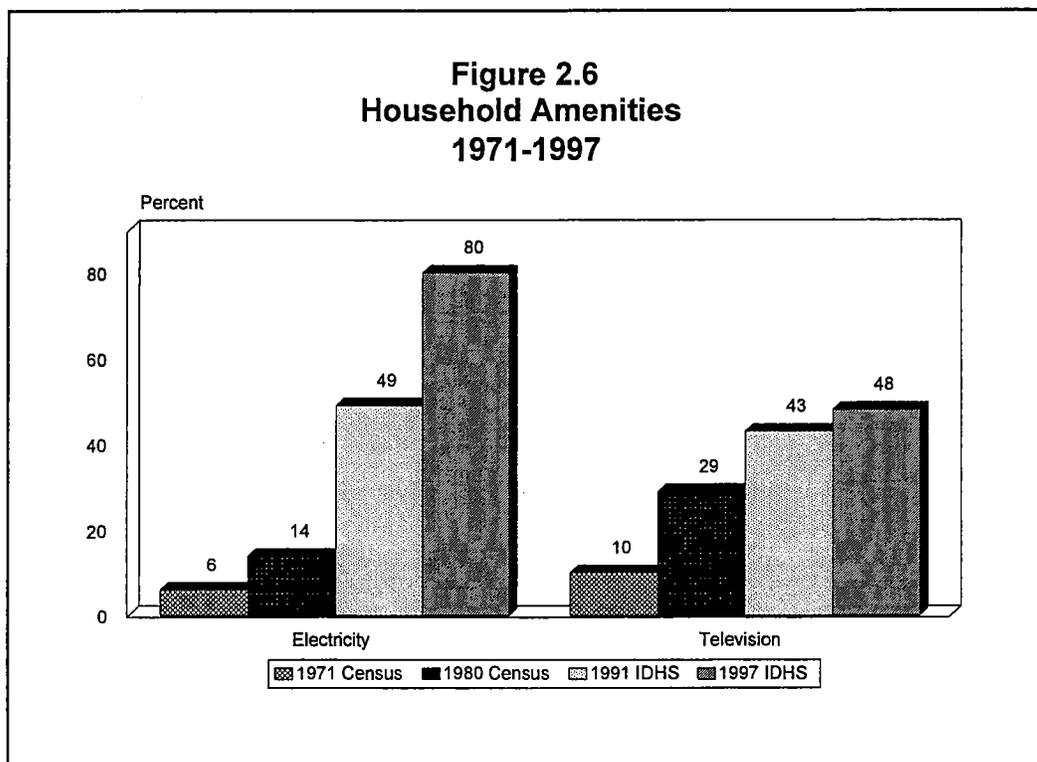


Figure 2.5
Housing Characteristics
1980-1997



Possession of durable household goods is an important social and economic indicator. Television, for example, was only available in ten percent of households in 1980. Along with the increase in the availability of electricity, in 1997 almost half (48 percent) of households had a television set .

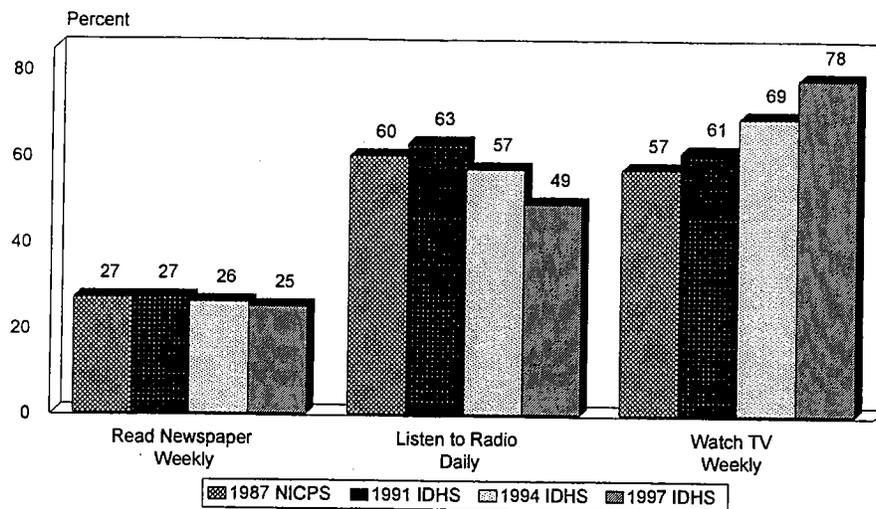


2.4 Exposure to Mass Media

Information about which women are likely to be reached by the media for diffusion of family planning, health and other information is a useful indicator for program planners.

In Indonesia, radio and television are more popular than printed materials. Figure 2.7 shows that the role of television as communication media has become more significant due to the longer hours of broadcasting and the availability of new television stations. Until 1991, the most popular communications media was the radio (63 percent). Since 1994, television has taken the lead role (78 percent in 1997).

Figure 2.7
Exposure to Mass Media Among Women Age 15-49
1987-1997



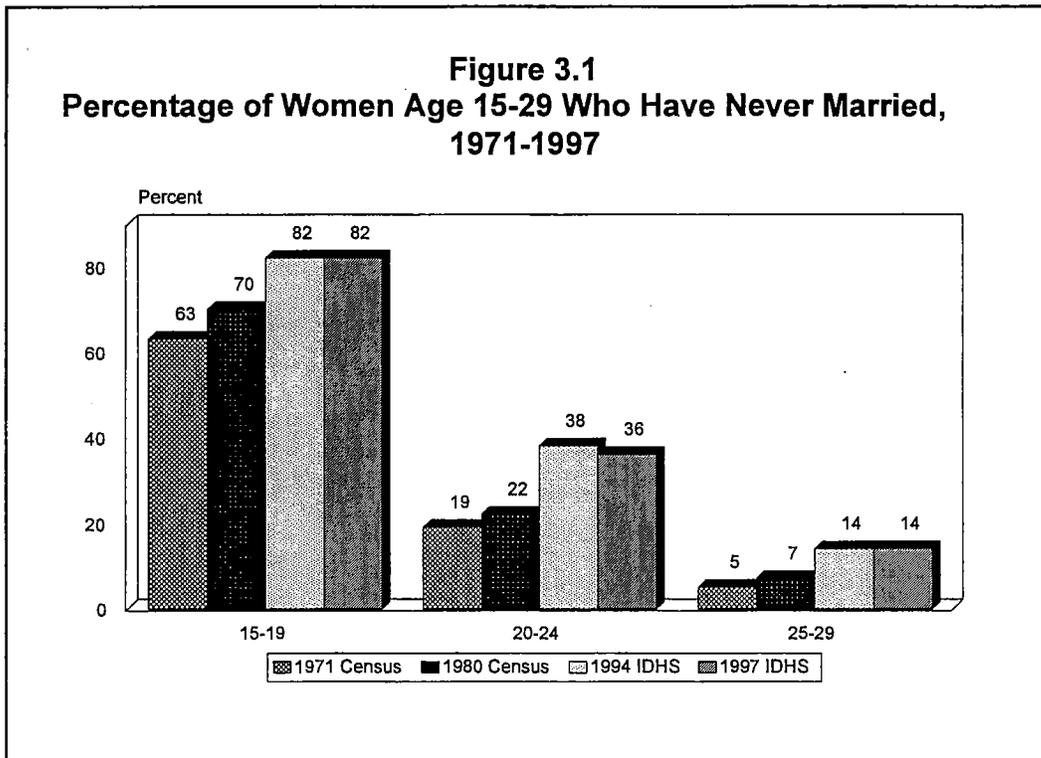
3 Marriage Patterns

3.1 Marital Status

Marriage and widowhood are demographic events that influence exposure to pregnancy and thereby affect fertility.

Marriage is universal in Indonesia; only one percent of women never marry by the end of their childbearing years. The majority of women are married by age 20; less than 5 percent remain single after age 30.

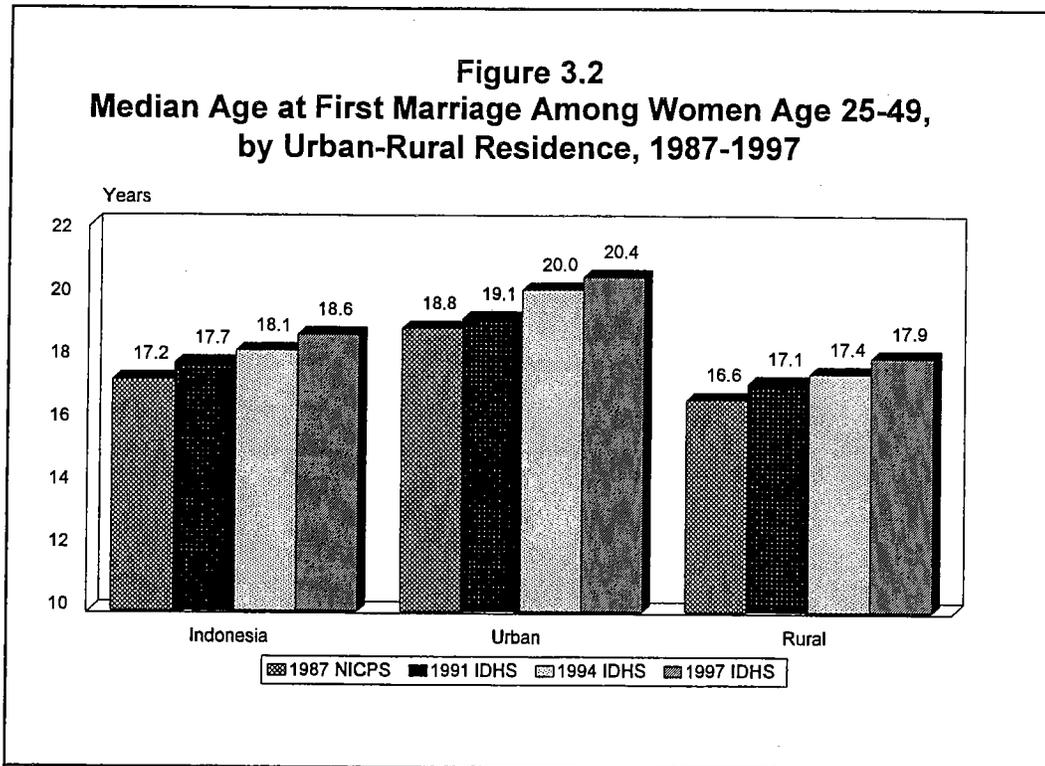
Over time, age at marriage has increased substantially. For example, 63 percent of women 15-19 had never been married in 1971, compared with 82 percent in 1994. The proportion of women who were single at age 25-29 in 1994 was 14 percent, almost three times the corresponding proportion in 1971 (5 percent). Similar proportions are observed in 1997 (Figure 3.1).



3.2 Median Age at First Marriage

Differentials in age at first marriage according to urban-rural residence and region are presented in Figures 3.2 and 3.3. The median age at first marriage is the age at which 50 percent of women in the age group x to $x+4$ have been married. Overall, the 1997 Indonesia DHS data show that women are marrying at older ages (i.e., delaying marriage), with a median age of 18.6 years in 1997 compared with 18.1 in 1994 and 17.7 in 1991. The increase in age at first marriage has occurred throughout the country.

Urban women generally marry later than their rural counterparts. In the ten years between 1987 and 1997, the increase in the median age at first marriage among urban women was more rapid than among rural women, widening the gap from 2.2 to 2.5 years (Figure 3.2).



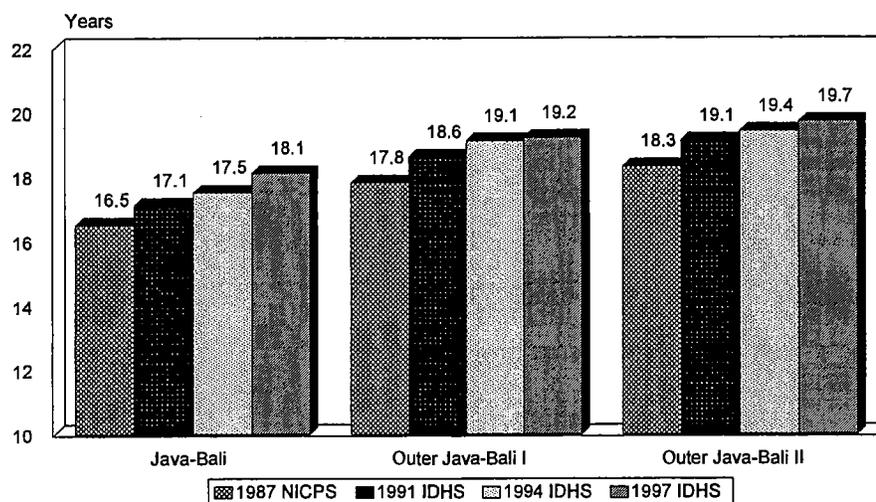
Women in Outer Java-Bali II marry later than women in other parts of the country (19.7 years), while women in Java-Bali marry at the youngest age (18.1 years). It should be noted that in the 1987 NICPS, only four of the 11 provinces in the Outer Java-Bali II region were included. Data from the 1997 IDHS showed that the age at first marriage in the seven provinces excluded from the 1987 NICPS was on average higher than that in the four provinces. Thus, age at first marriage in the Outer Java-Bali II region might have been even higher if all of the provinces had been included.

The low age at first marriage of women in Java-Bali may be due to the young ages at which women in West Java and East Java marry (17.4 years and 17.8 years, respectively). Between 1987 and 1997, the median age at first marriage among women in Java-Bali increased significantly (1.6 years), narrowing the gap between the age at first marriage of women in this region and that of women in the Outer Java-Bali regions (Figure 3.3).

3.3 Postpartum Amenorrhea, Postpartum Abstinence and Postpartum Insusceptibility

Among women who are not using contraception, exposure to the risk of pregnancy in the period following a birth is influenced by three factors: the resumption of menstruation, breastfeeding, and sexual abstinence.

Figure 3.3
Median Age at First Marriage Among Women Age 25-49
by Region, 1987-1997

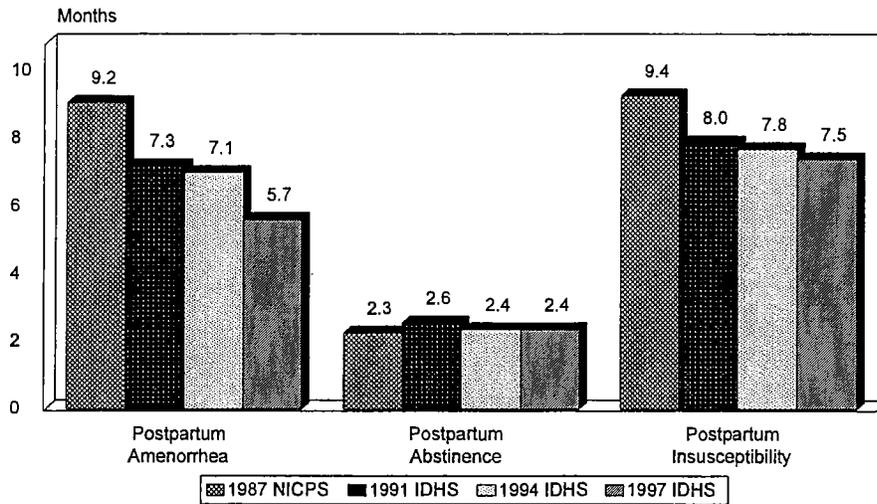


Postpartum amenorrhea, the period between delivery and the resumption of a woman's menstrual cycle, is gradually becoming shorter. While the median duration of amenorrhea in 1987 was 9.2 months, it was 2 months shorter in 1994, and was less than 6 months in 1997 (Figure 3.4).

Postpartum protection from conception can also be prolonged by breastfeeding—which can lengthen the duration of amenorrhea—and by delaying the resumption of sexual relations. Over the same time, the median length of postpartum abstinence, the period between delivery and the resumption of sexual intercourse, stayed more or less constant at just over two months.

Women are said to be unsusceptible to the risk of pregnancy if they are either amenorrheic or abstaining following delivery. Between 1987 and 1997, the period of postpartum insusceptibility became shorter, from 9.4 months in 1987 to 7.5 months in 1997. As postpartum abstinence remained constant in the past ten years, the shorter postpartum insusceptible period in Indonesia is primarily due to shorter postpartum amenorrhea.

Figure 3.4
Median Duration of Postpartum Amenorrhea, Postpartum
Abstinence, and Postpartum Insusceptibility for Births
in the Preceding 36 Months, 1987-1997



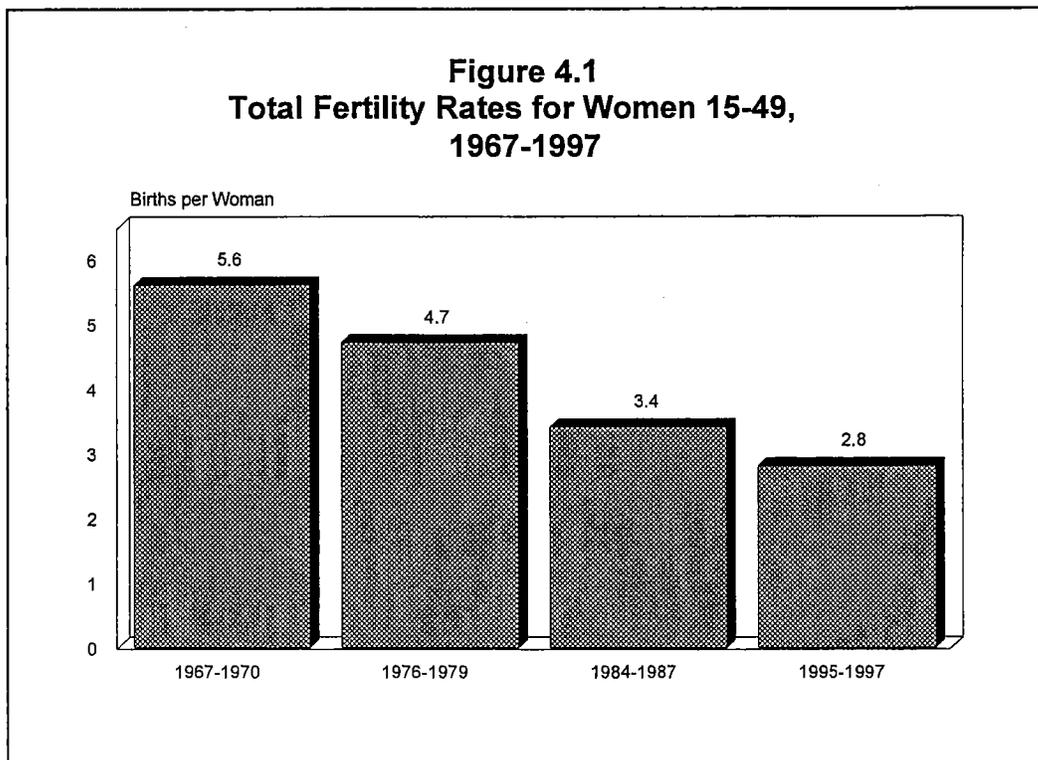
4 Fertility

4.1 Total Fertility Rates

The total fertility rate (TFR) is an estimate of the average number of births a woman would have at the end of her reproductive years if current fertility rates prevailed.

Figure 4.1 shows the trend in fertility based on results from selected sources. These rates are not strictly comparable because of differences in data collection procedures, geographic coverage, estimation techniques, and time reference. Estimates from the NICPS and IDHS surveys were based on information from a birth history, and refer to the three-year period preceding the survey. Estimates from population censuses and other demographic surveys were calculated based on information about number of children ever born using the "own children" estimation technique, and refer to a period one to four years before the survey. Despite these differences, the estimates serve the purpose of reflecting recent fertility trends in Indonesia.

Fertility has undergone a substantial decline in the past three decades. The fertility rate for the 1995-1997 period (1997 IDHS) was 2.8 births per woman, or half of that reported in the 1971 Census for the 1967-1970 period (5.6 births per woman). The pace of decline has varied over time. It was relatively slow prior to the mid-1970s, then accelerated in the late 1970s and early 1980s, and has slowed since the late 1980s.

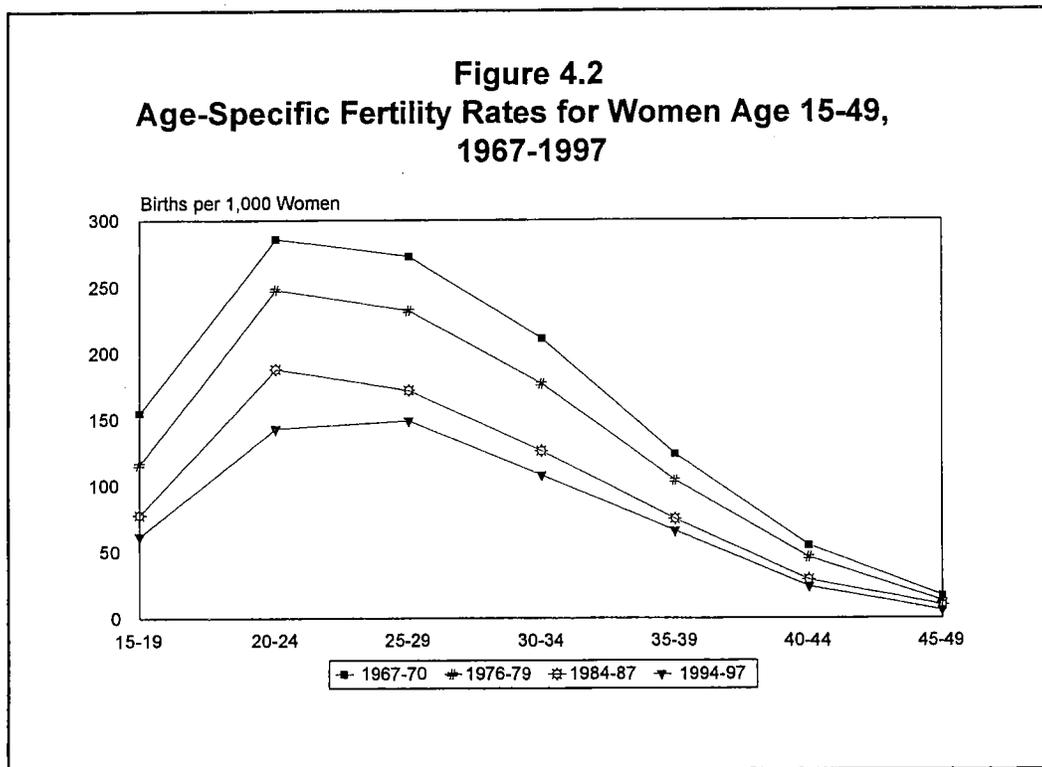


4.2 Age-Specific Fertility Rates

The decline in fertility continues to occur at all ages. However, the largest proportional decline (61 percent) is found among women in their teens, from 155 births in the late 1960s to 62 births per 1,000

women in the mid-1990s. The drop in fertility among teenagers is partly due to later marriages and increased use of contraception (Figure 4.2).

Figure 4.2 also shows that the shape of the curve for age-specific fertility rates continues to flatten. More importantly, since the late 1980s, the peak of the curve has shifted from the 20-24 year to the 25-29 year age group.



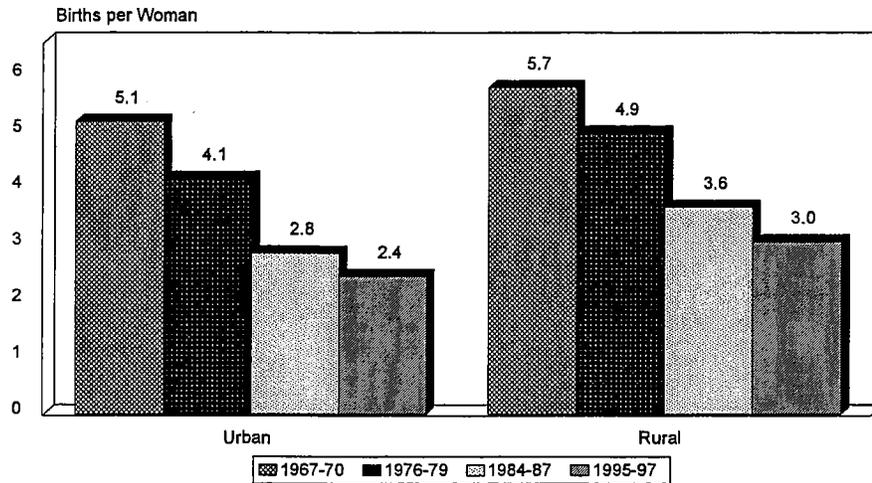
4.3 Fertility by Selected Characteristics

Data from past population censuses and demographic surveys show that fertility declines for all subgroups of population. Figure 4.3 demonstrates the decline by urban-rural residence using selected data sources.

Over time, urban women consistently have fewer children than their rural counterparts. In the mid-1990s, rural women had an average of 0.6 children more than urban women. The pace of decline appears to be the same in urban and rural areas, maintaining the gap at 0.6 children (see Figure 4.3)

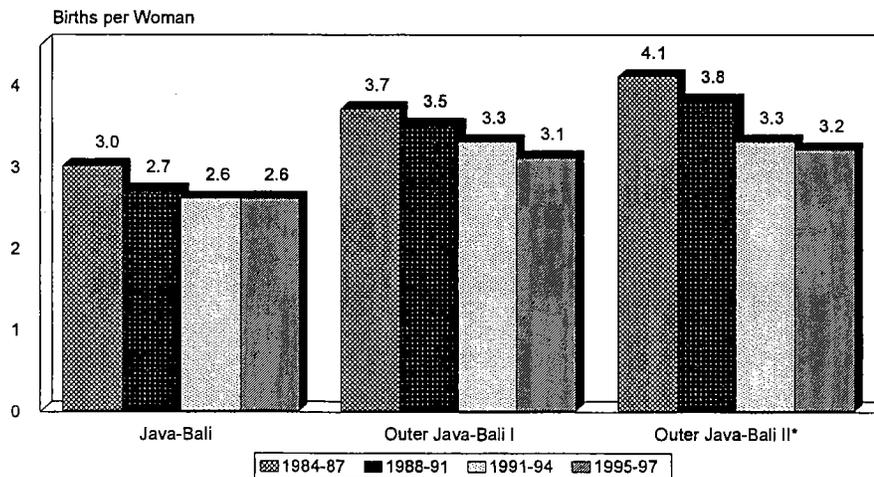
Data from past surveys indicate that women in Java-Bali have fewer births than women in other parts of the country. It should be noted that the 1987 NICPS included only four of the 11 provinces in the Outer Java-Bali II region, namely Riau, Bengkulu, Central Sulawesi, and Southeast Sulawesi. Fertility estimates for the remaining seven provinces in this region based on the 1995 Intercensal Population Survey data are higher than those for the four provinces in the 1987 NICPS. Including all of the provinces in the 1987 survey would have increased the fertility rate for the Outer Java-Bali II region.

Figure 4.3
Total Fertility Rates for Women Age 15-49,
by Urban-Rural Residence, 1967-1997



The pace of decline in fertility varies by region. It is fastest in the Outer Java-Bali II region, resulting in smaller differences in fertility level between the regions in the mid-1990s. While the gap in fertility between the Java-Bali region and the Outer Java-Bali II region in 1987 was 1.1 births, in 1997 the difference had declined to 0.6 births.

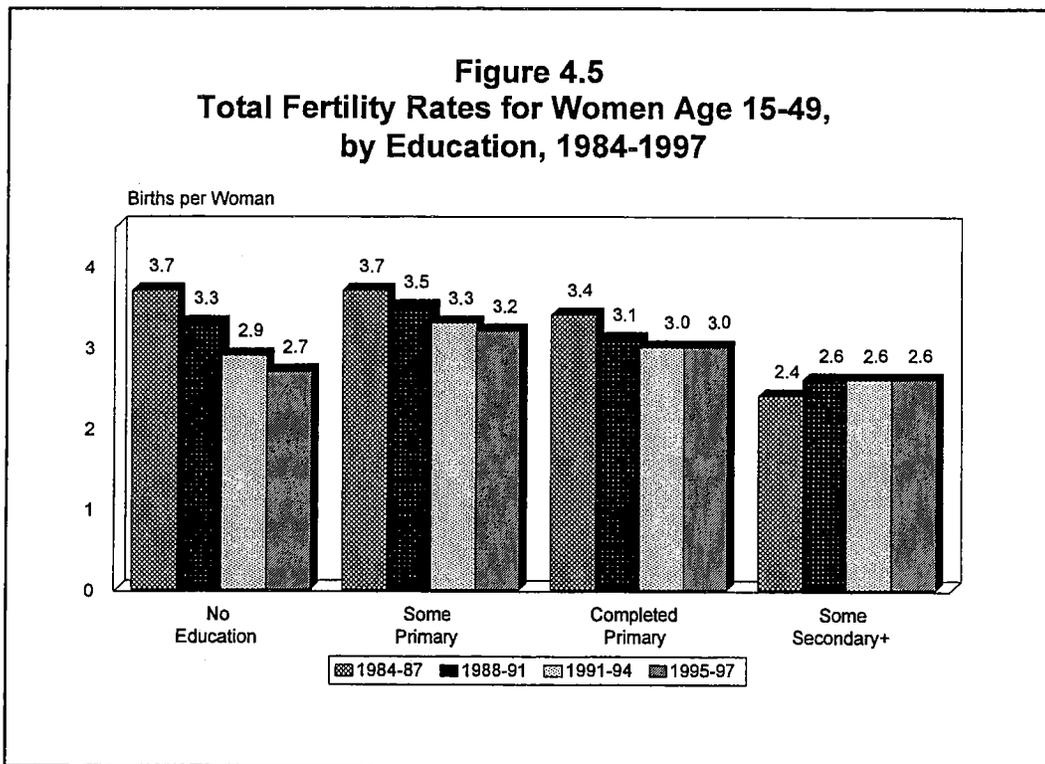
Figure 4.4
Total Fertility Rates for Women Age 15-49,
by Region, 1984-1997



* In the 1987 NICPS, limited to four provinces: Riau, Bengkulu, Central Sulawesi, and Southeast Sulawesi

The IDHS results show that fertility is closely associated with women's education, taking the form of an inverted U-shaped curve. Fertility is lowest among women with no education and those with some secondary education, and peaks for women who have some primary education. A similar association was observed in previous surveys.

Due to the more rapid decline in fertility among women with no education, the gap in fertility between women with no education and those with some secondary education has narrowed significantly between 1987 and 1997. In 1987, women who had never gone to school had on average 1.3 children more than women who had attended secondary school. In 1997, the difference in fertility was only 0.1 children (Figure 4.5). During the same period, fertility of women with some primary education or completed primary education declined less rapidly, resulting in larger differentials compared with women with no education and women with secondary or higher education.

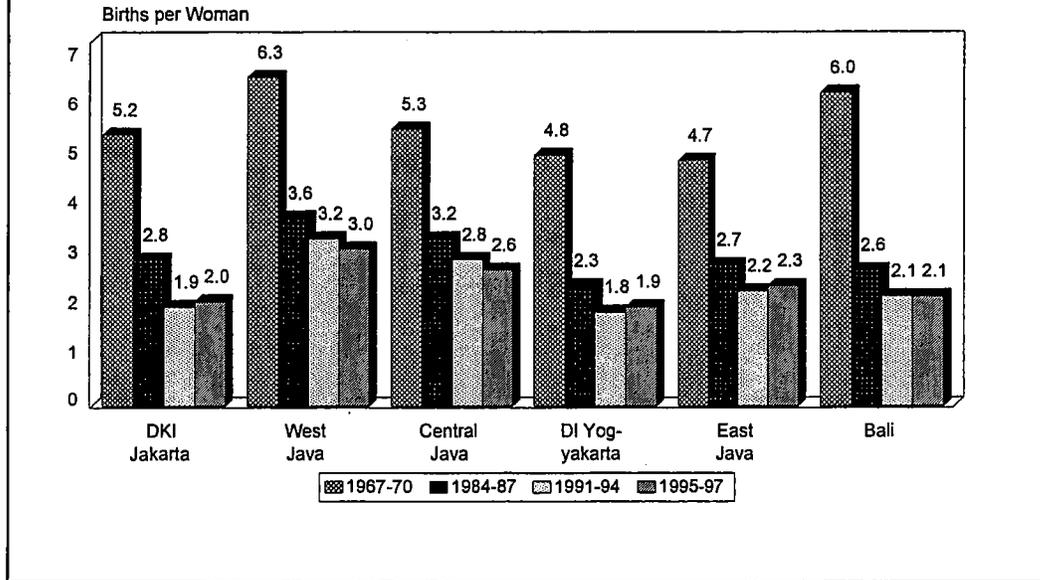


4.4 Total Fertility Rates in Java-Bali

Among the six provinces in Java-Bali, two have reached a fertility level of 2 or less children per woman (DKI Jakarta and DI Yogyakarta), and two are approaching this level (Bali and East Java). West Java, on the other hand, continues to have the highest fertility in this region (Figure 4.6). The level of fertility in West Java is not only high by the Java-Bali standard, but also higher than for many other provinces in the country. Although declining, fertility in Central Java is still relatively high compared with other provinces of the island.

Fertility decline in Bali is interesting to note. In the late 1960s, Bali had the second highest fertility rate following West Java. By the mid-1990s, Bali had one of the lowest fertility rates, while West Java continues to have the highest fertility rate of 3 births per woman.

Figure 4.6
Total Fertility Rates for Women Age 15-49
in Java-Bali, by Province, 1967-1997



Fertility levels vary across provinces. In the late 1960s, the total fertility rate (TFR) for most of the provinces was six or more births per woman, while eight provinces had a TFR of 5.0 to 5.9 births. During that period, only DI Yogyakarta and East Java had TFRs of less than 5 births per woman. By the mid 1990s, a dramatic change had taken place. All of the 27 provinces but East Timor had reached a fertility level of less than 4 births per woman (data not shown).

4.5 Median Age at First Birth

As Indonesian women continue to delay marriage, they also delay having children. The median age at which women start childbearing increased from 19.8 years in 1987 to 20.8 years in 1997. It is interesting to note, however, that while the median age at first birth is increasing, the interval between marriage and first birth is shorter. This pattern is observed in all regions and in urban and rural areas.

In general, urban women start childbearing two years later than rural women. Over the years, the gap in median age at first birth between urban and rural women has increased from 1.5 years in 1987 to 2.1 years in 1997 (Figure 4.7).

There are significant differences in age at first birth between women in Java-Bali and those in other parts of Indonesia. In 1997, women outside Java-Bali have their first birth 0.7 years later than in 1987. During the same time period, women in Java-Bali delayed having their first birth for 0.9 years. The gap in age at first birth between women in Java-Bali and in other regions in 1997 is narrower than those observed in the past. In 1997, the median age at first birth for women in Java-Bali was 20.6 years compared to that of their women in Outer Java-Bali (21 years or older) (Figure 4.8).

Figure 4.7
Median Age at First Birth Among Women Age 25-49,
by Urban-Rural Residence, 1987-1997

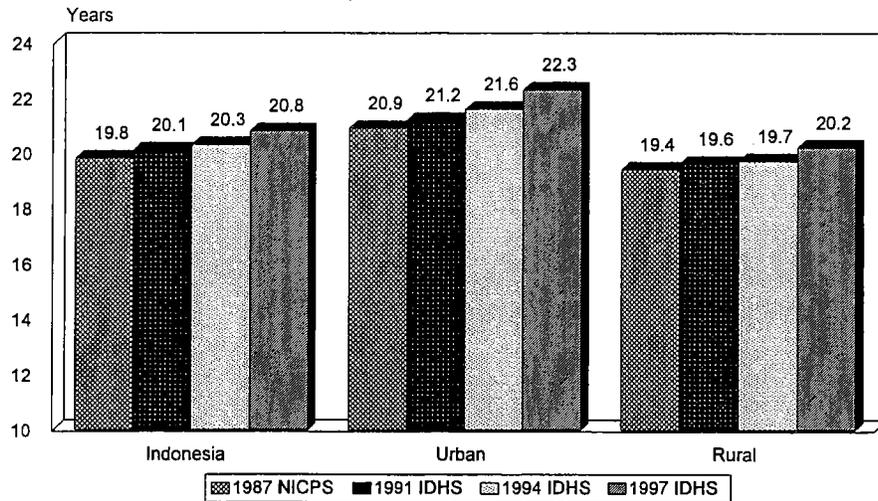
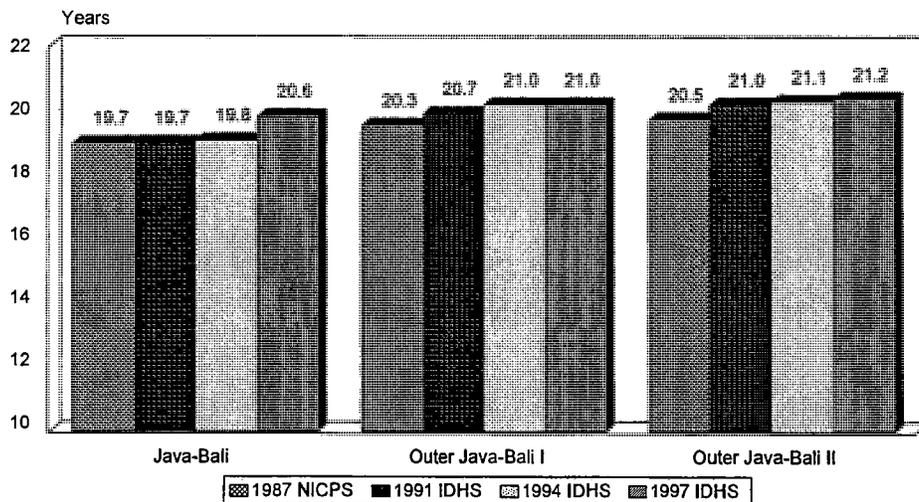


Figure 4.8
Median Age at First Birth Among Women Age 25-49,
by Region, 1987-1997

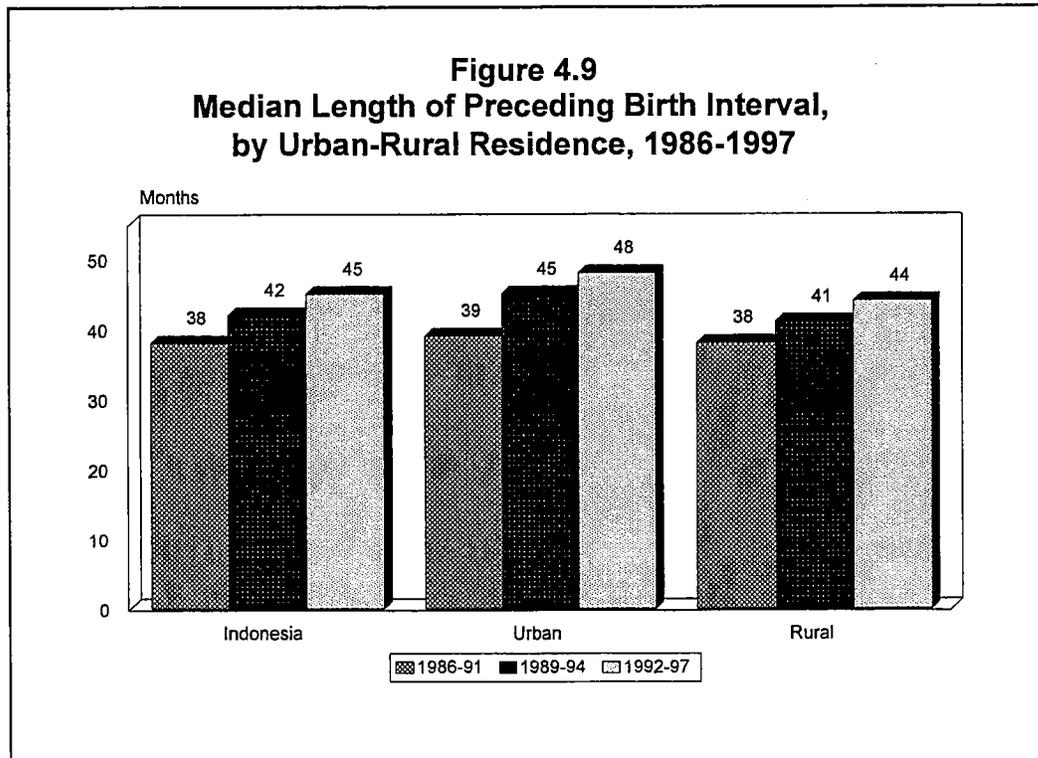


4.6 Birth Intervals

One factor influencing a child's health status is the interval from the preceding birth. Children born shortly after a prior birth are at greater risk of illness and death than those born after a long interval. For the mothers, giving birth at close intervals gives them insufficient time to restore their health, which may limit their ability to take care of their children.

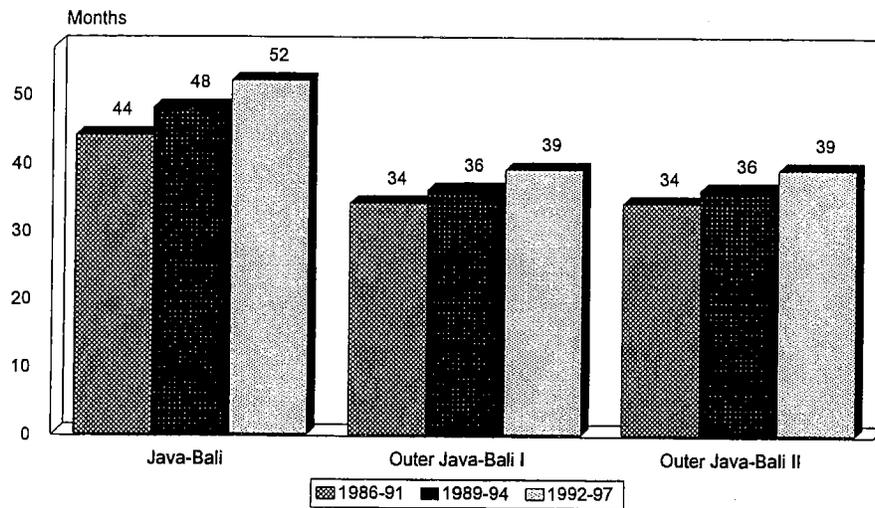
Overall, Indonesian women favor a relatively long birth interval—a median of 45 months among children born from 1992 to 1997. Of these births, 47 percent occurred four or more years after the birth of a preceding sibling, and 38 percent after two to three years. The remaining 15 percent were born less than two years after a previous birth (data not shown).

Data from previous surveys indicate that the median interval between births has increased throughout the country—38 months in 1991 to 45 months in 1997. The median birth interval is longer among urban births than among rural births (48 months compared to 44 months), and the gap has widened in recent years—1 month in 1991 to 4 months in 1997 (Figure 4.9).



Birth intervals vary widely by region. The interval between births to women in Java-Bali is more than one year longer than the interval between births in the Outer Java-Bali regions (52 months compared with 39 months, respectively) (Figure 4.10). The longer intervals among women in Java-Bali can be attributed partly to the longer breastfeeding duration—26 months compared with 22-23 months in other regions. The differentials in birth intervals between children in Java-Bali and that in the Outer Java-Bali regions have increased from 10 months in 1986-1991 to 13 months in 1992-1997.

Figure 4.10
Median Length of Preceding Birth Interval,
by Region, 1986-1997

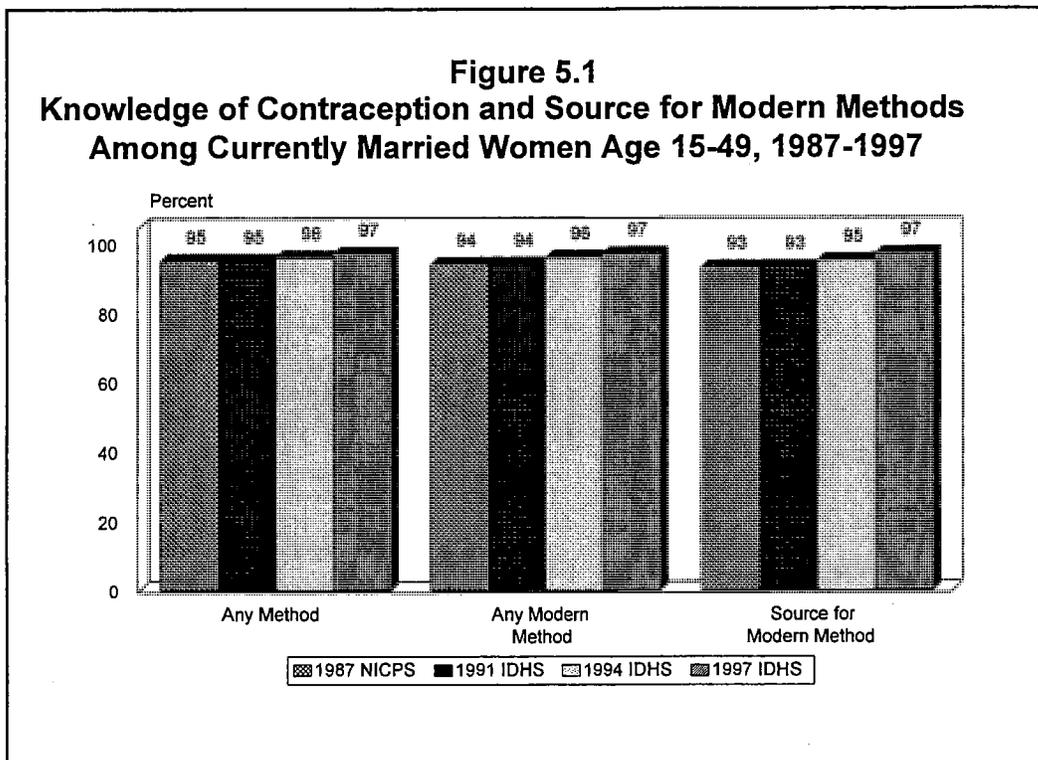


5 Family Planning

5.1 Knowledge of Family Planning

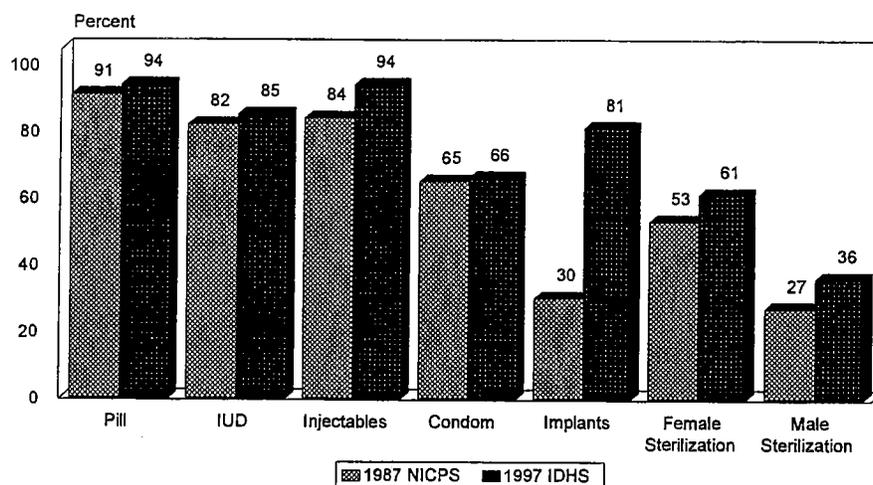
Information on knowledge of, attitude about, and practice of contraception is of particular interest to policy makers, program managers, and researchers in population and family planning. Familiarity with contraceptive methods is among the prerequisites for the adoption of fertility regulation. Information about contraceptive methods has been disseminated through various channels and mass media since the initiation of the national family planning programs in Indonesia in 1970.

Knowledge of at least some contraceptive methods has been widespread in Indonesia. Most women who know of a contraceptive method know a modern method and virtually all currently married women also know where to go to obtain a family planning method (Figure 5.1).



Modern contraceptive methods are widely known by Indonesian women. Since 1987, the pill, IUD and injection have been known to at least 8 in 10 married women. Data from the four IDHS surveys indicate that knowledge of implants, female sterilization and male sterilization increased substantially in recent years. While implants were known to only 3 in 10 married women in 1987; in 1997, this proportion had increased to 8 in 10 married women. Knowledge of male sterilization, however, remains relatively low. In 1997, while 6 in 10 women knew of female sterilization, less than 4 in 10 women knew of male sterilization (Figure 5.2).

Figure 5.2
Knowledge of Specific Methods Among Currently Married Women Age 15-49, 1987 and 1997



5.2 Ever Use of Family Planning

The proportion of married women who have ever used a method of contraception has increased significantly over the past decades (Figure 5.3). In 1987, 65 percent of married women reported having used a family planning method. In 1997, this proportion had increased to 78 percent. The proportion of women who have used a modern method increased from 61 percent in 1987 to 76 percent in 1997. These figures indicate that in 1987, 94 percent of women who had ever used contraception used modern methods. Since 1991, this proportion increased to 97 percent, and has remained at this level through 1997.

5.3 Current Use of Family Planning

Information on the current level of contraceptive use is important for measuring the success of the national family planning movement. The proportion of married women age 15 to 49 who are using a contraceptive method increased from 48 percent in 1987 to 57 percent in 1997 (see Figure 5.4). Use of traditional methods has always been limited (4 percent or less). The proportion of modern contraceptive users among all users gradually increased from 92 percent in 1987 to 96 percent in 1997.

During the 1984-1997 period, the contraceptive method mix underwent a dramatic change. While in 1984 the most commonly used methods were the pill (16 percent), in 1997 injectables became the most often used method (21 percent). Implants gained substantial popularity—from negligible in 1987 to 6 percent in 1997 (Figure 5.5). During the same period, the proportion of pill and IUD users declined from 17 percent to 15 percent, and from 13 percent to 8 percent, respectively.

The 1997 IDHS data indicate that the urban-rural differential in use of modern methods—which was 5 percentage points in 1994—has disappeared; 55 percent of currently married women in Indonesia use a modern method, regardless of whether they live in an urban or rural area.

Figure 5.3
Ever Use of Contraception Among Currently Married Women Age 15-49, 1987-1997

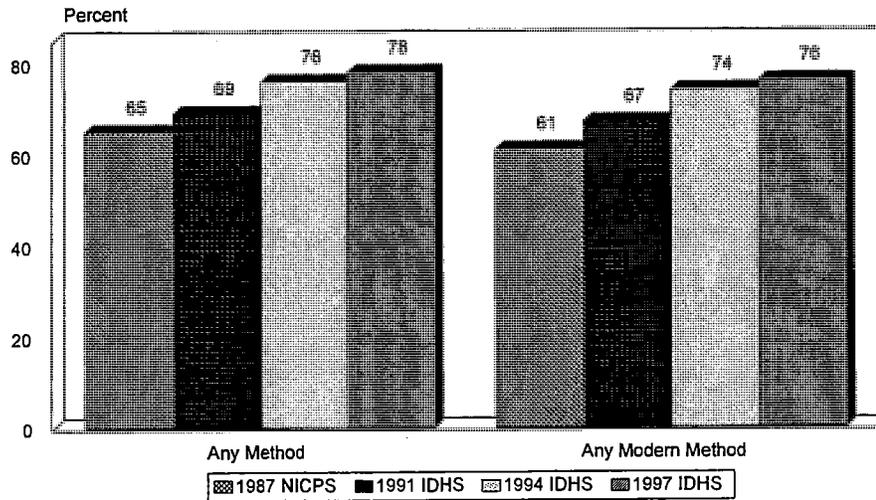


Figure 5.4
Current Use of Contraception Among Currently Married Women Age 15-49, 1987-1997

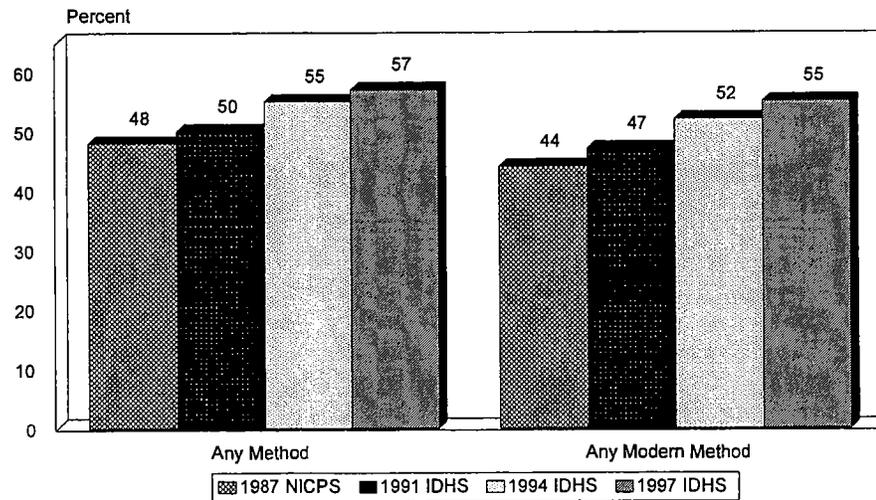


Figure 5.5
Current Use of Specific Modern Contraceptive Methods
Among Currently Married Women Age 15-49, 1987 and 1997

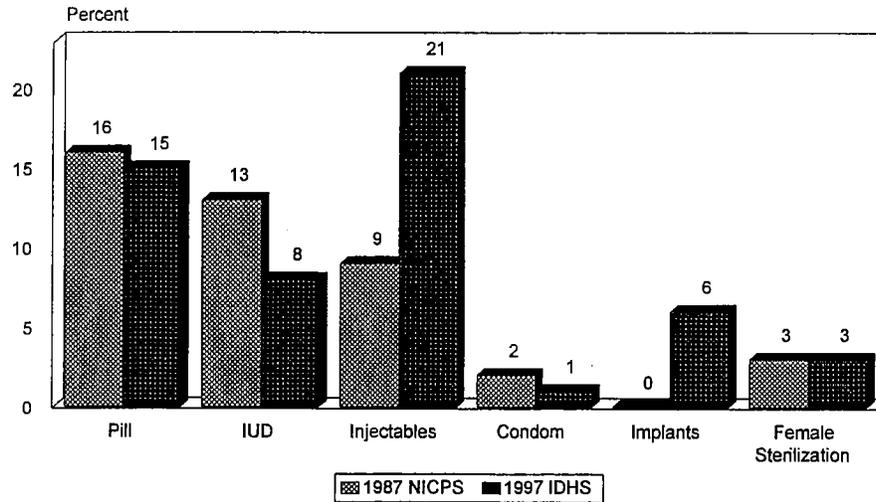
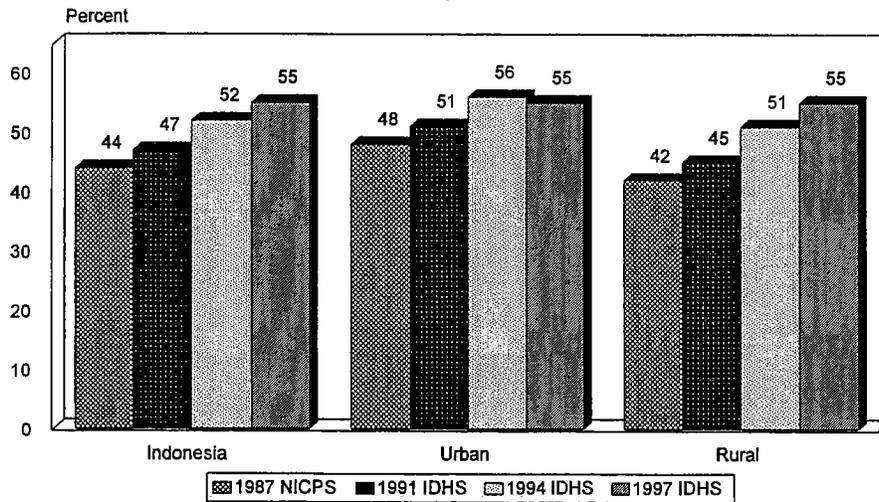
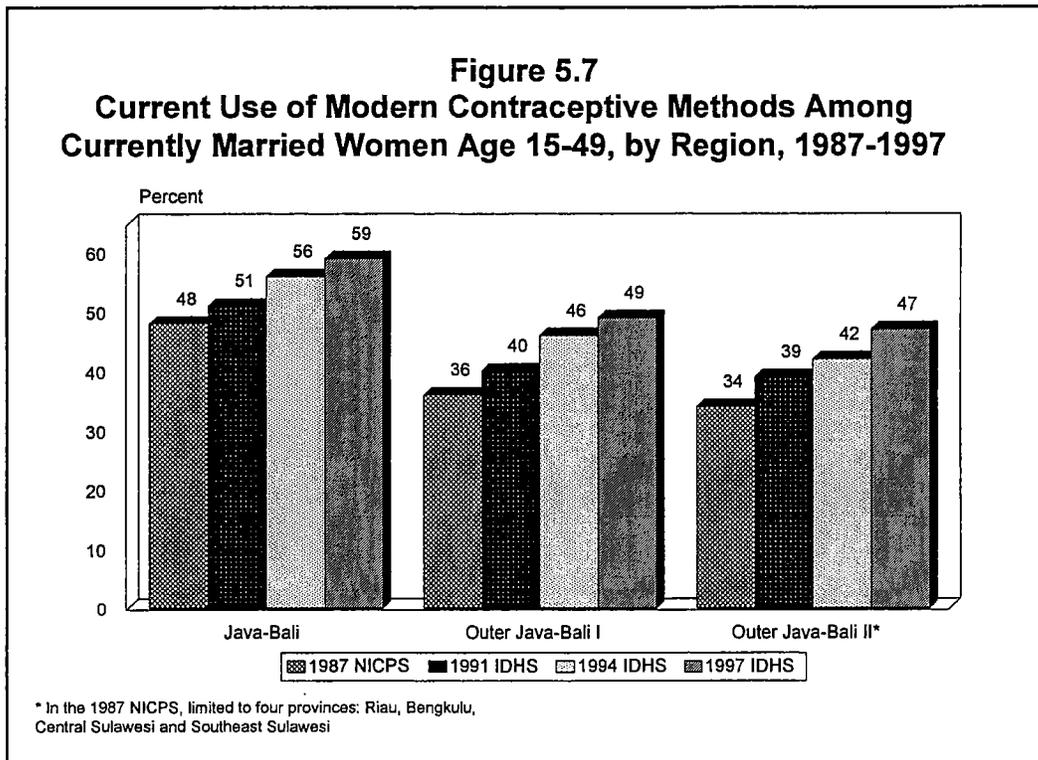


Figure 5.6
Current Use of Modern Contraceptive Methods Among
Currently Married Women Age 15-49, by Urban-Rural
Residence, 1987-1997



There are major differentials in the use of contraception between regions. In line with the time in which family planning programs were introduced in the region, contraceptive use is highest in Java-Bali, followed by Outer Java-Bali I and Outer Java-Bali II. Not only is the contraceptive prevalence rate in Java-Bali higher than in other regions, but women in Java-Bali tend to rely more on long-term methods than women in the other regions.

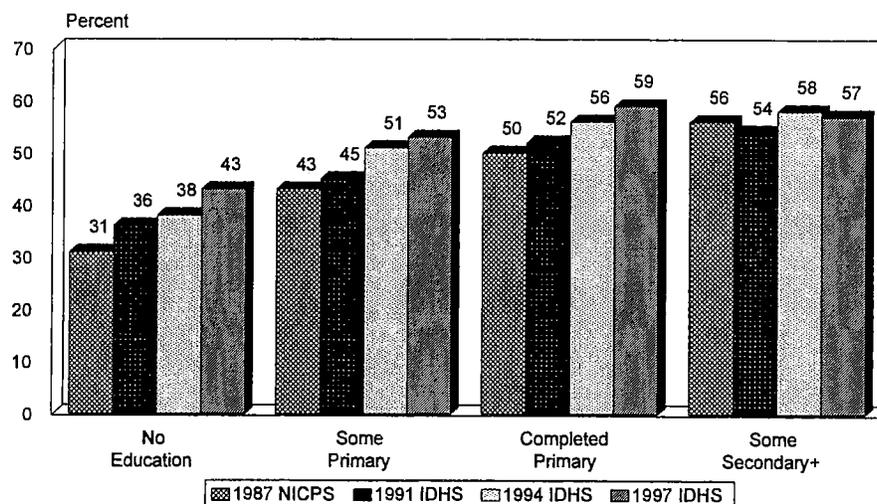
Figure 5.7 presents trends in the use of modern contraceptives by region. In 1997, 59 percent of married women in Java-Bali were using modern contraceptive methods, compared with 49 percent in Outer Java-Bali I, and 47 percent in Outer Java-Bali II. Contraceptive prevalence in Outer Java-Bali II was 38 percent higher in 1997 than in 1987. A more rapid increase in the use of family planning in Outer Java-Bali II has narrowed the gap that existed between this region and the other regions.



Contraceptive use increases with the respondent's level of education. For example, in 1997, 43 percent of women with no education were using a modern contraceptive method, compared with 59 percent of women who have completed primary education (Figure 5.8). There is an inverse relationship between the magnitude of the increase in contraceptive use and the level of education. Women with no education had the largest overall increase since 1987 (39 percent), while those with the highest level of education had the smallest increase (2 percent). This trend results in smaller differences in contraceptive use according to women's education.

Trends in contraceptive use in the six provinces in Java-Bali can be observed since 1976, using data from the Indonesia Fertility Survey (IFS) (Figure 5.9). In the early years of the national family planning programs, contraceptive prevalence ranged between 16 percent in West Java and 40 percent in DI Yogyakarta. Among these women, 9 of 10 used a modern contraceptive method. Between 1976 and 1987 contraceptive use increased substantially in all provinces in Java-Bali. In the 1987-97 period, contraceptive use continued to increase, with the exception of Bali, where contraceptive prevalence decreased from 67 to 66 percent.

Figure 5.8
Current Use of Modern Methods Among Currently Married Women Age 15-49, by Education, 1987-1997



Figures 5.6 through 5.9 show some interesting observations in the history of family planning movements in Indonesia. Since the early stages of the programs, emphasis has been placed on modern contraceptive methods. As early as 1976, 9 out of 10 currently married women used modern methods, in particular the pill and IUD. Over time, women who lagged behind in using family planning have caught up with women who started to use contraceptives earlier. The increased use among these women has narrowed the gap in contraceptive prevalence between regions and subgroups of women.

5.4 Unmet Need for Family Planning

Unmet need for family planning is broadly defined as the percentage of currently married women who do not use family planning although they do not want any more children or want to delay their next birth. According to this definition, in 1997, 9 percent of married Indonesian women had an unmet need for family planning, 4 percent for spacing and 5 percent for limiting births. The split between unmet need for spacing and limiting has changed little since 1991 when unmet need was 13 percent (see Figure 5.10).

In 1997, variations in unmet need by urban-rural residence, region and women's education have become insignificant, ranging between 9 and 11 percent. Among the provinces in Java, unmet need for family planning ranges from 5 percent in DI Yogyakarta to 10 percent in West Java. In the Outer Java-Bali regions, the corresponding proportions are 4 percent in North Sulawesi and 17 percent in East Timor (data not shown).

Figure 5.9
Current Use of Modern Methods Among Currently Married Women Age 15-49 in Java-Bali, by Province, 1976-1997

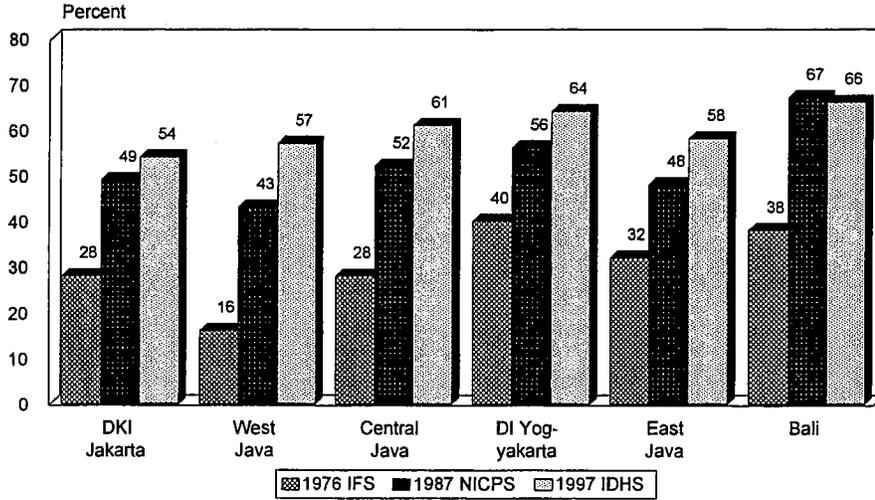
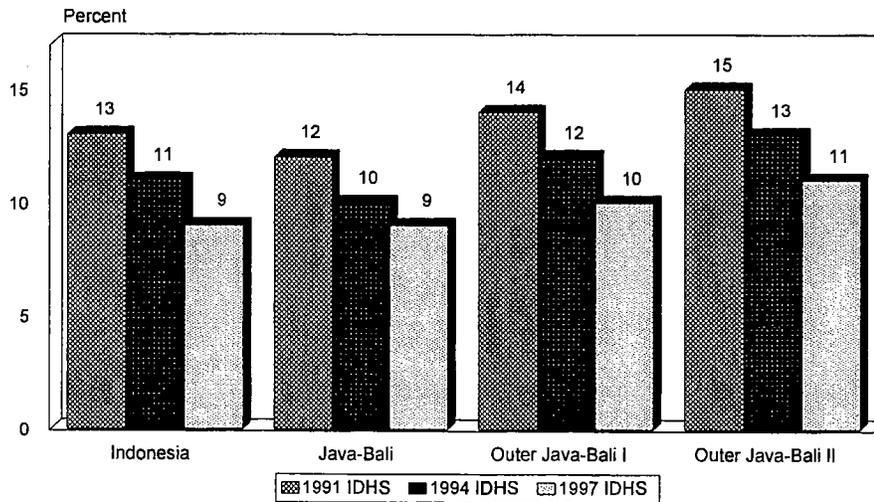


Figure 5.10
Unmet Need for Family Planning Among Currently Married Women Age 15-49, by Region, 1991-1997

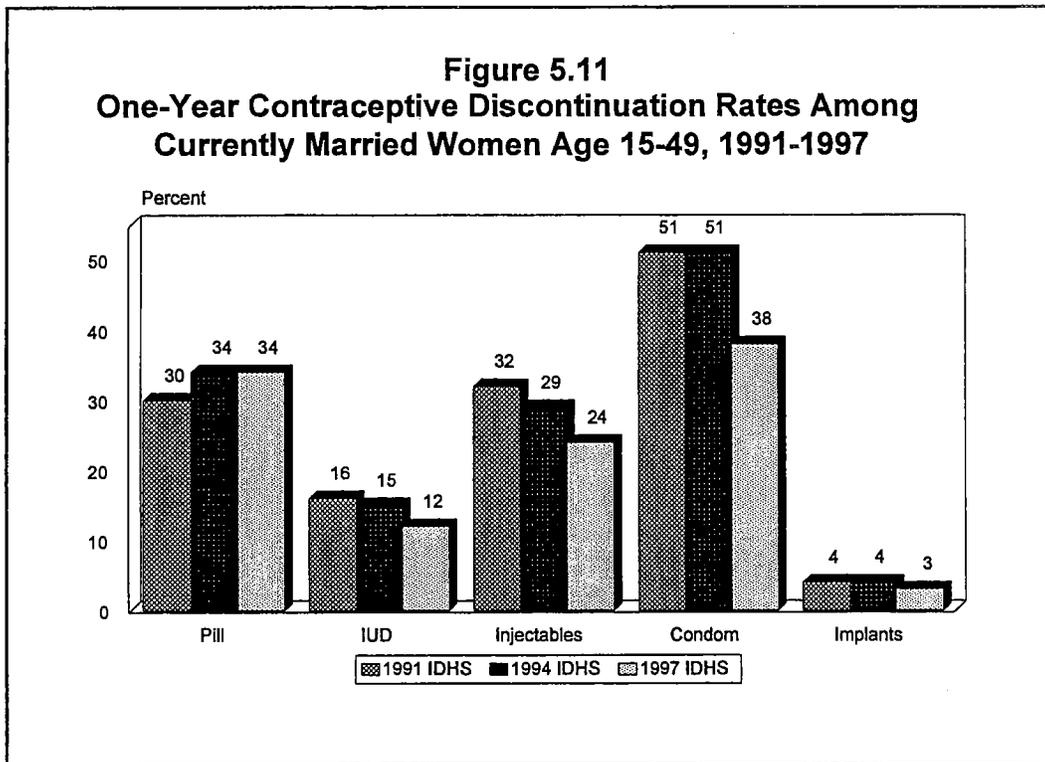


5.5 Discontinuation Rates

Improvement in the quality of contraceptive use is one of the goals of family planning programs in Indonesia. One measure of the quality of use is the rate at which users discontinue using a family planning method.

Data from the 1997 Indonesia DHS survey indicate that 24 percent of women reported that they stopped using contraception within one year after starting. This rate is 11 percent lower than that recorded in the 1991 IDHS, and the 1994 IDHS. The most frequently cited reason for stopping is side effects or health reasons (10 percent). In 1997, six percent of women stopped using family planning because they wanted to become pregnant, and 3 percent reported becoming pregnant while using the contraceptive method (method failure). High rates of discontinuation, method failure and method switching may indicate that improvements are needed in counseling in the selection of methods, follow-up care, and accessibility of services.

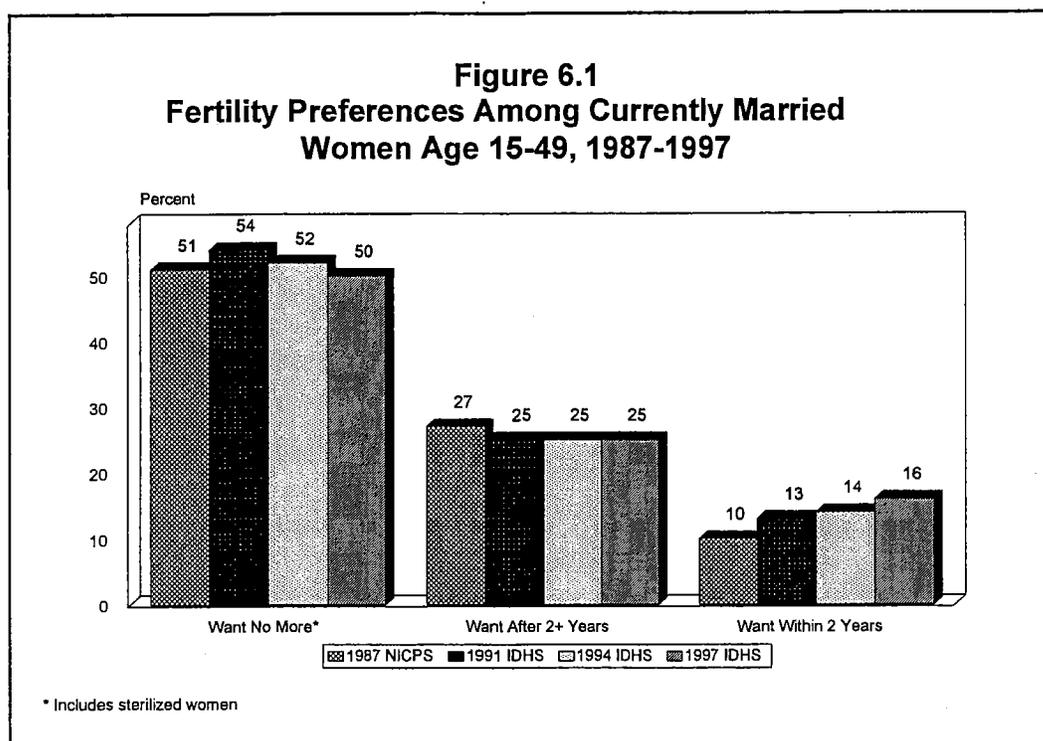
Discontinuation rates vary by method (Figure 5.11). In 1997, the highest one-year discontinuation rate was for condom users (38 percent). Since 1994, there has been a decline in discontinuation rates among users of the IUD, injectables, condoms, and implants. Only the discontinuation rate for the pill (34 percent) has remained unchanged.



6 Fertility Preferences

6.1 Desire for Children

Data from the 1997 Indonesia DHS indicate that more than half of married women in Indonesia want to stop childbearing or have been sterilized, one in four want to delay the next birth for at least two years, and 16 percent want to have another birth within two years (Figure 6.1). Between 1987 and 1997, there is a gradual decline in the proportion of women who want to postpone the next birth and to stop childbearing, while the proportion who want to have another child within two years increases—10 percent in 1987 compared with 16 percent in 1997. This is true for all subgroups of women (data not shown).



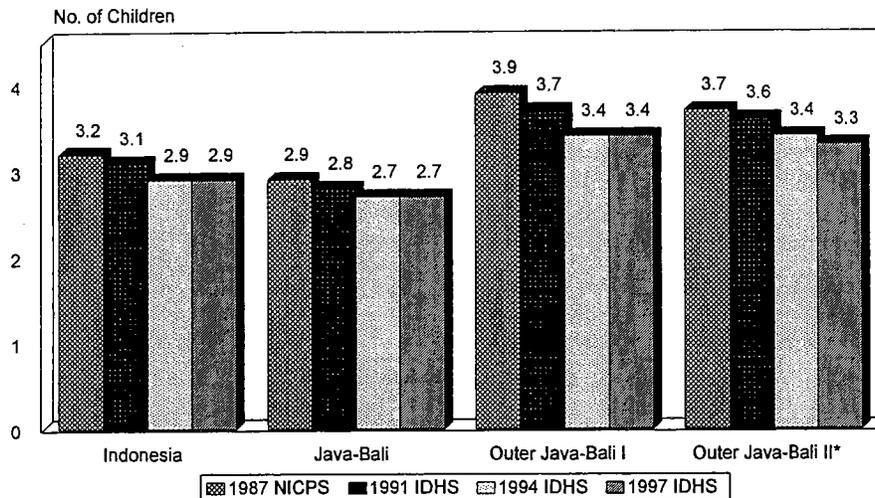
6.2 Ideal Family Size

In order to gain insight into fertility preferences among Indonesian women, all ever-married women were asked a hypothetical question about the number of children they would choose to have if they could start their reproductive years again. Those who gave a non-numeric answer (21 percent in 1997) were not prompted to give an exact number.

Figure 6.2 presents trends in the mean ideal number of children for ever-married women according to region of residence. The data indicate that women throughout the country reported wanting fewer children. Overall, the desired family size declined from 3.2 children in 1987 to 2.9 children in 1997.

There are notable differentials in ideal family size among regions (see Figure 6.2). Women in Java-Bali want fewer children than women in other regions—in 1997, 2.7 children compared with 3.3 children or more. Since 1991, the preferred number of children in Outer Java-Bali I is similar to that in Outer Java-Bali II.

Figure 6.2
Mean Ideal Number of Children Among Women
Age 15-49, by Region, 1987-1997



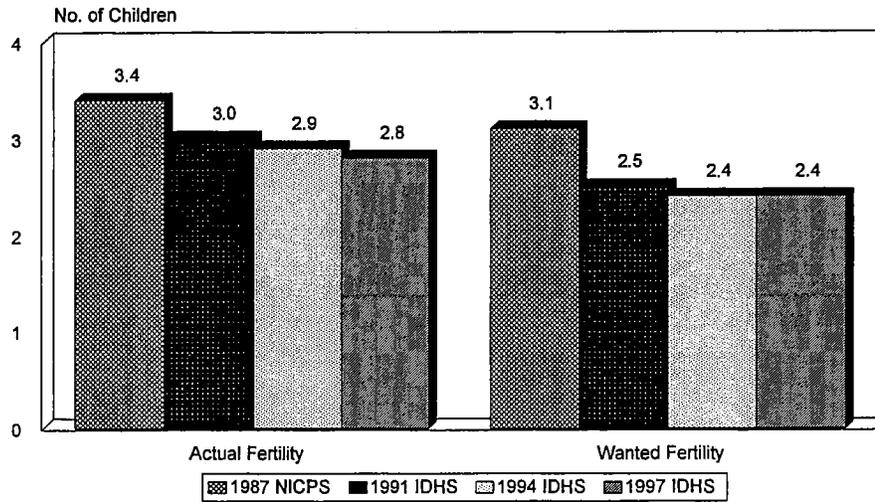
* In the 1987 NICPS, limited to four provinces: Riau, Bengkulu, Central Sulawesi and Southeast Sulawesi

6.3 Wanted Fertility

In the Indonesia DHS surveys, women were asked a series of questions about each child born in the preceding five years, to determine whether the pregnancy was wanted then, wanted but at a later time, or unwanted. Figure 6.3 presents a comparison of actual fertility (the total fertility rate) and wanted fertility. *Wanted fertility* is calculated in the same manner as conventional age-specific fertility rates, except that the numerator includes only births classified as wanted. If Indonesian women could achieve their fertility desires, the fertility rate (wanted fertility) in 1995-1997 would be 2.4 children, 0.4 child less than the observed fertility rate.

Over time, the gap between wanted fertility and observed fertility fluctuates from 0.3 children in 1987 to 0.5 children in 1991, and 0.4 children in 1997 (Figure 6.3).

Figure 6.3
Actual and Wanted Fertility Rates
1987-1997



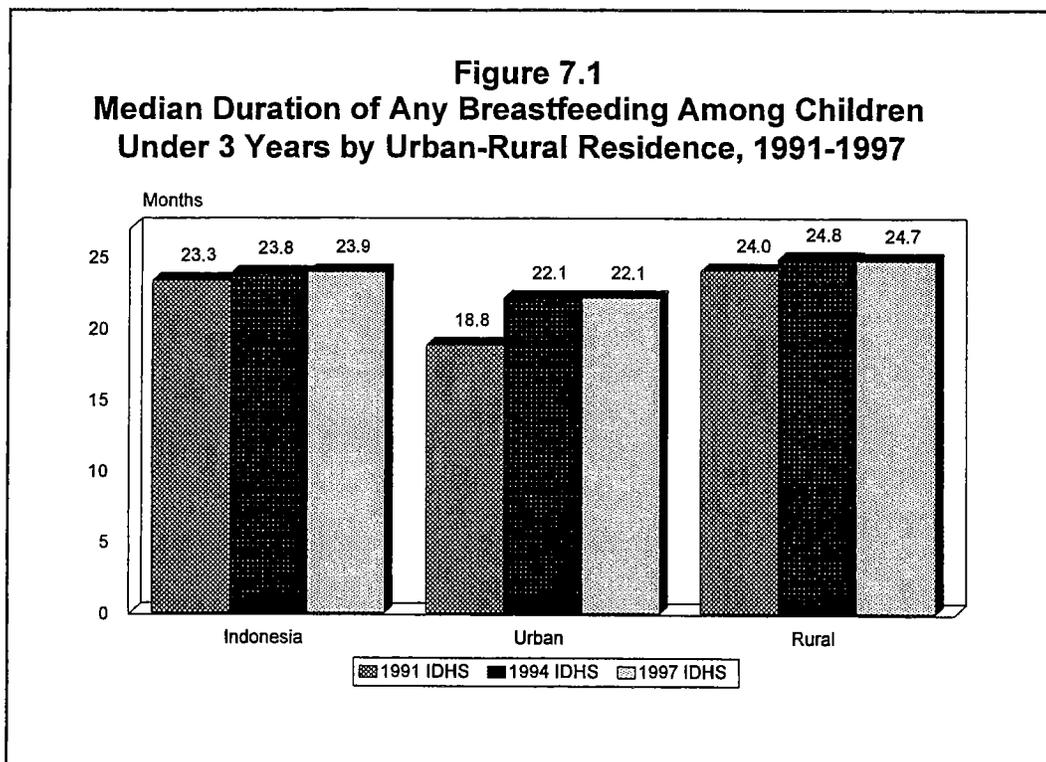
7 Breastfeeding and Infant Feeding

7.1 Any Breastfeeding

Breastfeeding plays a major role in the health and survival of infants. In Indonesia, almost all children (96 percent) are ever breastfed.

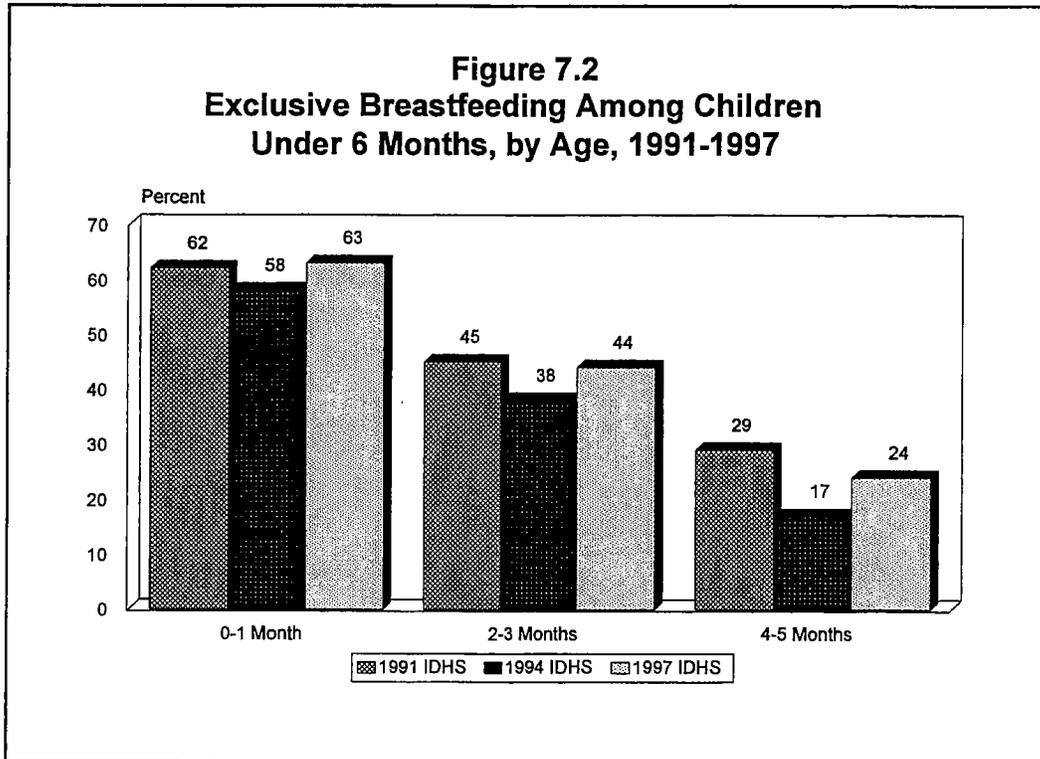
Indonesian women have a tradition of breastfeeding for a long duration. The median duration of breastfeeding gradually increased from 23 months in 1991 to 24 months in 1997. While the breastfeeding durations of infants in urban areas is becoming longer, it is still shorter than for infants in rural areas (Figure 7.1).

Data from the 1994 IDHS and 1997 IDHS consistently show that breastfeeding duration is inversely related to mother's education. Women with no education breastfeed for almost 7 months longer than women who have attained secondary education. Women in Java breastfeed longer than women in the Outer Java-Bali regions (26 months compared with 22-23 months). Children who were assisted by a traditional birth attendant during delivery are breastfed longer than children who were assisted by a medical professional (data not shown).



7.2 Exclusive Breastfeeding

In Indonesia, exclusive breastfeeding is recommended for infants under four months of age. However, data from the 1991 IDHS and 1997 IDHS indicate that supplementation is introduced at an early age, and the proportion of infants who receive breast milk only changed little in the intervening period. For example, in 1991, 62 percent of infants under two months old were exclusively breastfed, similar to that in 1997 (63 percent). For older infants, the proportion receiving exclusive breastfeeding declined slightly in 1997 (Figure 7.2).



8 Maternal Care

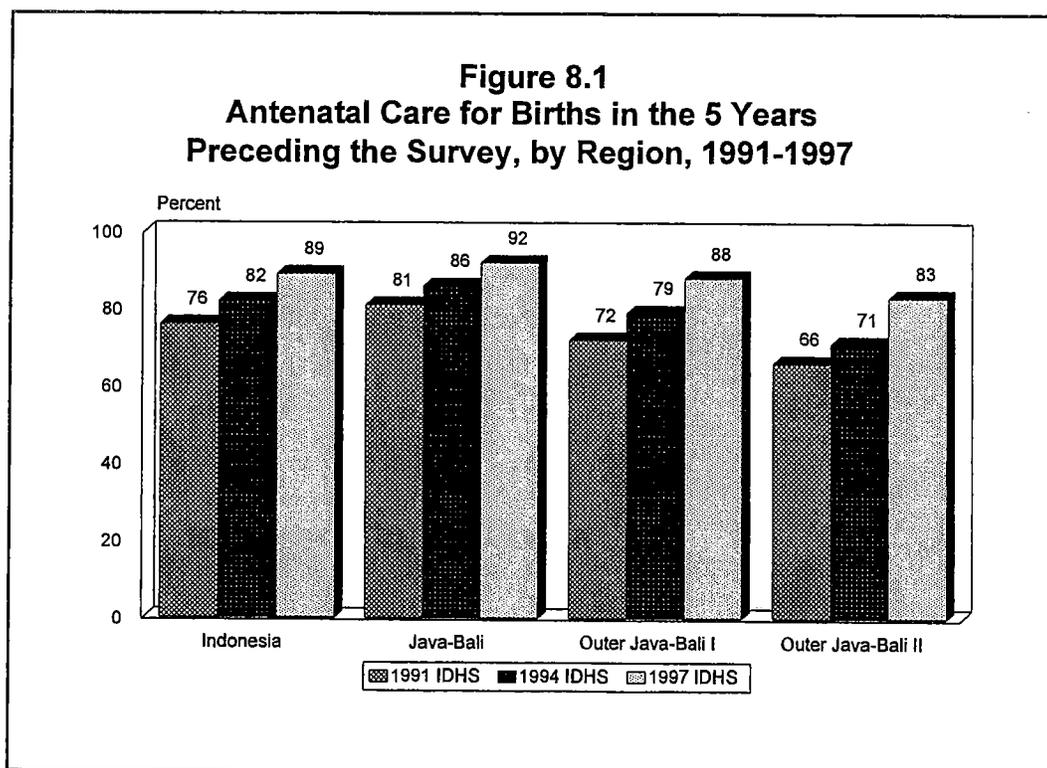
Comparable information on antenatal care, tetanus toxoid injections and delivery assistance is available only from the Indonesia DHS surveys. Data from these surveys indicate that health services are becoming more available to the public.

8.1 Antenatal Care

The Government of Indonesia defines antenatal care as pregnancy-related health care provided by a medical professional (doctor, nurse or midwife). Therefore, antenatal care received from traditional birth attendants, friends, and relatives is not included in this report.

Over the years, an increasing proportion of women have used antenatal care services. In 1997, 9 in 10 births in the five years preceding the survey were to mothers who received antenatal care. Among these births, 79 percent were examined by a nurse, a midwife, or an auxiliary nurse or midwife, and 11 percent by a doctor (data not shown). While the proportion of women who received care during pregnancy from a doctor did not change since 1994, the proportion receiving care from a nurse or midwife increased from 72 percent in 1994 to 79 percent in 1997. Over time, women made more antenatal visits (6 visits in 1991 compared with 7 visits in 1997), and started antenatal visits earlier—the proportion of women who had the first antenatal care in the first trimester increased from 29 percent in 1991 to 37 percent in 1997.

There are significant differences in antenatal care coverage by region. Women living in the Java-Bali region are more likely to have received antenatal care than women in other regions, however, there is evidence that the differences have narrowed in recent years (Figure 8.1), indicating that all over the country women are more likely to seek care during pregnancy.



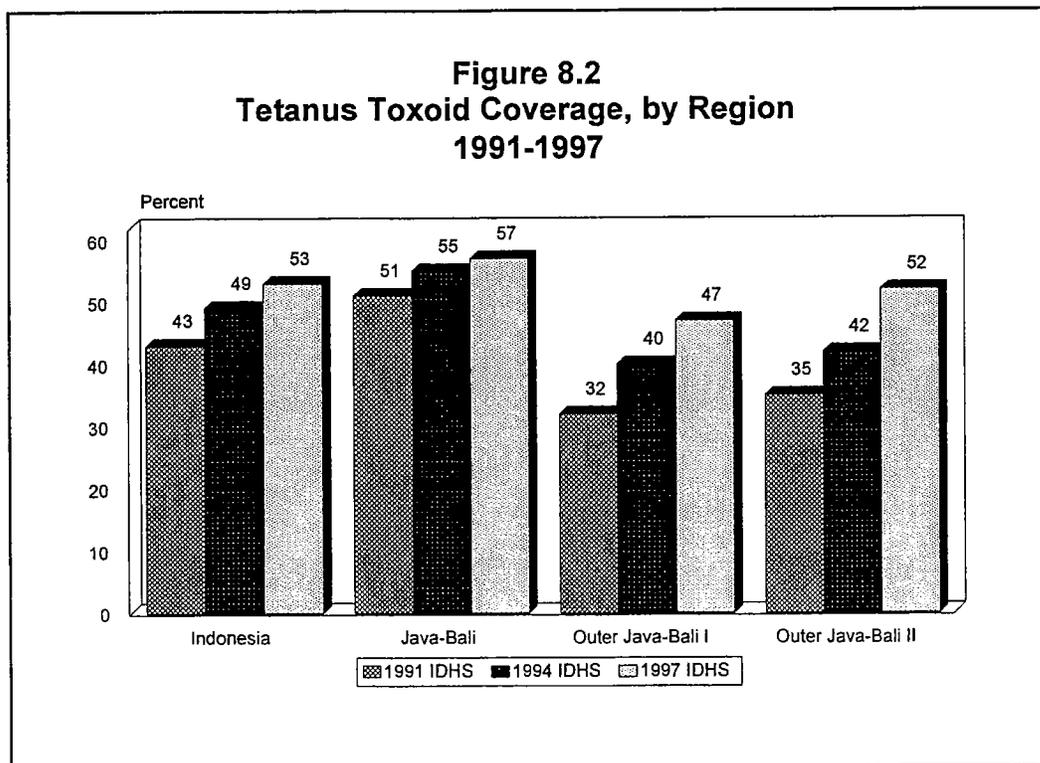
8.2 Tetanus Toxoid Injections

Immunization of pregnant women is a coordinated activity of the Expanded Program of Immunization and the maternal and child health care units of the Ministry of Health, which recommends that women receive two tetanus toxoid (TT) injections during the first pregnancy. In recent years, TT immunization has also been given to women before marriage, so that any pregnancy within three years of the wedding would be protected against tetanus.

Coverage of tetanus toxoid injections has increased over time, reflecting the increase in antenatal care coverage. Overall, in 1997, 53 percent of births in the five years preceding the survey were to mothers who received two or more doses of TT injection, compared with 43 percent in 1991 (Figure 8.2).

While the increase occurred in all regions, children in Java-Bali are more likely to be protected against tetanus than children in other regions (57 percent in Java-Bali compared to 47 to 52 percent in the Outer Java-Bali regions).

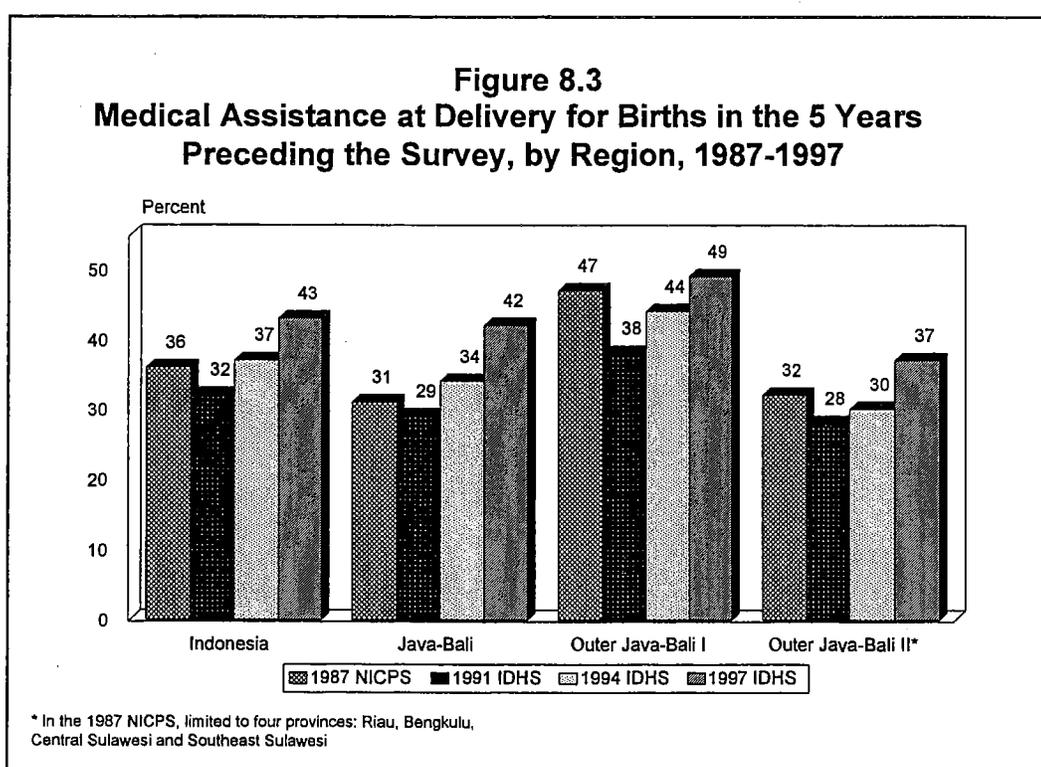
The increase in TT coverage is found in all subgroups of children, regardless of residence, mother's age and education, and birth order. The largest increase, however, took place among children in rural areas and of uneducated mothers (data not shown).



8.3 Delivery Assistance

In the IDHS surveys, if more than one delivery assistant was present during delivery, only the least qualified person was recorded, to indicate the first choice to assist the delivery. In Indonesia, traditional birth attendants continue to have a very important role in delivery assistance, providing services to more than half of all births in the 5 years preceding the survey. However, women are gradually more likely to be assisted by health professionals. In 1997, 4 of 10 births in the 5 years preceding the survey were assisted by a doctor or midwife at delivery, a modest increase from 32 percent in 1991 (Figure 8.3).

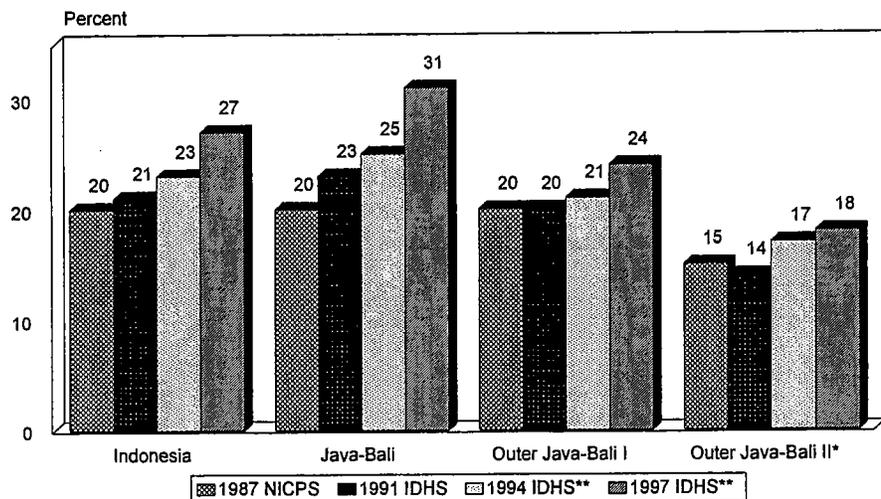
Births in Outer Java-Bali I are more likely than those in other regions to be assisted by a medical professional—49 percent, compared with 42 percent in Java-Bali and 37 percent in Outer Java-Bali II. In the 1991-1997 period, improvement in medical assistance at delivery is most apparent in Java-Bali (13 percentage points).



8.4 Place of Delivery

A large proportion of births in Indonesia occur at home, and conditions have not changed significantly since 1991 (Figure 8.4). Deliveries in a health facility are slightly lower in the Outer Java-Bali regions than in Java-Bali—31 percent in Java-Bali compared to 24 percent in Outer Java-Bali I and 18 percent in Outer Java-Bali II. However, the proportion of births in Java-Bali which took place in a health facility increased substantially since 1987, reaching 31 percent in 1997. One of the factors contributing to the increase is the practice of delivery at a midwife's home. While the proportion was negligible in 1987, ten years later 10 percent of births in the five years preceding the 1997 IDHS were delivered in a private midwife's home (data not shown).

Figure 8.4
Delivery in a Health Facility for Births in the 5 Years
Preceding the Survey, by Region, 1987-1997



* In the 1987 NICPS, limited to four provinces: Riau, Bengkulu, Central Sulawesi and Southeast Sulawesi
 ** Includes delivery at a midwife's home

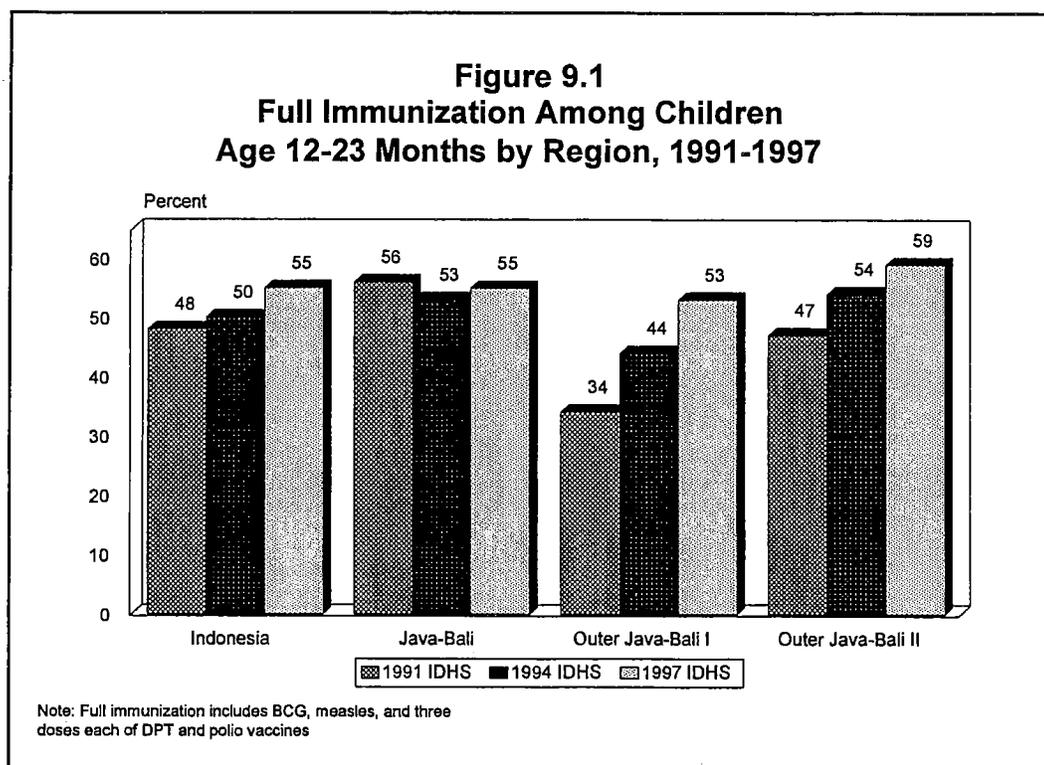
9 Child Care and Childhood Diseases

9.1 Immunization

The Expanded Program of Immunization, launched by the Indonesian Ministry of Health in 1977 recommends that all children receive immunization against six diseases: tuberculosis, diphtheria, pertussis, polio, tetanus, and measles.

In the IDHS, immunization information was collected for children born in the five years before the survey. Immunization coverage is based on information recorded on health cards and information obtained from the mothers. Based on both sources, the proportion of children 12 to 23 months who are fully vaccinated against these six childhood diseases has increased from 48 percent in 1991 to 55 percent in 1997 (Figure 9.1). On the other hand, the percentage of children for whom mothers could show health cards to the survey interviewers decreased slightly from 35 percent in 1991 to 31 percent in 1997 (data not shown).

Data since 1991 show that children in Outer Java-Bali II are more likely than children in other regions to be fully immunized. Data from the 1997 IDHS suggest that there has been a slight decline in immunization coverage in Java-Bali from 56 percent in 1991 to 53 percent in 1994 and to 55 percent in 1997. On the other hand, large gains have been observed in the Outer Java-Bali regions. In 1997, full immunization in Outer Java-Bali II was 59 percent, while the corresponding rate for the Outer Java-Bali I region was 53 percent.



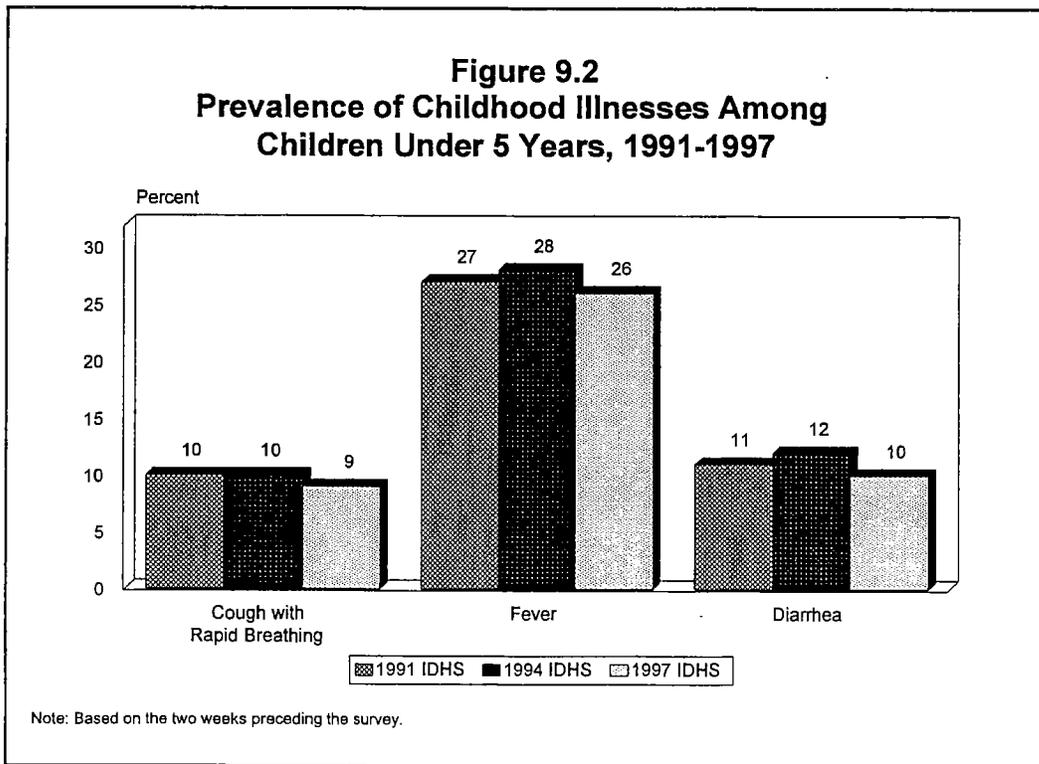
9.2 Prevalence of Acute Respiratory Infection, Fever, and Diarrhea

Acute lower respiratory tract infection (ARI), primarily pneumonia, is a common cause of illness and death among children under age five. Pneumonia is characterized by cough with difficult or rapid breathing and chest in drawing. In this survey, ARI among children is identified as the mother's perceptions of the respiratory symptoms suffered by her child.

The 1997 Indonesia DHS data show that 9 percent of children under five were reported to have been sick with cough and rapid breathing in the two weeks preceding the survey. The same level of illness was reported in the 1991 and 1994 Indonesia DHS (Figure 9.2).

Various infectious diseases are accompanied by fever. In Indonesia, the most common diseases with fever are malaria, respiratory and intestinal infections, measles, and typhoid. The 1991 and 1994 Indonesia DHS data showed that 27 percent or more of children under five had fever in the two weeks prior to the survey; in 1997, the rate was 26 percent (Figure 9.2). Urban children and those in Java-Bali were more likely than other children to have been reported as having fever (data not shown).

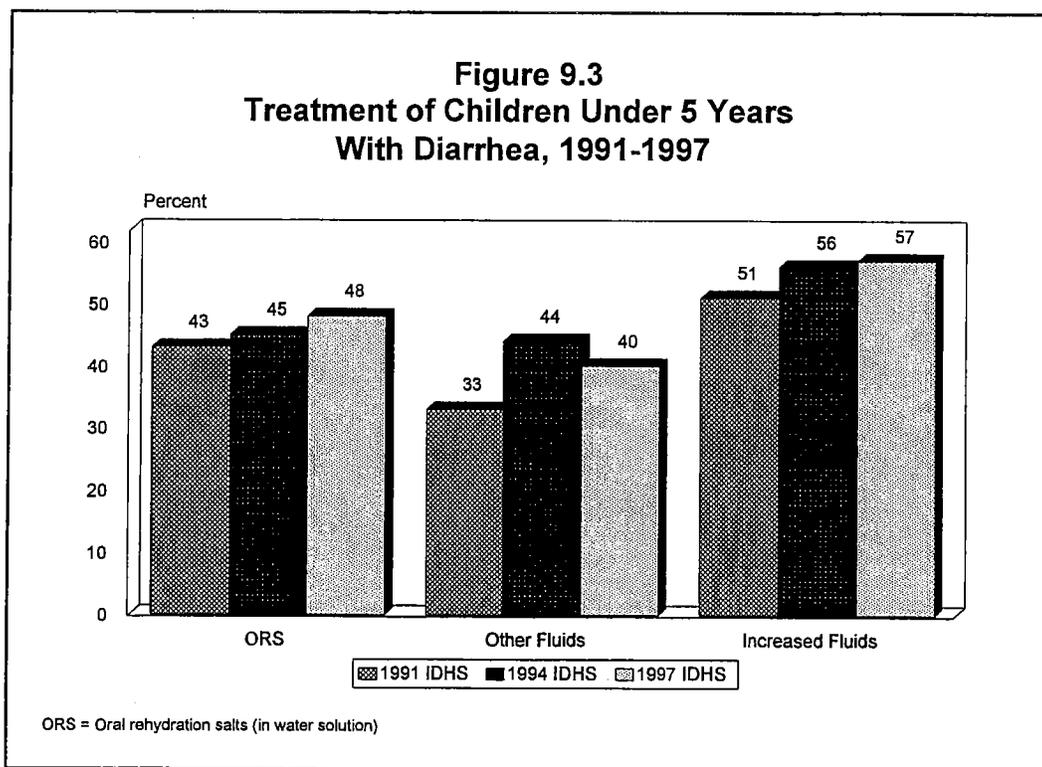
Diarrheal disease continues to be a public health problem in Indonesia. To control this disease, a special program has been instituted by the government; it includes improving health services, training health professionals, and promoting oral rehydration therapy. The two-week prevalence rate for diarrhea in 1997 was 10 percent, slightly lower than that in previous years (Figure 9.2).



9.3 Treatment of Diarrhea

The recommended treatment for diarrhea is oral rehydration therapy, including solution prepared from packets of oral rehydration salts (ORS)—brand name ORALIT—and increased fluids. Although nine of ten mothers whose children had had diarrhea reported that they had heard of or seen ORS packets, in practice less than half (48 percent) of the children with diarrhea were actually treated with ORS (Figure 9.3). Over time, diarrhea treatment seems to have improved, with more children being treated with ORS, other fluids and increased fluids.

Children in urban areas, children of better educated mothers, and older children are more likely than other children to be given increased fluids during diarrhea (data not shown).



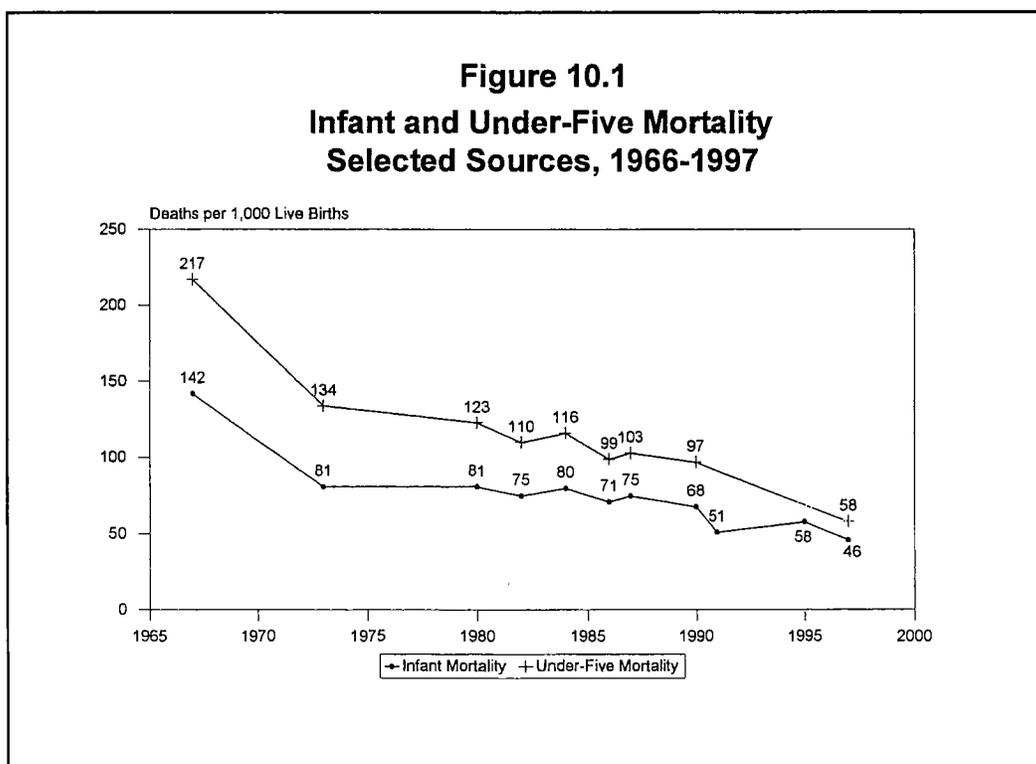
10 Infant and Child Mortality

10.1 Infant and Child Mortality Rates

Trends in infant and child mortality can be studied using estimates based on population censuses and demographic surveys as well as retrospective data from a single survey. Infant and child mortality rates based on census data are estimated indirectly using information on the number of children ever born and the number of children who died, while estimates from the Indonesia DHS surveys are obtained from the birth history data. As in the case of fertility, these estimates are not strictly comparable, but they are useful for showing trends in infant and child mortality in the recent past.

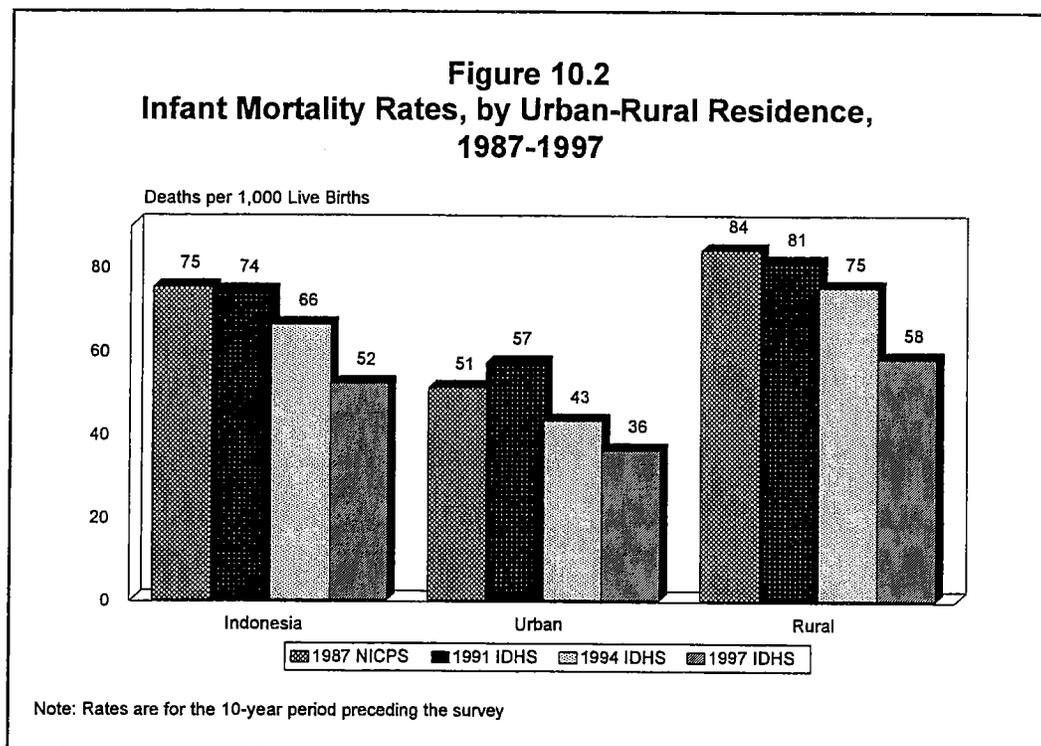
Unlike the DHS surveys, estimates of infant and child mortality from the census and other demographic surveys are not published according to the social and economic characteristics of the children. Thus, trends in infant and child mortality by background characteristics can only be examined using data from the four Indonesia DHS surveys (1987 NICPS, 1991 IDHS, 1994 IDHS, and 1997 IDHS).

The rates presented in Figures 10.1 are based on births in the five-year period preceding each of the four surveys. For example, estimates from the 1997 IDHS refer to 1992-1997. The infant mortality rate has declined from 142 deaths per 1,000 live births in 1967-1971 to 46 per 1,000 in 1992-1997. At the same time, mortality among children under five years declined from 217 deaths per 1,000 live births in 1966-1971 to 58 per 1,000 in 1992-1997 (Figure 10.1).



10.2 Infant Mortality Rates by Urban-Rural Residence

The rates in the following figures refer to the ten-year period preceding the survey. Children born to women living in urban areas have consistently lower mortality than those born to women in rural areas—36 deaths per 1,000 live births, compared with 58 per 1,000 (Figure 10.2). This pattern is found for all ages at death in all regions. Over time, infant mortality in rural areas declined faster than in urban areas, narrowing the gap in infant mortality between urban and rural children from 33 deaths per 1,000 live births in 1987 to 22 deaths per 1,000 in 1997. Lower mortality rates in urban areas may be related to greater availability and accessibility of health facilities.



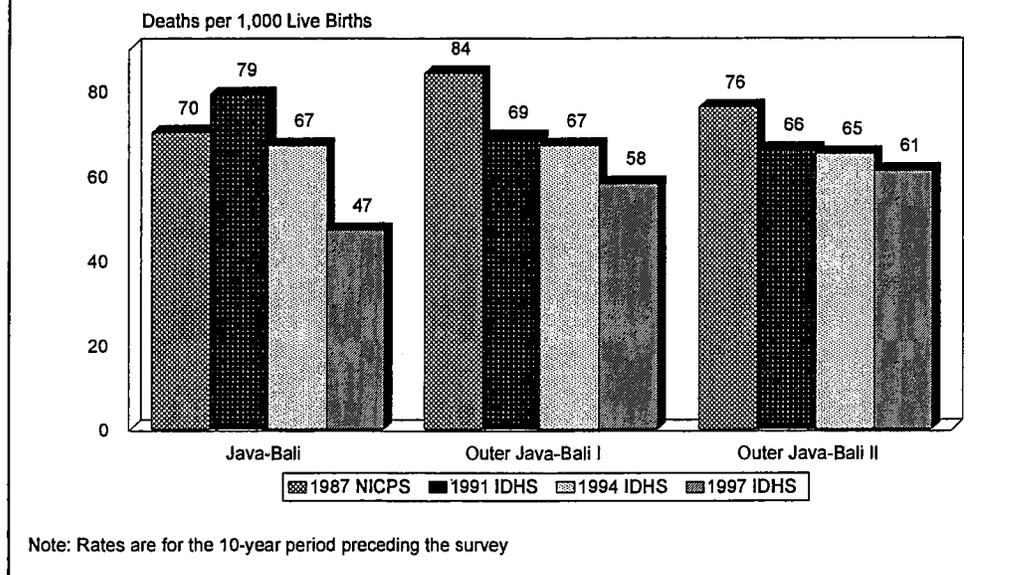
10.3 Infant Mortality Rates by Region

In a country as large and geographically dispersed as Indonesia, considerable variation in mortality among regions can be expected. Provinces in the Java-Bali region have always shown the lowest mortality rates. The Java-Bali region also made the most progress in reducing infant mortality. However, the decline in Outer Java-Bali I was faster than that in Outer Java-Bali II, reaching a lower level (58 deaths per 1,000) than the rate in the latter region (61 deaths per 1,000) (Figure 10.3).

10.4 Infant Mortality Rates by Education

Mother's level of education is inversely associated with rates of childhood mortality; children of less educated women generally have less chance of surviving than those born to educated mothers. For example, for the 1987-1997 period, children of mothers who have no education are almost three times as likely to die before their first birthday than children of mothers with some secondary education. While this pattern has been observed in all DHS surveys in Indonesia (Figure 10.4), over time, the differentials are becoming smaller due to faster decline in infant mortality among children of less educated women.

Figure 10.3
Infant Mortality Rates, by Region,
1987-1997



10.5 Infant Mortality Rates in Java-Bali

Infant mortality rates in all of the provinces have continued to decline, but the pace has varied. There are significant variations in infant mortality rates among the six provinces of Java-Bali. DKI Jakarta, the capital, and DI Yogyakarta consistently have the lowest infant mortality—26 and 23 deaths per 1,000 live births in 1997. On the other hand, West Java continues to have the highest infant mortality rate (IMR) in this region (Figure 10.5).

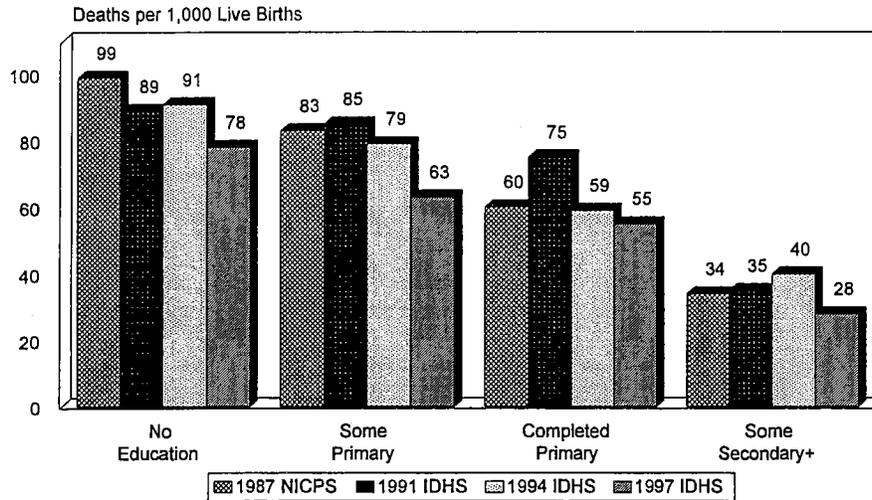
10.6 Differentials in Infant Mortality by Province

Infant mortality in Indonesia has undergone a significant decline throughout the country in the past three decades. In the late 1960s, the IMR was 100 deaths per 1,000 live births or higher in all but one province, and 150 deaths per 1,000 live births or higher in 11 provinces. The highest IMR was in West Nusa Tenggara—221 deaths per 1,000 live births. In the late 1980s, the IMR had declined to less than 100 deaths per 1,000 live births in all but one province, while the IMR in West Nusa Tenggara remained high at 110 deaths per 1,000 live births. Data from 1997 IDHS show that the IMR declined to less than 75 deaths per 1,000 live births except for South East Sulawesi (78 deaths) and Central Sulawesi (95 deaths); while the IMR in West Nusa Tenggara stayed relatively unchanged (111 deaths per 1,000 live births). On the other hand, the rate is less than 30 deaths per 1,000 live births in DI Yogyakarta, DKI Jakarta, and Maluku.

10.7 High-risk Births

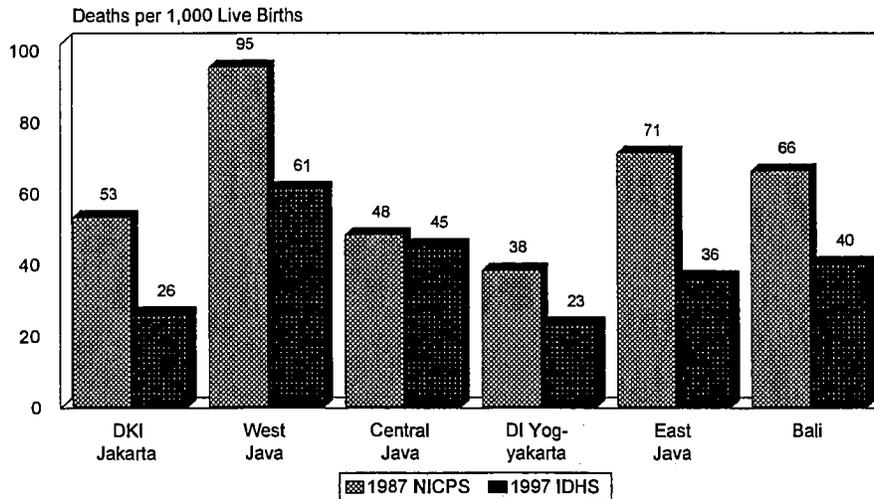
Children are at elevated risk of dying if their mothers were too young or too old when they gave birth, if they were born after a short birth interval, or if they are of high birth order. IDHS data indicate that a smaller proportion of children were at elevated risk of dying in 1997 (40 percent) than in 1991 (48 percent) (Figure 10.6). While the proportion of children in a single high-risk category has decreased from 34 percent in 1991 to 27 percent in 1997, the proportion at risk due to multiple causes has remained about the same.

Figure 10.4
Infant Mortality Rates, by Education,
1987-1997



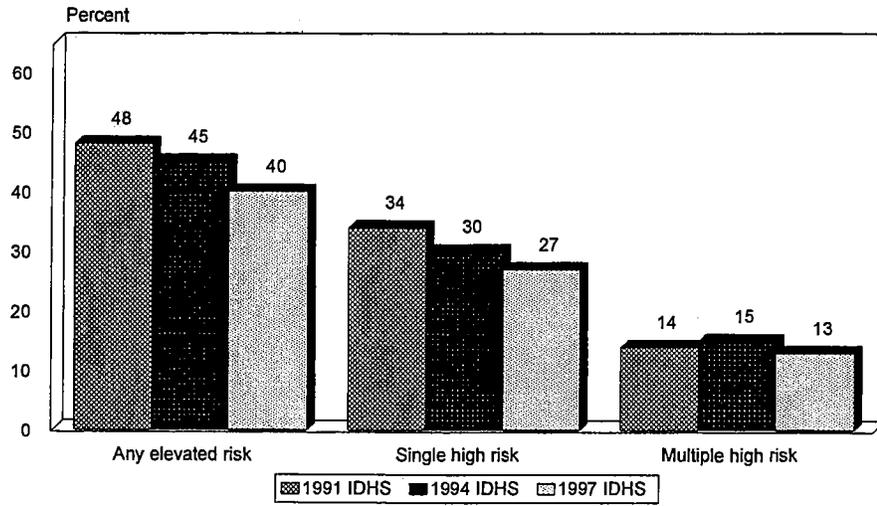
Note: Rates are for the 10-year period preceding the survey

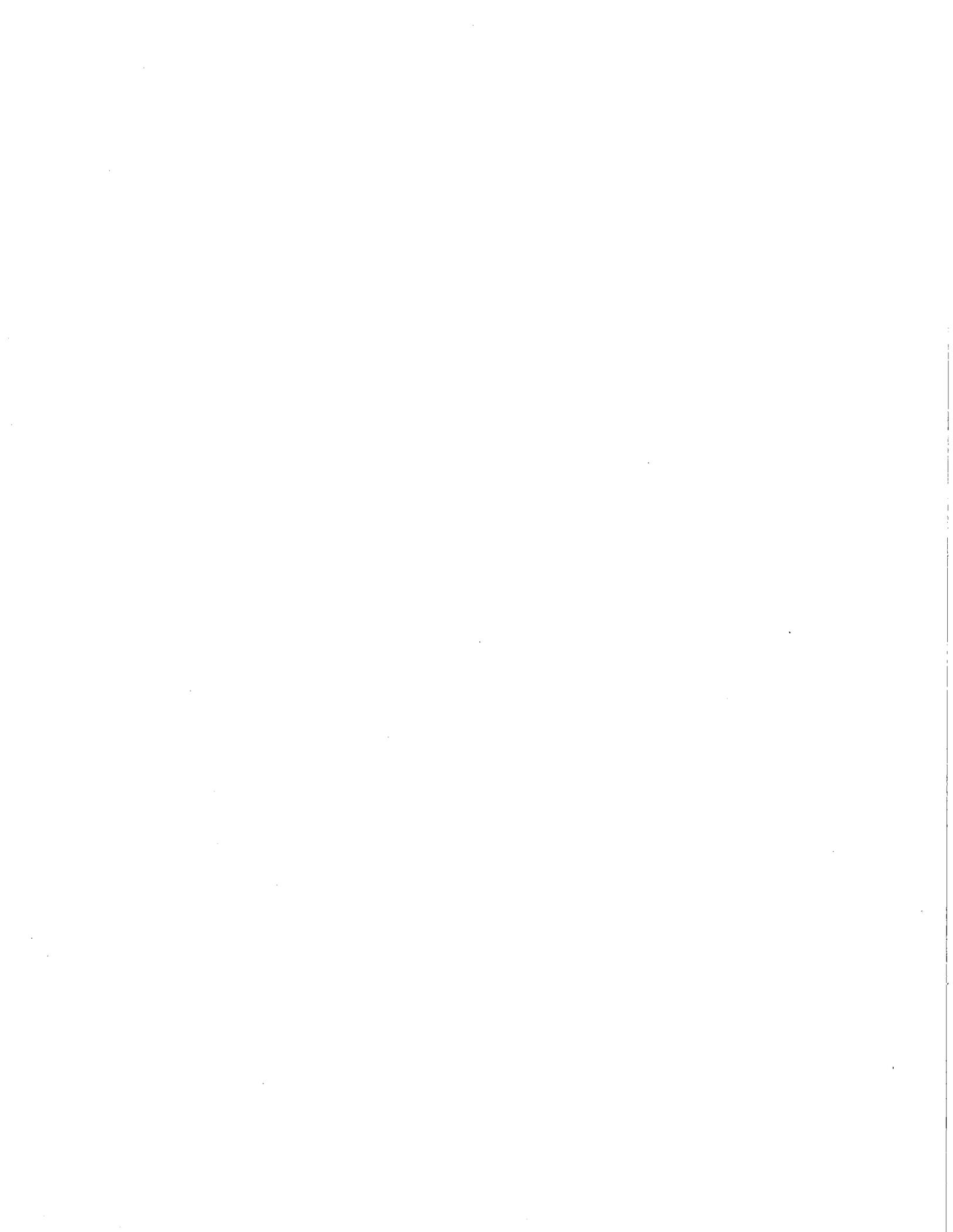
Figure 10.5
Infant Mortality Rates in Java-Bali,
by Province, 1987 and 1997



Note: Rates are for the 10-year period preceding the survey

Figure 10.6
High-Risk Births, 1991-1997





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