

World School-Age Population: Trends and Implications, 1960 to 2000

by
Zoltan Zsigmond
Mary Sue Devereaux

Statistics Canada
Projections Section
Education, Science and Culture Division

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FOREWORD

Statistics Canada is pleased to be identified with UNESCO in this study of world school population trends; it marks another major step forward in international statistical cooperation.

The Education, Science and Culture Division of Statistics Canada has long recognized the importance of enrolment projections to the education community. Over the past decade the Projections Section has developed and refined its methodologies and procedures to the level required for education planning. Implications of changing population patterns are significant for more than education authorities; this becomes evident from even a casual examination of the data.

Statistics Canada is pleased to share its expertise with all the countries of the world, and is grateful to UNESCO for having created the opportunity to do so.

Chief Statistician of Canada.

AUTHOR'S PREFACE

We approached the prospect of preparing a report on projected school-age population trends with confidence, anticipating that the application of our established Canadian methodology on a global basis would suffice. However, as we became more involved in the work, the complexity of the task revealed itself. The field is vast and markedly different from the situation with which we are familiar. Specialists in each region undoubtedly know more than we do about the meaning of school-age population trends there. Without firsthand knowledge of developing countries, we had to base our commentary on a somewhat cursory examination of relevant literature. Furthermore, implications we suggest for the more developed regions may be influenced by our somewhat ethnocentric North American perspective.

The main intention is to outline broad demographic patterns. While this information may help planners avoid obvious mistakes, it can serve as no more than a preliminary step. Because they pertain to such large geographic areas with so much internal diversity, the data should not be accepted uncritically by planners working at the practical level.

Zoltan Zsigmond
Statistics Canada
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The major value of this publication lies in the numerous charts and tables that illustrate trends in the world's school-age population. Therefore, the authors give full credit to Mrs. Hyacinth Belloni of the Projections Section and the Chart Design and Production Section, Statistics Canada, who were responsible for preparation and drafting of the graphic and tabular material.

The Division of Statistics on Education of UNESCO's Office of Statistics provided invaluable technical assistance.

We would also like to thank the staff of the United Nations' Department of International Economic and Social Affairs for some of the unpublished population data that were necessary for the study.

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Finally, we wish to express our appreciation to all those at Statistics Canada, UNESCO, and elsewhere who read and commented upon the manuscript. This helpful assistance notwithstanding, responsibility for opinions, errors and distortions in the data, and for misinterpretation of trends belongs entirely to the authors, not to UNESCO or Statistics Canada.

INTRODUCTION

Background

This monograph is not an original demographic study; rather it complements, interprets, and summarizes different sources of data. One of these, a forthcoming United Nations' publication, Selected Demographic Indicators by Country 1950-2000: Demographic Estimation and Projection as Assessed in 1978, is the primary source (see Bibliography). However, the projections in that publication are not classified for the convenience of the education community, and give figures only at five-year intervals. To make these projections more useful to education planners, the UNESCO Office of Statistics prepared a special tabulation showing yearly statistics for specific age groups by region. The other document that was utilized is the UNESCO Office of Statistics' Trends and Projections of Enrolment by Level of Education and by Age (see Bibliography). Because the latter was based on 1973 population assessments, some adjustments were necessary. UNESCO is now updating these projections, as well as preparing for publication the main findings of the present study, together with a complementary analysis highlighting the policy and planning implications for education of these school-age population trends.¹

The major part of both publications consists of tables. While providing valuable detail, such a presentation does not readily convey the message. Columns of numbers have less impact than the same numbers shown graphically. A deliberate effort has, therefore, been made in this report to avoid a long, statistics-laden exposition. Wherever possible, charts are employed; emphasis is on trends and relative magnitudes, not exact figures.

Population Projections and Enrolment

Population projections are not predictions. They are calculations that indicate the direction and magnitude of the development of a population when certain assumptions are made about the future course of fertility, mortality, and migration. Since these basic components of change can be objectively determined, population projections are relatively easier to make and more reliable than most others. But like any others, population projections must be evaluated in light of conditions prevailing when they were produced

¹These activities have benefited from financial support by the United Nations Fund for Population Activities under UNFPA/UNESCO Project INT/76/P22.

and their underlying assumptions; hence, they are generally updated as new information becomes available.

In more developed regions population projections up to school-leaving age are tantamount to enrolment projections. By contrast, in less developed regions population projections have a different meaning for the education system. For example, since many developing regions have so far not achieved universal primary education, the projected size of the population of primary school age indicates the effort required to achieve universal primary attendance by a specified future year.

Objectives

As stated at the outset, this report is not a genuine piece of demographic research. An attempt is made here to rearrange the United Nations' latest population projections for the convenience of the education community and other agencies engaged in social planning. These projections may be helpful to decision-makers concerned with population growth and school enrolment, because population trends suggest what facilities and resources may be necessary (schools, teachers, expenditures).

Plans for one segment of society cannot be made in isolation. Demographic shifts that are significant for education have wider social and economic implications. The young, the old, and everyone in between are affected by the size and age structure of the population and any alterations it may undergo. Population projections are widely, and increasingly, used by major sectors like government, business, industry, labour, etc. They form the basis for planning the needs of society such as food, housing, education, employment, health care, etc. Thus, a "by-product" of this study is an overview of the relative growth of three broad age groups (0-14, 15-64, and 65+). Almost everywhere the young are dependants, and in many societies the old rely on either their families or the government. Theoretically, these two cohorts at the beginning and end of the life cycle are supported by the "producing" group aged 15-64. More rapid growth of the dependent segments would place a greater burden on the labour force, and conversely, a fast-growing labour force would feel less economic pressure from the young and the old.

Scope and Reference Period

The study focuses on the school-age population, divided into four groups: 6-11, 12-17, 6-17, and 18-23. No breakdown by sex is made. Historical data are shown from 1960 to 1975, and population trends are projected to 2000. Most data are presented in charts; absolute numbers given for selected years are rounded to millions.

All geographic groupings of data accord with the classification used in Selected Demographic Indicators by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978. The world total of every variable (e.g., age group) is shown, and then subdivided in two ways:

- by more developed regions (MDR) and less developed regions (LDR),¹ and
- by geographic region² (see Appendix C for classifications).

The main body of the report concentrates on the LDR-MDR dichotomy and the eight major regions. However, some subregions and individual countries are singled out to illustrate a point. Whereas Unesco's enrolment projections exclude certain countries for which no official data were available (i.e., the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia), the demographic projections include all countries and territories.³

Three variants - high (H), medium (M), and low (L) - of projections of the school-age population are given for every subregion. But the medium variant has generally been taken to compare trends for other broad age groups

¹This classification is maintained throughout the period covered by this report (i.e., until 2000).

²Africa, Latin America, Northern America, East Asia, South Asia, Europe, Oceania, and the U.S.S.R.

³Countries included in each subregion are listed in Appendix C.

in the major regions. This variant is also used in the discussion of the implications of population trends.

The United Nations assessed the population by country as of 1978 (the results will be published in late 1980). But UNESCO's enrolment projections are based on mid-seventies' data. Therefore, 1975 was arbitrarily designated the latest year for which "actual" statistics are available.

Limitations

Any statistical study that relies heavily on diverse international sources, particularly for population projections, has several inherent limitations. Besides the validity of assumptions about future fertility, mortality, and migration, the soundness of any population projection depends on the quality of "actual" statistics. Unfortunately, all countries have not conducted a census, and among those that have, there is considerable variety, not only in quality, but also in the time at which the count was taken. Projections for countries where a census had been carried out were based on the latest results; for countries lacking a census or other reliable population survey, the U.N. estimate was used. Because of differences in the quality of the population data, some questionable trends may be perpetuated in the projections.

Chapter 1

SUMMARY

This summary highlights the findings of the main report. Unless otherwise stated, data refer to the medium population variant.

DEMOGRAPHIC FACTORS AFFECTING POPULATION CHANGE

Birth rate: Since the early fifties the world's birth rate has declined substantially. This downtrend is expected to continue in the remaining decades of the twentieth century, but faster in the less developed regions (LDR) than in the more developed (MDR).

Fertility: At present, each woman can expect an estimated average 4.0 children; by 2000 the average will be almost one fewer. The MDR rate, 2.0, is already below the replacement level, so a slight increase is expected. But in the LDR the anticipated reduction is from 4.8 to 3.4. South Asia is expected to contribute most to this decline. Africa's fertility rate is the highest (6.4), while Northern America has the lowest rate of all the major regions (1.8).

Mortality: Mortality has been substantially reduced in the last few decades, a trend that is presumed to continue, but more slowly. However, in the mid-seventies, almost 100 infants per 1,000 live births died before they reached their first birthday. Regional differences are marked, e.g., Middle Africa's rate is almost 13 times higher than that of Northern Europe.

Life expectancy: Life expectancy has increased everywhere: in the early fifties the world average was about 47; twenty-five years later it had lengthened to slightly more than 57, and by the end of the century it is projected to be close to 65. There

has always been a considerable difference between the MDR and the LDR in favour of the former, but the gap is closing. Even so, the disparity in 2000 is still expected to be at least ten years. By then, Europe is projected to have the longest life expectancy (over 74), and Africa the shortest (less than 60).

TRENDS AND COMPOSITION OF THE TOTAL POPULATION

Total population:

In 1975 the world's population was an estimated 4.0 billion. According to the medium variant of the U.N. projections, it will increase to 6.2 billion at the turn of the century (high and low variants — 6.5 billion and 5.9 billion, respectively). This amounts to a 54% gain, just six percentage points less than in the previous twenty-five years. The LDR gain will be 68%, a seven percentage point drop from the 1950–75 period; the MDR increase, 16%, is much reduced from the 31% rise that occurred between 1950 and 1975.

Africa, Latin America, and South Asia will experience the largest increases, 104%, 88%, and 76%, respectively, and Europe the least, only 10%.

Natural increase:

The population grows because of a high rate of natural increase, i.e., annual births greatly exceed deaths. The average 1975–80 rate of natural increase in the MDR is 6 per 1,000 population, but the rate in the LDR is more than three times that. A decline is expected in both regions in the rate of natural increase, and the gap between them is likely to narrow somewhat.

LDR-MDR population distribution:

The difference in birth rates and natural increase mean that the LDR share of the world's total population is growing steadily while relative numbers in the MDR drop: in 1975 the proportions were 72.9% and 27.1%, respectively; by 2000 they are expected to be 79.5% and 20.5%.

Age
composition:

When the total population is subdivided into three broad age groups (0-14, 15-64, and 65+), different growth trends emerge. The overwhelming cause of a change in age structure is the fertility rate. A drop in fertility has two obvious results: (i) the percentage of children falls, while that of the elderly rises, and (ii) intermediate age groups reach peak proportions and then decline, creating population waves.

Despite a numerical increase, as a general rule, the percentage of the total population made up by children is dropping in the world and in each major region. There are, however, substantial contrasts in the share of the total that they represent, as well as in the rate of decrease. Regions with high proportions of children have relatively low proportions of 15-64-year-olds - the "labour force source population." Similarly, where the percentage of children is high, the percentage 65+ is low, and vice versa. Nonetheless, the absolute number of "demographically aged" is increasing.

LDR-MDR
distribution
of age groups:

In 1975, 72.9% of the world's population was in the LDR, but their share of each age group was disproportionate: the LDR had 81.5% of the 0-14 age group, 69.8% of the 15-64, and 49.4% of the population 65 and over. Even though people in the MDR amounted to only 27.1% of the world total, over half the elderly lived there (50.6%).

By 2000, a larger percentage of every age group will be in the LDR than in 1975, but the disproportion of the age groups persists. The LDR will contain about 79.5% of the total world population, 86.0% of the 0-14 age group, 78.4% of the 15-64-year-olds, and 57.8% of the elderly.

Consequences
of age
structure:

Age structure determines a nation's manpower supply, which in turn influences government priorities. Projections indicate a net gain in the proportion of 15-64-year-olds under almost

every assumption. This growth of the "productive" sector could, in some measure, balance spending required for the other two groups, providing the absorptive capacity of the labour force is adequate.

TRENDS OF THE SCHOOL-AGE POPULATION

Total
school-age
population:

The world's school-age population, defined here to comprise the 6-23 age group, grows steadily under each variant projected. In 1975 this age group numbered 1.5 billion; the total in 1985 is expected to be between 1.75 and 1.78 billion, and by 2000, between 1.96 and 2.33 billion, depending on the variant.

At any time, the total school-age population constitutes over a third of humanity — in 1975 about 38%. By 1985 this proportion will have fallen slightly. And if the birthrate continues its rapid decline, by 2000 the proportion could drop to about 33%. Even if the birth rate conforms to the high variant, the proportion would continue to fall to about the 1960 level (35%). The size of the 6-23 age group and the proportion of the total population they represent differ greatly in the LDR and MDR.

LDR
school-age
population:

The 6-23 age group now makes up more than 40% of the LDR population. But although numbers continue to rise between 1975 and 2000, all variants show a decline in the proportion by 2000.

MDR
school-age
population:

The 6-23 age group never amounts to even a third of the MDR population, and by 2000 could constitute just a quarter. Moreover, only the high variant shows a moderate increase in numbers between 1975 and 2000.

Because of differences in the size of the total populations and the level of birthrates in the two types of region, the LDR share of the world's 6-23 age group is growing steadily. In 1975, 78.2% of them lived there, but by 2000 the proportion (according to the medium variant) will be 85.0%.

School-age
subgroups:

The total school-age population has been divided into three subgroups: 6-11, 12-17, and 18-23. Under every variant, the world totals of each subgroup increase constantly between 1975 and 2000. According to the medium variant, 6-11-year-olds will grow from 568 million to 774 million; 12-17-year-olds from 521 million to 724 million, and 18-23-year-olds from 449 million to 654 million — gains of 36%, 39%, and 46%, respectively.

LDR
school-age
subgroups:

Each of the three subgroups in the LDR is growing at a faster pace than in the world as a whole. The medium variant suggests 45%, 52%, and 63% increases in the respective groups from 1975 to the end of this century. Yet despite the uptrend, average annual rates of growth were higher between 1960 and 1975 than are projected by any variant, particularly for the two younger groups.

MDR
school-age
subgroups:

School-age population trends in the MDR differ significantly from those in the LDR. Instead of an uninterrupted rise, under every variant directions of each age group reverse at least twice during the forty years between 1960 and 2000. This is an effect of the earlier increase in fertility and births, the "postwar baby boom," in many MDR countries and the succeeding drop. By the late fifties or early sixties, total births in most countries had peaked. Family planning practices became more common, and as a result, the number of births decreased. However, the generation born during the baby boom will swell each successive age group.

Assumptions about future fertility have relatively more effect on the direction of school-age population trends in the MDR than in the LDR. Hence, the likelihood is strong that trends in many MDR, whose fertility rates are low, will be closer to the low variant.

Trends in
major
geographic
regions:

The school-age population in major geographic regions tends to conform to the type with which they are classified — MDR or LDR. But the extent of growth and the timing of changes differ. And there is a third pattern, an intermediate phase, in which past configurations follow the LDR, but the shape of the future is closer to the MDR.

Africa, Latin
America, and
South Asia:

The continuous increase of the school-age groups in Africa, Latin America, and South Asia is typical of the LDR. Africa is the only one of the three where under the medium assumption the size of each age group doubles between 1975 and 2000. Increases in Latin America and South Asia, compared with Africa, are much more moderate.

Oceania and
East Asia:

The school-age population in Oceania is an anomalous case. The largest subregion, Australia and New Zealand, contains more than three-quarters of Oceania's population. This subregion is classified among the MDR, yet the medium and high variants exhibit the school-age population pattern of the LDR.

East Asia is the reverse of Oceania — classified as an LDR, its school-age population trends follow the typical MDR waves. The region's demography is dominated by the People's Republic of China whose falling fertility rate and decreasing births have set the general pattern.

Northern
America,
Europe, and
the U.S.S.R.:

Projections for Northern America, Europe, and the U.S.S.R. display the familiar MDR wave pattern: the baby boom peak, a sharp decline, an upturn, and finally, another drop.

SOME IMPLICATIONS OF SCHOOL-AGE POPULATION TRENDS

School-age population patterns have practical consequences for enrolment, teachers, facilities, curriculum, school leavers,

finance, and government. LDR and MDR must be examined separately, because their population configurations are different, as is their stage of educational development.

Less Developed Regions

LDR
enrolment
ratios:

Despite demographic growth and economic problems, between 1960 and 1975 the LDR were able to increase the proportion of each age group enrolled. Age-specific enrolment ratios of the three school-age groups (6-11, 12-17 and 18-23) in the LDR (excluding the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia) increased from 47.3% to 61.3%; 22.2% to 35.4%, and 3.6% to 8.9%, respectively. Corresponding projected ratios for the year 2000 are 75.6%, 46.6%, and 15.1%.

LDR
enrolment:

This means that from 1960 to 1975, 6-11-year-old enrolment increased by about 100 million to a total of 198.5 million. If UNESCO's projection of a 75% enrolment ratio for this age group by 2000 is to materialize, a further 205 million will have to be enrolled - and even then, roughly 130 million children would not be in school. Some relief for the education system would result if future fertility follows the low variant. However, for at least a dozen years a change in fertility can have no effect on the size of the 12-17 and 18-23 age groups. Consequently, projected levels of enrolment cannot be reached without a significant increase in enrolment ratios. UNESCO projects a rise in 12-17-year-old enrolment from 97 million in 1975 to 227 million in 2000, which is a gain of more than 130%. The largest relative increase is the projected 229% jump for the 18-23 age group from 19.6 million to 64.4 million.

The greatest efforts will have to be made in Africa, Latin America, and South Asia, because of their low enrolment ratios and/or fast-growing school-age populations.

Statistical
observations
about LDR:

Proportionally, fewer girls than boys are enrolled, but a reduction of this inequality is projected for each age group, though even among 6-11-year-olds an 11 percentage point difference between the male and female enrolment ratios is expected for 2000.

The problem of dropouts remains serious in that an estimated 30% of the pupils who were in Grade 1 in 1970 did not reach Grade 2, and only 45% of the original number stayed till Grade 5.

In 1976, the LDR, with large school-age populations, devoted only 4.1% of their GNP to public education. This is 1.9 percentage points less than the share of GNP taken by education in the MDR (6% in 1976).

Although the proportion illiterate is declining, because of population growth, the absolute number is rising. By 1980 world illiteracy will total an estimated 814 million adults, the overwhelming majority of them in the LDR. Since fewer women have been and are enrolled, the female illiteracy rate is higher.

An additional impediment to education is that more than 70% of the people in the LDR live in rural areas, a significant proportion of which are remote and lack adequate transportation and communications.

Teachers:

Scarce financial resources combined with the growing population have meant that there are insufficient qualified teachers in many countries to provide basic education, not only to school-age children, but also to illiterate adults.

More Developed Regions

While all three school-age groups in the LDR increase steadily between 1960 and 2000, MDR trends fluctuate. The population waves have produced "roller coaster" enrolment that has disrupted the education systems.

Background: Primary education has long been compulsory in the MDR. In 1960 around 91% of the 6–11 age group were enrolled, amounting to about 98 million children. The number of pupils in this age group increased to more than 106 million in 1970, close to the all-time baby boom high, and the enrolment ratio rose to 92.9%. By 1975 enrolment was following the downtrend of the 6–11 population and stood at 101 million.

The baby boom children eventually increased enrolment at the secondary and tertiary levels; moreover, the economic climate after the Second World War favoured expansion. Enrolment of 12–17-year-olds rose from 67 million in 1960 to 97 million in 1975. The corresponding enrolment ratios of the 12–17 age group were 73.2% and 83.9%; by the end of the century more than 90% are expected to be in school.

An increasing number of secondary graduates automatically boosted third level enrolment. Tertiary attendance was also stimulated by the need for more secondary school teachers, the buoyant economy, and scientific and technological advances. In 1960 enrolment of the 18–23 age group totalled 13.4 million, which represented an enrolment ratio for this age group of 15.3%. By 1975 enrolment had risen to 33.4 million and the ratio to 30.1%. The UNESCO projections envision an enrolment ratio around 40% in 2000.

Primary enrolment: The annual increase that used to be the norm at the primary level no longer occurs, and in fact, numbers are still falling along with the 6–11 age group. After a few more years of contraction, enrolment is expected to rise again. If the medium population variant proves correct, enrolment will peak in the mid-nineties above the previous high. The school system will feel new pressure, but it will be short-lived, for another population drop is projected. If the low variant turns out to be accurate, the increase in the second part of the eighties will be moderate.

Secondary
enrolment:

With a six-year time-lag, the 12-17 age group takes the same route, and so does secondary enrolment. However, because attendance up to age 17 is seldom compulsory, and even though many students stay in the system beyond the mandatory age, enrolment is somewhat less than the relevant age group. An individual's decision to stay in school may be influenced by employment opportunities. On the one hand, a thriving job market could induce students to drop out, and on the other, when employment is scarce, they might tend to remain longer in school. Nonetheless, as a general rule, secondary enrolment in the MDR parallels trends of the 12-17 age group.

The "ups and downs" of primary and secondary enrolment do not coincide: as the former declines, the latter rises, and vice versa.

Tertiary
enrolment:

Third level enrolment is an even more complex phenomenon to analyse. Although most full-time students are between 18 and 23 years old, trends of this age group have less formative impact on tertiary enrolment than does the younger population on earlier levels, because enrolling in higher education is discretionary.

UNESCO projects a steady rise in the enrolment ratio at this level, which counterbalances the coming decline in the population. But since tertiary enrolment is strongly affected by economic and social conditions, the ratio may not increase as projected. The reason is an adverse job market for young people, including university graduates, in many industrialized countries where demand for degrees and diplomas in some disciplines has faded.

Teachers:

When the baby boom hit the education system, an unprecedented number of teachers were required. The variety of subjects taught proliferated to such an extent that the teaching force grew at an even faster pace than enrolment. With their professional

skills at a premium, teachers' salaries rose, and they were able to obtain benefits like job security, lighter teaching loads, etc.

One result of these developments was a lower student/teacher ratio. Declining enrolment will reduce this ratio further, because teachers cannot be released proportionately. Certain subjects must be taught whatever the size of the class; and the number of academic nonteaching personnel is relatively insensitive to enrolment fluctuations.

However, actual and impending declines in primary and secondary enrolment make some layoffs unavoidable. Therefore, each year opportunities for new teachers get narrower, more teachers become unemployed, and consequently, their propensity to change jobs lessens. Furthermore, the median age of the teaching force is now relatively low, so few chances for promotion are opened up by retirements.

Nonetheless, the enrolment drop could be followed by an increase. If adequate provision is not made, qualified teachers might be scarce, and the standard of education could suffer.

School buildings:

Massive construction was necessary in the postwar period to accommodate the ever-growing number of students at each successive level. Then, when primary enrolment started to decline, surplus space became a problem, as did the rising cost per student. Strategies that have been proposed to deal with the situation include:

- Extension of special education services.
- Inter-level sharing of facilities (a stop-gap measure at best, which may be possible only during the few years when the primary slump coincides with the secondary hump, and vice versa).
- School closure and busing (with skyrocketing gasoline prices, not necessarily a saving).
- Conversion to an alternate use.

Ultimately, authorities have to decide at what point enrolment has dropped so low as to justify closure or conversion — but their decision must be tempered by the possibility that the school could be needed again in a few years if enrolment rises.

Finance:

During the baby boom explosion, education expenditures increased at a faster rate than enrolment: teachers' salaries rose, student/teacher ratios fell, and facilities and programs were constantly expanded. Total spending, as a percentage of the GNP, grew till the mid-seventies. As enrolment declines, this proportion is expected to level off or fall, but much more slowly, for expenditures cannot be pared in proportion to enrolment. In fact, during an enrolment decline, on a per student basis, education becomes more expensive, even in constant terms, because:

- Maintenance and administration must continue.
- The student/teacher ratio is usually lower.
- Average wages tend to rise because few new teachers are hired, and layoffs are likely to affect younger ones with less seniority and experience whose earnings are lower.
- The shift in the relative weight of enrolment from the primary and secondary to the more expensive tertiary level adds to unit costs.

Thus, any savings that might accrue from reduced enrolment tend to be offset by rising unit costs; when the next upturn occurs more resources will be needed, probably amounting to a larger share of GNP.

School
leavers:

Students today have to stay in school longer than did their counterparts decades ago, largely because the prerequisites for nearly every job have increased. Most occupations have become more complex, and new technology has led to the creation of others. Over the last decade young people have entered the labour market in unusually large numbers. Therefore, competition

is keen, and employers frequently have the luxury of choosing among several well-qualified candidates.

Current high numbers of school leavers coupled with a slowdown in economic growth have resulted in youth unemployment or underemployment in some countries. The situation of university graduates, in particular, has been worsened by shrinking opportunities in two major sectors: the education industry and government. Both have restricted hiring – the former because of falling enrolment, and the latter, to restrain mounting government expenditures.

Government: Governments furnish the bulk of the education budget in most countries. During the fifties and sixties, the growth of education spending was generally approved by taxpayers – rising enrolment justified the need for better teachers, buildings and equipment, particularly if the result of schooling was reasonably good career prospects.

Although the importance of education is still recognized, it does not enjoy the priority that it once did. Governments are responsible for other social services (family allowances, medical and hospital care, social security) and must invest in fields such as energy, environment, transportation, defence, etc. Consequently, efforts are under way to curb education expenditures.

CONCLUSION

This chapter has summarized past and future population trends, with specific emphasis on school-age groups. The synopsis of the effects of these trends on the education system covers only the most obvious ones; undoubtedly, the list could be lengthened, for the problems vary in number and degree by region and by country. This speculative discussion about potential implications of future population trends is

presented to alert policy-makers to situations that could arise, and to stimulate further discussion and research.

Population projections show only what is likely if the demographic assumptions are realized. Thus, any trend may be valid for just a few years, as it is possible for demographic conditions to undergo sudden, sharp reversals (e.g., the MDR fertility decline).

Nonetheless, authorities in education and government can take a big step toward coping with future problems by closely monitoring demographic change and updating their long-range population projections as new data become available.

Chapter 2

DEMOGRAPHIC FACTORS AFFECTING POPULATION CHANGE

Introduction

This chapter is designed to lay the groundwork for topics discussed later in the report. It has three specific purposes:

- To identify the demographic variables that affect population change.
- To explain the assumptions embodied in the projections.
- To outline past and projected trends so that readers will have some basis for choosing among the variants displayed in the charts.

The essential demographic determinants of population change are births, deaths, and migration. These variables influence the size of the total population, and also the age distribution.

However, sheer numbers of births, deaths, and migrants are meaningless unless they are related to the appropriate segment of the population. In other words, indicators must be created. Many countries have long collected comprehensive statistics, so historical changes can be monitored and there is a solid basis for projections. Nevertheless, in a study that includes all regions approximate measures must suffice.

Of the three demographic factors that influence the size of the school-age population, births have the greatest and most immediate impact. Two measures of the level of births are shown here: the total fertility rate¹ and the crude birth rate (births per 1,000 population).

¹The average number of children that would be born to each woman in a population if each were to live through her childbearing years (15-49) bearing children at the same rate as women of those ages actually did in a given year.

Infant deaths have a direct effect on early school enrolment. So because the central concern is the school-age population, the infant mortality rate (deaths per 1,000 live births) is also used as an indicator.

Changes in mortality — notably the general worldwide decline — are manifested most clearly in a lengthening of life expectancy. For this reason, life expectancy at birth has been selected for discussion rather than the crude death rate (deaths per 1,000 population).

Finally, migration trends are sketched briefly at the end of the chapter.

Fertility

Calculating the total fertility rate requires several demographic statistics: the exact number of births, the age of their mothers, and the size and age of the female population. Actual data for most areas are lacking; few countries in the LDR collect such statistics, and while many developed countries now use the fertility rate in their population studies, historical information is sometimes unavailable. Thus, all figures shown here are projected.

Speculating about fertility is the most difficult aspect of population projections, and the further in time the projection extends, the less certain is the fertility rate. The reason for this uncertainty is the difficulty of predicting human behaviour. In the postwar period alone, enough theoretical and empirical studies on the determinants of fertility have been written to fill a good-sized library. Some of the more frequently cited explanations of the rate in a particular area are:

- Availability of family planning advice.
- Social values (e.g., family-size norms).
- Tradition.
- Education. (As a general rule, the higher the level of education, the fewer the children; conversely, illiteracy tends to be associated with high fertility.)
- Religion.
- Increasing female labour force participation and the women's movement.

-Family economics, i.e., the cost of a child. (In traditional rural societies, children may make an essential contribution to the family's well-being through agricultural, hunting, handicraft, and similar pursuits. Parents, therefore, are motivated to have more children. On the other hand, in developed societies a child may be an economic burden, entailing additional expenditures for food and clothing. In addition, there may be another financial loss if the mother must give up her job.)

-Government policy. (Some governments that want to check population growth establish programs to discourage births, e.g., readily available family planning services; prohibition of marriage under certain ages; no free education, family allowances, or hospitalization benefits after the second or third child, etc. On the other hand, countries that believe their fertility rate to be unacceptably low have instituted financial incentives for childbearing, e.g., substantially greater family allowances for the third and later children, and long, paid maternity leave, etc.)

These are only some of the factors that can affect fertility, and opinions differ about the degree of influence of any single one. On the whole, the MDR exhibit fewer variations in the level of fertility, as well as in its determinants, than the LDR.

During the 1975-80 period, the world's total fertility rate was 4.0 (2.0 in the MDR, 4.8 in the LDR). The subregion with the highest rate was Western Africa at 6.8. Western Europe's 1.6 was lowest of all the subregions. The countries with the highest and lowest rates were Kenya (8.1) and the Federal Republic of Germany (1.4).

The United Nations assumes that in the long run fertility rates in all regions will approach the replacement level (2.1 to 2.5 children per woman). This would mean a rise in most of the MDR and a decline in the LDR. However, in some regions where current rates are high (e.g., Africa), the anticipated reduction may take two or three generations.

Table 2-1 shows the five-year averages of the fertility assumptions for the world and its major regions. At the global level, according to this projection, toward the end of the century each woman will be having about one child less than did women in the second half of the seventies. The difference between the MDR and LDR is expected to narrow from 2.8 to 1.2 children per woman (medium variant). In the LDR, by 2000 East Asia is projected to have the lowest fertility, i.e., the same as Europe and Northern America,

Table 2-1. Projected total fertility rates,¹ by major region, high, medium and low variants, selected years, 1975 to 2000²

	(H = high variant; M = medium variant; L = low variant)								
	1975-80			1985-90			1995-2000		
	H	M	L	H	M	L	H	M	L
World	4.1	4.0	3.9	3.8	3.6	3.2	3.5	3.1	2.6
More developed regions	2.1	2.0	2.0	2.3	2.1	1.8	2.4	2.2	1.9
Less developed regions	4.9	4.8	4.6	4.3	4.0	3.6	3.8	3.4	2.8
Africa	6.4	6.4	6.3	6.2	5.9	5.4	5.5	4.9	3.9
Latin America	5.0	4.9	4.7	4.8	4.4	3.8	4.5	3.9	3.1
Northern America	2.0	1.8	1.7	2.5	2.0	1.7	2.6	2.1	1.7
East Asia	3.2	3.0	2.9	2.4	2.3	2.0	2.2	2.1	1.8
South Asia	5.7	5.5	5.4	5.0	4.6	4.3	4.0	3.5	3.1
Europe	2.0	2.0	2.0	2.1	2.0	1.8	2.3	2.1	1.8
Oceania	2.9	2.8	2.8	2.9	2.6	2.4	2.8	2.5	2.1
USSR	2.4	2.4	2.4	2.5	2.4	2.2	2.5	2.3	2.1

¹ Expressed as average number of children that would be born to each woman in a population if each were to live through her childbearing years (15-49) bearing children at the same rate as women of those ages actually did in a given year.

² Five-year averages.

Source: United Nations, Department of International Economic and Social Affairs, Population Division, Selected Demographic Indicators by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978 (ST/ESA/SER.R/38), forthcoming.

which are somewhat below the overall MDR level. But during the next two decades, the largest drop in fertility is expected for South Asia. Per woman, at the end of this century, the most children would still be born in Africa (between 4 and 5), and in South Asia and Latin America (between 3 and 4).

Crude Birth Rate

Because historical data about fertility are unavailable for many regions, an alternate indicator, the crude birth rate, is used to demonstrate past trends. It is a less precise measure of actual and potential reproduction than fertility, as it is influenced by the composition of the total population. It can be affected by the number of children and elderly people — groups who have yet to enter or who have already passed their reproductive years. Thus, two countries with the same fertility rate can have different crude birth rates. To illustrate, suppose countries "A" and "B" have the same total fertility rate, but in "A" the proportion of the population under 15 and over 49 is much greater than in "B". Thus, the crude birth rate in "A" will be lower than in "B". Nevertheless, for international comparisons the crude birth rate is an acceptable measure.

Table 2-2 presents the crude birth rate in selected years for the world and its major regions. The first three columns contain estimates for the past; the projections in the next three columns were based on the population as assessed in 1978. Averages of the variants are shown for 1975-80, 1985-90, and 1995-2000.

A definite downtrend is obvious — the world's crude birth rate fell from 35.6 in the early fifties to an estimated average of 28.9 for the medium variant in 1975-80. Hence, today almost 7 fewer children per 1,000 population are being born. Even so, twenty-five years ago the MDR birth rate was still lower than the current level in most LDR. Between the early fifties and the second part of the sixties, the MDR rate dropped faster than it has since. Because Europe's birth rate was the lowest, the decline there was least pronounced. Of all the MDR, Northern America had the sharpest reduction since the fifties — about 10 children per 1,000 population.

Table 2-2. Crude birth rate,¹ by major region, high, medium and low variants, selected years, 1950 to 2000²

Region	Estimated			Projected								
	1950-55	1965-70	1970-75	1975-80			1985-90			1995-2000		
				H	M	L	H	M	L	H	M	L
World	35.6	31.9	30.3	29.7	28.9	28.1	28.8	27.1	24.9	25.9	23.8	21.0
More developed regions	22.7	17.8	16.7	16.1	15.6	15.2	17.3	15.7	14.2	16.5	14.9	13.2
Less developed regions	41.8	37.7	35.5	34.5	33.6	32.7	32.3	30.6	28.2	28.4	26.2	23.1
Africa	48.1	46.9	46.1	46.1	46.0	45.5	44.6	42.9	40.1	39.9	36.9	31.2
Latin America	41.4	38.0	36.3	36.3	35.4	34.2	36.5	33.0	29.6	33.1	29.6	25.1
Northern America	25.0	18.3	15.8	16.8	15.3	14.1	20.2	16.6	14.3	17.3	14.2	11.9
East Asia	37.7	28.4	25.5	22.7	21.7	20.8	20.0	19.3	17.1	17.9	17.3	15.4
South Asia	43.2	42.6	40.5	39.9	38.9	37.8	36.3	34.1	32.1	30.3	27.8	25.5
Europe	19.8	17.6	15.8	14.7	14.5	14.2	15.4	14.4	13.2	15.6	14.5	12.8
Oceania	27.6	24.5	25.1	21.9	21.6	21.3	22.4	20.5	18.8	20.6	18.8	16.7
USSR	26.3	17.6	17.8	18.4	18.3	18.3	19.4	18.2	16.9	17.5	16.4	15.2

¹Per 1,000 population.

²Five-year averages.

Source: United Nations, Department of International Economic and Social Affairs, Population Division, World Population Trends and Prospects by Country, 1950-2000: Summary Report of the 1978 Assessment (ST/ESA/SER.R/33), 1979.

The falling birth rate in the LDR is more significant because the majority of the world's population (72.9% in 1975) live there. Most of the decline is attributable to the drop in East Asia, which includes the country with the largest population, i.e., the People's Republic of China. Estimates suggest that in the last twenty-five years East Asia's birth rate fell more steeply than that in any other major region — from 37.7 to 21.7 children per 1,000 population. In contrast, a slower reduction occurred in Africa: from 48.1 to 46.0, so the greatest growth of the school-age population can be expected there.

Chart 2-1 shows the crude birth rate in the past and the three variants projected for the future for the world and the MDR and LDR. The downtrend persists, but the wide range between variants illustrates the difficulty of projecting future birth rates. (In Table 2-2, "M", the medium variant, is assumed to be most likely.)

Chart 2-2 shows the 1975-80 averages of the three variants of the crude birth rate projected for the world and its major regions. Differences between major regions, and between the high, medium, and low variants for each region are obvious. The highest LDR rates (Africa) were about three times the lowest MDR rates (Europe). For the LDR as a whole, a 1.8 gap separated the high and low variants — exactly double the 0.9 range between the high and low MDR variants. By major region, the least difference between variants was shown for the U.S.S.R. (0.1), while Northern America had the greatest (2.7).

What the birth rate actually turns out to be is critical. For instance, in Northern America, the high instead of the low variant would mean at least 650,000 more births a year; in East Asia, around 2 million more.

Of course, crude birth rates vary by subregion and by country. For example, the 1975-80 estimate of the medium variant ranged from 49.0 in Western Africa to 11.8 in Western Europe; the countries with the highest and lowest values for the same period were Kenya (53) and the Federal Republic of Germany (9).

Mortality

In the past, mortality was a prime determinant of population growth, especially in the LDR. Because of improvements in socio-economic conditions and medical technology, mortality has declined substantially.

Chart — 2-1

Crude Birth Rates, World, More and Less Developed Regions, 1950-55 to 1995-2000
(Five-year averages)

Rate per 1,000 population
44 —

Rate per 1,000 population
44 —

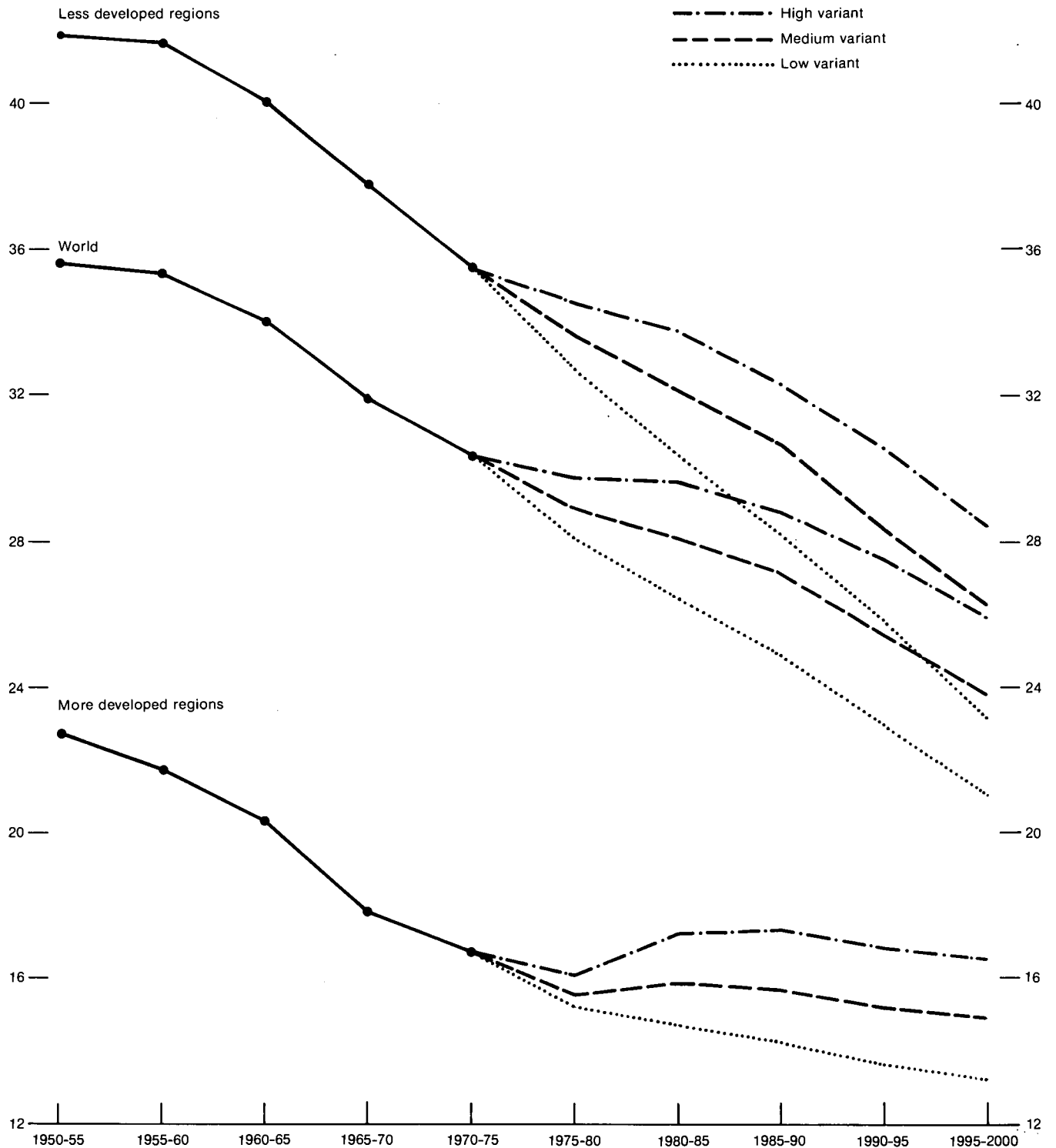
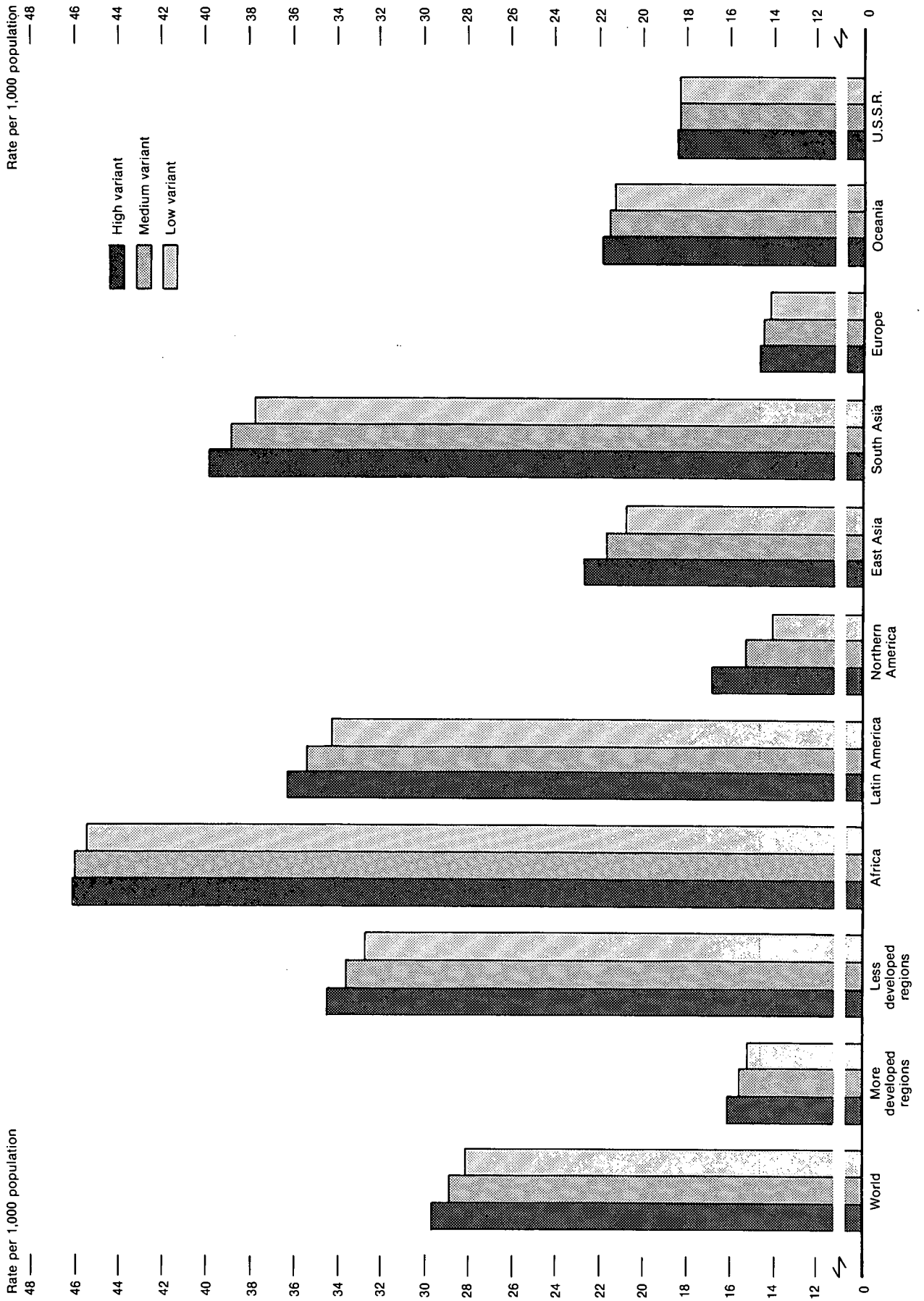


Chart — 2-2

Crude Birth Rates, World and Major Regions, Projected 1975-80 Average



Infant Mortality

The U.N. population projections show only the crude death rate, which includes infant deaths, but because this report concentrates on the education age groups, infant mortality is considered more relevant. In some regions it has a strong effect on the future number of primary school pupils: globally, nearly 100 of every 1,000 children die before their first birthday. If this rate were lowered, the school-age population would increase.

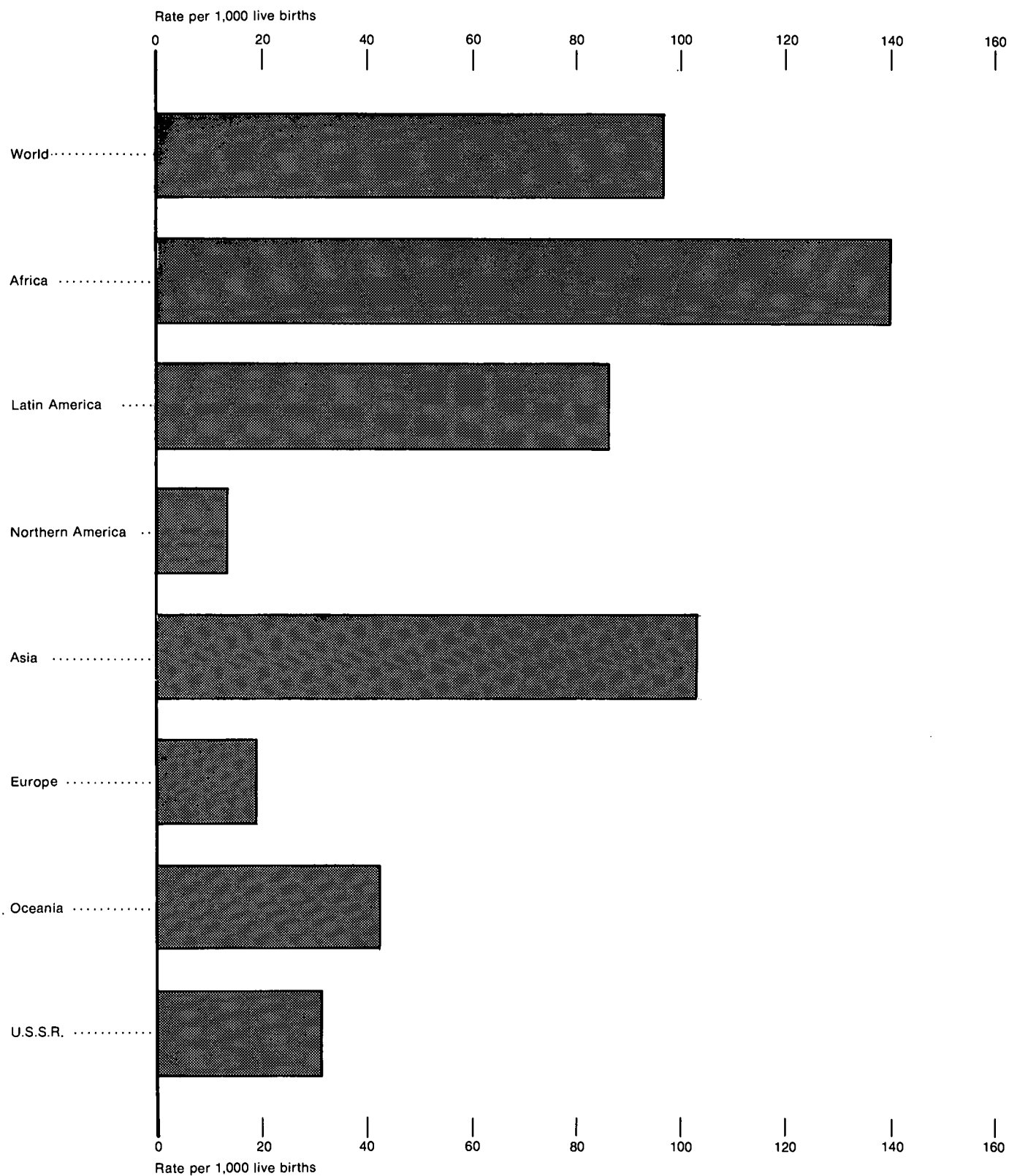
Chart 2-3 compares infant mortality in the major regions, and Table 2-3 gives the subregional figures shown in the 1980 World Population Data Sheet.

Table 2-3. Infant mortality rates, by region, late seventies
(per 1,000 live births)

World	97		
Africa	140	Asia	103
Northern Africa	121	Southwest Asia	117
Western Africa	159	Middle South Asia	137
Eastern Africa	132	Southeast Asia	96
Middle Africa	167	East Asia	51
South Africa	101		
Latin America	85	Europe	19
Middle America	72	Northern Europe	13
Caribbean	72	Western Europe	12
Tropical South America	98	Eastern Europe	23
Temperate South America	44	Southern Europe	24
Northern America	13	Oceania	42
		U.S.S.R.	31

Regional differences are marked. For example, the rate in Middle Africa was almost 13 times that of Northern Europe. The country with the highest infant mortality rate, 226, was Afghanistan, located in Middle South Asia. Sweden in Northern Europe had the lowest rate, 8.

Chart — 2-3

Infant Mortality Rates, World and Major Regions, Late Seventies

Life Expectancy at Birth

Life expectancy is rising in every region. Table 2-4 reveals that at the beginning of the fifties it was longest in Northern America, so later advances there were relatively slower. Between 1950-55 and 1965-70, the U.S.S.R. made the largest gain of all the MDR, 8.3 years.

The LDR are gradually approaching the MDR level. In 1950-55, around 23 years separated them; by 1975-80, the disparity had been reduced to about 17 years. East Asia had the greatest lengthening of life expectancy, from about 48 to 65 years.

In the U.N. projections, LDR life expectancy is raised a maximum of 2.5 years during each five-year interval until an acceptable level is reached, and thereafter the rate of improvement is gradually reduced. For the MDR a further increase is anticipated, but not as great. In any case, life expectancy will lengthen in each LDR at a quicker pace than in the MDR, with a resultant narrowing of the gap between them. Yet, if conditions do not improve more rapidly than the U.N. assumed, by the turn of the century Africa's average would be less than 60; in South Asia it would hover near 60, and in Latin America and Oceania, near 70. Life expectancy in the other major regions would be 70 or more, with the highest in Northern America and Europe, over 74.

Variations by subregion and country are great: the longest life expectancy was Northern Europe, with an average of 72.9 for 1975-80, and the lowest, in Middle Africa with 45.1; by country, Norway, Sweden, Iceland, and Japan had achieved the highest level with over 75, while Afghanistan had the lowest with 37.

Migration

International movement has particular significance for the school-age population. Those who cross international boundaries are predominantly young adults — either parents with small children or potential parents, so their numbers could affect future enrolment. However, information about

Table 2-4. Life expectancy, by major region, high, medium and low variants, selected years, 1950 to 2000¹

	Estimated		Projected											
	1950-55	1965-70	1975-80				1985-90				1995-2000			
			H	M	L	H	M	L	H	M	L	M	H	L
World	47.2	54.2	57.9	57.4	57.1	61.8	61.0	60.1	65.2	64.4	63.3			
More developed regions	65.2	70.5	71.9	71.9	71.8	72.8	72.8	72.8	73.6	73.6	73.6			
Less developed regions	42.5	51.0	55.6	55.1	54.6	60.0	59.1	58.1	64.0	63.0	61.7			
Africa	37.4	44.4	49.0	48.7	48.3	54.1	53.3	52.2	59.1	57.9	56.2			
Latin America	52.0	59.3	64.4	63.4	63.4	66.8	66.8	66.8	69.7	69.7	69.6			
Northern America	69.0	70.6	73.1	73.2	73.3	73.7	73.8	73.8	74.2	74.3	74.3			
East Asia	47.5	59.3	65.2	64.7	64.3	68.6	68.1	67.4	71.4	70.6	70.0			
South Asia	39.4	47.3	52.5	51.8	51.4	57.8	56.4	55.4	62.2	61.0	59.2			
Europe	65.4	70.5	71.9	71.9	71.9	73.2	73.2	73.2	74.2	74.2	74.2			
Oceania	60.8	64.5	65.7	65.7	65.7	68.2	67.7	67.1	70.2	69.8	68.8			
USSR	61.7	70.0	69.6	69.6	69.6	70.5	70.5	70.5	71.4	71.4	71.4			

¹Five-year averages.

Source: United Nations, Department of International Economic and Social Affairs, Population Division, Selected Demographic Indicators by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978 (ST/ESA/SER.R/38), forthcoming.

international movement is seriously deficient, and even countries in the MDR lack reliable emigration statistics. Furthermore, it is affected by political events and administrative factors, which are impossible to predict. Consequently, net migration data are an educated guess, at best. The U.N. projections assume a general slowdown in interregional migration by the end of the century. This reflects the world's rapidly diminishing frontier areas, as well as the increasing uncertainty of projections of this variable, the further they are made into the future.

Chapter 3

TRENDS AND COMPOSITION OF THE TOTAL POPULATION

Introduction

This chapter has two purposes:

- To show how the total population of the world increased over the past twenty-five years, and to indicate expectations to the turn of the century.
- To examine the changing size of three broad age groups: 0-14, 15-64, and 65+.

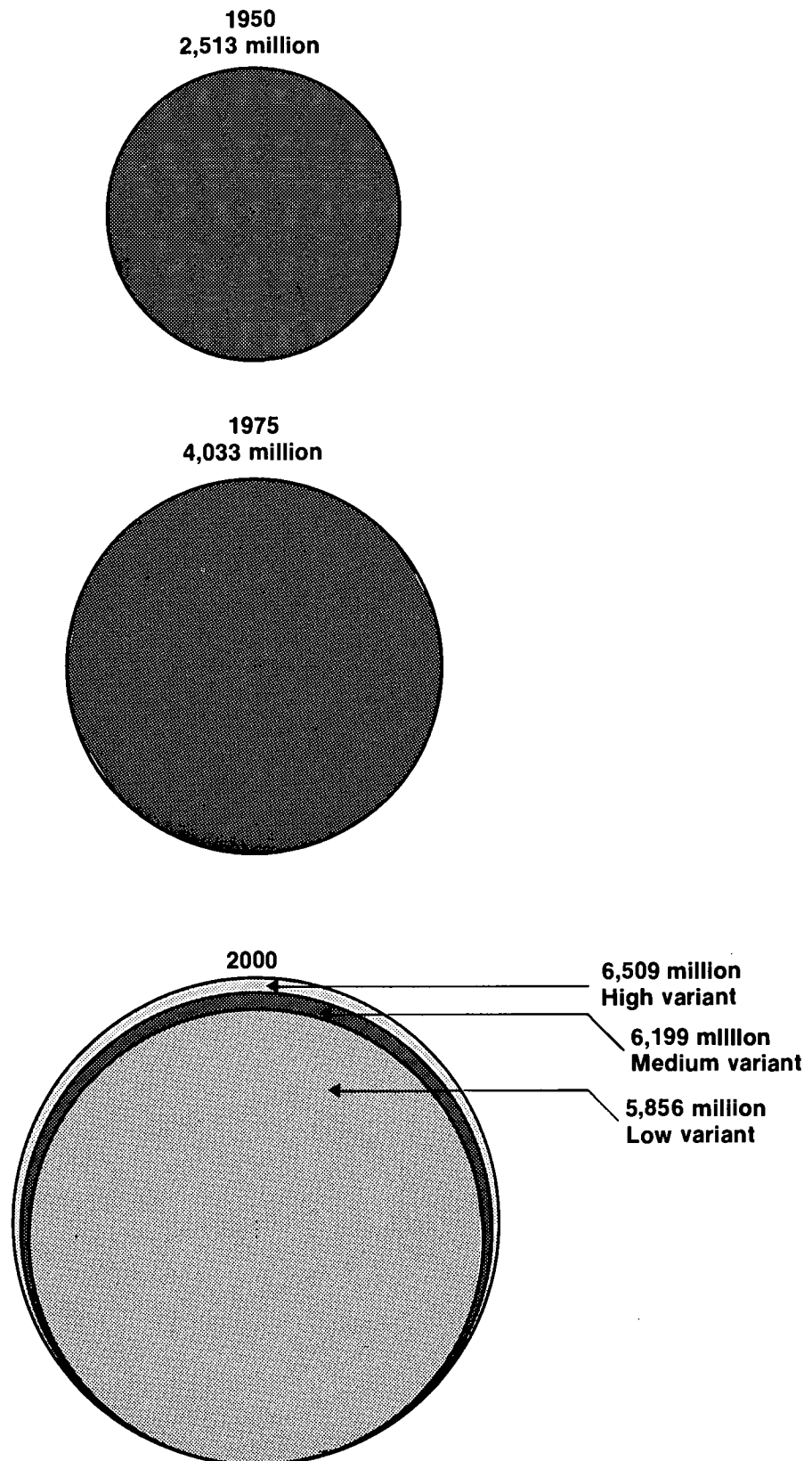
A chapter about the total population may seem out of place in a study that concentrates on school-age groups, but the future size and composition of the entire population are crucial in social and economic planning. Without a reasonable idea of overall demographic trends, no government can anticipate the demand for and arrange the supply of public services, education being essential among them. Thus, this chapter deals briefly with the "economically active" and the elderly populations, as well as with children.

World Population Growth

The world's total population is rising steadily. Estimates placed it at 2.5 billion in 1950, and by 1975, 4 billion — about a 60% gain. Growth is expected to continue, but at a slower pace. Chart 3-1 shows the world totals for 1950 and 1975, and the three variants projected for 2000: the total for the medium variant is 6.2 billion; for the low variant, 5.9 billion, and for the high variant, 6.5 billion.

Why is the world population expected to increase by about 2.2 billion (medium projection) in the next quarter century when one of the main assumptions is a drop in the birth rate? The answer to this apparent paradox is the faster decline of the death rate. Table 3-1 shows the rate of natural increase (the excess of births over deaths per 1,000 population). It went from 17.3 in

Chart — 3-1

Total Population, World, 1950, 1975 and 2000

1950–55 to an estimated average of 17.6 for 1975–80. The rate is expected to decrease in most regions by 2000, but births will still outnumber deaths. Therefore, at least to the beginning of the twenty-first century, the population of all regions will continue to rise.

Table 3–1. Rate of natural increase per 1,000 population, world, more and less developed regions, selected years, 1950 to 2000¹

	1950–55	1975–80	1995–2000		
	Estimated	M	H	M	L
World	17.3	17.6	17.6	15.1	11.8
More developed regions	12.6	6.2	6.6	4.8	2.8
Less developed regions	19.6	21.6	20.6	17.9	14.3

¹Five year averages.

Source: Based on United Nations Department of International Economic and Social Affairs, Population Division, World Population Trends and Prospects by Country, 1950–2000: Summary report of the 1978 assessment, ST/ESA/SER.R/33. New York, United Nations, 1979

Between 1950 and 2000, the world population is expected to increase 147%: in the LDR from 1.7 billion to 4.9 billion, a 193% gain, and in the MDR from 832 million to 1.3 billion, only a 53% gain. As a percentage of the world's total, the LDR increased from 66.9% in 1950 to 72.9% in 1975, and are expected to comprise well over three-quarters (79.5% according to the medium variant) by the turn of the century (Chart 3–2).

Population Growth in Major Regions

Every major region has experienced population growth, and it is projected to continue in the future, although at different rates. Table 3–2 shows past and expected totals, percentage increases over time, and the percentage

Chart — 3-2

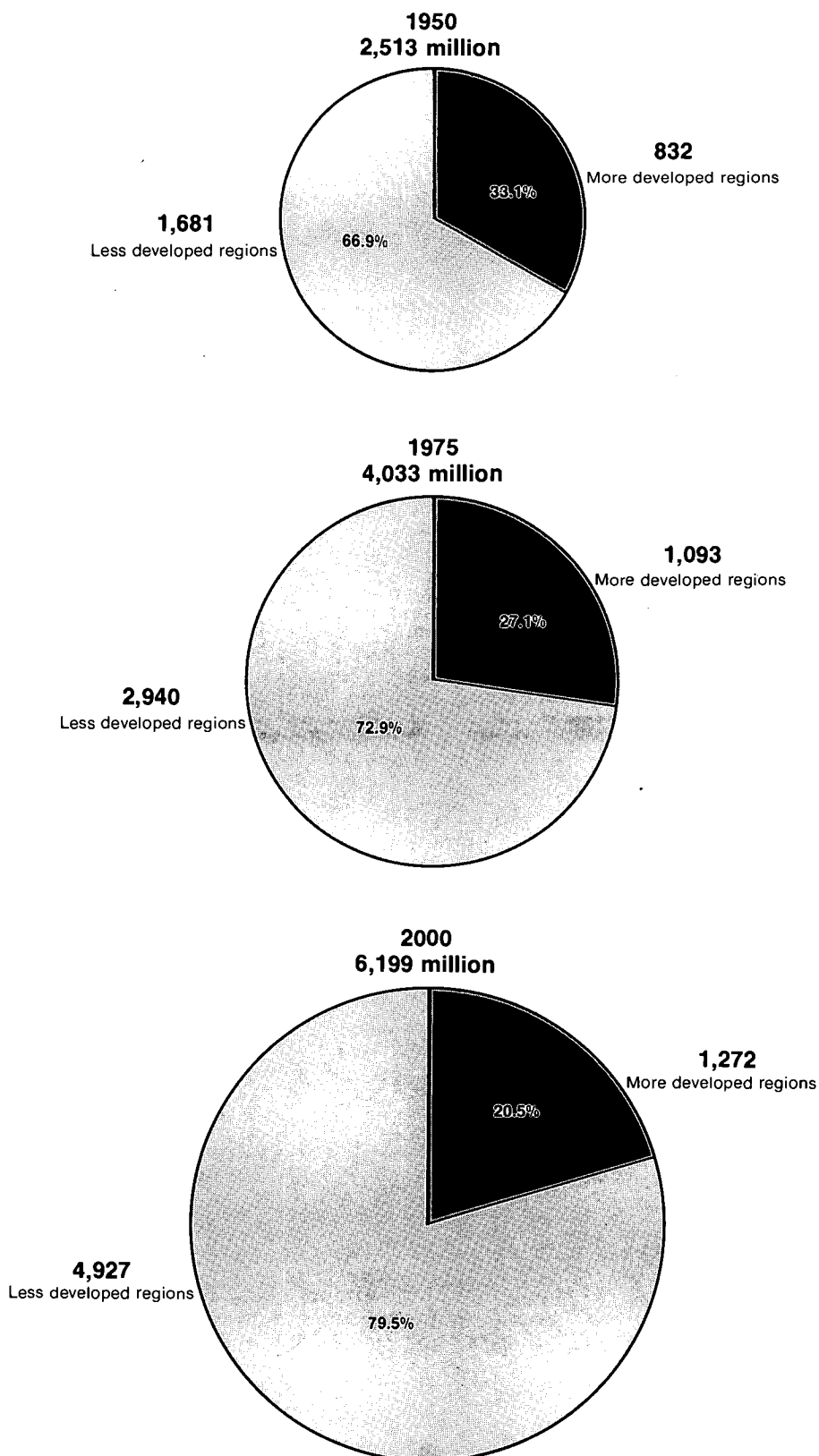
Percentage Distribution of World Population between More and Less Developed Regions, Medium Variant, 1950, 1975 and 2000

Table 3-2. Total population, percentage increase, and percentage distribution, by major region, 1950, 1975 and 2000

Total population					
Region	1950 estimated	1975	2000		
		M	H	M	L
		Millions			
Africa	219	406	868	828	761
Latin America	164	323	645	608	563
Northern America	166	236	314	289	273
East Asia	673	1,063	1,452	1,406	1,341
South Asia	706	1,255	2,348	2,206	2,081
Europe	392	474	531	520	505
Oceania	13	22	31	30	28
USSR	180	254	320	312	304
World	2,513	4,033	6,509	6,199	5,856
More developed regions	832	1,093	1,319	1,272	1,229
Less developed regions	1,681	2,940	5,190	4,927	4,627

Percentage increases during periods indicated

Region	1950-75	1975-2000			1950-2000
		H	M	L	M
		Percentage			
Africa	85	114	104	87	278
Latin America	97	100	88	74	270
Northern America	42	33	23	16	74
East Asia	58	37	32	26	109
South Asia	78	87	76	66	212
Europe	21	12	10	7	33
Oceania	62	48	43	27	131
USSR	41	26	23	20	73
World	60	61	54	45	147
More developed regions	31	21	16	12	53
Less developed regions	75	76	68	57	193

Percentage distribution

Region	1950		1975		2000			
	%	Rank order	%	Rank order	H	M	L	Rank order
Africa	8.7	4	10.1	4	13.3	13.4	13.0	3
Latin America	6.5	6	8.0	5	9.9	9.8	9.6	4
Northern America	6.6	7	5.9	7	4.8	4.7	4.7	7
East Asia	26.8	2	26.3	2	22.3	22.7	22.9	2
South Asia	28.1	1	31.1	1	36.1	35.5	35.5	1
Europe	15.6	3	11.8	3	8.2	8.4	8.6	5
Oceania	0.5	8	0.5	8	0.5	0.5	0.5	8
USSR	7.2	5	6.3	6	4.9	5.0	5.2	6
World	100.0		100.0		100.0	100.0	100.0	
More developed regions	33.1		27.1		20.3	20.5	21.0	
Less developed regions	66.9		72.9		79.7	79.5	79.0	

Note: Due to rounding, detail may not add to total.

Source: Based on United Nations, Department of International Economic and Social Affairs, Population Division, Selected Demographic Indicators by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978 (ST/ESA/SER.R/38), forthcoming.

distribution by region. From 1950 to 1975, numbers in Latin America nearly doubled, while in Africa and South Asia increases were 85% and 78%, respectively. Gains in these three regions were greater than the LDR average (75%), and Oceania's 62% was above the world average (60%). Europe made the smallest advance with 21%.

Between 1975 and 2000, only Africa's rate of growth is expected to accelerate. Under any assumption the percentage increase of population in Latin America and South Asia will also be above the LDR average, but the growth rate will be slower than that for the previous 25 years. Europe will exhibit the least change — a gain between 7% and 12%, depending on the variant.

Shifts in population distribution among the eight major regions are substantial. At the beginning of the fifties, the most populous were South Asia (706 million) and East Asia (673 million), followed by Europe (392 million) and Africa (219 million). By 1975 the only changes in rank order were that Latin America had moved from seventh to fifth, ahead of Northern America and the U.S.S.R., and these two regions had switched places.

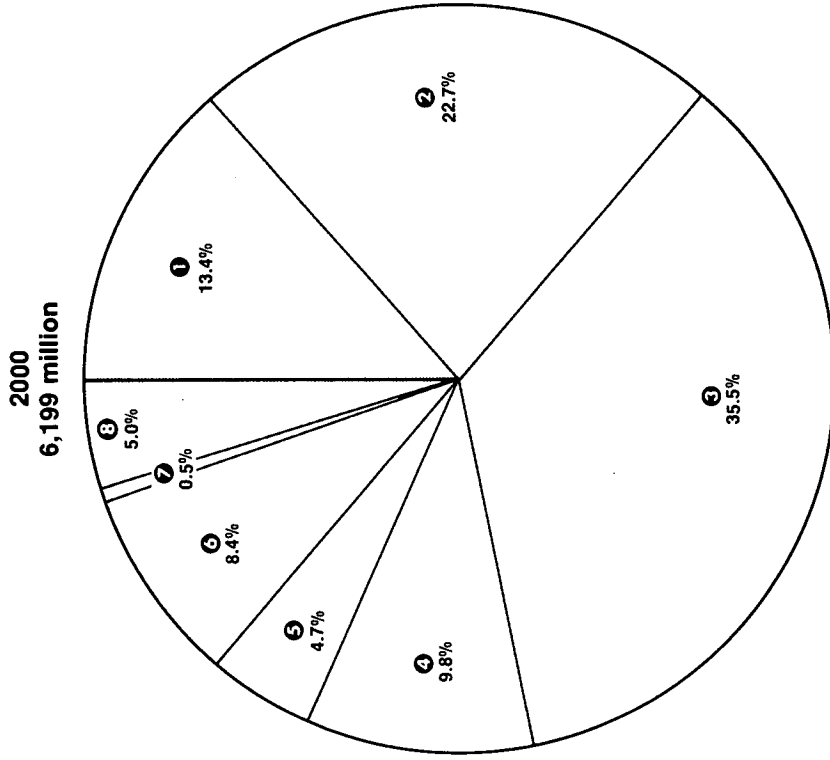
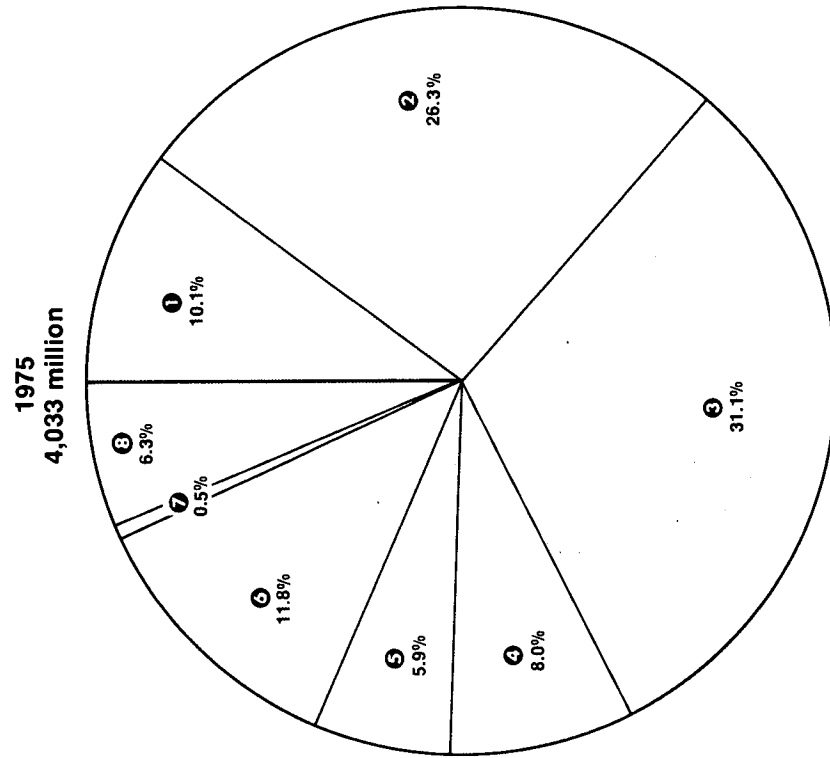
To the turn of the century, Asia will continue to account for well over half the world total; but significantly, while the 1950 Asian population was almost evenly divided between the East and South, half a century later about two-thirds are expected to live in the South. At that time, Africa is projected to rank third and Latin America fourth, followed by Europe, the U.S.S.R., Northern America, and Oceania. Changes in population distribution between 1975 and 2000 are illustrated in Chart 3-3. Subregional breakdowns of total population and estimated annual rates of growth, according to the three variants, are given in Appendix A.

Age Composition of the Total Population

In this section the population is divided into three broad age groups¹

¹ While sex composition is also vital to population analysis, lack of space prevents such a classification in this study. Population data by sex and five-year age groups are given in World Population and Its Age-Sex Composition by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978, prepared by the Population Division, Department of International Economic and Social Affairs of the United Nations Secretariat, ESA/P/WP.65, January, 1980.

Percentage Distribution of World Population among Major Regions,
Medium Variant, 1975 and 2000



- 1 Africa
- 2 East Asia
- 3 South Asia
- 4 Latin America
- 5 Northern America
- 6 Europe
- 7 Oceania
- 8 U.S.S.R.

whose numbers, rate of change, and share of the total will be examined. These groups are: 0-14 (children), 15-64 (the "economically active"), and 65+ (the "demographically aged").

Of the three major variables that affect the age profile of a population (fertility, mortality, and migration), fertility has the overwhelming influence. If fertility is high throughout the lifetime of a given cohort, they will have many children and still more grandchildren. As a result, decades later the original group will constitute only a small proportion of the total, even if they all survive to age 70. But should fertility decline, the proportion of elderly people will gradually rise.

The two most obvious effects of declining fertility on a population's age structure are:

- The percentage of young people falls, while that of elderly people increases.
- Intermediate age groups reach peak proportions and then decrease, i.e., population "waves" are created.

Because the world's fertility rate decreased while life expectancy lengthened, the age distribution has shifted toward the older group. This tendency is expected to continue throughout the projected period.

The contrast in age structure between the MDR and the LDR is striking, as can be seen from the following tables, which show figures for 1975 and 2000. Table 3-3 displays the medium variant of the size of the three age groups, and Table 3-4 shows what percentage of the population in the two types of region each age group constitutes.

In 1975 children made up less than a quarter of the total population in the MDR and more than 40% of the LDR. Nearly two-thirds of the people in the former were of working age (15-64), as against just over half in the LDR. The difference in the proportion of elderly is also pronounced: 10.6% in the MDR, but only 3.8% in the LDR. Significant modifications are expected during the next twenty-five years. The age structure of the two types of region will still differ, but a reduction in the margin between the proportions of the young and middle groups is anticipated, while that of the elderly cohort widens slightly.

Table 3-3. Population, by age group, world, more and less developed regions, medium variant, 1975 and 2000

	<u>1975</u>				<u>2000</u>			
	Total	0-14 (millions)	15-64	65+	Total	0-14 (millions)	15-64	65+
MDR	1,093	271	706	116	1,272	274	831	167
LDR	2,940	1,191	1,636	113	4,927	1,684	3,014	229
World	4,033	1,462	2,343	228	6,199	1,958	3,845	396

Note: Because of rounding, detail may not add to totals.

Table 3-4. Percentage of total population in specified age groups, world, more and less developed regions, medium variant, 1975 and 2000

	<u>1975</u>				<u>2000</u>			
	Total	0-14	15-64	65+	Total	0-14	15-64	65+
MDR	100.0	24.8	64.6	10.6	100.0	21.6	65.3	13.1
LDR	100.0	40.5	55.7	3.8	100.0	34.2	61.2	4.6
World	100.0	36.2	58.1	5.7	100.0	31.6	62.0	6.4

By 2000 the lower fertility rate will have affected the entire 0-14 age group, a small portion of the 15-64, and none of the elderly. Because fertility was already low in the MDR, the 0-14 age group there is reduced by only 3.2 percentage points; however, a sharp fertility decline is anticipated for the LDR, and accordingly, the young age group diminishes by 6.3 percentage points.

Table 3-5 shows the relative proportions of each age group in the two types of region.

Table 3-5. Percentage distribution of age groups between more and less developed regions, medium variant, 1975 and 2000

	<u>1975</u>				<u>2000</u>			
	Total	0-14	15-64	65+	Total	0-14	15-64	65+
MDR	27.1	18.5	30.2	50.6	20.5	14.0	21.6	42.2
LDR	72.9	81.5	69.8	49.4	79.5	86.0	78.4	57.8
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

In 1975, 72.9% of the world's 4 billion people were in the LDR, 27.1% in the MDR. This distribution did not apply to the broad age groups. The LDR had a disproportionately small share of the 15-64 age group (69.8%), but the most conspicuous disparity between the two types of region was the 65+ group. More than half (50.6%) the world's elderly lived in the MDR, although these regions accounted for just over a quarter of the total world population.

Proportions are expected to change by 2000 (Chart 3-4). The LDR have an even greater majority of the world's people (79.5%), making gains in every age group. The relative distribution of the elderly reverses: the LDR are projected to contain more than half the 65+ age group - a rise of 8.4 percentage points over 1975.

Table 3-6 gives the percentage increases expected in the age groups between 1975 and 2000.

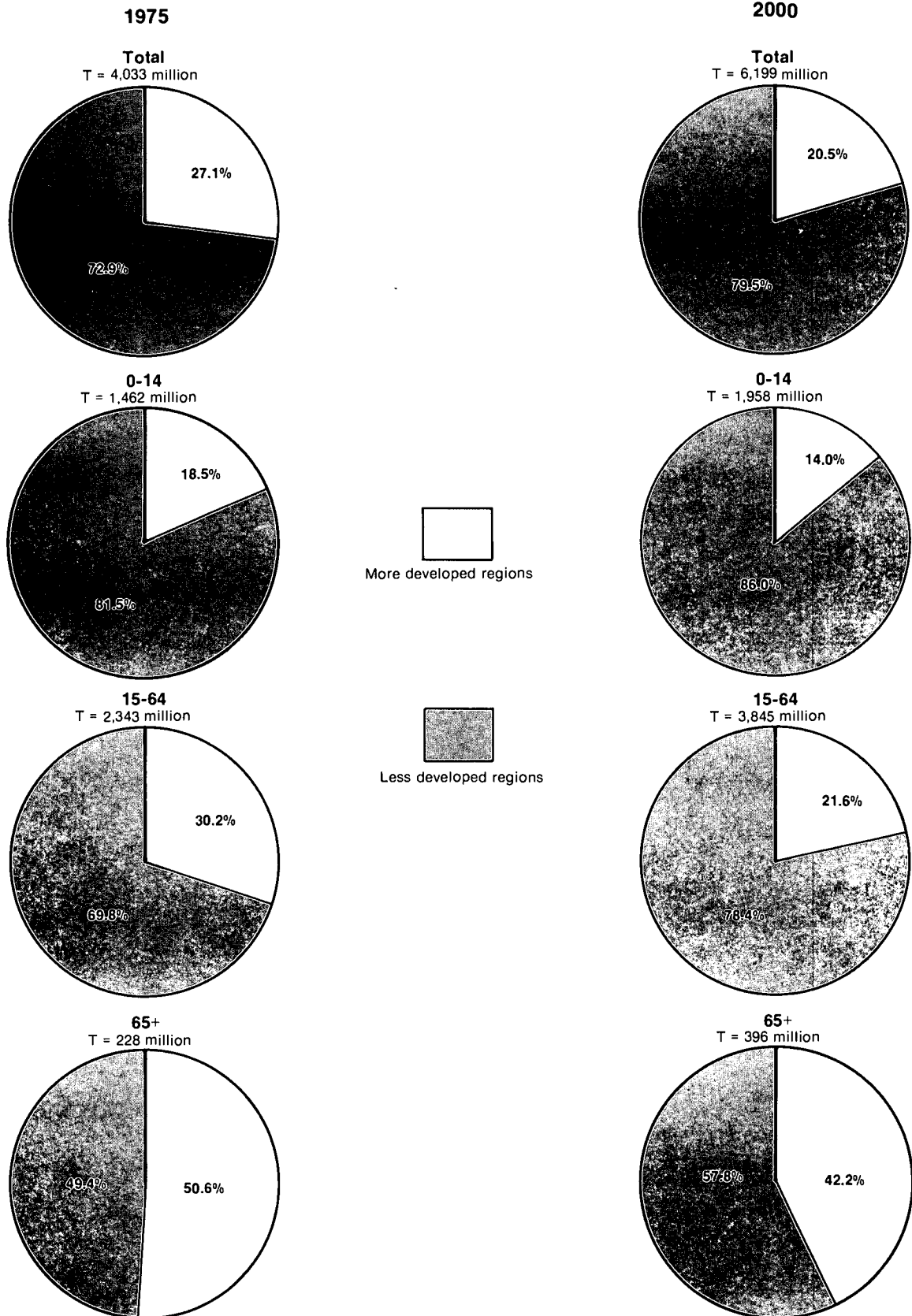
Table 3-6. Percentage increase of age groups in world and more and less developed regions between 1975 and 2000, medium variant

	<u>Total</u>	<u>0-14</u>	<u>15-64</u>	<u>65+</u>
MDR	16.4	1.1	17.7	44.0
LDR	67.6	41.4	84.2	102.7
World	53.7	33.9	64.1	73.7

The total MDR population is projected to grow gradually (about 16%). The number of children increases even more slowly, showing a minimal gain

Chart — 3-4

Percentage Distribution of World Population by Age Group, More and Less Developed Regions, Medium Variant, 1975 and 2000



of only 1.1% (even this rise is not constant, as there will be a further drop before the upturn foreseen for the 1980s). The 15-64 population advances a little faster than the total, and the 65+ age group, more than twice as quickly.

A two-thirds increase (67.6%) is expected for the total LDR population, but the number of children is anticipated to rise by just 41.4%. The much larger addition to the 15-64 age group is mainly a reflection of high birth rates in the past. The greatest percentage jump will occur among the elderly whose ranks will more than double. Their numbers, too, will be augmented by the high birth rates of the past, as well as the decline in mortality.

Changes in the age structure of a population depend on the course of basic demographic variables. Table 3-7 compares the distribution of the age groups in 2000 that would result from the three variants.

Table 3-7. Percentage distribution of world population by age groups, more and less developed regions, high, medium and low variants, 2000

<u>Regions and Variant</u>		<u>Total</u>	<u>0-14</u>	<u>15-64</u>	<u>65+</u>
MDR	high	100.0	23.5	63.9	12.7
	medium	100.0	21.6	65.3	13.1
	low	100.0	19.5	66.9	13.6
LDR	high	100.0	36.2	59.3	4.5
	medium	100.0	34.2	61.2	4.6
	low	100.0	31.4	63.7	4.9
World	high	100.0	33.6	60.2	6.1
	medium	100.0	31.6	62.0	6.4
	low	100.0	28.9	64.4	6.7

Again, the influence of fertility on population composition is evident. By 2000, under the high assumption, the 0-14 component will make up 4 percentage points more than is the case with the low variant.

Whatever the variant, the population does not change rapidly. Charts 3-5 to 3-7 show that the trends of the three age groups from 1960 to 2000 are not

Chart — 3-5

Population 0-14 as Percentage of All Ages, World, More and Less Developed Regions, 1960 to 2000

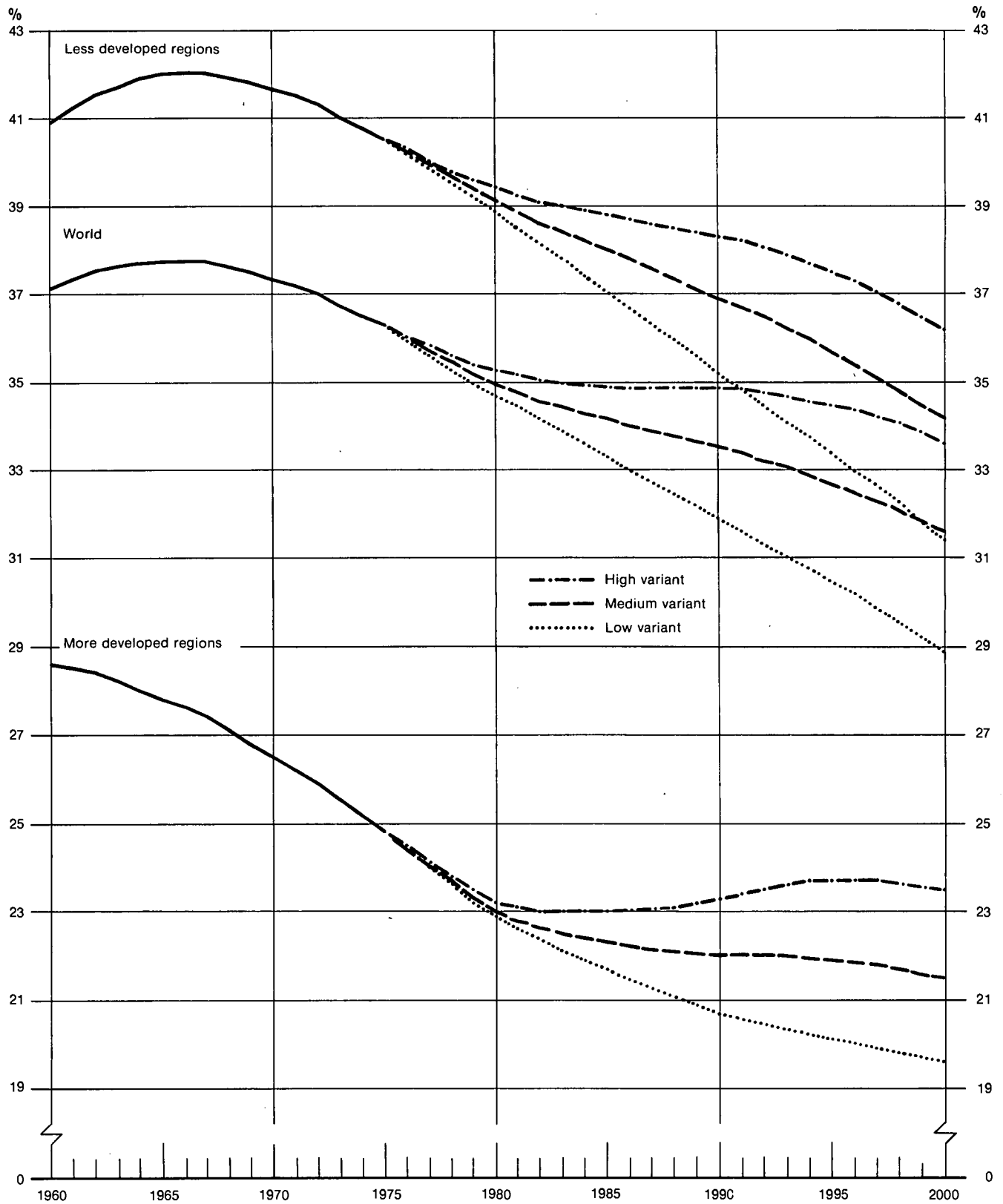


Chart — 3-6

Population 15-64 as Percentage of All Ages, World, More and Less Developed Regions, 1960 to 2000

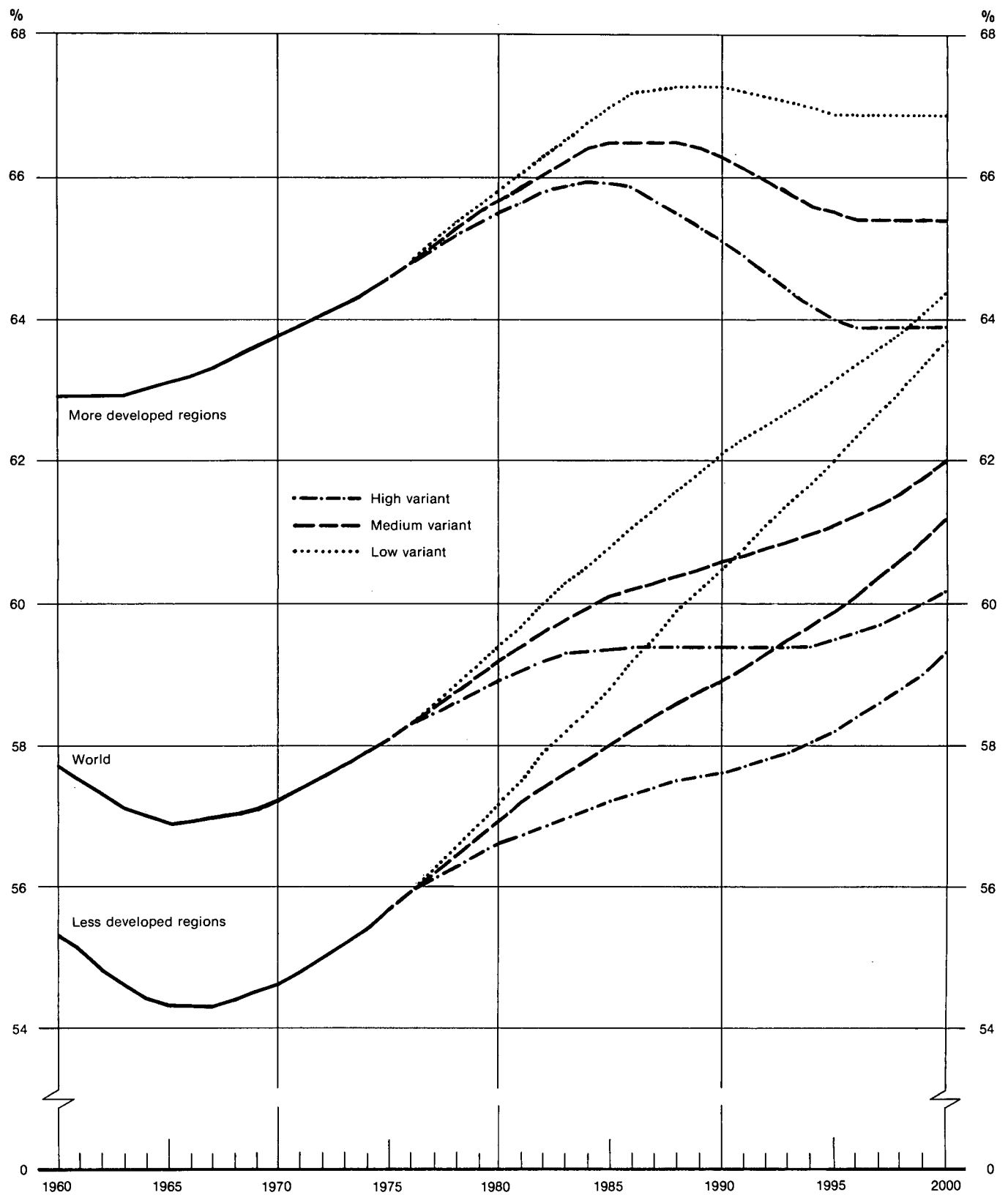
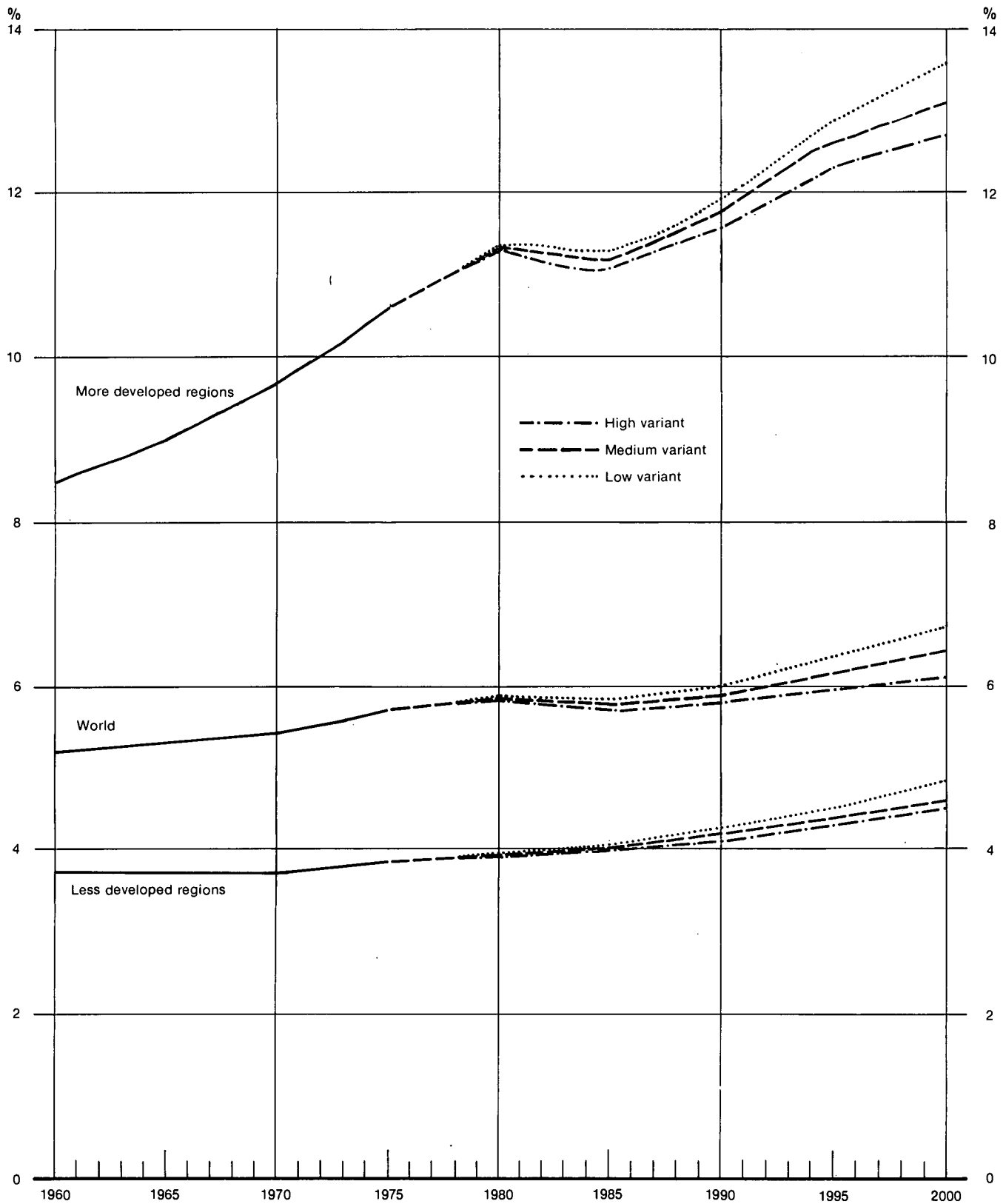


Chart — 3-7

Population 65+ as Percentage of All Ages, World, More and Less Developed Regions, 1960 to 2000



abrupt. The exception is the drop in the MDR 65+ age group between 1980 and 1985, an aftereffect of the loss of lives during World War II.

Table A-5 in Appendix A gives the percentage breakdown of the three age groups in the major regions, subregions, and selected countries for 1970, 1985, and 2000, according to the medium variant.

Consequences of Changing Age Distribution

The decline of the young as a proportion of the total population and concomitant rise of the elderly are evident in Charts 3-5 and 3-7. There is a close connection between demography and social policy, since development of government programs for education of the young and social security for the old must be based on an understanding of probable demographic change. Where income security for the elderly either does not exist or is limited, it might be a great financial hardship to introduce or extend such programs. Pressure for this kind of social service is spreading in many countries, but governments face the dilemma of setting priorities. For example, if finances are limited, they may choose education and postpone old age pensions.

Chart 3-6 indicates a net gain in the proportion of 15-64-year-olds. Ostensibly, this growth of the "productive" sector would in some measure balance spending required for the young and the old. However, the rapid rise of the 15-64 age group is not an unmixed blessing, since the absorptive capacity of the labour force may not be great enough to forestall unemployment. Furthermore, the employability of these people will depend not only on economic expansion, but also on their education and whether the skills they have acquired are appropriate to the needs of their society. Governments should, therefore, prepare and be prepared for a large labour force source population.

Basic education services in some LDR were not able to keep up with the increasing population, and evolution of higher levels of education was effectively blocked. An expanding population, which seems to be the prospect for these regions, ultimately means fewer resources available to educate not only school-age children, but also illiterate adults.

The MDR face a different problem. Their population growth has been much more moderate, and the rapidly declining birth rate reduced the proportion of children and increased the proportion of elderly people. Sharp changes in

birth rates produced "waves" in the young population, and this will eventually affect every facet of society as the cohort progresses through the life cycle and makes an unprecedented claim on public services at each stage. The education problem for the MDR is not providing rudimentary instruction, but improving the system. That, however, depends on available resources, so if another population segment increases at an accelerated pace, for example the 65+ age group, a significant and growing percentage of the budget has to be set aside for their unique needs.

Chapter 4

TRENDS OF THE SCHOOL-AGE POPULATION

Introduction

The "school-age population" is an artificial concept, as the ages of people participating in regular education vary from country to country, and even within countries. In all the MDR, attendance for a specified number of years is compulsory, and a significant proportion continue their education far beyond the legal minimum. In the LDR, a considerably smaller percentage of the population attends school, and the time in their lives when this occurs is far from uniform. Nonetheless, there is an age range with flexible lower and upper limits in which most students are likely to fall.

Here, the 6-23 age group has been arbitrarily designated the "school-age population." The choice of this age group is based upon the structure of the education system, and does not necessarily correspond to the "most common age" of pupils enrolled. For primary education, the 6-11 age group was selected, because in the majority of countries the official admission age is 6, and the duration of primary education is six grades. Similarly, in many countries, general secondary education also extends over six grades - hence, the 12-17 age group. However, this does not necessarily imply that even most students aged 12-17 are actually enrolled at the secondary level. Frequently, because of late entrants and repeaters, 12-17-year-olds are in primary school, while 18-23-year-olds are secondary students. Thus, it is very important not to equate enrolment of the 12-17 age group with secondary education or enrolment of the 18-23 age group with higher education.

The three variants (high, medium, and low) of the United Nations' population projections for many areas diverge after 1975, but no real difference is apparent before 1980. This is because the effects of fertility cannot reach the group for five years; any minor deviations that do arise result from migration and mortality. Consequently, for analytical purposes, 1975 was regarded as the last date for which actual population data are available.

Major regions and subregions are shown on separate charts, so that readers interested in a specific area can examine its trends alone, and then compare them with the situation elsewhere. Tables containing detailed data (e.g., size of the age groups, rates of increase, etc. from 1960 to 2000) for the three variants, many classified by subregion, are in Appendix A.

Total School-Age Population

The world's population aged 6-23 is a significant proportion of the total. At any time between 1960 and 2000, more than a third of humanity is within this age range (Table 4-1).

Table 4-1. The world's 6-23-year-old population, number and percentage of total, high, medium and low variants, selected years, 1960 to 2000

(numbers in millions)

<u>Variant</u>	<u>1960</u>		<u>1975</u>		<u>1985</u>		<u>2000</u>	
	No.	%	No.	%	No.	%	No.	%
High					1,784	36.4	2,331	35.8
Medium	1,070	35.3	1,538	38.1	1,768	36.6	2,152	34.7
Low					1,753	36.8	1,958	33.4

Their numbers grow steadily throughout the period. The proportion they constituted in 1960 (35.3%) was appreciably lower than in 1975 (38.1%), and the next ten years show only a slight decline (no lower than 36.4%). However, by 2000, when the group will consist of an entirely new generation (all born after 1975) with lower overall fertility, the proportion is expected to fall slightly below the 1960 level, although it varies according to the assumption.

Table 4-2 shows the school-age population as a proportion of the total population in the MDR and the LDR. During the years covered in the table, this segment does not make up even a third of the MDR total, and by 2000

it could constitute only a quarter. The high variant alone shows an increase in numbers from 1975 to 2000, but the gain amounts to only about 5%.

Table 4-2. Population 6-23 years old, number and percentage of total population in more and less developed regions, high, medium and low variants, selected years, 1960 to 2000
(numbers in millions)

<u>Variant</u>	<u>1960</u>		<u>1975</u>		<u>1985</u>		<u>2000</u>	
	No.	%	No.	%	No.	%	No.	%
<u>More developed regions</u>								
High					322	27.3	353	26.8
Medium	287	30.3	336	30.7	320	27.4	322	25.3
Low					319	27.5	294	23.9
<u>Less developed regions</u>								
	No.	%	No.	%	No.	%	No.	%
High					1,462	39.3	1,978	38.1
Medium	783	37.6	1,202	40.9	1,448	39.6	1,830	37.1
Low					1,434	39.8	1,664	36.0

By contrast, in the LDR, even under the low variant, the school-age population continues to rise. The cohort in 1975 makes up close to 41% of the LDR total population; by 2000, the proportion falls 3 to 5 percentage points, depending on the variant.

Chart 4-1 illustrates the vast difference in the size of the school-age population in the MDR and LDR. The MDR contain an even smaller share of this group than they do of the total. Whereas 27.1% of the world's people lived in the MDR in 1975, just 21.8% of the 6-23 age group did so.

The past and projected percentage distribution of 6-23-year-olds between the two kinds of region, according to the medium variant, is given in Table 4-3. By 2000, the MDR are expected to have only 15% of the world's school-age population.

Chart — 4-1

**Total School-age Population, by Age Group, World, More and Less Developed Regions
Medium Variant, 1960 to 2000**

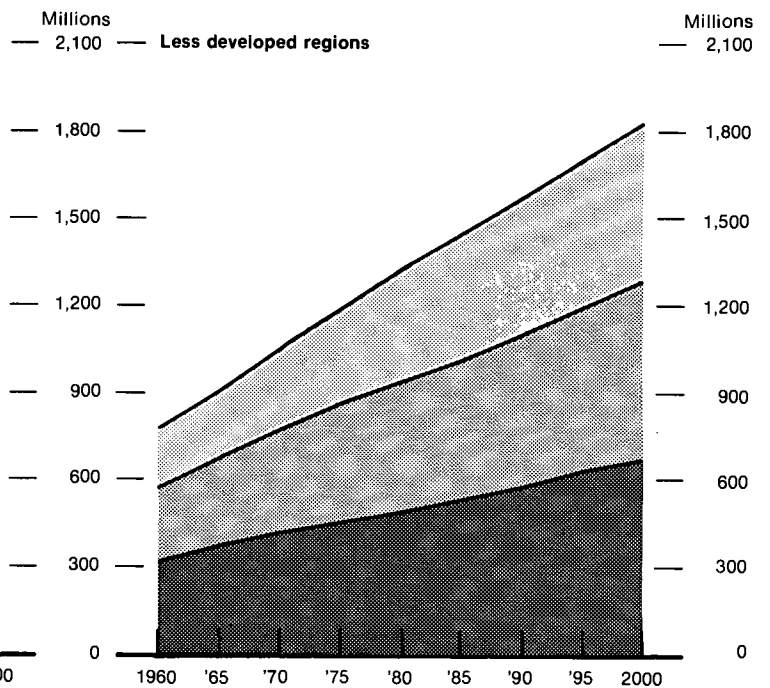
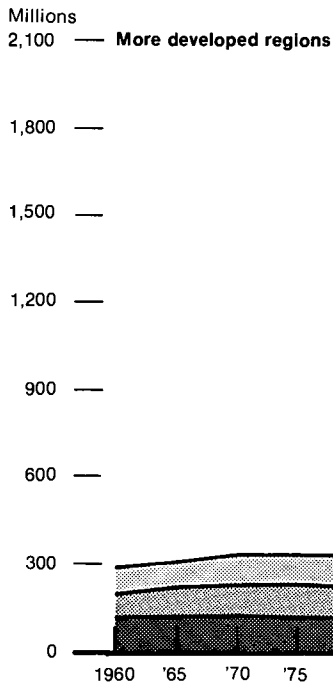
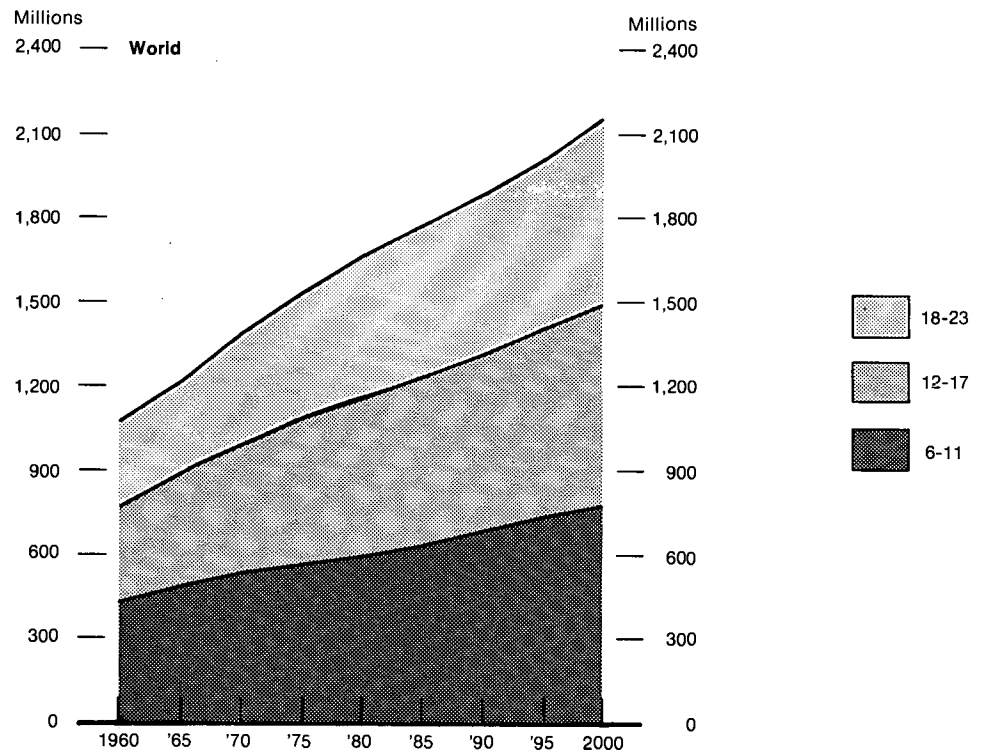


Table 4-3. Percentage distribution of the 6-23-year-old population between more and less developed regions, medium variant, selected years, 1960 to 2000

	<u>1960</u>	<u>1975</u>	<u>1985</u>	<u>2000</u>
	(percentage)			
MDR	26.8	21.8	18.1	15.1
LDR	73.2	78.2	81.9	85.0
World	100.0	100.0	100.0	100.0

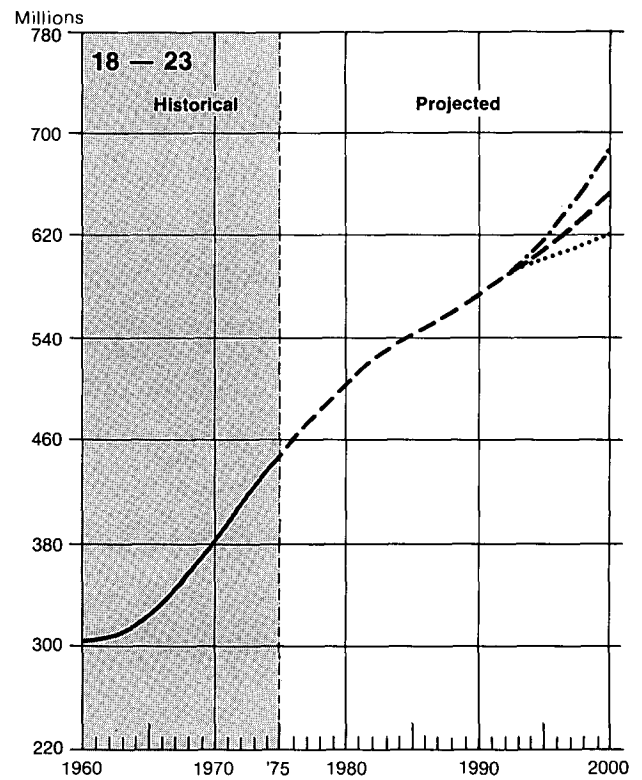
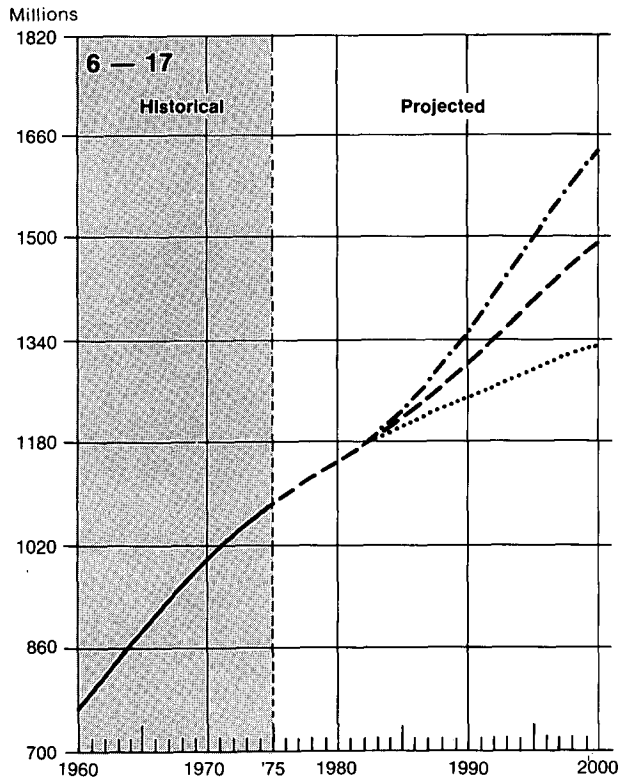
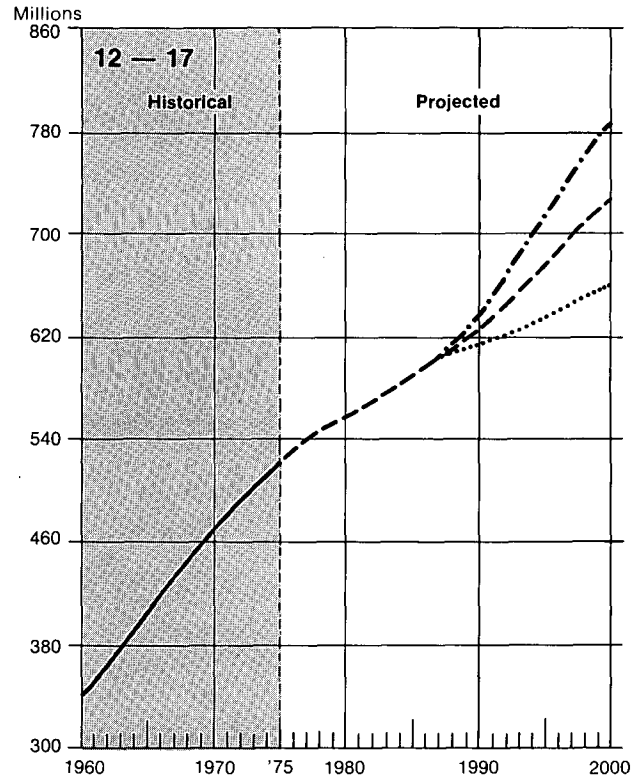
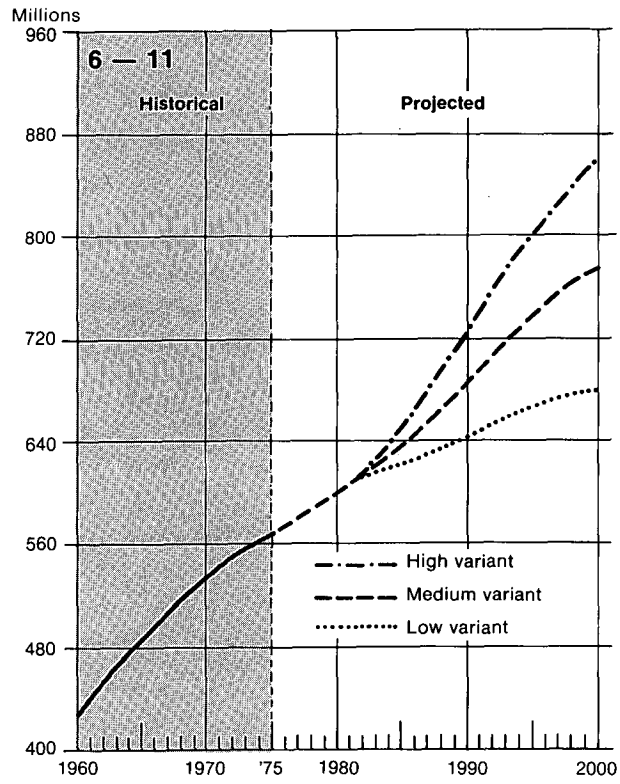
School-Age Population Subgroups

Each chart in this section shows the three variants (high, medium, and low) of four age groups (6-11, 12-17, 6-17, and 18-23). The values on the scales for different age groups may vary, but within each region the intervals are the same. These charts, however, cannot be used to compare regions. Vast disparities in population size meant that different intervals had to be used on the scales. Comparable interregional charts showing the school-age population growth index are provided in a later section of this chapter.

Chart 4-2 displays the world's school-age population. Different fertility assumptions are the main cause of the divergence between the variants. Despite the declining number of children per woman in the past, and a further projected reduction from 4.0 to 3.1 (medium assumption), the total number of births will rise because of the increase in the female population of child-bearing age. Hence, the essential features of the chart are:

- Steady increases for each age group.
- Widening differences between variants.
- The older the age group, the later the branching out of variants.
- After 1975, a faster rate of increase among older groups than among younger ones.
- No appreciable "levelling off" during the projected period, except for the low variant of the 6-11 age group just before the turn of the century.
- In any given year, older cohorts are outnumbered by younger ones.

Chart — 4-2

School-age Population, by Age Group, 1960 to 2000**THE WORLD**

Because births have risen annually, there are more 6-11-year-olds than 12-17-year-olds, who in turn, are more numerous than 18-23-year-olds. Of course, another reason why successively older cohorts are smaller is that they have been exposed to mortality longer.

The medium variant suggests that between 1975 and 2000 the 6-11 age group will grow from 568 to 774 million; 12-17-year-olds, from 521 to 724 million, and the 18-23 group, from 449 to 654 million — increases of 36%, 39%, and 46%, respectively. The slower rate of growth of the younger group reflects declining fertility.

For two reasons, the remainder of this chapter pays particular attention to 6-11-year-olds: they are the first to reflect demographic changes, and they are the target population for the goal of full primary participation. In any case, fluctuations in the size of this age group eventually work their way up through 12-17- and 18-23-year-olds. Thus, it is not necessary to analyse the latter two at length, since the same comments apply six and twelve years later.

Less Developed Regions

As Table 4-3 demonstrated, in 1975 more than three-quarters of the world's school-age population were in the LDR, and the proportion is expected to grow to more than four-fifths at the turn of the century. Under the medium variant, between 1975 and 2000 the LDR 6-11 age group increases 45%, the 12-17 age group by 52%, and the 18-23 age group, by almost 63%. There is no significant leveling off, even among 6-11-year-olds. From 1975 to 2000, the number of children aged 6-11 increases by 206 million (Chart 4-3), which is greater than the United States' total 1970 population.

Despite gains in the size of each age group, Table 4-4 shows that average annual rates of growth were higher between 1960 and 1975 than is projected for the next ten years by any variant. And the medium and low variants show a further slowdown to the end of the century.

Chart — 4-3

School-age Population, by Age Group, 1960 to 2000 LESS DEVELOPED REGIONS

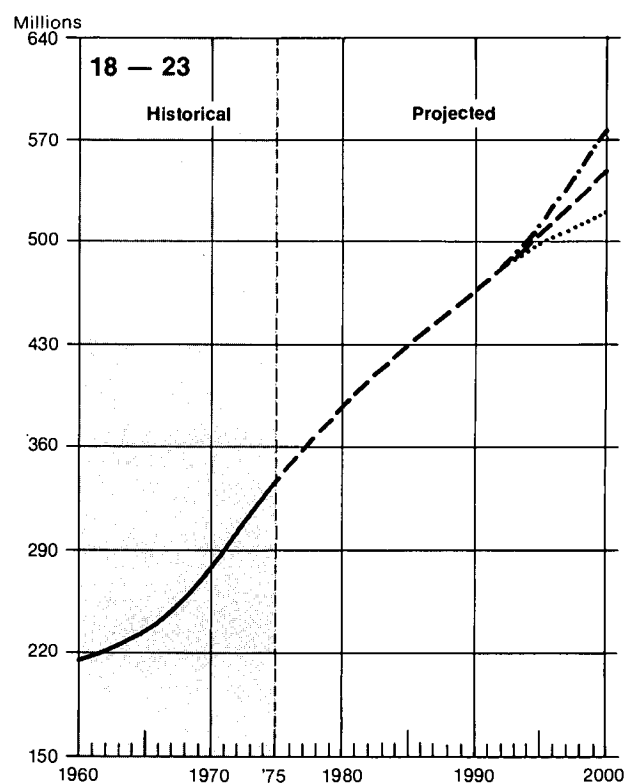
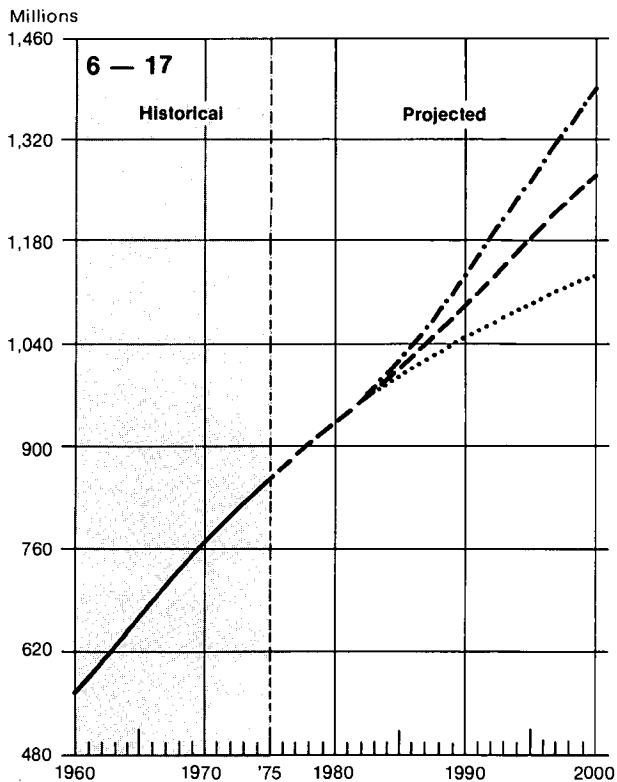
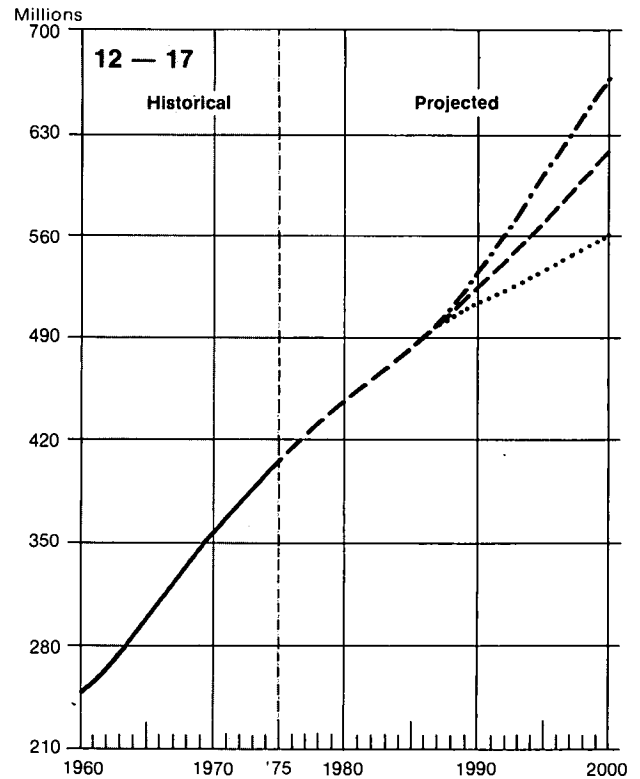
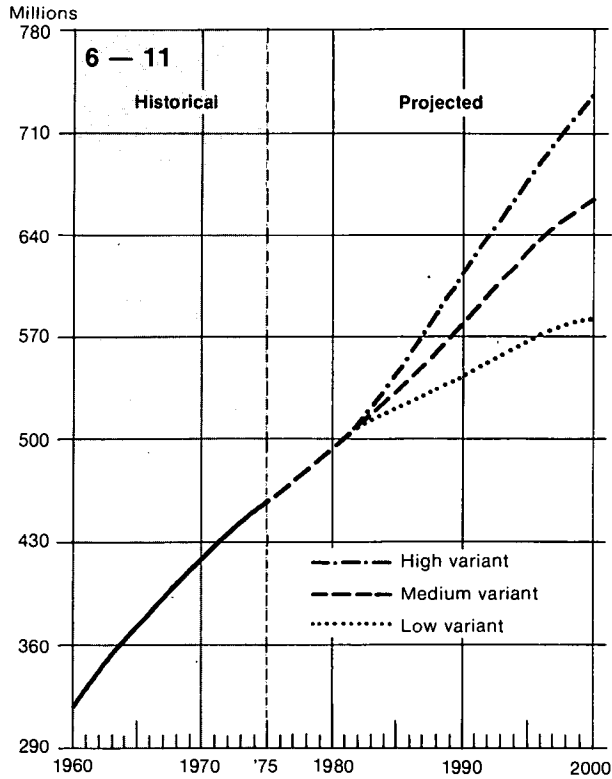


Table 4-4. Annual average rates of growth of the school-age population, less developed regions, high, medium, and low variants, between selected years, 1960 to 2000

<u>Age group and variant</u>	<u>1960-75</u>	<u>1975-85</u> (percentage)	<u>1985-2000</u>
<u>6-11</u>			
High		1.8	2.0
Medium	2.5	1.6	1.5
Low		1.3	0.7
<u>12-17</u>			
High		1.8	2.2
Medium	3.3	1.7	1.7
Low		1.7	1.0
<u>18-23</u>			
High		2.5	2.0
Medium	3.0	2.5	1.6
Low		2.4	1.3

More Developed Regions

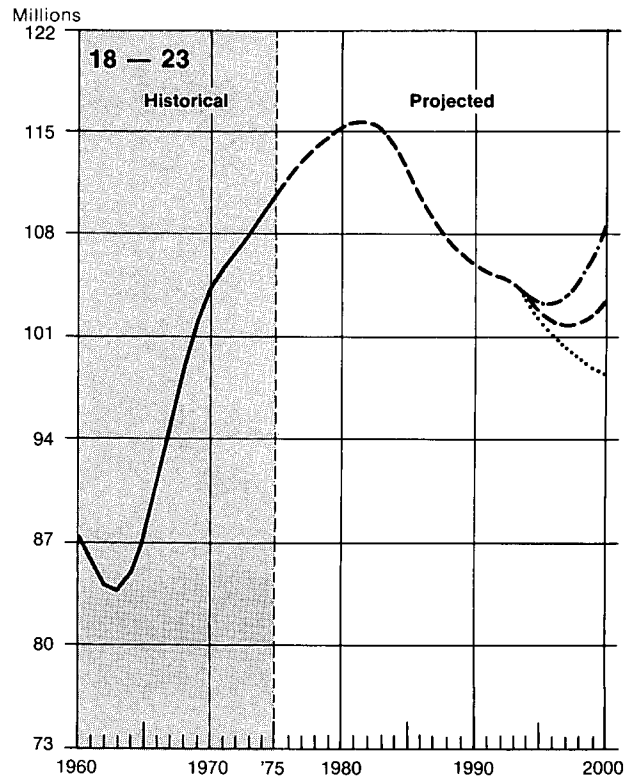
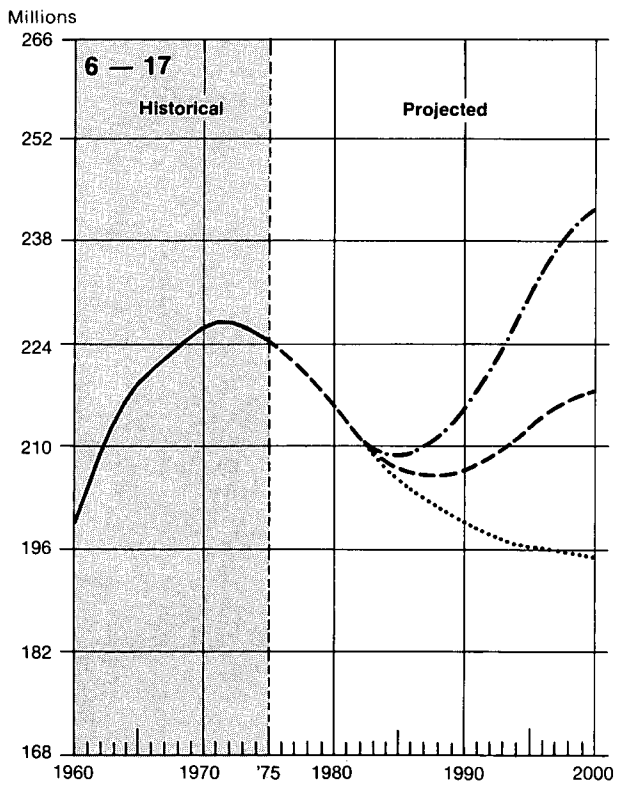
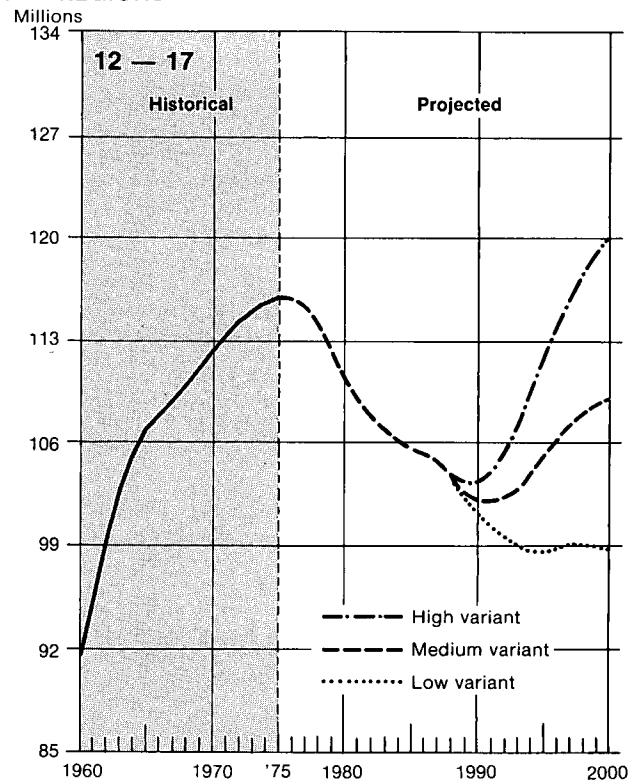
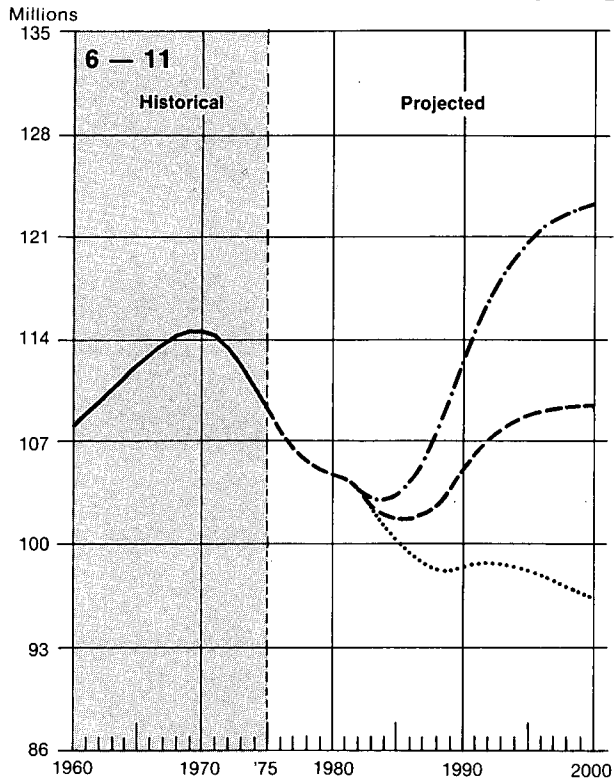
Trends of the school-age population in the MDR are different from those in the LDR (Chart 4-4). Instead of an unbroken increase, directions change at least twice during the forty years between 1960 and 2000.

These "waves" in the age groups have their roots in the way demographic variables evolved three decades ago. After the Second World War, fertility and births increased in almost every major MDR. Known as the postwar baby boom, the phenomenon lasted for a shorter or longer period, depending on the particular country. In most subregions, total births peaked in the late 1950s or early 1960s, and therefore, throughout the sixties the 6-11 age group increased, reaching a high late in the decade. Meanwhile, family planning became more common. As a result, the fertility rate dropped, and with it, the number of births. One repercussion was a decrease in the 6-11 age group, so that it is now smaller than it was in 1960.

Chart — 4-4

School-age Population, by Age Group, 1960 to 2000

MORE DEVELOPED REGIONS



If the fertility decline persists, as is assumed in the low variant, the age group will diminish until the late eighties. A slight, short-lived increase will then occur as the baby boom girls of the late fifties reach their child-bearing years. But by the end of the century, the decline will reassert itself, because the ranks of potential mothers will consist of the small cohort born in the late sixties and early seventies.

If the fertility rate stays fairly constant (medium variant), a second, but smaller, baby boom could occur. Thus, by the mid-nineties, the 6-11 age group would again be as large as in 1975. If the high fertility assumption proves accurate, the group will experience an unprecedented increase that will diminish only in the next century.

Of course, the other age groups undergo the same ups and downs, but with six- and twelve-year time-lags. The oldest age group, 18-23, dropped noticeably from 1960 to 1963, reflecting the decreased birth rate and the number of children who died during the Second World War. After 1965 the age group clearly reflects the postwar baby boom.

Major Geographic Regions

While age groups in the major geographic regions generally conform to the tendencies of the type with which they are classified — MDR or LDR — the extent and timing of trends differ. In some areas, past configurations follow the LDR mold, but the shape of the future seems closer to the MDR pattern.

Unquestionably, the school-age population in Africa, Latin America, and South Asia resembles the LDR model (Charts 4-5, 4-6, and 4-7). Of the three, Africa is the most extreme, and it is the only major region where, under the medium assumption, each age group is expected to more than double between 1975 and 2000. Even the low variant projects about a 75% gain of 6-11-year-olds.

Latin American and South Asian school-age groups do not increase as sharply as those in Africa, particularly under the low variant. Should this variant prove true, the number of 6-11-year-olds in South Asia will decline slightly just before, and in Latin America after, the turn of the century.

Chart — 4-5

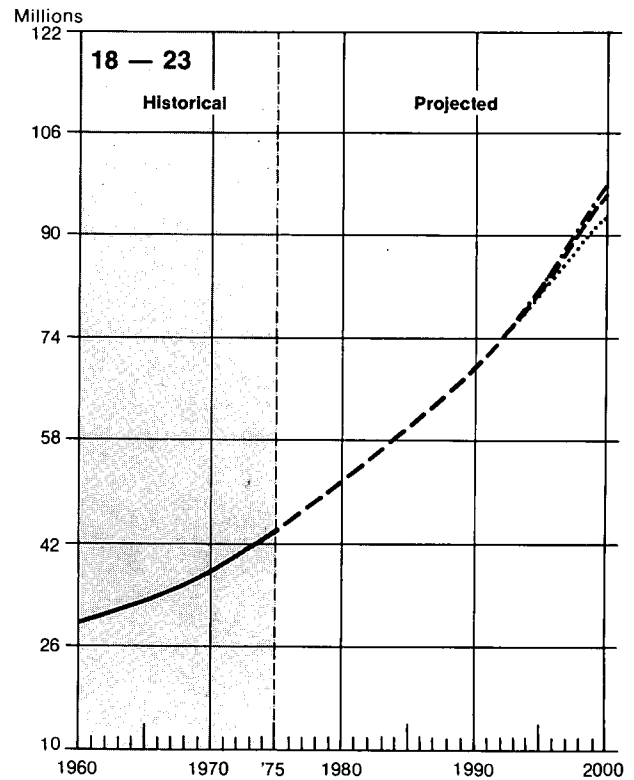
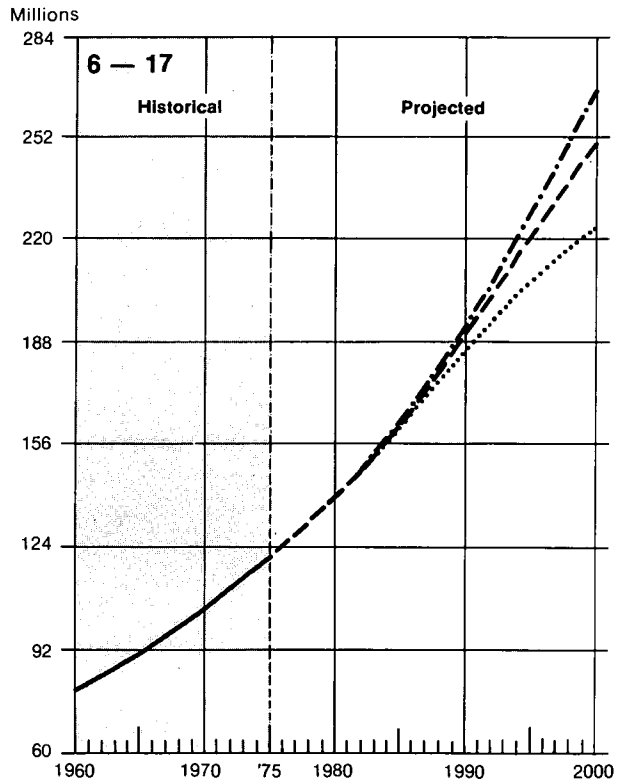
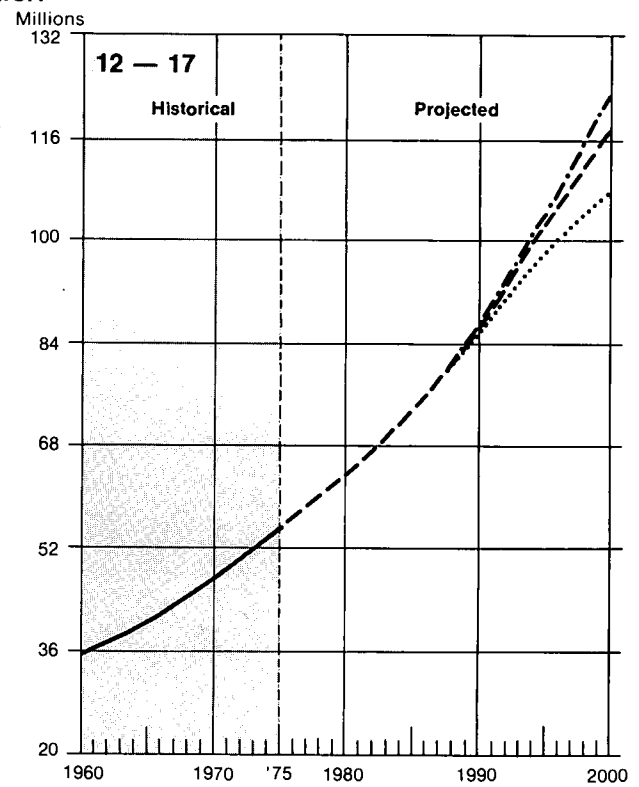
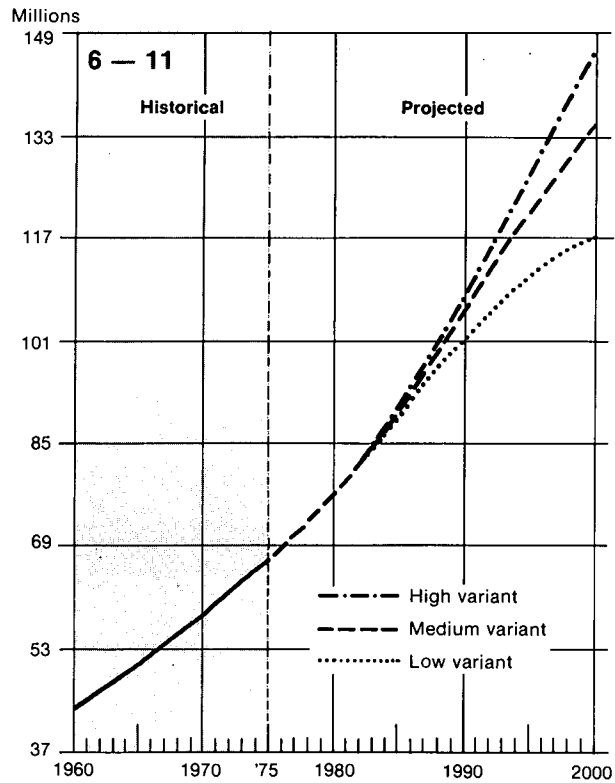
School-age Population, by Age Group, 1960 to 2000**AFRICA**

Chart — 4-6

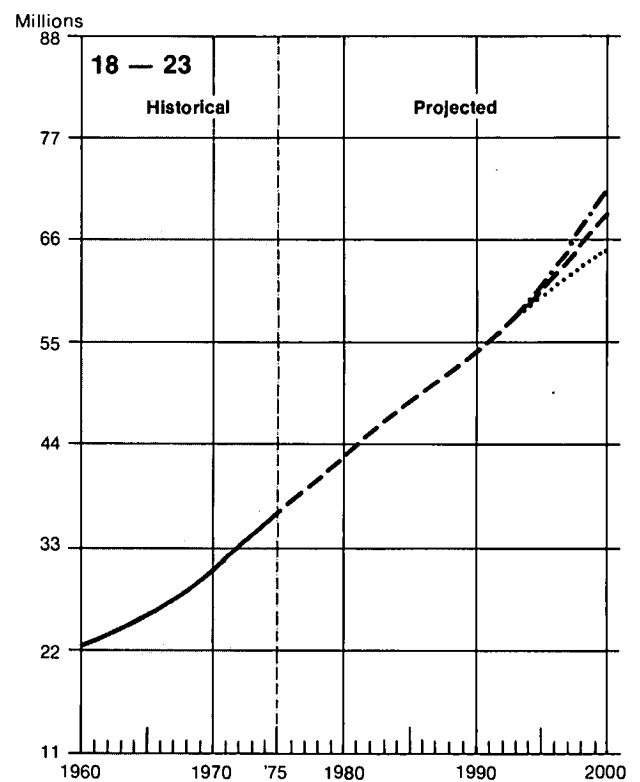
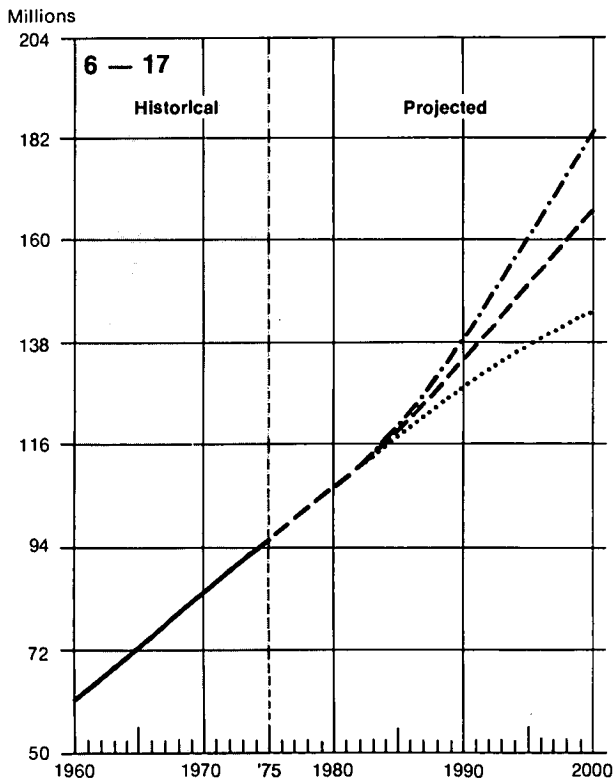
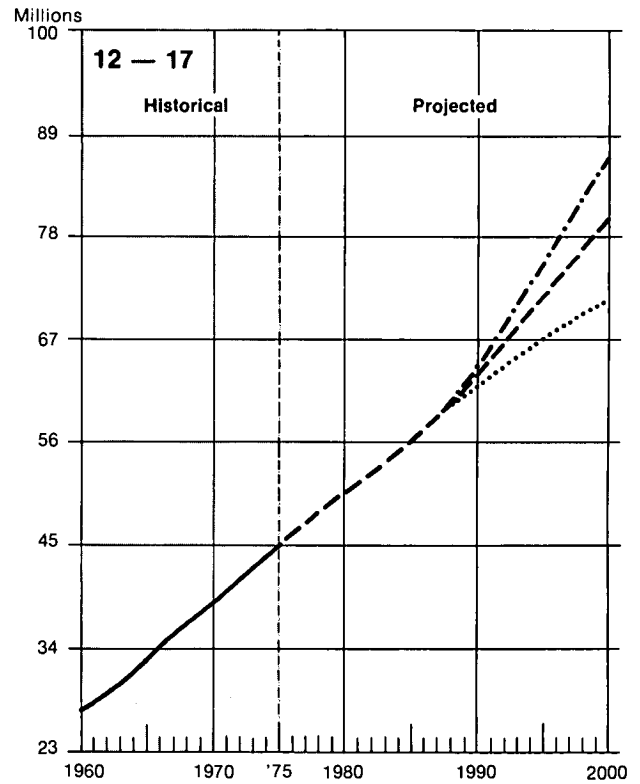
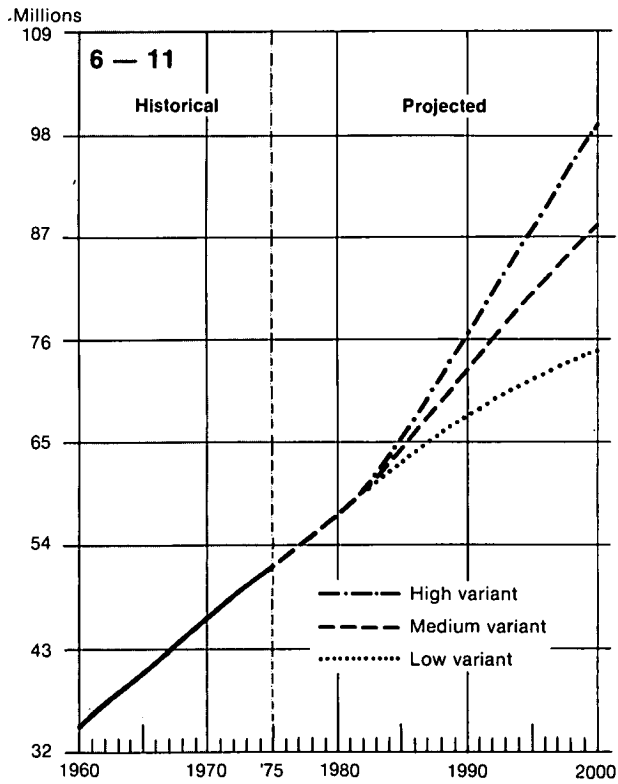
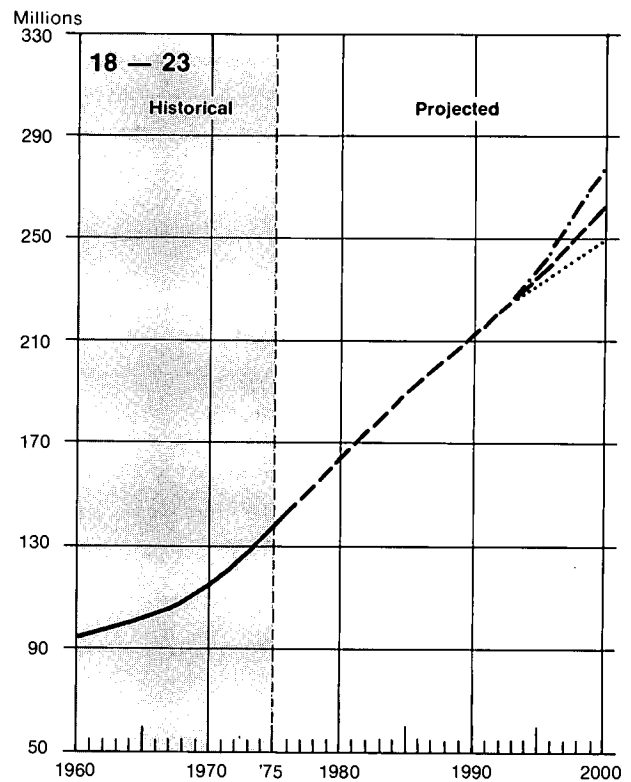
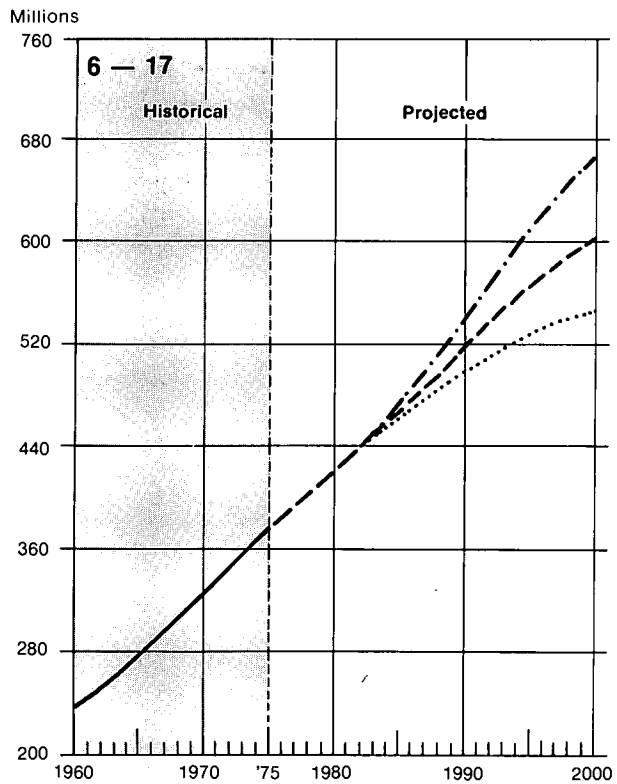
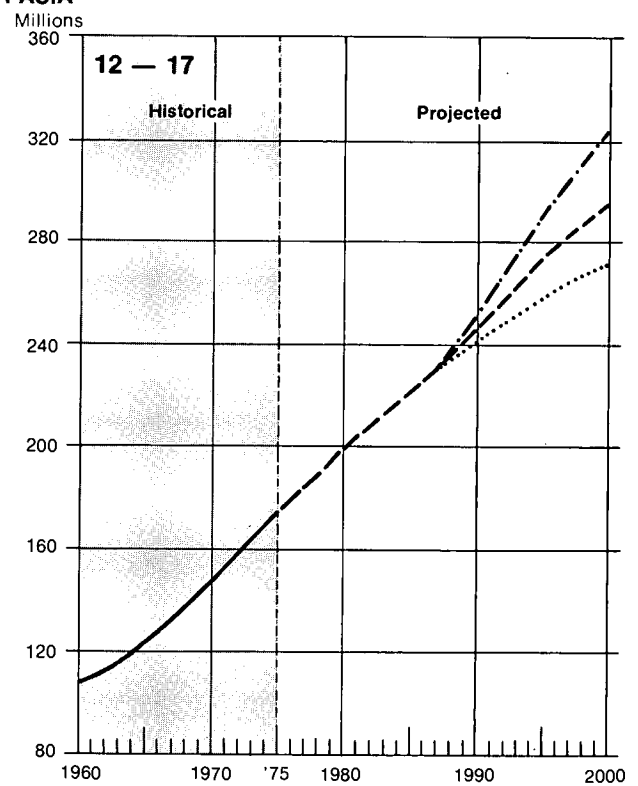
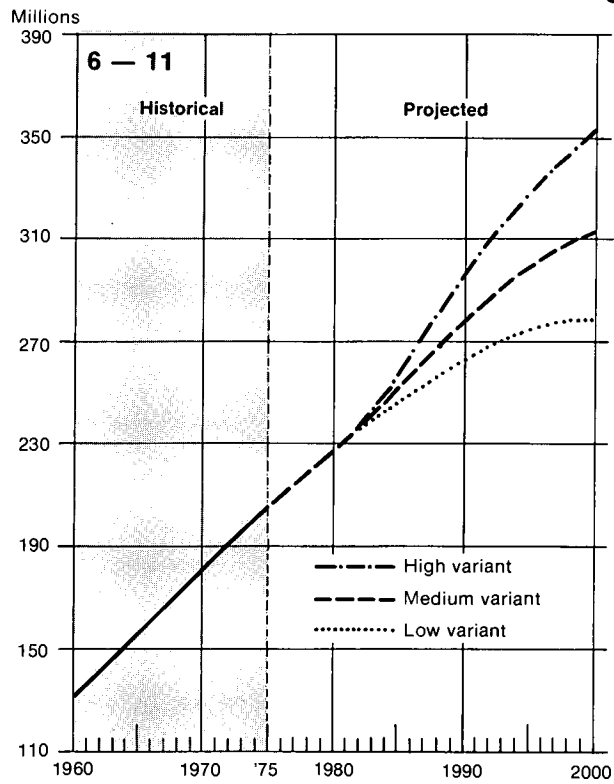
School-age Population, by Age Group, 1960 to 2000**LATIN AMERICA**

Chart — 4-7

School-age Population, by Age Group, 1960 to 2000

SOUTH ASIA



Oceania is an anomaly (Chart 4-8). More than three-quarters of the population live in Australia and New Zealand — classified as a more developed subregion — but the shape of Oceania's school-age population, at least the medium and high variants, is closer to the LDR pattern. This is because Australia and New Zealand have relatively high fertility rates (compared with many other MDR) and gain through immigration. Only the low variant indicates a definite decline in the 6-11 age group from the early eighties to the early nineties. But even this variant shows an upturn by the end of the century.

East Asia is the reverse of Oceania — classified as less developed, its school-age population trends exhibit the typical MDR waves (Chart 4-9). The decline of the age groups projected for the future is attributable to China, which dominates regional population trends. If the low variant materializes, by 1990 the 6-11 age group will not be as large as it was in 1960. Relative differences between the three variants are smaller than in most LDR.

Projections for Northern America, the U.S.S.R., and Europe show the familiar MDR wave pattern in the school-age population (Charts 4-10, 4-11, and 4-12). The 6-11 age group in these areas reached its postwar baby boom peak in the late 1960s or early 1970s. A sharp decline lasting at least ten years follows. Sometime in the eighties, each of these regions will again experience growth (the extent of which will depend on future fertility) and then an almost inevitable drop during the nineties.

In Europe (Chart 4-12) the baby boom lasted a little longer than that in Northern America or the U.S.S.R. Therefore, the 6-11 age group peaked in the early 1970s, and the decline will continue for a few years longer. The fertility assumptions cause great disparities between the three variants: in other MDR even the lowest variant creates a baby boom "echo", but not in Europe. If low fertility prevails (a strong possibility according to current information), the number of 6-11-year-olds will continue to decrease for the rest of the century. Yet if the trend follows the medium assumption, the size of the age group is expected to grow. Nonetheless, by 2000 it would still be smaller than it was in 1980. The high fertility assumption would result in an even larger age group, but by 2000 it would still not match the baby boom peak.

Chart — 4-8

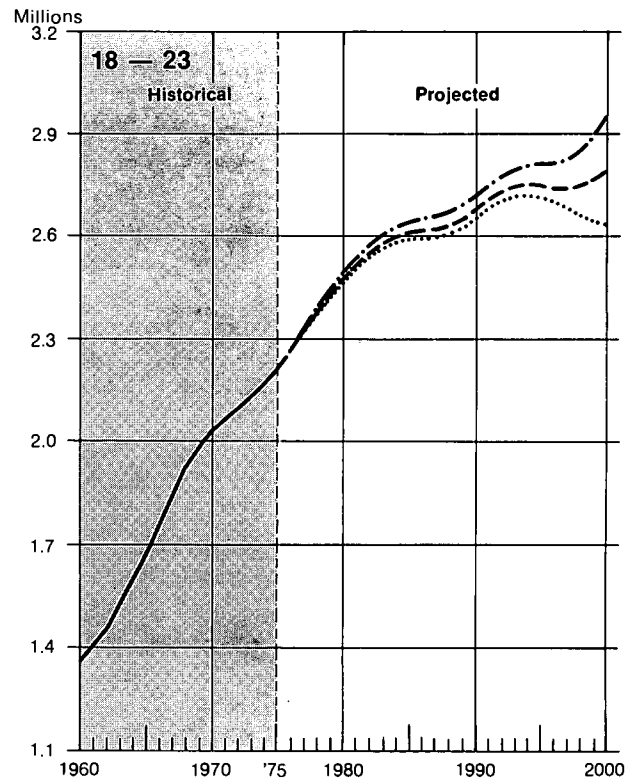
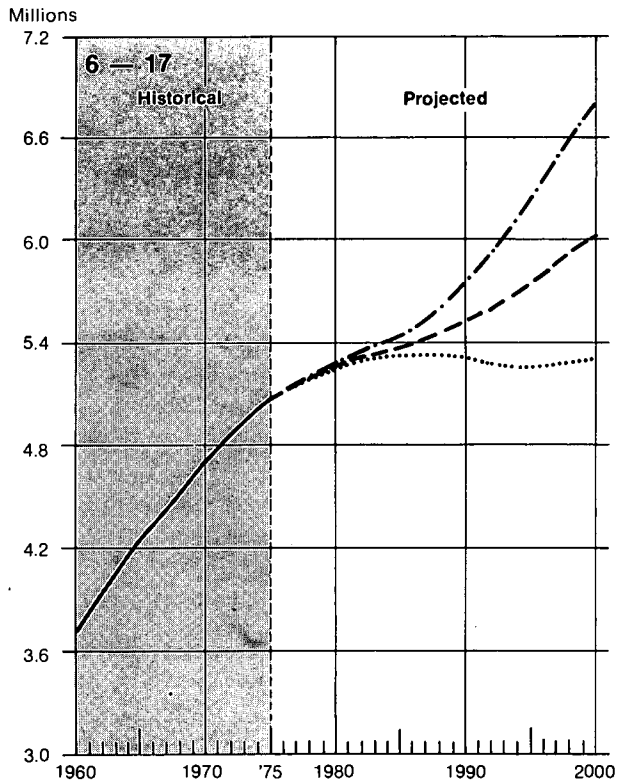
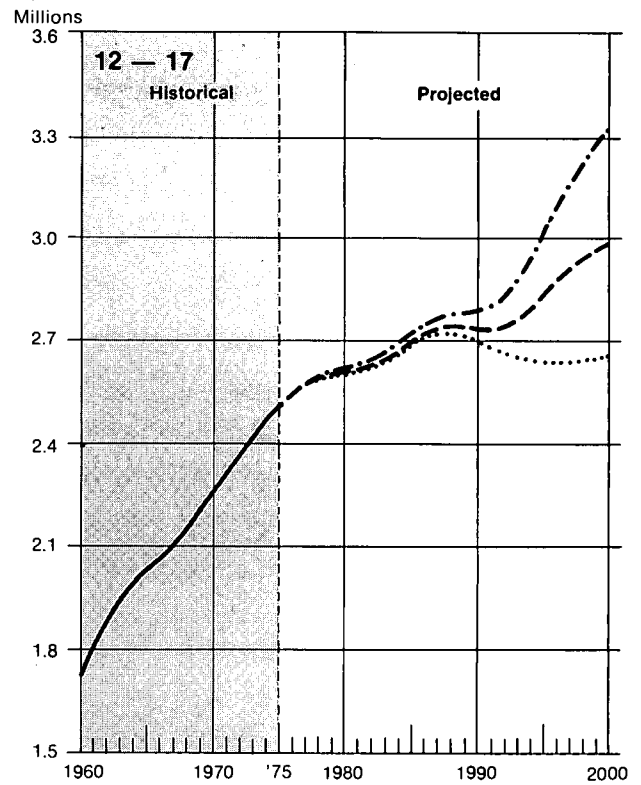
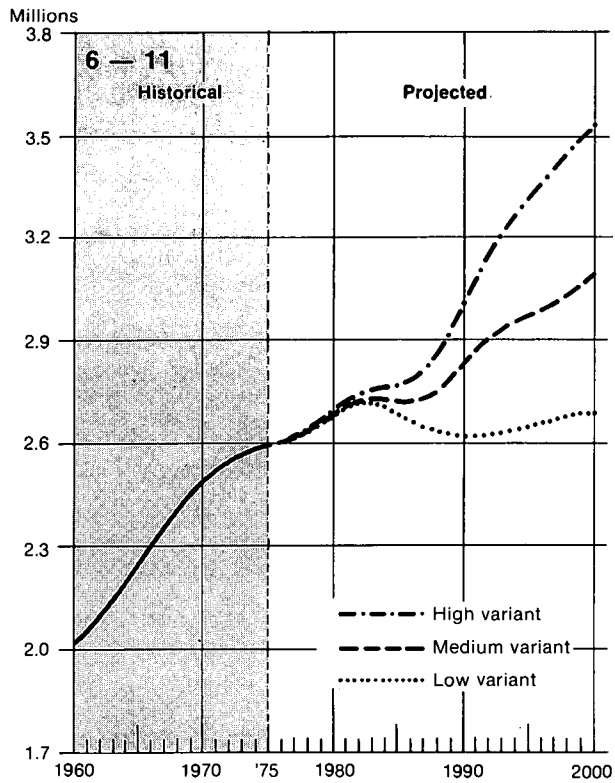
School-age Population, by Age Group, 1960 to 2000**OCEANIA**

Chart — 4-9

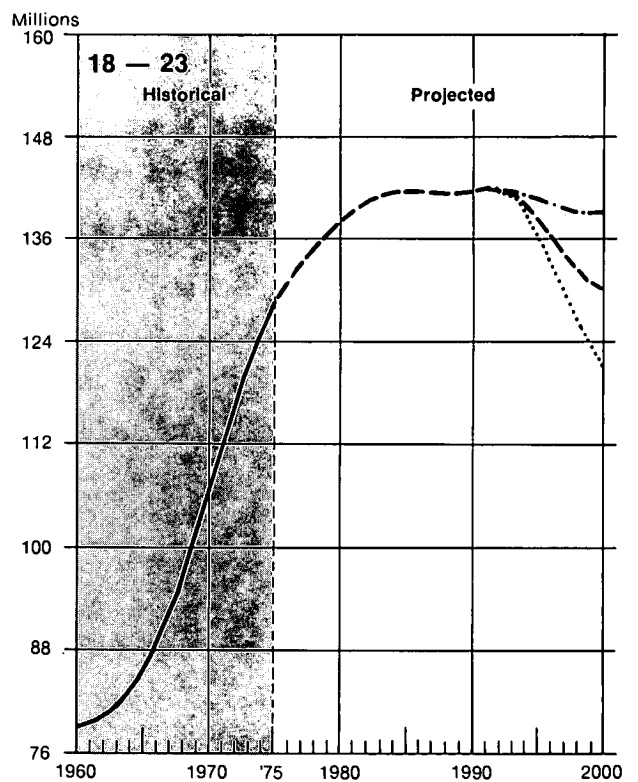
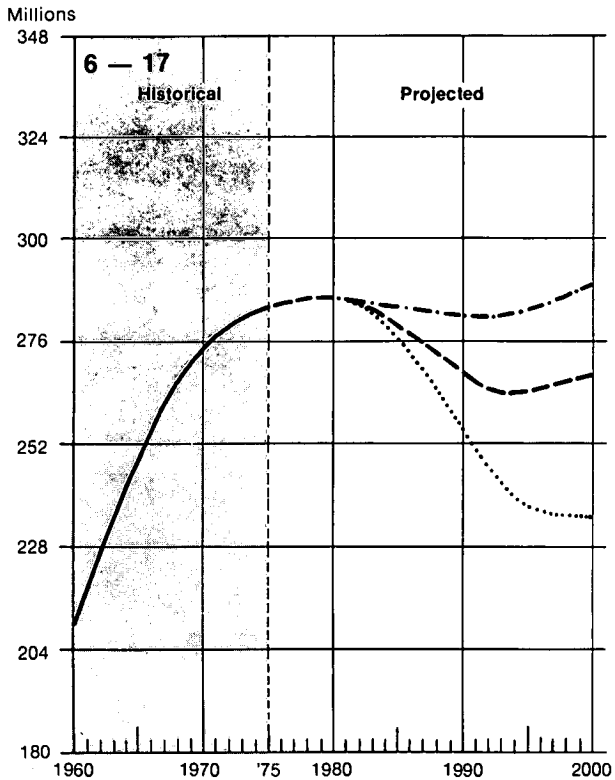
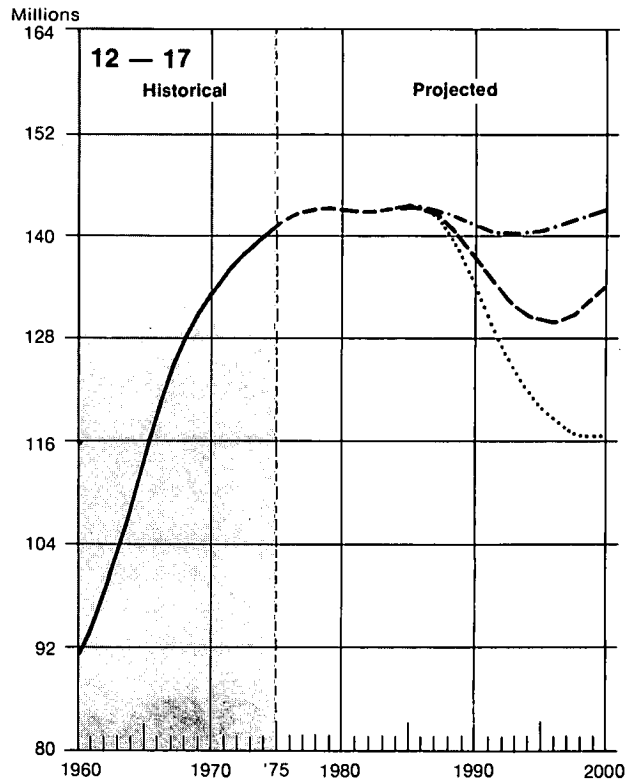
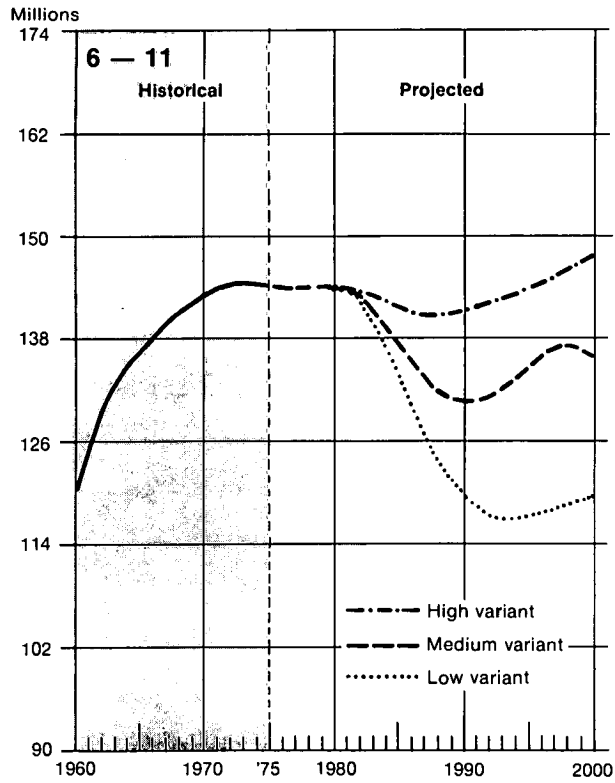
School-age Population, by Age Group, 1960 to 2000**EAST ASIA**

Chart 4-10

School-age Population, by Age Group, 1960 to 2000

NORTHERN AMERICA

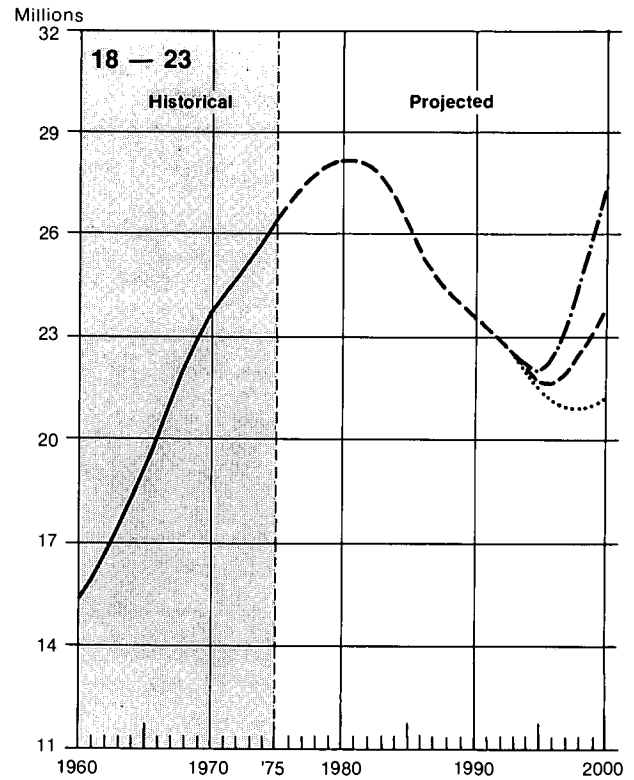
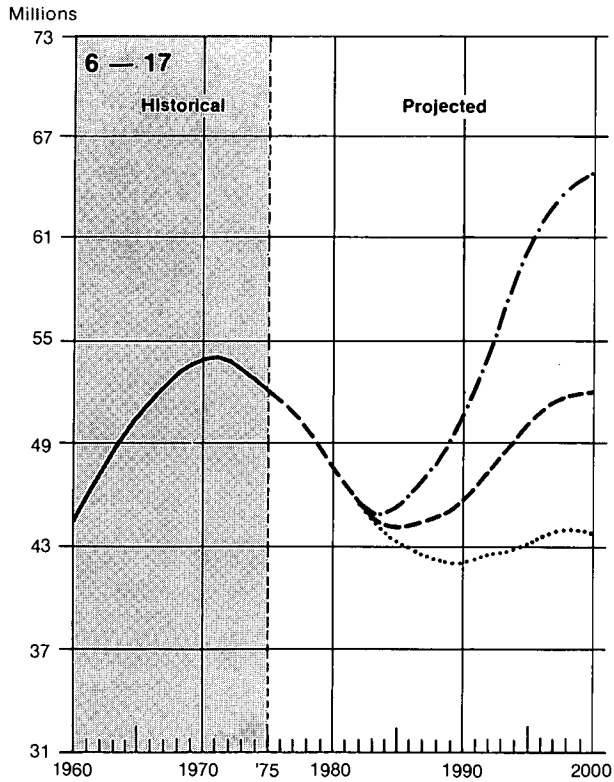
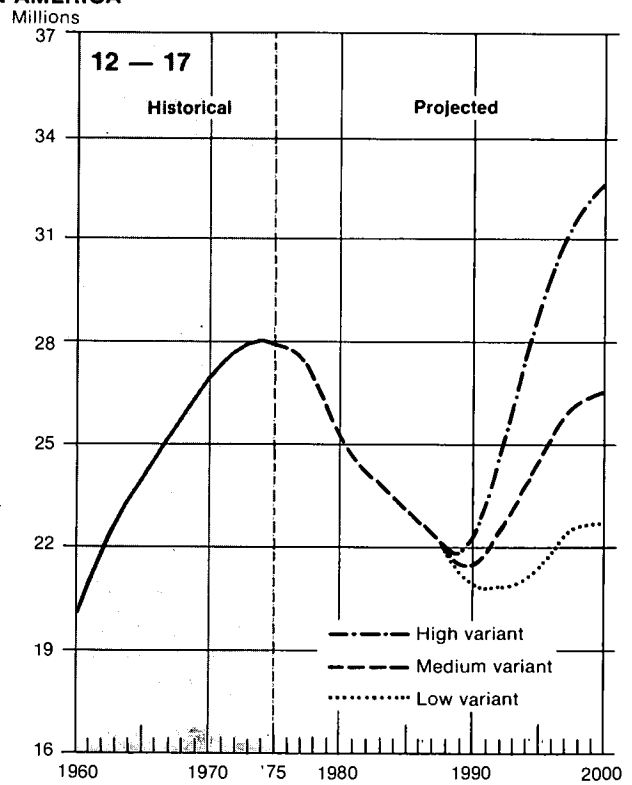
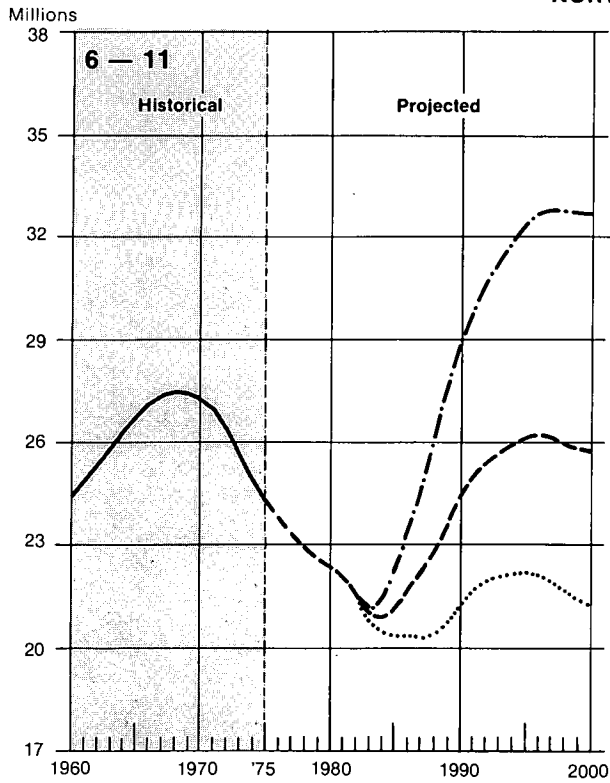


Chart — 4-11

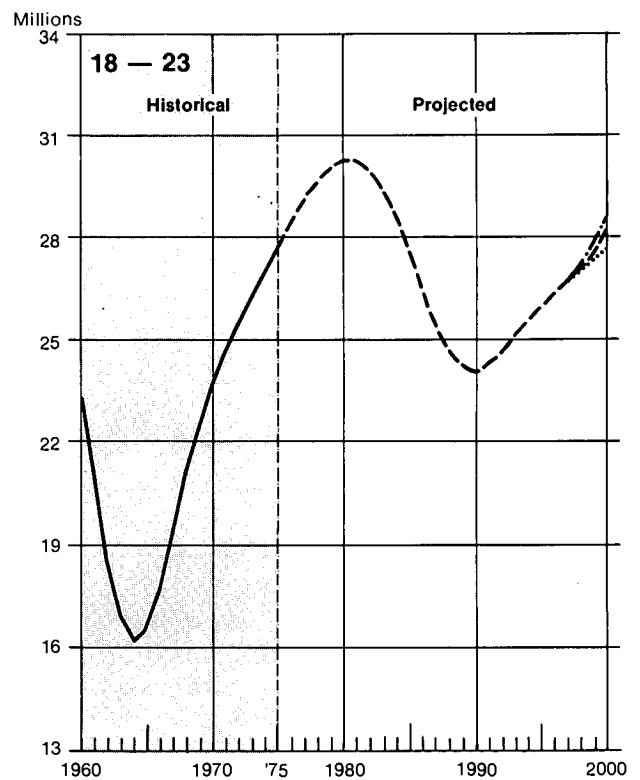
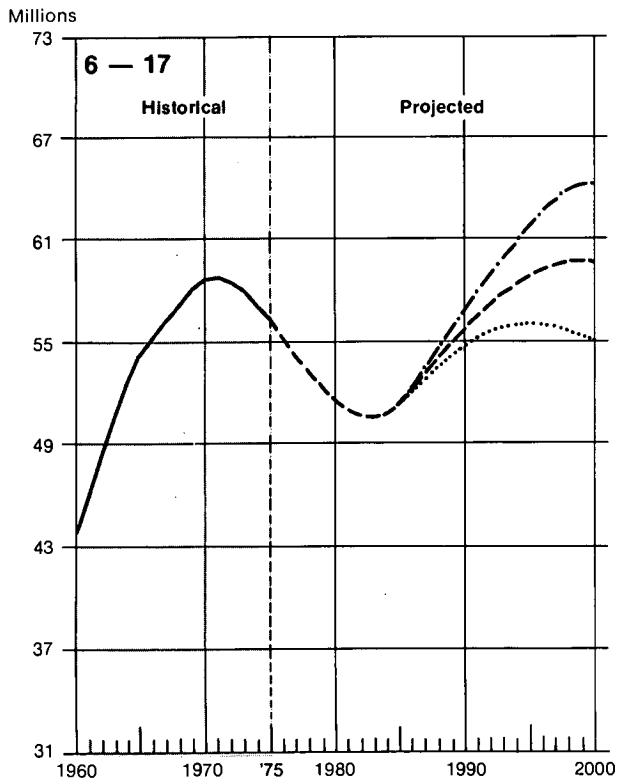
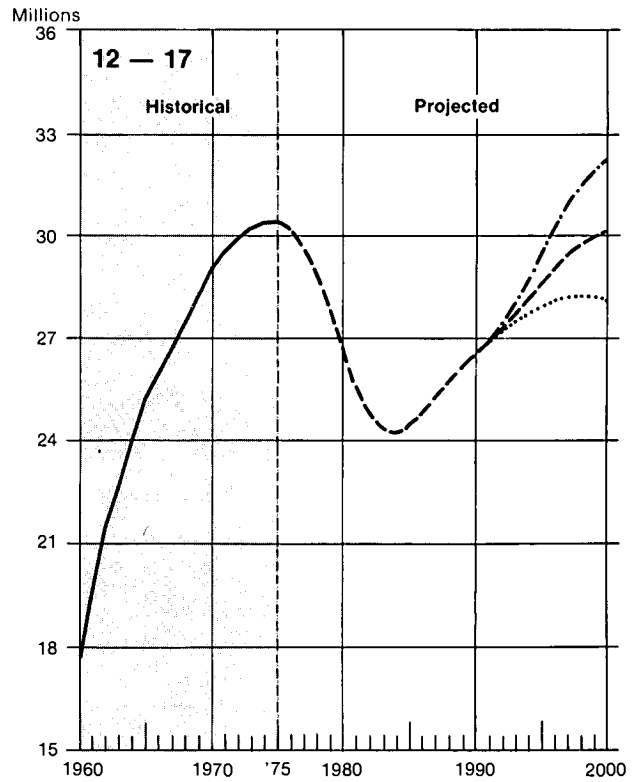
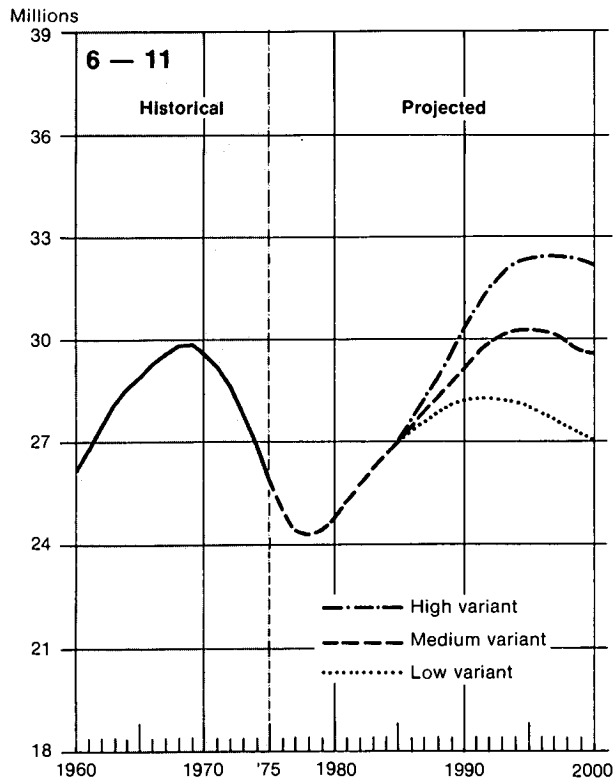
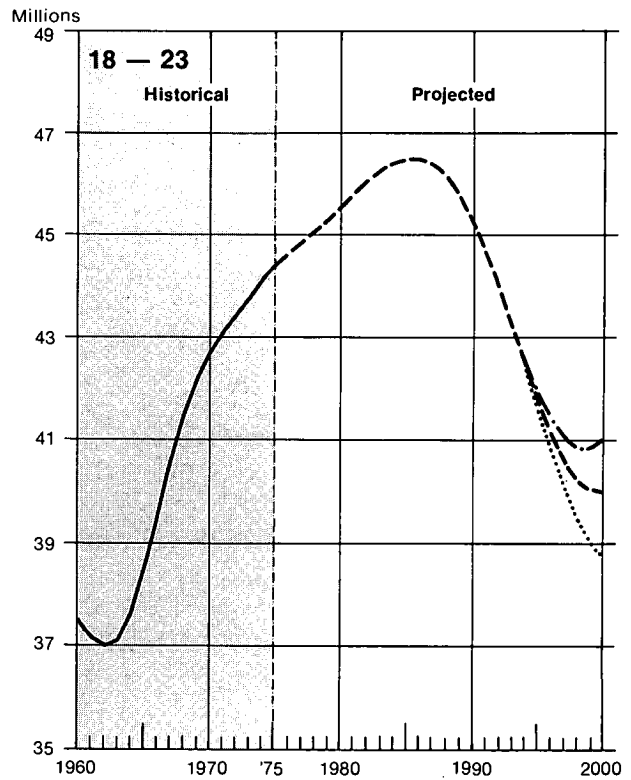
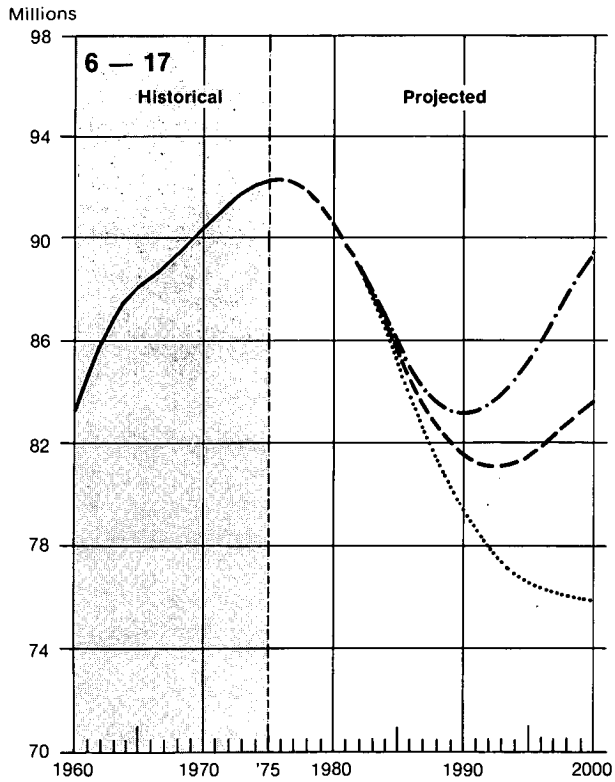
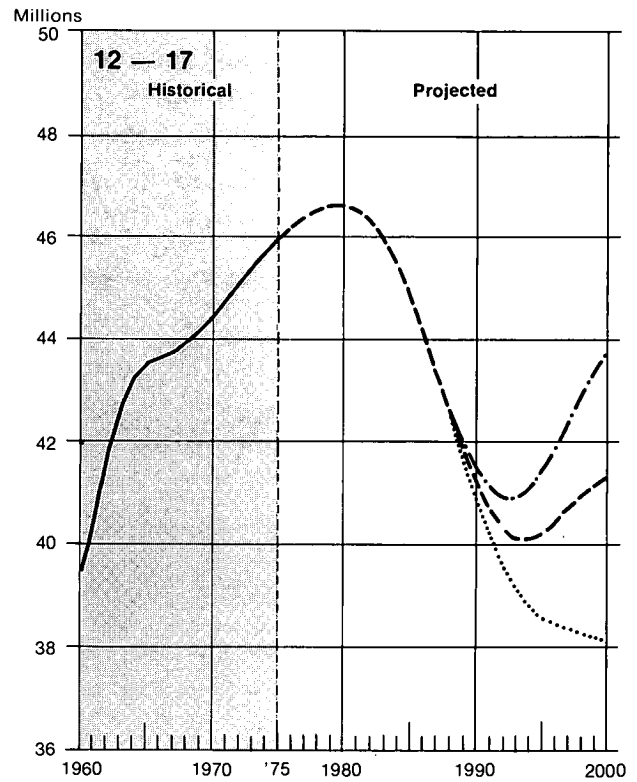
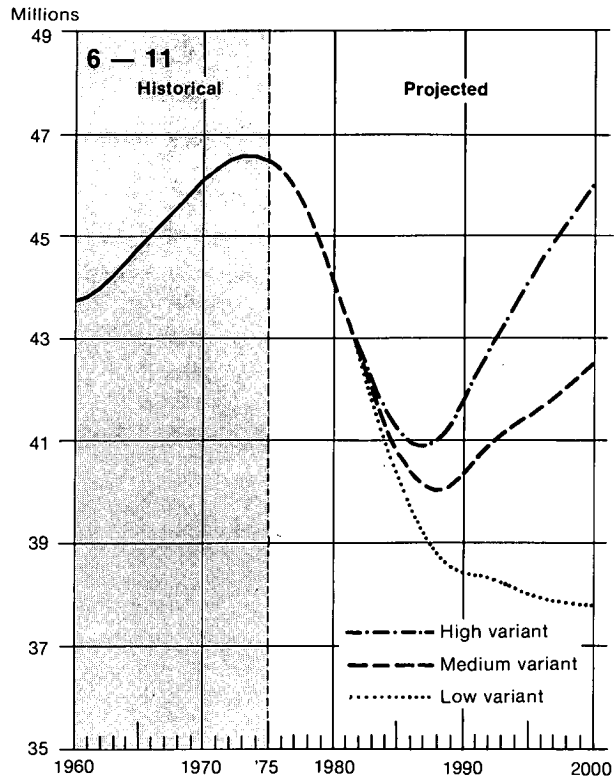
School-age Population, by Age Group, 1960 to 2000**U.S.S.R.**

Chart — 4-12

School-age Population, by Age Group, 1960 to 2000**EUROPE**

Subregional Trends

The course of the school-age population in every major region is shaped or strongly influenced by the pattern in its most populous subregions, which in turn, are affected by the largest countries. As a consequence, the demography of a subregion may diverge a little or a lot from the overall direction of school-age population trends.

Thus, it was necessary to prepare charts for each subregion (because of their small size, Melanesia, Micronesia, and Polynesia have been combined under "Other Oceania"). These charts are in Appendix B; only a few exceptional cases have been chosen for comment here (Charts 4-13 to 4-18).

-The most anomalous case is the Caribbean (Chart 4-13). This subregion is part of Latin America, which is an LDR. Yet the Caribbean's 6-11-year-old population is projected to follow a course that more closely resembles an MDR. The age group declines for a short period in the eighties before it starts to rise again in the last decade of the century.

-In East Asia as a whole, the 6-11 age group increases continually from 1960 until the mid-1970s. But because Other East Asia (Chart 4-14) excludes the dominant influence of the People's Republic of China and also Japan, in this subregion the age group fluctuates. According to the medium variant, it declines in the early seventies, rises again in the eighties, and levels off before the end of the century.

-Chart 4-15 shows Japan's pattern to be distinct from the main region, too, although in quite a different way. Japan, unlike the rest of East Asia, is classified as more developed, but its population trends do not strictly adhere to the MDR mode. One of the first subregions to experience a downtrend in births, its 6-11 population peak occurred in the second part of the 1950s, and the deepest trough ten years later. Since 1970 the age group has been undergoing a second, sharp increase, but the peak in the 1980s will not equal that of the 1950s.

-Charts 4-16 and 4-17 for Eastern and Northern Europe demonstrate the striking discrepancies that can exist between bordering subregions. Northern Europe's 6-11 age group increased throughout most of the sixties and early seventies, while numbers in Eastern Europe fell.

Intraregional Trends

Just as subregional patterns may diverge from those of the main geographic area, there are variations between countries in a subregion. Differences between developing nations are inclined to be in rates of population increase

Chart — 4-13

School-age Population, by Age Group, 1960 to 2000

CARIBBEAN

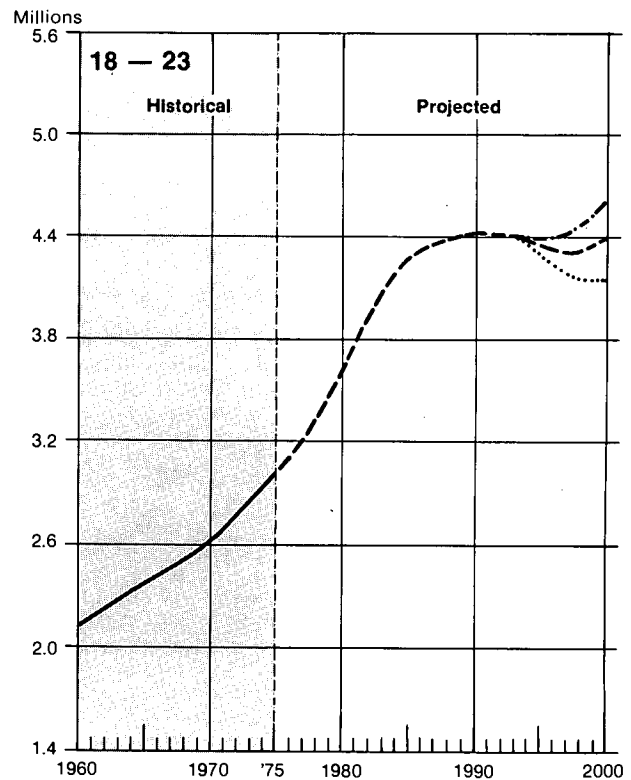
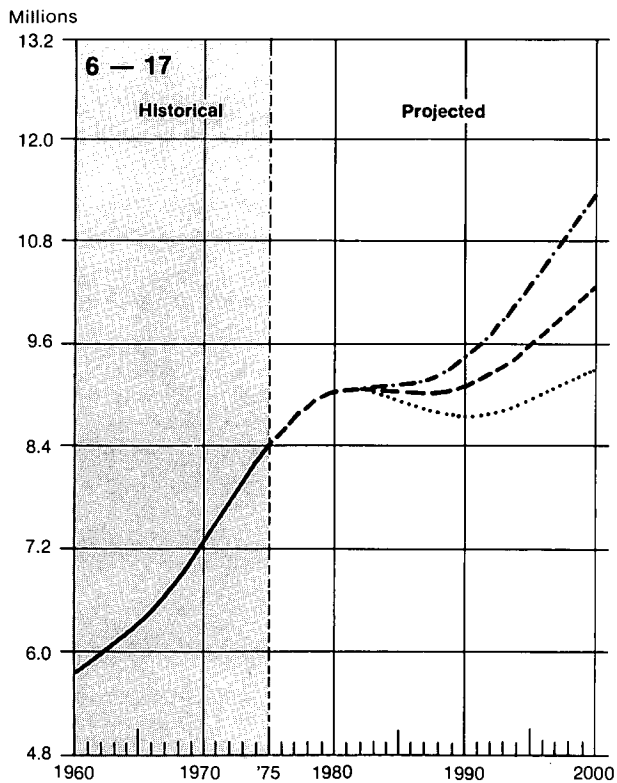
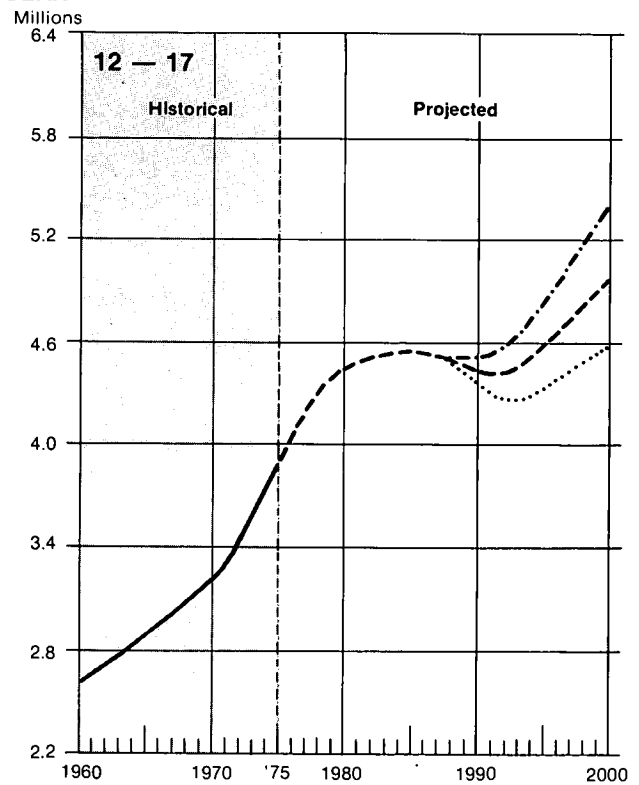
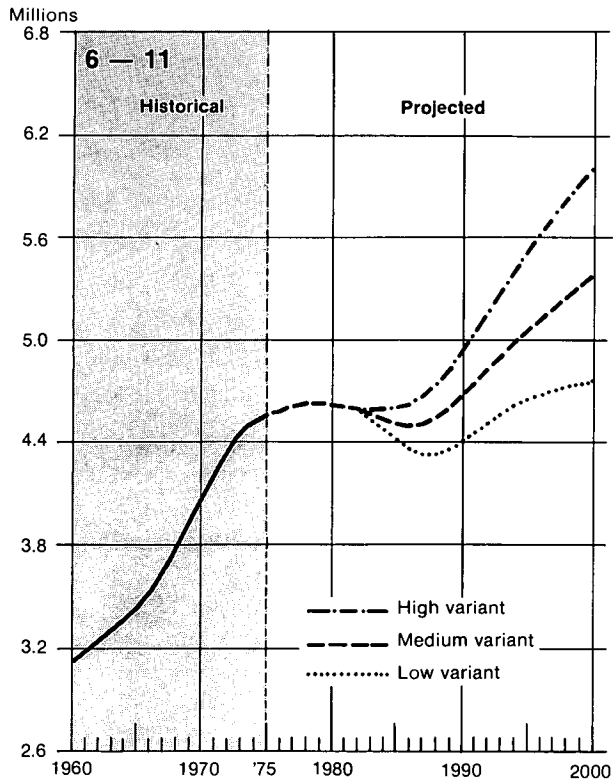


Chart — 4-14

School-age Population, by Age Group, 1960 to 2000

OTHER EAST ASIA

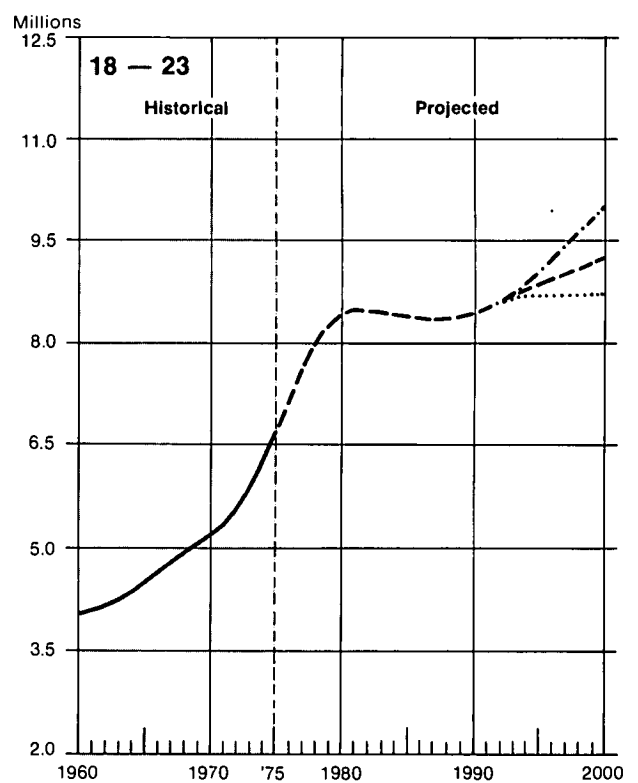
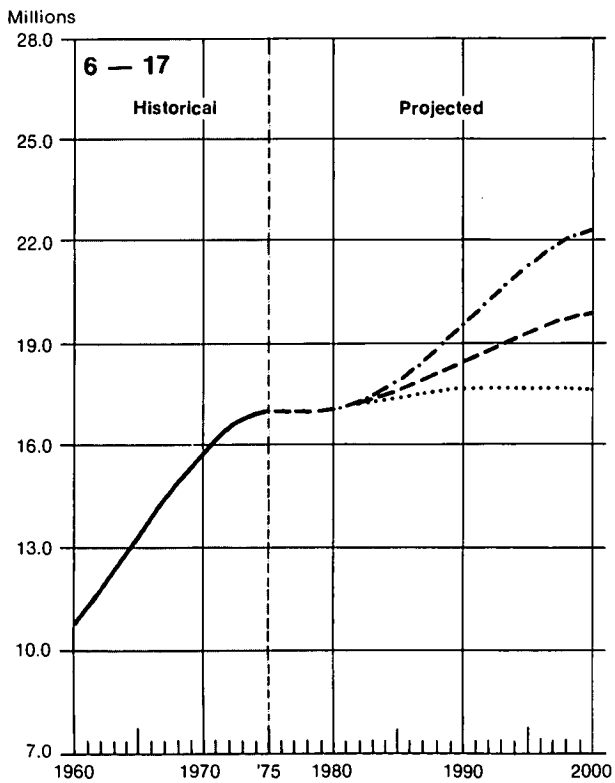
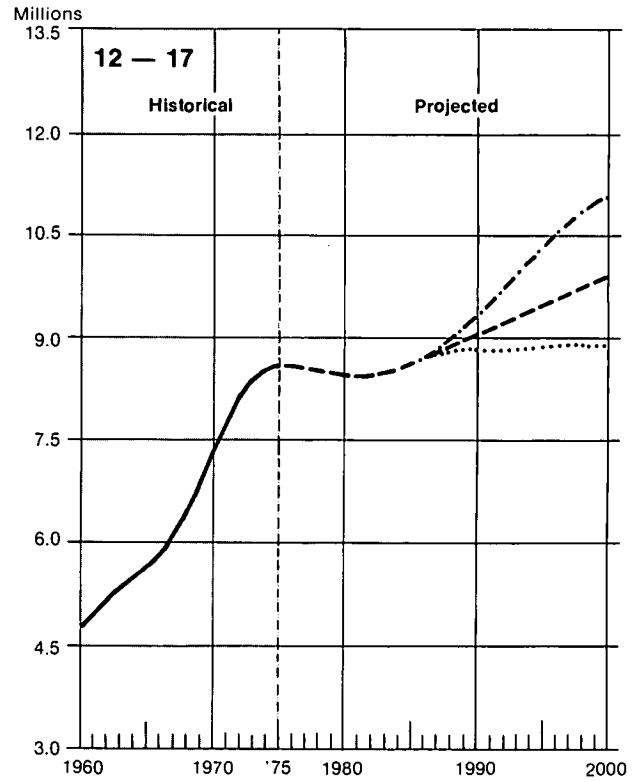
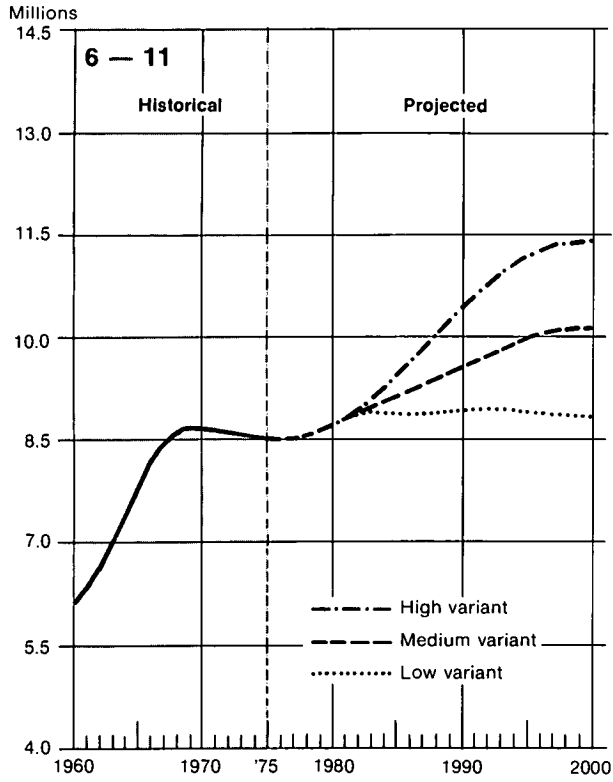


Chart — 4-15

School-age Population, by Age Group, 1960 to 2000

JAPAN

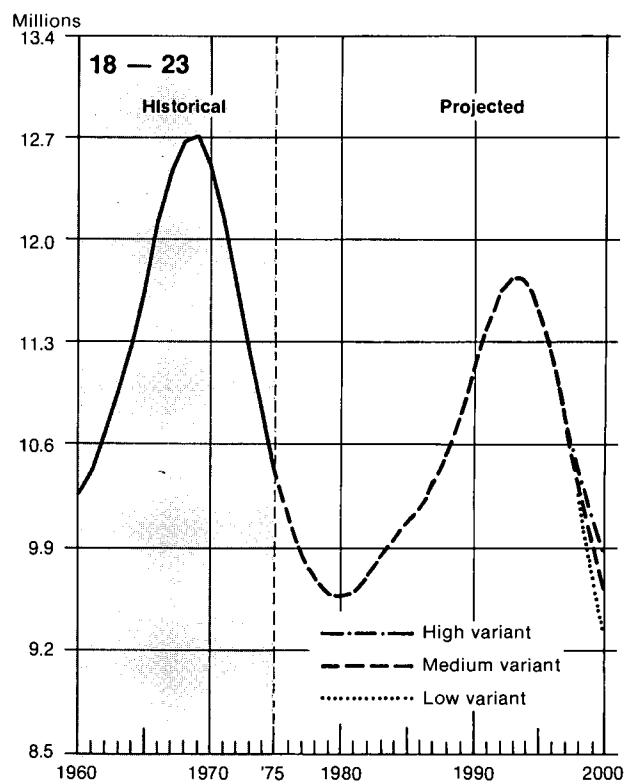
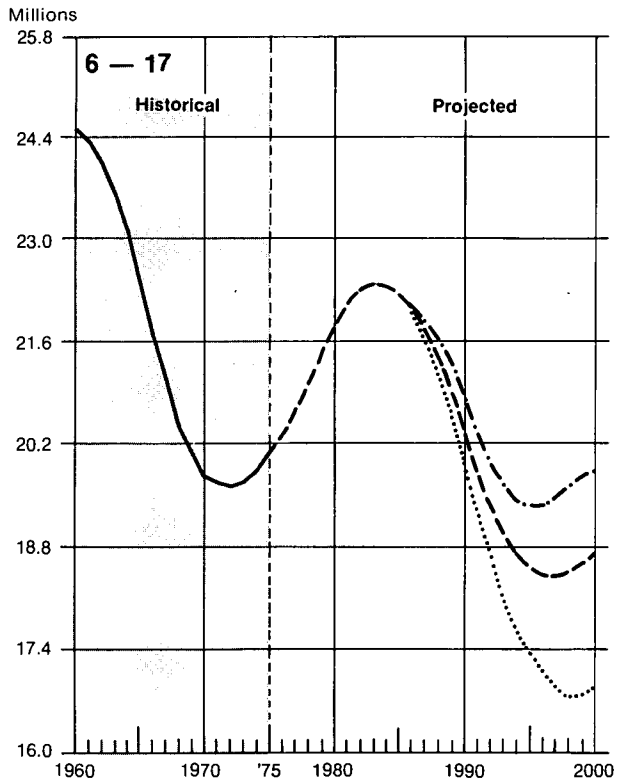
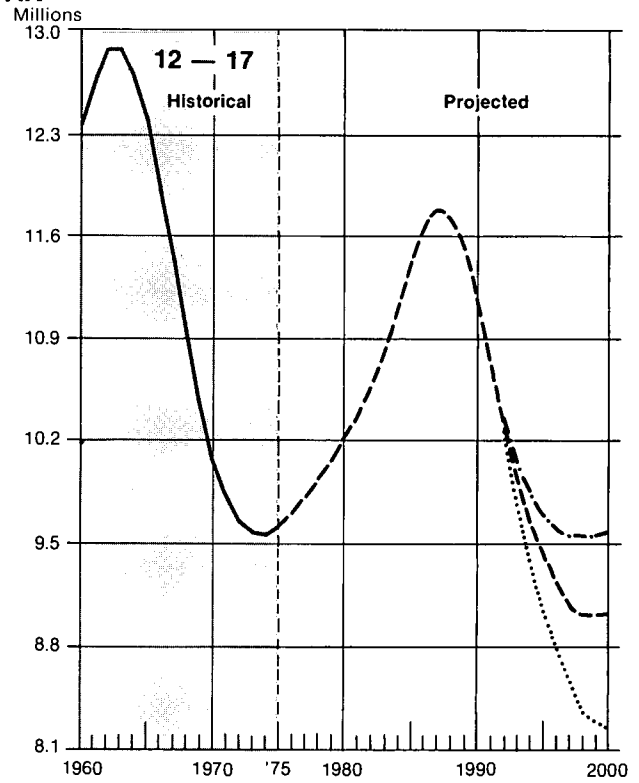
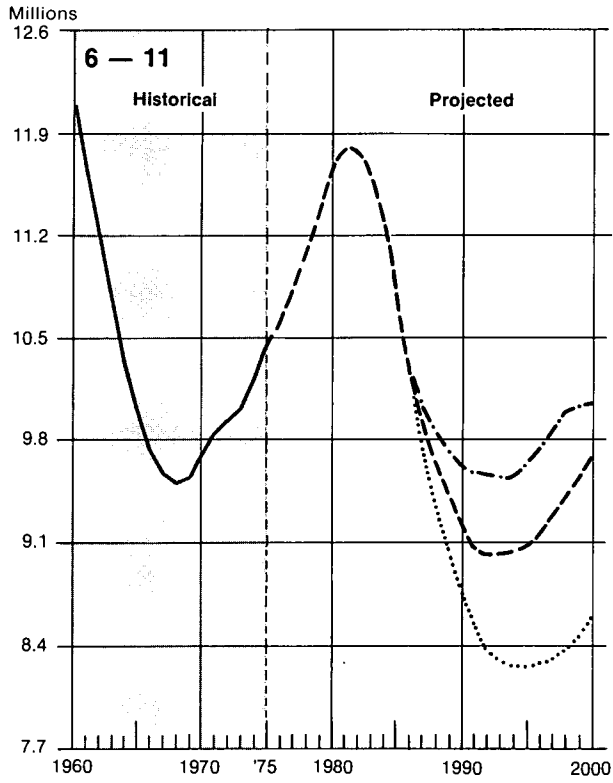


Chart — 4-16

School-age Population, by Age Group, 1960 to 2000

EASTERN EUROPE

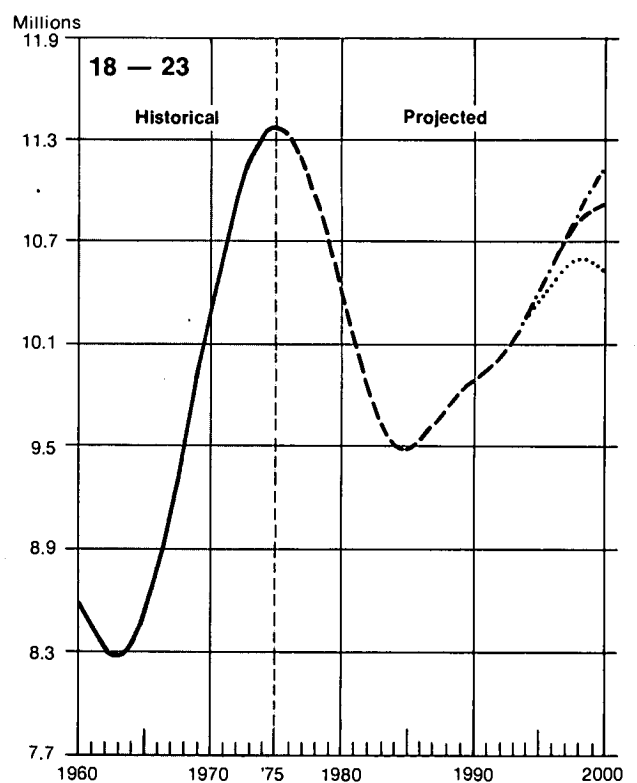
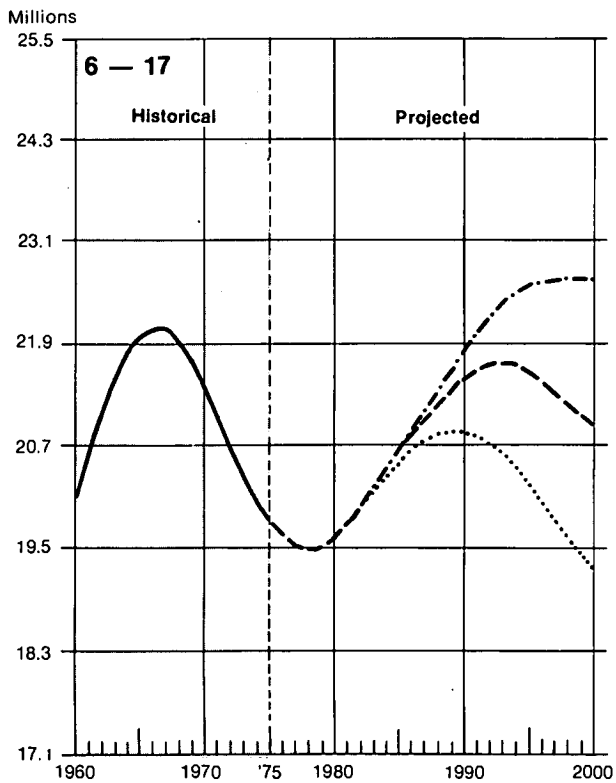
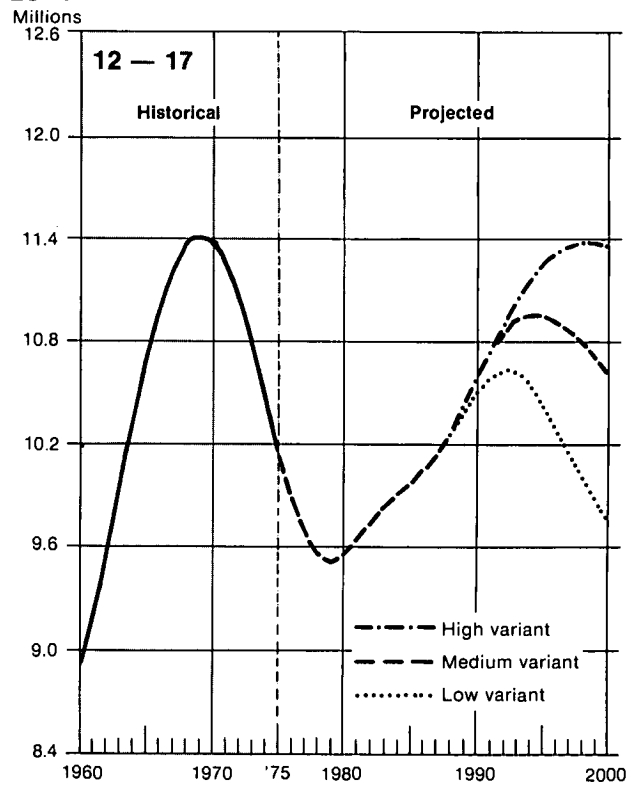
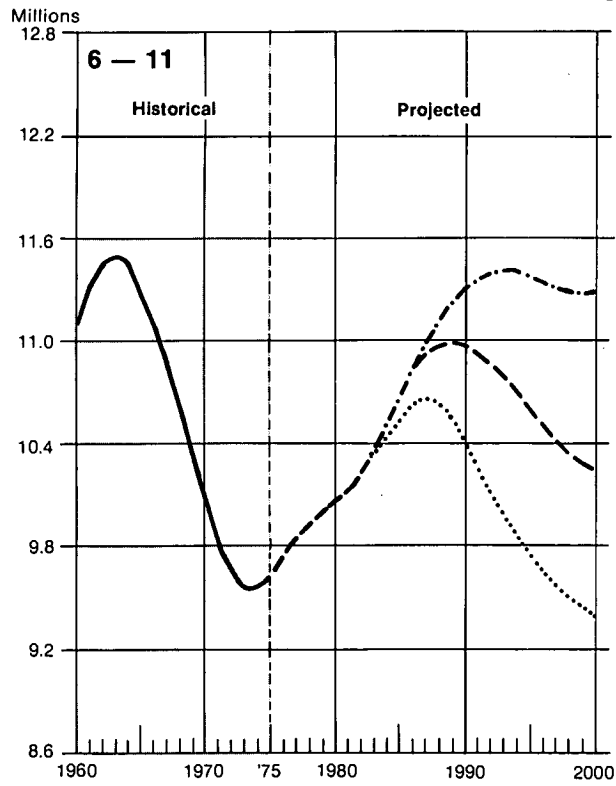
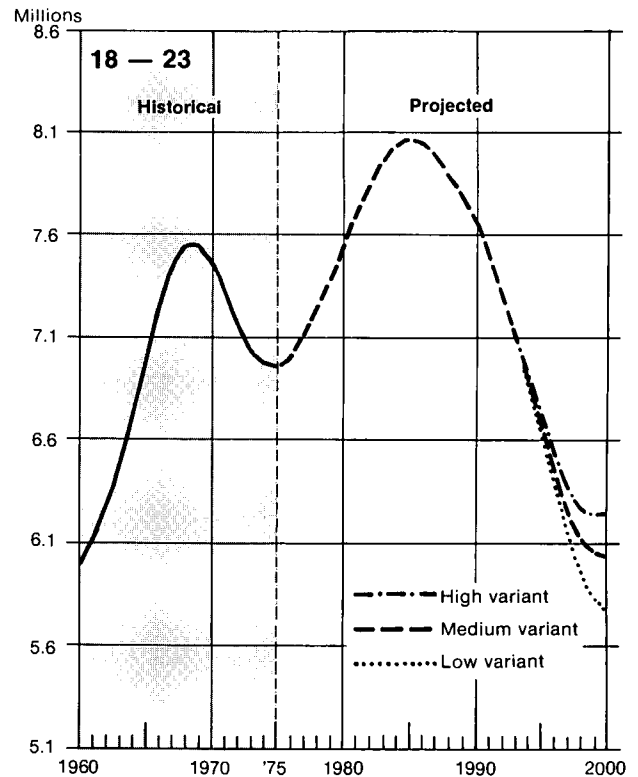
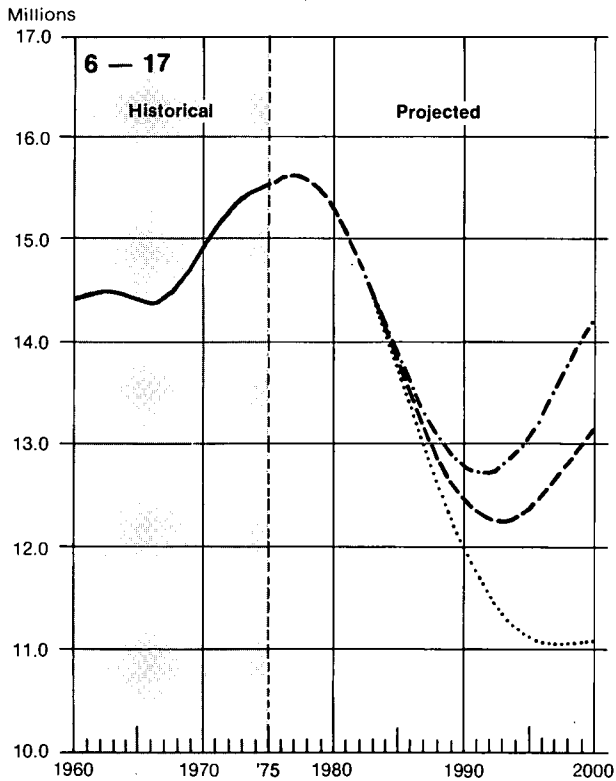
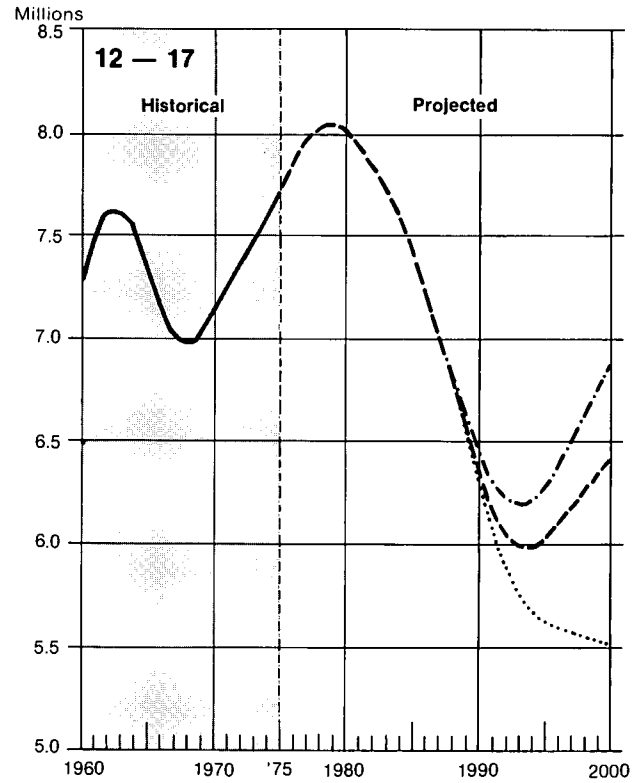
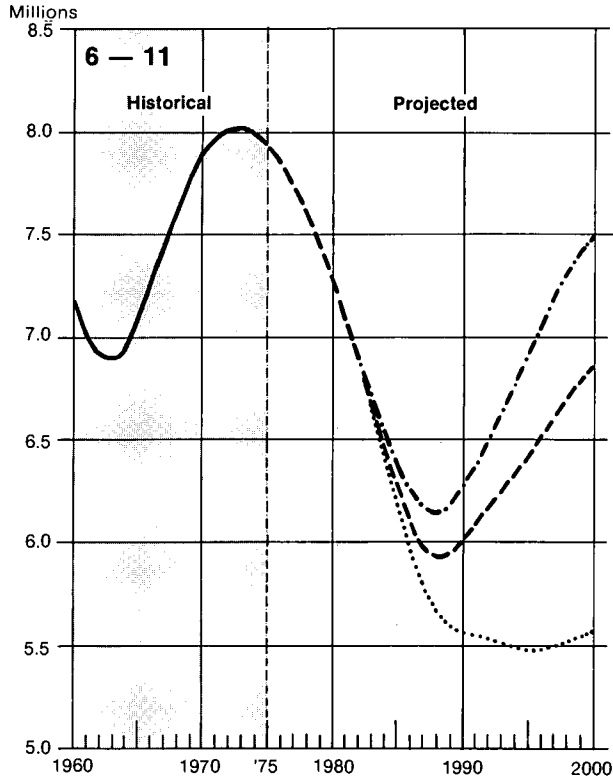


Chart — 4-17

School-age Population, by Age Group, 1960 to 2000**NORTHERN EUROPE**

rather than in contrary trend directions, as is the case for more developed countries. To demonstrate this point, Chart 4-18 gives the three variants of the 6-11 age group in four countries. The top half shows two developing nations: Egypt (Northern Africa) and Pakistan (Middle South Asia). The lower half shows two industrialized countries of Eastern Europe: Czechoslovakia and the German Democratic Republic.

The trend in Egypt and Pakistan is sustained increase, although Egypt's anticipated gain between 1975 and 2000 is slower than that of all Northern Africa: 49% versus 79% (medium variant). On the other hand, Pakistan's growth is much faster than that of Middle South Asia: 93% as opposed to 54% (medium variant).

The timing of trends in Czechoslovakia and the adjacent German Democratic Republic are nearly opposite: a decline in one usually coincides with an increase in the other. Czechoslovakia's 6-11-year-old population diminished until the mid-seventies, but then took an abrupt upturn, which is expected to culminate near the previous peak by the mid-eighties. Contrariwise, the number of children aged 6-11 in the German Democratic Republic reached an all-time high in the early seventies, but is expected to drop by more than half a million by early 1980s. The three population variants for Czechoslovakia to the turn of the century offer a range of possibilities: a gradual rise in numbers, a slight decline and levelling off, or a sharp reduction. However, the projected patterns for the German Democratic Republic — an increase from the low and then a decline — differ only in the extent of fluctuation.

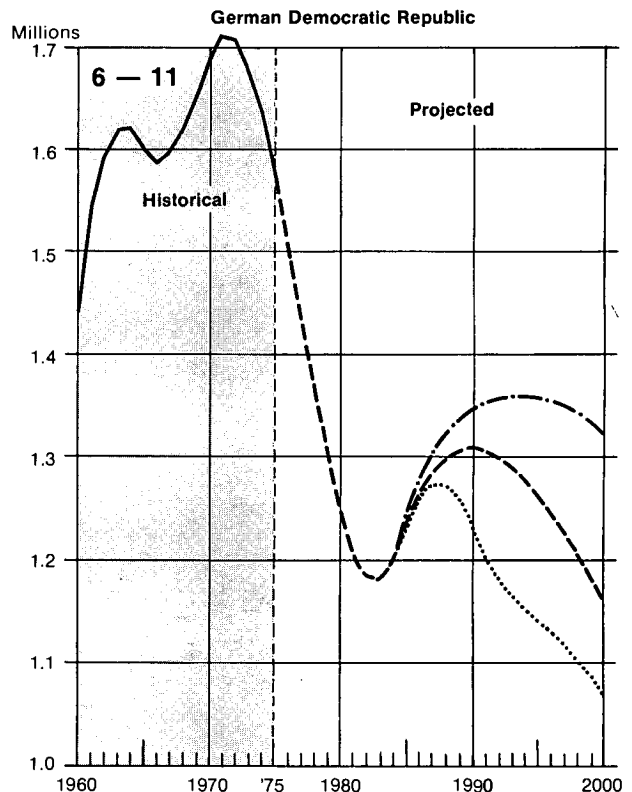
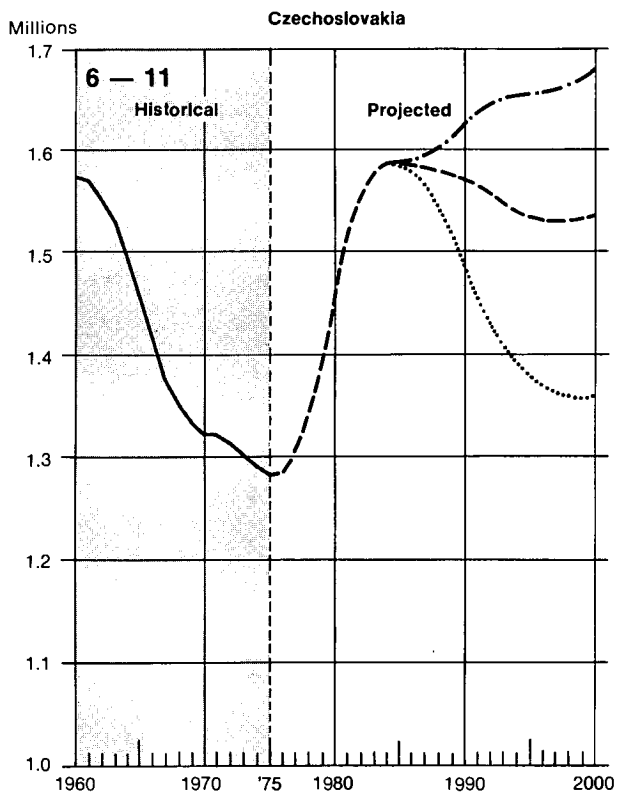
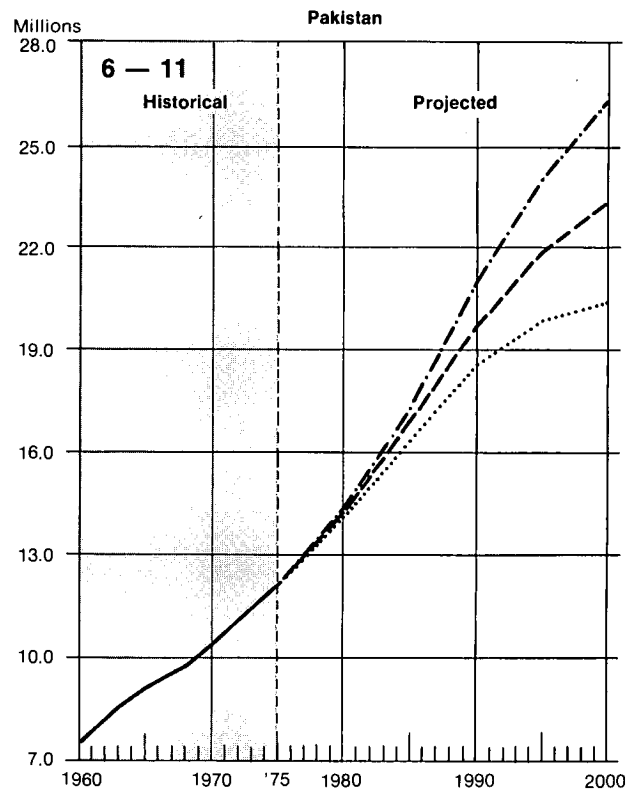
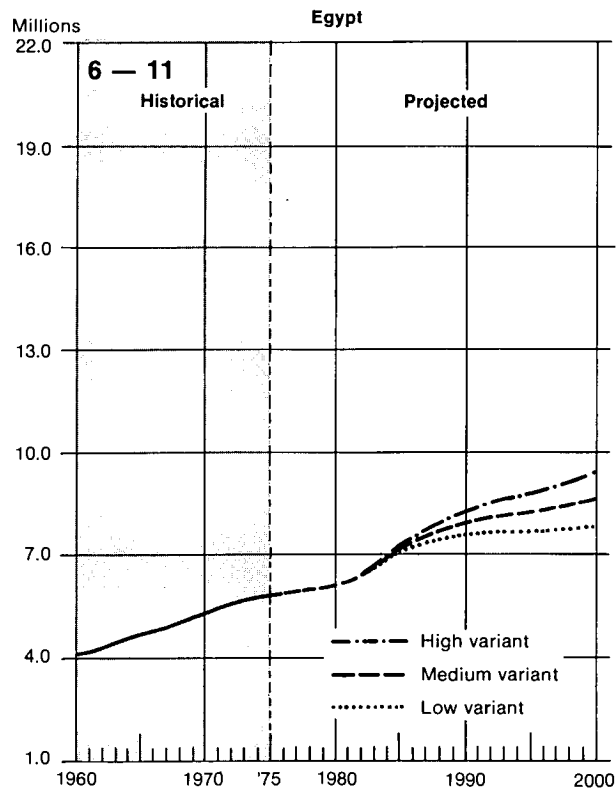
Readers must be cautious in drawing conclusions about the effect of different fertility rates from the charts. Because the scales vary, the visual impression is that by 2000 relative disparities between the projections are larger in Europe than elsewhere. But actually, the percentage difference separating the low and high variants is greatest in Northern America (54%), followed by Latin America (33%). The narrowest ranges are projected for the U.S.S.R. (19%) and Europe (22%).

School-Age Population Growth Index

To correct any misinterpretation that might result from the use of different scales on the charts in the previous section, several charts based on index

Chart — 4-18

Population 6-11, Egypt, Pakistan, Czechoslovakia and the German Democratic Republic, 1960 to 2000



numbers have been prepared, which allow visual comparison of the rate of population growth in different regions.

An index value rather than the actual population is plotted. The index represents the size of the population in any year related to its size in 1975. Therefore, the shape of the line in one region can be compared directly with the line for the same age group in another region. The medium variant was used to calculate the indexes;¹ the high and low variants would have yielded other results, although relative differences would generally persist.

All numbers are expressed as a percentage of the 1975 value. For instance, if the 1990 index is 140, the age group is 140% of what it was in 1975 (i.e., a 40% increase). If the index is less than 100, say 95, the age group amounts to only 95% of its 1975 size (i.e., a 5% decrease). An index of 80 in 1960 means that the age group was then only 80% of the 1975 value. But this does not represent a 20% increase from 1960 to 1975. Rather, the increase would be 25% (i.e., $\frac{100 - 80}{80} \times 100\% = 25\%$).

Chart 4-19 shows the total and school populations for the world and the MDR and LDR. Totals rise constantly throughout the period, but the rate of growth is faster in the LDR. By 2000 the increase of younger age groups for the world and the LDR is less than that of older ones, reflecting the assumption that fertility will decline.

Charts 4-20 to 4-22 compare the medium variant of the 6-11, 12-17, and 18-23 age groups in the major regions. Without exception the most rapid growth occurs in Africa where each age group is expected to more than double by 2000. For Africa, Latin America, South Asia, East Asia, and Oceania, it is generally true that the younger the age group, the smaller the increase. After Africa, Latin America and South Asia have the next highest growth rates. The fourth fastest rate of school-age population increase is in Oceania, where each age group will be about 20% larger in 2000 than it was in 1975.

The charts show that two pairs of regions, the U.S.S.R. and Northern America and East Asia and Europe, have roughly parallel population waves. The school-age groups in the U.S.S.R. and Northern America are projected

¹ Because the indexes were calculated from unrounded figures, a similar calculation based on the rounded data in Table A-12 might produce slightly different results.

Chart — 4-19

Population Growth Index of Selected Age Groups, World, More and Less Developed Regions, Medium Variant

(1975=100)

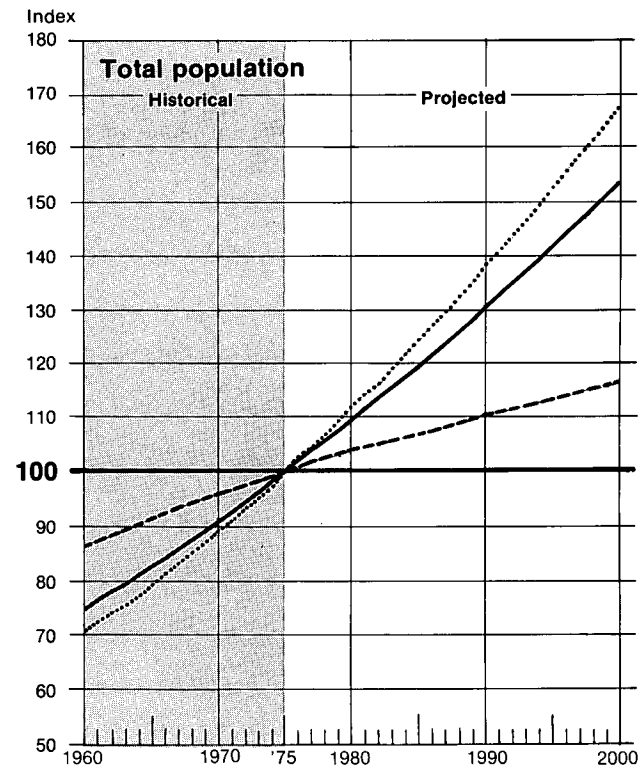
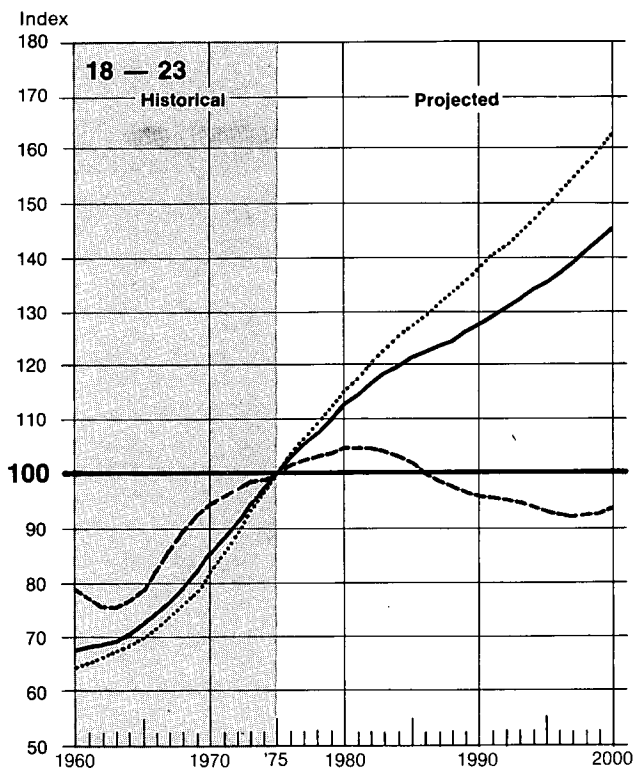
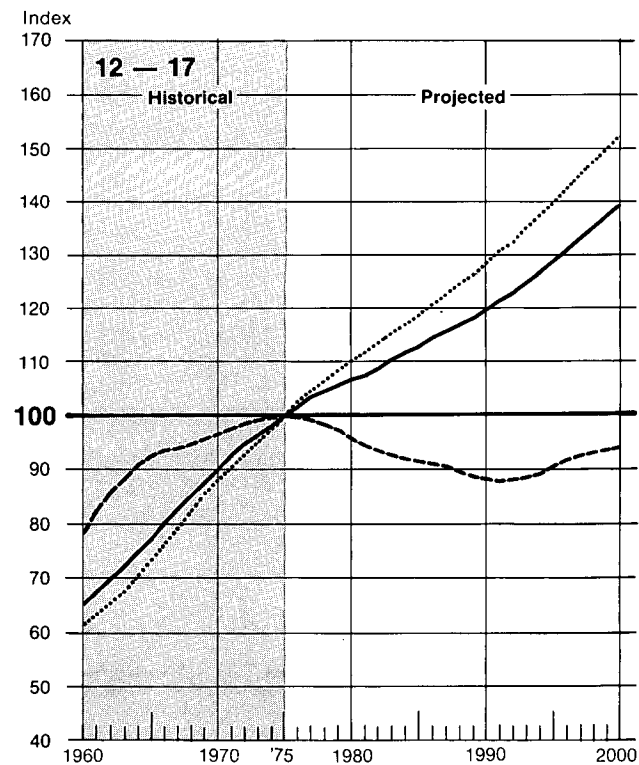
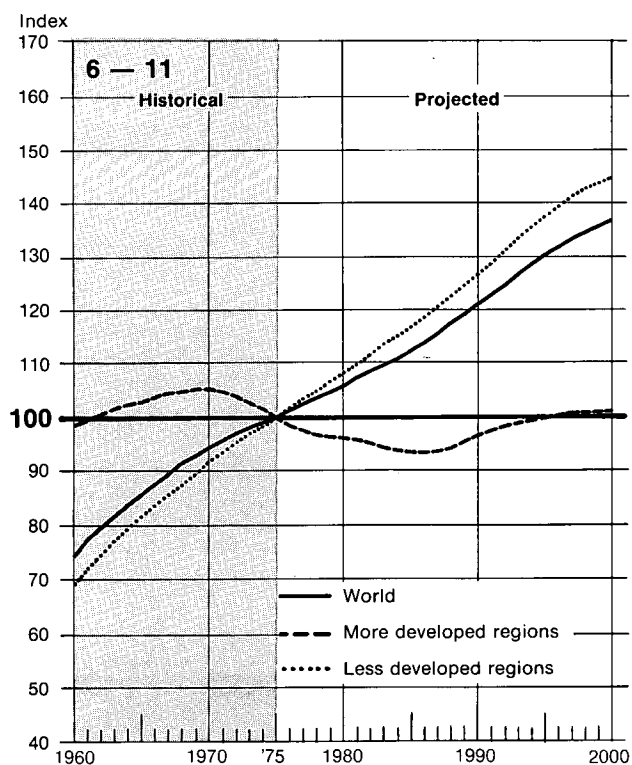


Chart — 4-20

**Population Growth Index of 6-11 Age Group,
Major Regions, Medium Variant
(1975=100)**

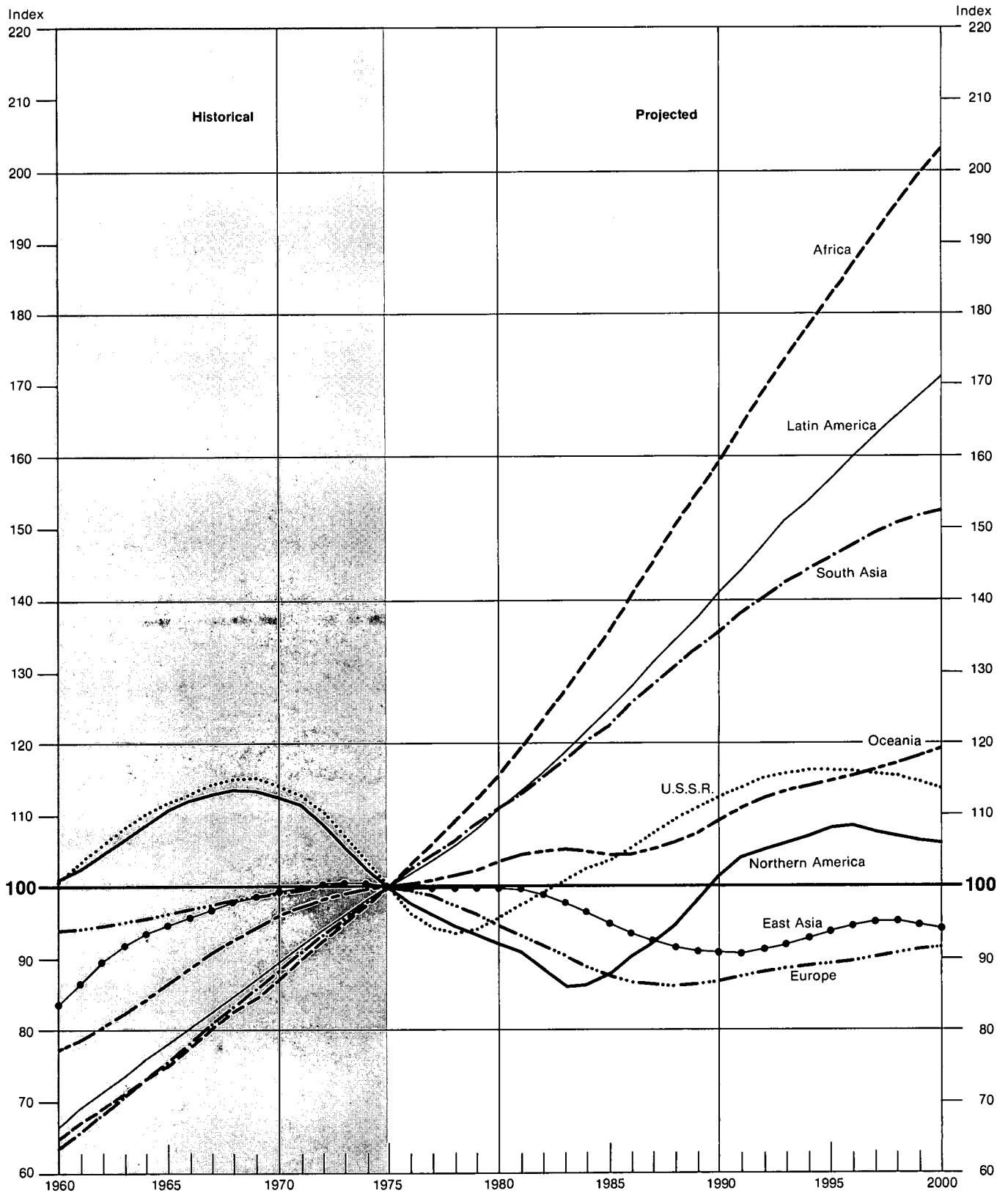


Chart — 4-21

**Population Growth Index of 12-17 Age Group,
Major Regions, Medium Variant
(1975=100)**

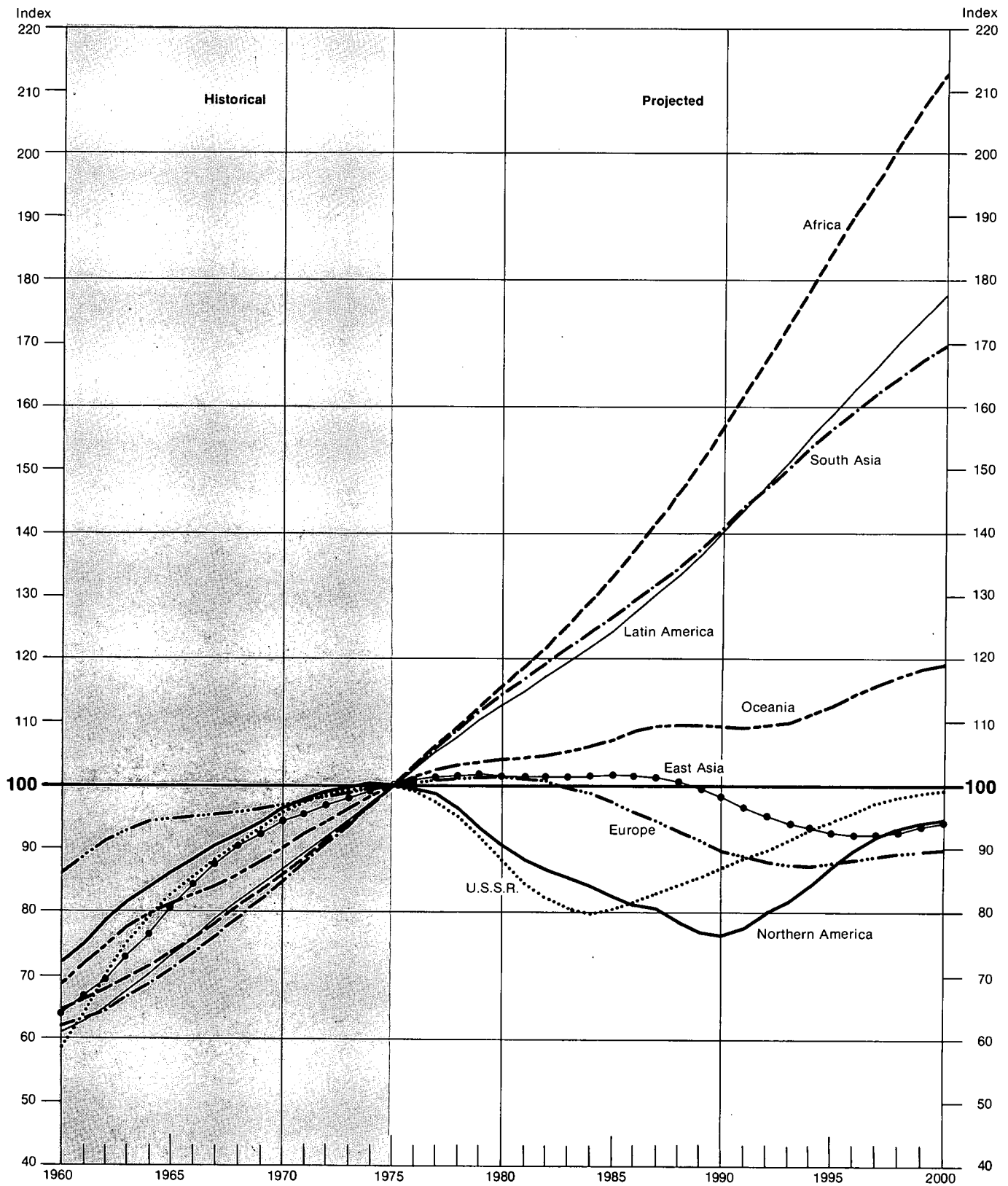
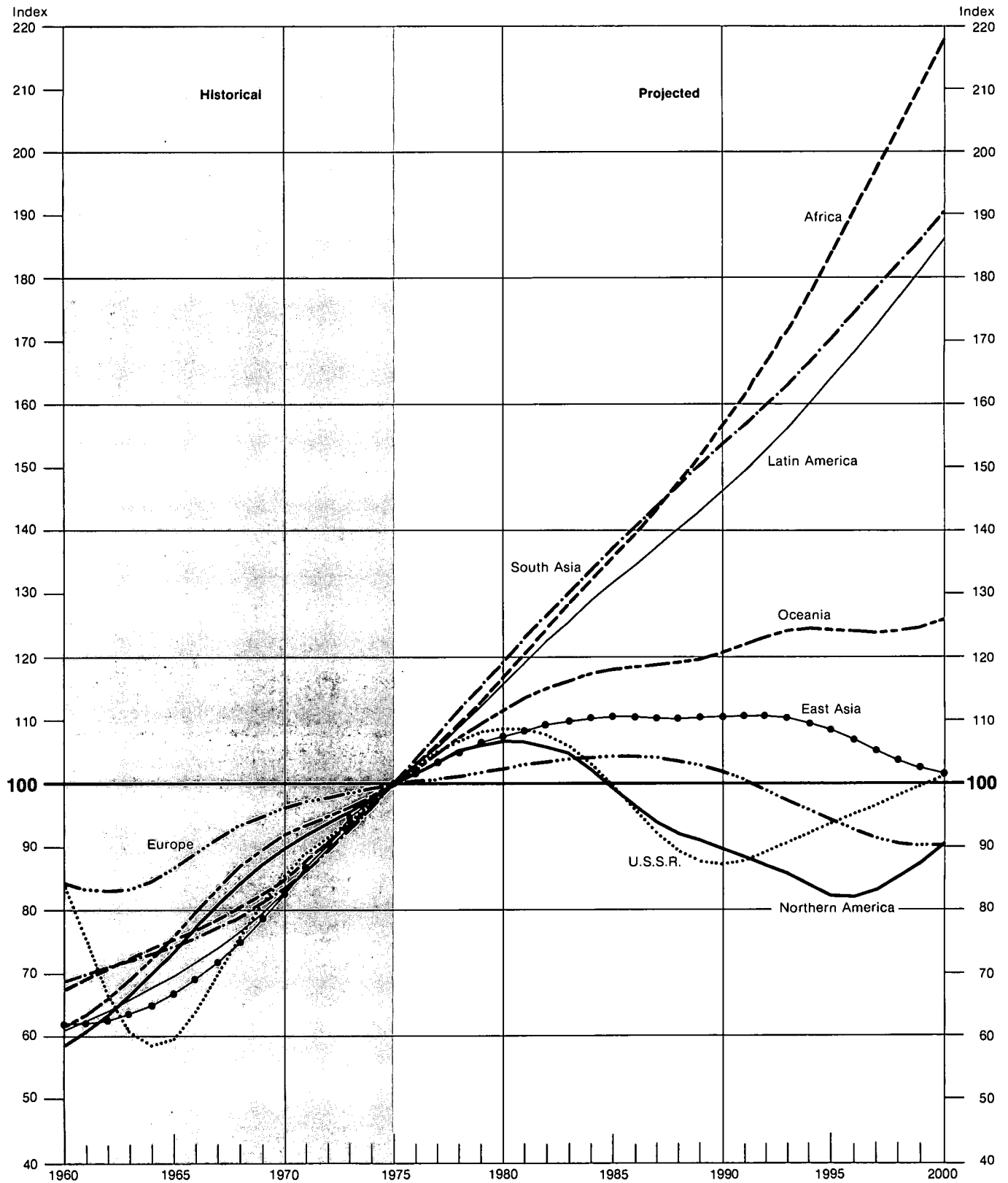


Chart — 4-22

**Population Growth Index of 18-23 Age Group,
Major Regions, Medium Variant
(1975=100)**



to undergo pronounced ups and downs at approximately the same time. During most periods in the U.S.S.R., relative increases are greater and relative losses not so severe as in Northern America.

Despite the difference in size, East Asia and Europe have similar population trends. Europe's relative growth is always less than East Asia's. "Growth," however, is a misnomer, because by the end of the century, the projected size of most age groups is below the 1975 level.

The effect of the rapid decline of East Asia's fertility rate is visible in the pattern of 6-11-year-olds. The size of the age group does not change until 1980, after which it declines for at least a decade. A small increase is projected for the 1990s. Europe's 6-11-year-old population experiences the longest continuous decline from 1975. Notwithstanding some increase in the 1990s, by 2000 the age group is shown as being 8% less (the biggest drop among all regions) than it was twenty-five years earlier.

When areas within a single major region are compared, different rates of growth and even different patterns may emerge. In Africa (Chart 4-23), most subregions adhere to the main trend of steady growth. Two African subregions (Western and Eastern) will at least double their 6-11 population by 2000; an increase of more than 120% is anticipated for Western Africa. The least growth in Africa - just 73% - is expected for Southern Africa.

Latin America's most populous subregion, Tropical South America (Chart 4-24), sets the overall pattern - uninterrupted growth. However, each subregion increases at a different rate. The fastest is Middle America, the only one where the number of 6-11-year-olds will more than double by 2000, essentially because of the effect of Mexico, which, because of its size, dominates the subregion. The Caribbean pattern, however, is more typical of an MDR. The age group is projected to drop below its 1975 level in the mid-eighties before it starts to increase again, and then, only moderately.

South Asia (Chart 4-25) gains more than 50% over the twenty-five years, although the rise in the western part is substantially greater.

Trends in Oceania are strongly influenced by Australia and New Zealand (Chart 4-26), which are classified as more developed. The 6-11 age group in these two countries will hover around its 1975 level for the rest of the century. By contrast, "Other Oceania" increases steadily, so that by 2000 its 6-11 age group is 62% higher than it was in 1975.

Chart — 4-23

**Population Growth Index of 6-11 Age Group,
Africa and Its Subregions, Medium Variant
(1975=100)**

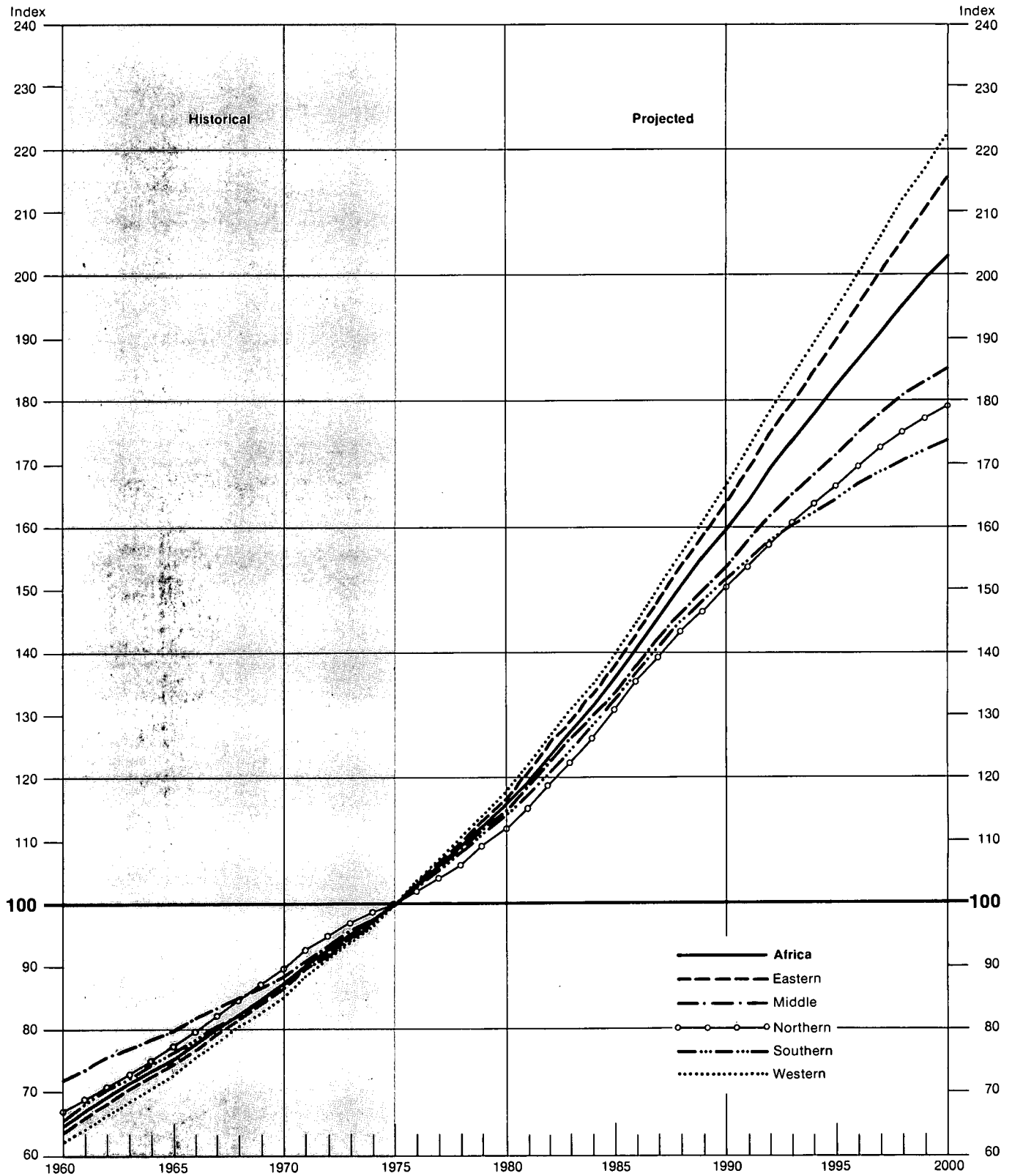


Chart — 4-24

**Population Growth Index of 6-11 Age Group,
Latin America and Its Subregions, Medium Variant
(1975=100)**

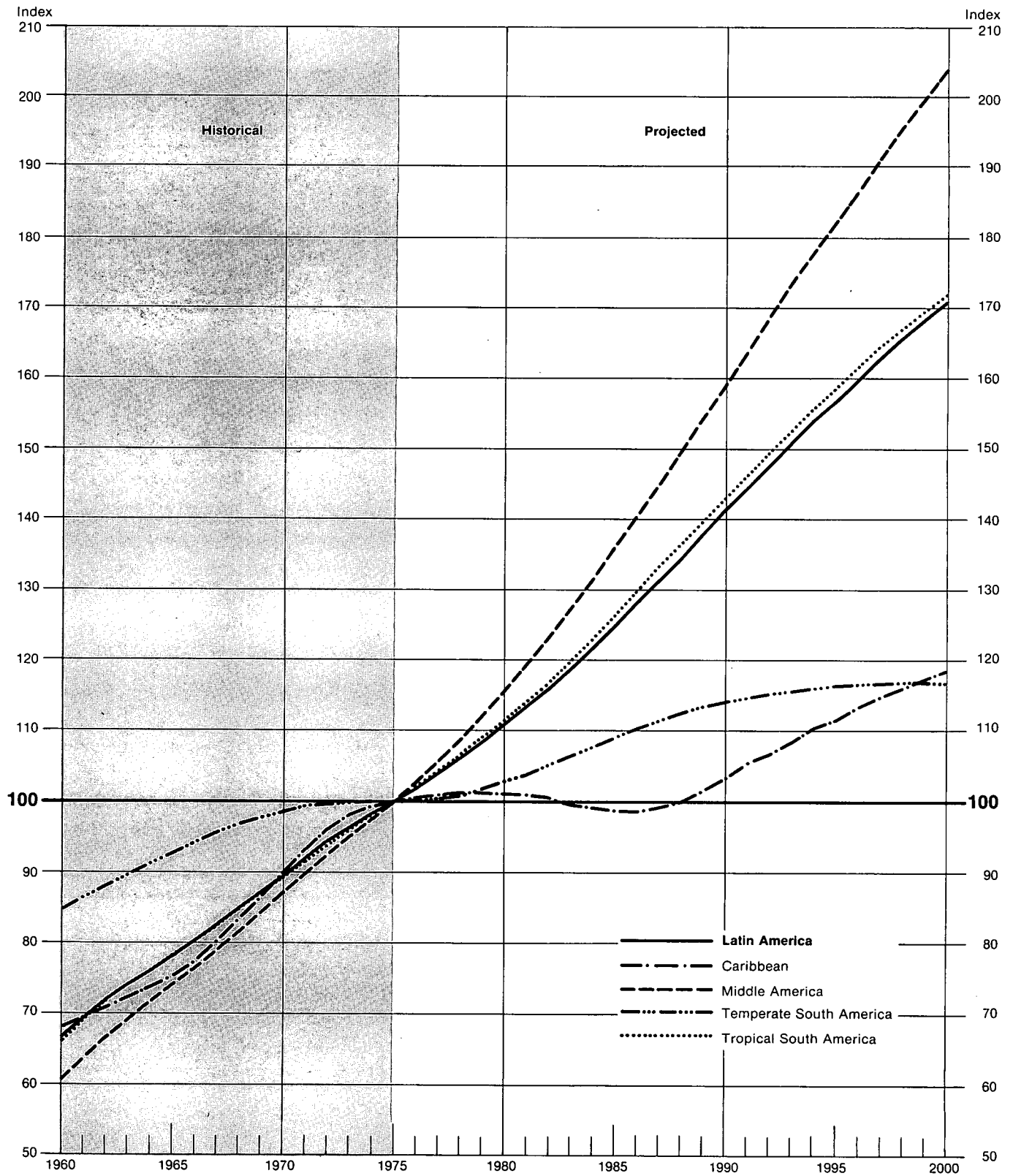


Chart — 4-25

**Population Growth Index of 6-11 Age Group,
South Asia and Its Subregions, Medium Variant
(1975=100)**

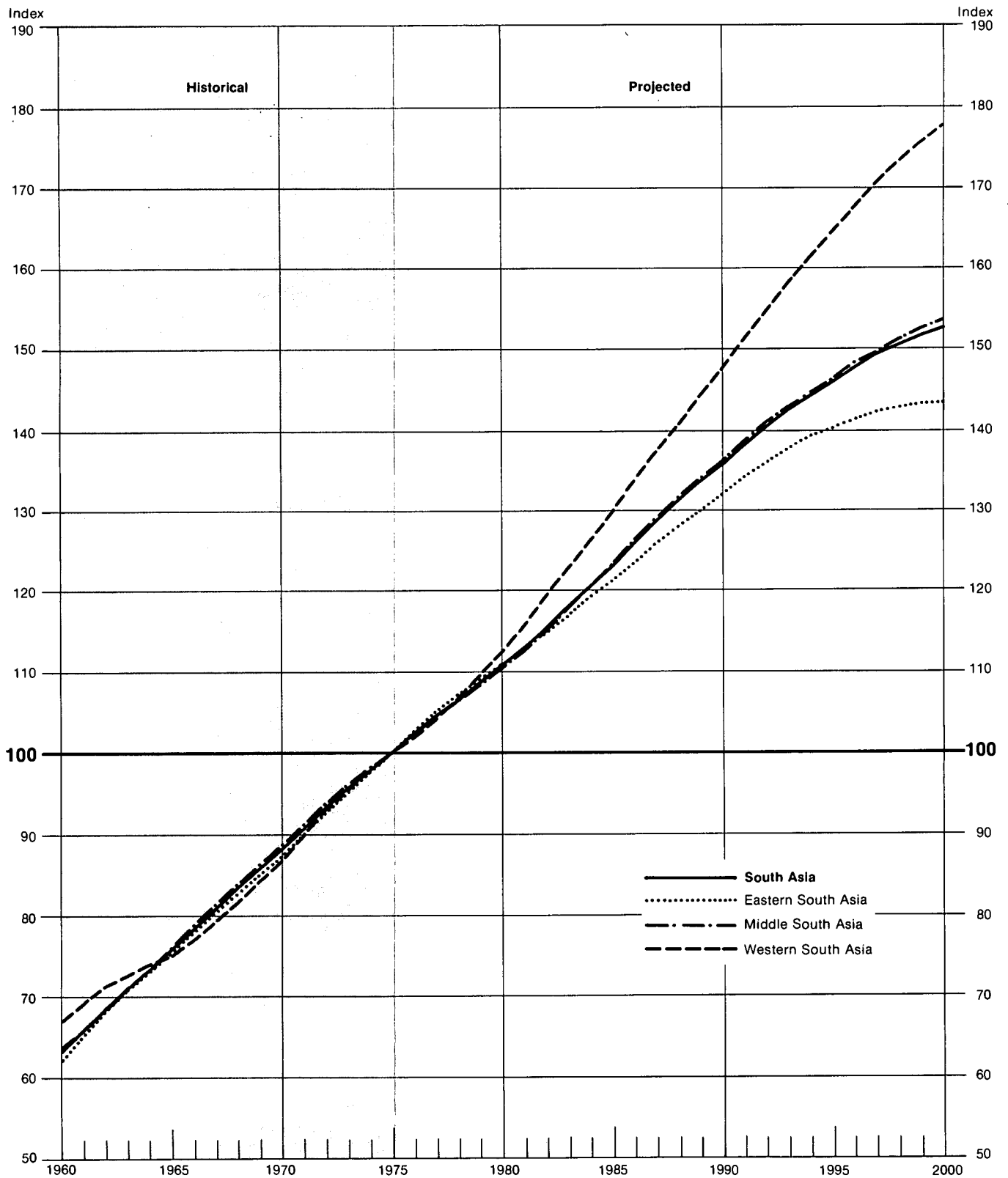
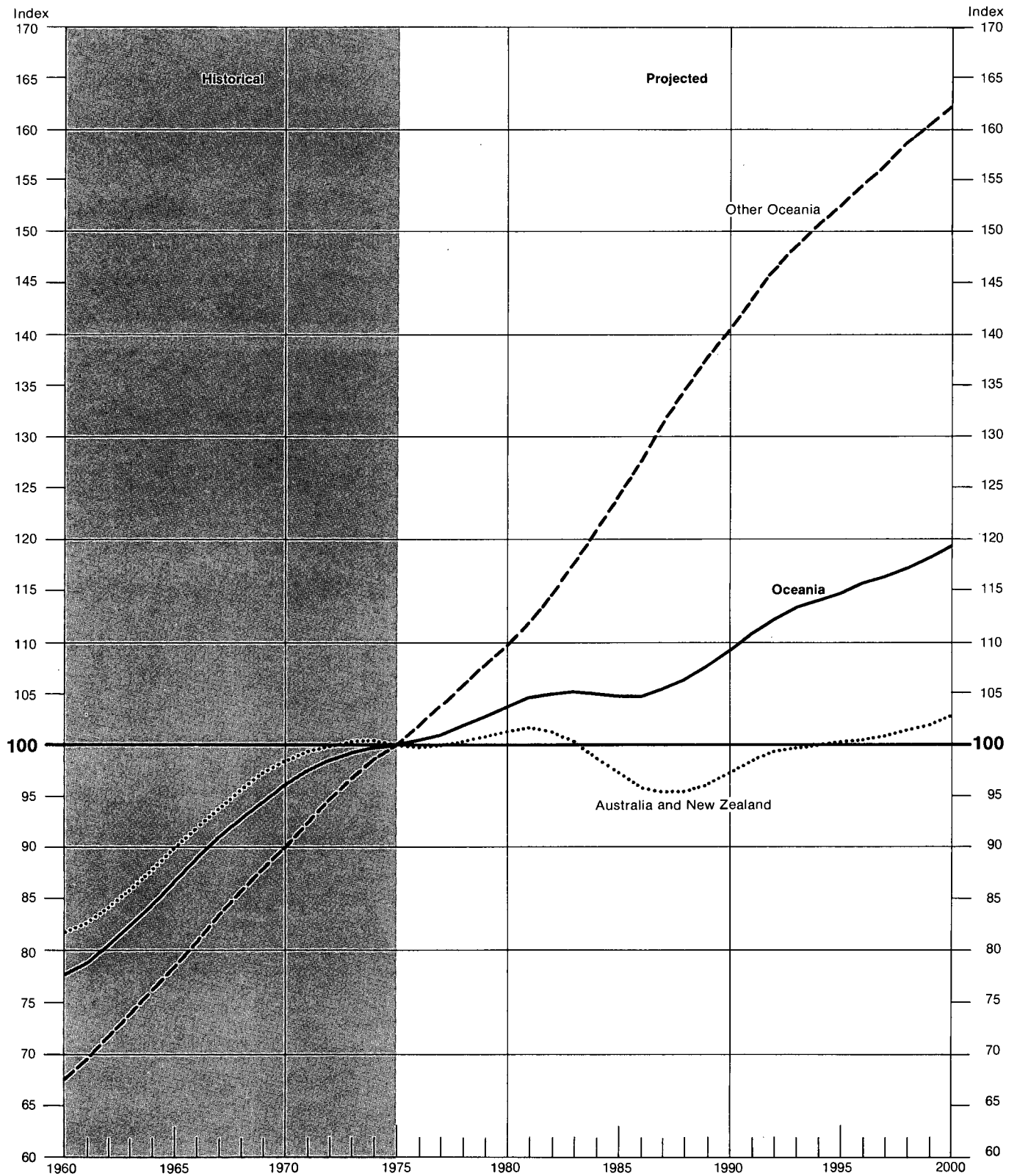


Chart — 4-26

**Population Growth Index of 6-11 Age Group,
Oceania and Its Subregions, Medium Variant
(1975=100)**



The 6-11 age group in each East Asian subregion behaves differently (Chart 4-27), but the vast People's Republic of China sets the general trend. "Other East Asia" shows the largest increase, the sole interruption occurring between 1960 and 1978, an aftereffect of the war in Korea a generation ago. Japan is the only subregion classified as more developed. The number of 6-11-year-olds fell about 25% in less than ten years before turning around to rise to the 1975 level. By the early eighties, the age group is expected to almost equal the 1960 total, but then drop back to its 1975 size within five years and continue to decline sharply. In the last seven years of the century, some moderate growth is expected.

All four European subregions exhibit the typical "more developed" characteristic: "waves" (Chart 4-28). Southern Europe closely follows trends of the main region after 1975; so do Northern and Western Europe, but at a significantly lower level. Eastern Europe goes in the opposite direction. The 6-11 age group in the Eastern subregion was at almost its minimum in 1975, while the Western and Northern subregions hit highs that they are not expected to reach again this century.

These charts show where particular age groups are growing most rapidly, and also suggest implications of the population trends for education. Increases expected in LDR indicate how much effort will be needed to maintain 1975 enrolment rates and what extra resources must be mobilized to boost enrolment at one level or another. For the MDR the noteworthy aspect of the charts is the fluctuation in relation to 1975, which has consequences much different from those for the LDR.

Rates of Change

Of course, education planning is easier (providing that the necessary resources are available) if changes in the school-age groups are always in one direction, for example, increasing. This would mean more schools, more teachers and more money. But planning is complicated if numbers rise and fall. Education systems in the more developed subregions have all undergone the initial impact of the "baby boom" and the subsequent drop in births. Some regions are already experiencing a baby boom "echo"; others are still in a period of decline.

Chart — 4-27

**Population Growth Index of 6-11 Age Group,
East Asia and Its Subregions, Medium Variant
(1975=100)**

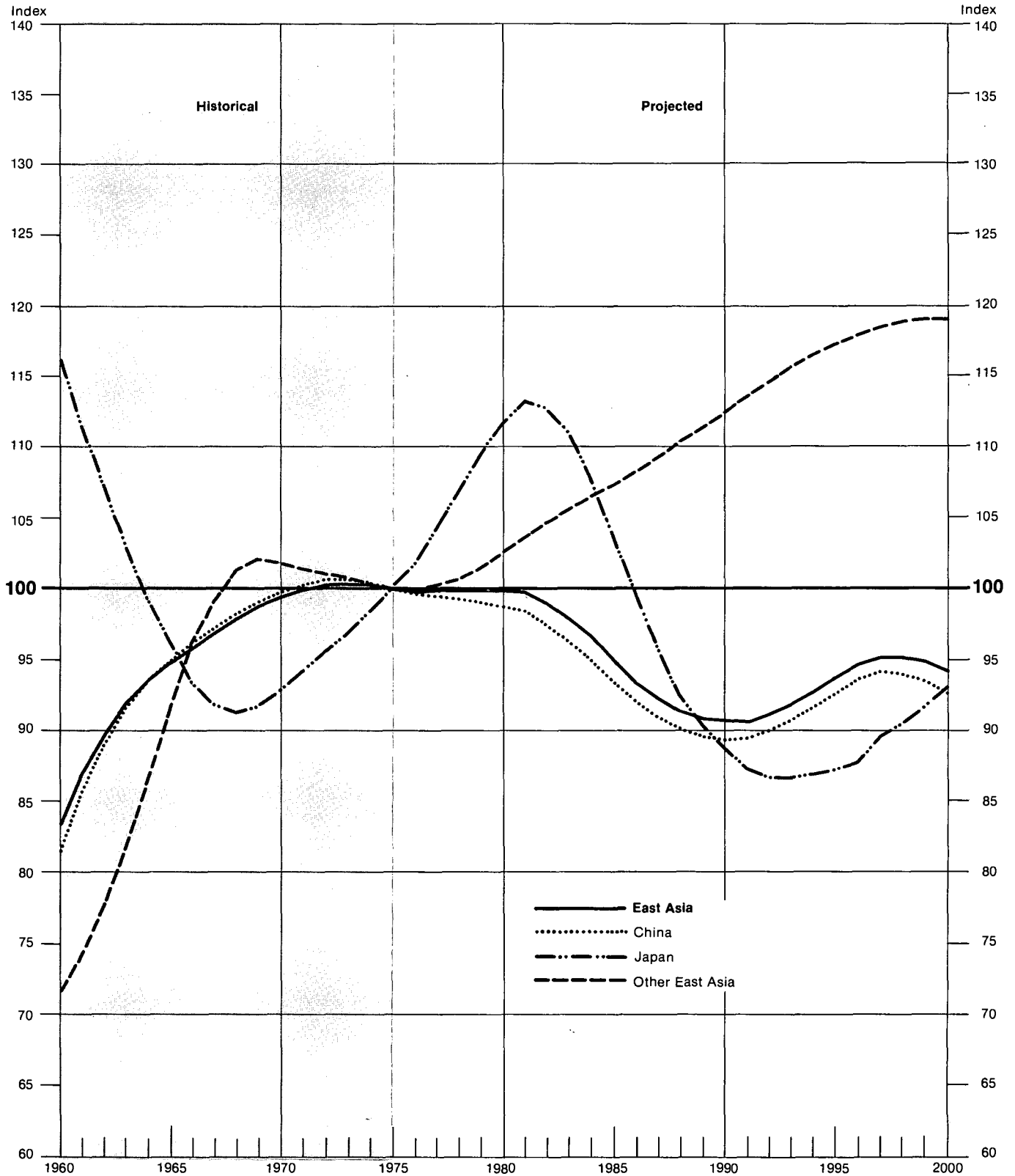


Chart — 4-28

**Population Growth Index of 6-11 Age Group,
Europe and Its Subregions, Medium Variant
(1975=100)**

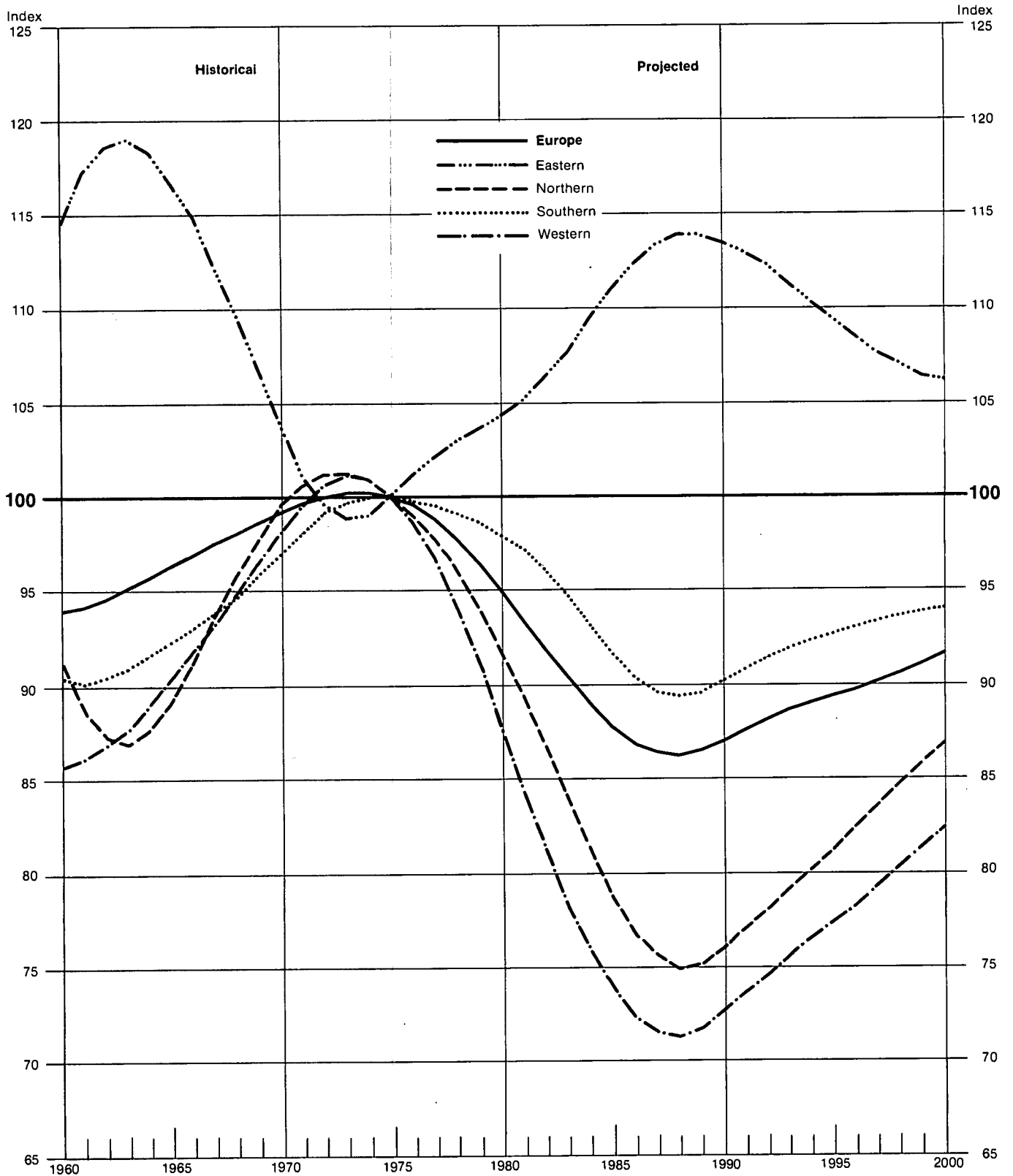


Table 4-5 gives the turning points from 1960 to 2000 of all age groups in China and the MDR according to the medium and low variants (1960 is the base year for the calculations). Figures are shown for the years when the trend changes, and arrows between years indicate if numbers are rising (↗) or falling (↘); percentage changes from one turning point to the next have also been calculated. Because the high variant appears unlikely in these regions, it is not included.

While the MDR have several turning points in the forty-year period, the school-age population in most LDR undergoes no, or only small, deviations from the continual increase. Table 4-6 shows the annual rate of growth of the school-age groups for the world and for selected major regions, where, as a rule, the overall tendency is upward.

Fluctuations in MDR and ever-rising numbers of children in LDR have serious implications for education. Some of these implications are examined in the next chapter.

[illegible]

Table 4-5. Turning points and percentage changes in school-age populations in China and the more developed regions, medium and low variants, 1960 to 2000 - continued

Region	Direc- tion of change	% change from 1960	Turning point	Direc- tion of change	% change	Turning point	Direc- tion of change	% change	Turning point	Direc- tion of change	% change	Turning point	Direc- tion of change	% change	Turning point
Japan															
6-11 age group															
Medium	↗	-21.5	1968	↗	24.2	1981	↗	-23.5	1992	↗	7.4	2000			
Low	↗	-21.5	1968	↗	24.2	1981	↗	-29.8	1995		4.0	2000			
12-17 age group															
Medium	↗	4.0	1963	↗	-25.7	1974	↗	23.2	1987	↗	-23.5	1998	↗	0.2	2000
Low	↗	4.0	1963	↗	-25.7	1974	↗	23.2	1987		-29.8	2000			
18-23 age group															
Medium	↗	23.7	1969	↗	-24.7	1980	↗	23.1	1993	↗	-18.1	2000			
Low	↗	23.7	1969	↗	-24.8	1980	↗	22.9	1993		-20.2	2000			
Europe															
6-11 age group															
Medium	↗	6.6	1973	↗	-14.0	1988	↗	6.2	2000						
Low	↗	6.6	1973	↗	-18.8	2000									
12-17 age group															
Medium	↗	18.0	1980	↗	-14.0	1994	↗	3.1	2000						
Low	↗	18.0	1979	↗	-18.3	2000									
18-23 age group															
Medium	↗	-1.4	1962	↗	25.9	1985	↗	-13.9	2000						
Low	↗	-1.4	1962	↗	25.9	1985	↗	-16.7	2000						
Eastern Europe															
6-11 age group															
Medium	↗	3.9	1963	↗	-17.0	1973	↗	15.3	1989	↗	-6.8	2000			
Low	↗	3.9	1963	↗	-17.0	1973	↗	11.8	1987		-11.8	2000			
12-17 age group															
Medium	↗	28.3	1969	↗	-16.8	1979	↗	15.3	1995	↗	-3.0	2000			
Low	↗	28.3	1969	↗	-16.8	1979	↗	11.8	1992		-7.8	2000			
18-23 age group															
Medium	↗	-3.9	1963	↗	37.7	1975	↗	-16.7	1985	↗	15.3	2000	↗	-0.6	2000
Low	↗	-3.9	1963	↗	37.7	1975	↗	-16.7	1985		11.9	1998			

Table 4-5. Turning points and percentage changes in school-age populations in China and the more developed regions, medium and low variants, 1960 to 2000 - continued

Region	Direction of change	% change from 1960	Turning point	Direction of change	% change	Turning point	Direction of change	% change	Turning point	Direction of change	% change	Turning point	Direction of change	% change	Turning point
Northern Europe															
6-11 age group															
Medium	↗	-4.7	1963	↗	16.5	1973	↗	-26.0	1988	↗	15.8	2000			
Low	↗	-4.7	1963	↗	16.5	1973	↗	-31.7	1995	↗	2.1	2000			
12-17 age group															
Medium	↗	5.5	1963	↗	-8.7	1968	↗	15.5	1979	↗	-25.6	1994	↗	6.7	2000
Low	↗	5.5	1963	↗	-8.7	1968	↗	15.4	1979	↗	-31.3	2000			
18-23 age group															
Medium	↗	26.2	1969	↗	-7.9	1975	↗	15.7	1985	↗	-25.1	2000			
Low	↗	26.2	1969	↗	-7.9	1975	↗	15.7	1985	↗	-28.4	2000			
Southern Europe															
6-11 age group															
Medium	↗	-0.3	1961	↗	10.9	1975	↗	-10.6	1988	↗	5.2	2000	↗	-0.5	2000
Low	↗	-0.3	1961	↗	10.9	1975	↗	-12.9	1989	↗	0.5	1994			
12-17 age group															
Medium	↗	7.1	1965	↗	-0.4	1967	↗	12.7	1980	↗	-10.5	1994	↗	3.1	2000
Low	↗	7.1	1965	↗	-0.4	1967	↗	12.7	1980	↗	-12.7	1995		0.3	2000
18-23 age group															
Medium	↗	-2.7	1963	↗	27.9	1986	↗	-10.5	2000						
Low	↗	-2.7	1963	↗	27.8	1986	↗	-12.4	2000						
Western Europe															
6-11 age group															
Medium	↗	18.0	1973	↗	-29.5	1988	↗	15.6	2000						
Low	↗	18.0	1973	↗	-32.0	1989	↗	3.8	2000						
12-17 age group															
Medium	↗	28.6	1979	↗	-29.6	1994	↗	7.1	2000						
Low	↗	28.6	1979	↗	-32.0	1994	↗	7.7	2000						
18-23 age group															
Medium	↗	-1.8	1962	↗	31.2	1985	↗	-29.5	2000						
Low	↗	-1.8	1962	↗	31.2	1985	↗	-31.9	2000						

Source: Based on special tabulation prepared by Unesco, Office of Statistics, Division of Statistics on Education, 1980.

Table 4-6. Annual average rates of growth of the school-age populations, world and selected regions, high, medium and low variants, between selected years, 1960 to 2000

Region	Variant	6-11 age group			12-17 age group			18-23 age group		
		1960-75	1975-85	1985-2000	1960-75	1975-85	1985-2000	1960-75	1975-85	1985-2000
World	High		1.4	1.9		1.2	1.9		1.9	1.6
	Medium	2.0	1.2	1.3	2.9	1.2	1.4	2.6	1.9	1.2
	Low		0.9	0.6		1.2	0.8		1.9	0.9
Less developed regions	High		1.8	2.0		1.8	2.2		2.5	2.0
	Medium	2.5	1.6	1.5	3.3	1.7	1.7	3.0	2.5	1.6
	Low		1.3	0.7		1.7	1.0		2.4	1.3
Africa	High		3.2	3.2		2.9	3.5		3.1	3.3
	Medium	2.9	3.1	2.7	2.9	2.9	3.2	2.6	3.1	3.2
	Low		3.0	1.8		2.9	2.6		3.1	3.0
Latin America	High		2.4	2.8		2.3	2.9		2.8	2.6
	Medium	2.8	2.2	2.1	3.4	2.2	2.4	3.3	2.8	2.3
	Low		2.0	1.2		2.2	1.6		2.8	2.0
South Asia	High		2.4	2.1		2.4	2.5		3.2	2.5
	Medium	3.1	2.1	1.4	3.2	2.4	1.9	2.5	3.2	2.2
	Low		1.8	0.8		2.4	1.4		3.2	1.9
Oceania	High		0.6	1.6		0.8	1.3		1.8	0.7
	Medium	1.7	0.5	0.9	2.5	0.7	0.7	3.3	1.7	0.4
	Low		0.3	0.0		0.7	-0.1		1.6	0.1

Source: Based on special tabulation prepared by Unesco, Office of Statistics, Division of Statistics on Education, 1980.

Chapter 5SOME IMPLICATIONS OF THE SCHOOL-AGE POPULATION TRENDSIntroduction

Demographic developments have serious implications for enrolment, teachers, facilities, curriculum, finance, school-leavers, and governments. To complicate the issue, in a single region the impact on various levels of instruction can differ because the age groups may follow opposite trends. In some cases, re-evaluation of an entire education policy may be necessary.

Population touches the school system directly: the number of children determines the quantity of education that must be provided, and this, in turn, may influence quality, especially if resources are scarce. Funds devoted to education cannot be spent on other concerns. Therefore, the shape of the school-age population has widespread consequences.

Children in school today are tomorrow's labour force. The academic and vocational skills that they acquire can affect all sectors of society. Those who leave school without sufficient training may be destined to join the ranks of the unemployed illiterate.

This chapter examines the significance of school-age population trends in relation to enrolment statistics.¹ The more and less developed regions are treated separately.

Data for the past differ from those published by UNESCO in 1977, because Temperate South America has since been reclassified from an MDR to an LDR (see Appendix C). This reclassification also altered the enrolment projections shown here, which in any case, would have been different, as they are based on a more recent (1978) population assessment.

¹Unesco, Office of Statistics, Division of Statistics on Education. Trends and Projections of Enrolment by Level of Education and by Age, CSR-E-21. Paris, 1977.

Enrolment

The previous chapter demonstrated overall growth of the world's school-age population between 1975 and the turn of the century. The most obvious implication is higher enrolment at all levels. A tremendous effort in the LDR raised the enrolment ratio of 6-11-year-olds about 14.0 percentage points between 1960 and 1975, and gains among older age groups were also significant: a 13.2 percentage point increase for 12-17-year-olds; 5.3 percentage points for 18-23-year-olds. This was accomplished despite the constant increase of the young population.

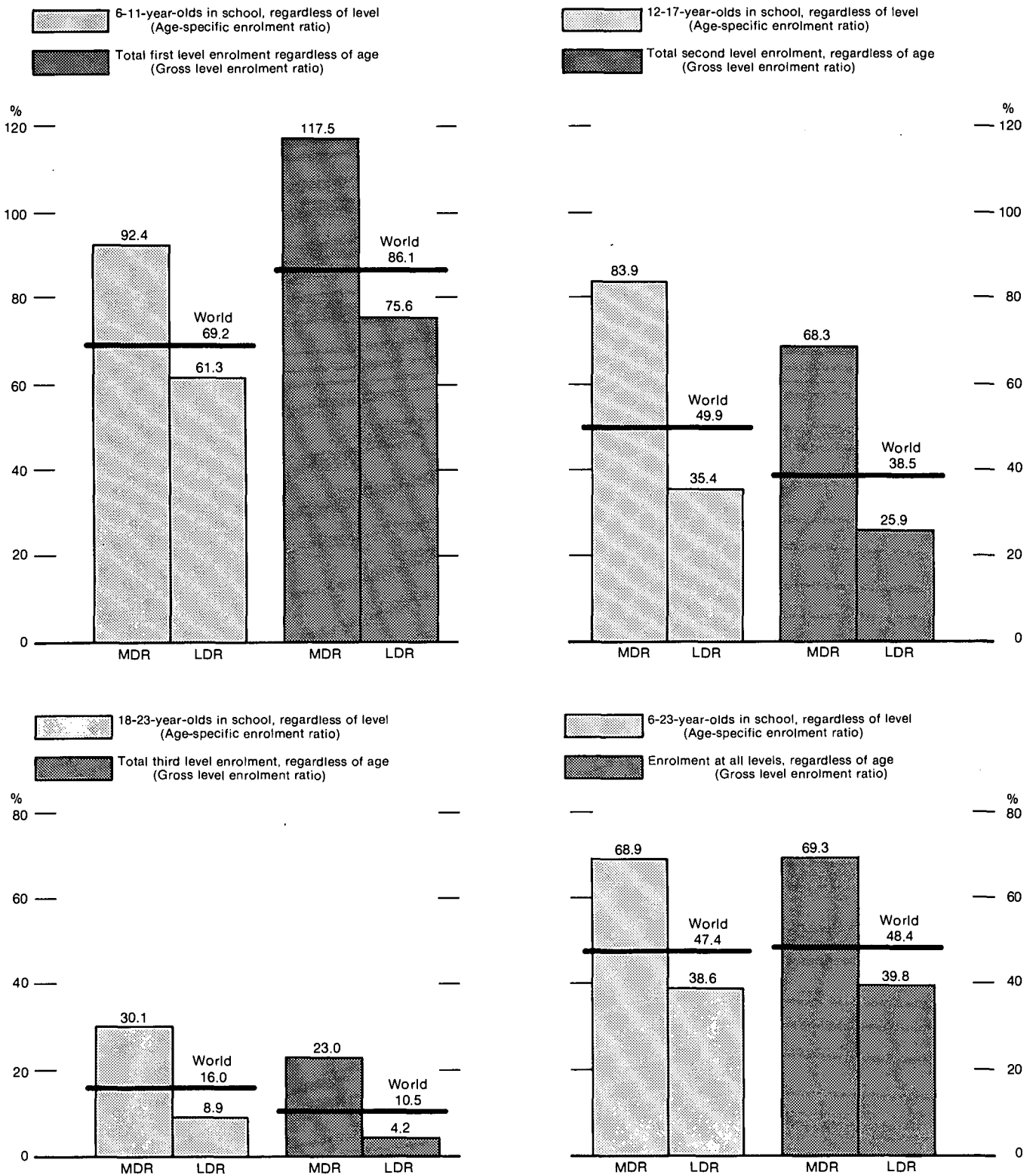
Most developing countries have committed themselves to, or are working toward, universal primary education, and many nations are trying to increase participation at the second and third levels. To comprehend the meaning of these objectives, it is first necessary to determine how close they are to realization.

Chart 5-1 shows 1975 enrolment ratios¹ for the world and for MDR and LDR, by age group and by level. For example, the first two bars (light) in the upper left corner indicate that the age-specific enrolment ratio of 6-11-year-olds in the MDR was 92.4%, but only 61.3% in the LDR (the world average was 69.2%). By contrast, the two dark bars show that the gross level enrolment ratio at the first level of education in the MDR was 117.5%, and in the LDR, 75.6% (the world average was 86.1%).

The older the age group, the wider the relative enrolment disparity between MDR and LDR. The age-specific enrolment ratio of 12-17-year-olds in the former was more than double that in the latter: 83.9% compared with 35.4%. In both MDR and LDR, the gross second level enrolment ratio is lower than the age-specific ratio, because some of the age group are studying at the first level. The age-specific enrolment ratio of the 18-23-year-old population in the MDR

¹Two enrolment ratios are calculated here. The age-specific enrolment ratio is the number of students in a particular age group (e.g., 12-17) who are enrolled at any level of education, divided by the size of that age group. The gross level enrolment ratio is the number of students enrolled at a particular level of education (e.g., primary), regardless of their ages, divided by the size of the relevant age group (e.g., 6-11).

Chart — 5-1

Enrolment by Age and by Level, Expressed as a Percentage of the Relevant Age Group, World, (1) MDR and LDR, (1) 1975


(1) Excludes the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia.

was about three times that in the LDR (30.1% compared with 8.9%). Again, this exceeded the gross enrolment ratio for the third level, because all students in this age group had not advanced to the third level of instruction. Little difference is evident between the age-specific and gross enrolment ratios in the summary portion of the Chart (6-23 age group), thereby proving that the vast majority of student in both types of region fell within this age range.

Tables 5-1 to 5-4 show the 1975 breakdown of age-specific enrolment ratios by major region, and indicate ratios projected for 1985 and 2000.¹ The tables also give enrolment, average annual rates of change, and for 6-11-year-olds, the number who will not be in school.² Because no country, even in the MDR has made education compulsory to the end of the secondary level, the number not in school for the 12-17, 18-23, and 6-23 age groups is not presented.

For several reasons, figures in these tables should not be accepted uncritically. First, they are merely extrapolations of trends observed during the 1960-75 period, not predictions of what will actually happen. Second, because the tables are based on the medium population variant, enrolment in any region may be over- or underestimated. In the MDR, at least to 1985, the low variant is more likely, but by contrast the high variant seems a truer reflection of Africa's situation. Third, all countries have not collected reliable time series on which projections, ideally, should be based (to give a better picture, adjustments were made for several countries).

Strict comparisons of enrolment ratios in different regions cannot be made because of the variety of school systems. Some countries have more than six grades of primary education; others have fewer. Furthermore, the compulsory age of entry may be earlier or later than six.

¹Enrolment projections were calculated by subregion. Enrolment ratios projected by UNESCO were applied to revised population figures to determine subregional enrolments. The results were added to yield total enrolment in the major regions. Therefore, in some cases, new enrolment ratios do not agree with those projected earlier by UNESCO.

²UNESCO's enrolment projections are being updated; publication is planned for 1981.

Every table demonstrates that the LDR will feel the pressure of a growing population. Enrolment in these regions has to be expanded just to keep the ratios at the 1975 level. Since school-age groups in MDR increase only moderately, or even decline, maintaining ratios is less difficult.

Table 5-1 projects a rise of 6-11-year-old enrolment from an estimated 299 million in 1975 to 506 million in 2000. The enrolment ratio in two major regions - Africa and South Asia - was below the 1975 LDR average, and although a steady improvement is projected throughout the rest of the century, ratios in both regions still lag behind that average. Africa's enrolment nearly triples from 33 million to 96 million, while South Asia's almost doubles from 119 million to 219 million. In both regions, however, the projected number not in school also mounts - from 34 million to 39 million in Africa, and from 80 million to 84 million in South Asia. In accord with trends of the 6-11 population, enrolment of the age group is likely to decline in Europe and Northern America between 1975 and 1985. A slight drop in East Asia is also probable between 1985 and 2000.

Table 5-2 indicates an increase in world enrolment of the 12-17 age group from 194 million in 1975 to 325 million in 2000. Overall, the number enrolled in the MDR changes little, rising about 1% from 97 million to 99 million. But between 1975 and 1985, numbers drop because of the population declines in Northern America and the U.S.S.R. Nonetheless, the age-specific enrolment ratio in the MDR is projected to rise almost 7 percentage points to just over 90% at the turn of the century.

The number of 12-17-year-olds enrolled in the LDR more than doubles - from 92 million to 227 million - and the age-specific enrolment ratio goes from 35.4% to 46.6%, which is a greater increase than in the MDR. However, a wide gulf remains between the ratios in the two types of region.

As was the case for 6-11-year-olds, actual and projected age-specific enrolment ratios for the 12-17 age group in South Asia and Africa (except in 2000) are below the LDR average. In 1975 Northern America was the only region where the ratio was higher than 90%; by 1985 East Asia, and by 2000 Europe, too, are projected to reach that level.

Table 5-1. Enrolment of 6-11 age group, by major region, medium variant, 1975, 1985 and 2000

	Enrolment (6-11)			Age-specific enrolment ratios			Change in enrolment between:		Average annual rate of change between:		Not enrolled in school ¹		
	1975	1985	2000	1975	1985	2000	1975-85	1985- 2000	1975-85	1985- 2000	1975	1985	2000
	Millions			Percentage			Millions		Percentage		Millions		
World	299.1	373.0	506.2	69.2	73.5	78.8	73.9	133.2	2.2	2.1	133.4	134.5	136.6
More developed regions	100.6	95.7	103.1	92.4	94.1	94.2	-4.9	7.4	-0.5	0.5	8.3	6.0	6.3
Less developed regions	198.5	277.3	403.1	61.3	68.3	75.6	78.8	125.8	3.4	2.5	125.1	128.5	130.3
Africa	33.0	55.0	95.9	49.5	60.7	71.0	22.0	40.9	5.2	3.8	33.7	35.6	39.2
Latin America	40.4	55.3	81.5	78.1	85.8	92.4	14.9	26.2	3.2	2.6	11.3	9.1	6.7
Northern America	23.8	21.2	25.6	98.3	99.3	99.3	-2.6	4.4	-1.2	1.3	0.4	0.1	0.2
East Asia	16.2	16.8	16.2	98.8	99.5	99.6	0.6	-0.6	0.4	-0.2	0.2	0.1	0.1
South Asia	118.8	160.4	218.6	59.9	65.8	72.3	41.6	58.2	3.1	2.1	79.6	83.3	83.8
Europe	43.6	39.5	41.7	93.8	96.9	98.1	-4.1	2.2	-1.0	0.4	2.9	1.3	0.8
Oceania	2.3	2.3	2.6	87.0	85.9	82.9	0.0	0.3	0.0	0.8	0.3	0.4	0.5
USSR ²	21.0	22.4	24.2	98.0	98.0	98.0	1.4	1.8	0.7	0.5	0.4	0.5	0.5

¹Because six-year-olds are excluded from data for the U.S.S.R., the sum of the regions does not equal the world total. However, six-year-olds in the U.S.S.R. are included in the MDR total.

²Refers to 7-11 age group.

Note: Due to rounding, detail may not add to totals. Excludes the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia.

Source: Calculations derived from UNESCO, Office of Statistics, Division of Statistics on Education, Trends and Projections of Enrolment by Level of Education and by Age, CSR-E-21, Paris; 1977, and special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table 5-2. Enrolment of 12-17 age group, by major region, medium variant, 1975, 1985 and 2000

Region	Enrolment (12-17)			Age-specific enrolment ratios			Change in enrolment between:		Average annual rate of change between:	
	1975	1985	2000	1975	1985	2000	1975-85	1985-2000	1975-85	1985-2000
	Millions			Percentage			Millions		Percentage	
World	194.1	242.2	325.2	49.9	53.4	54.6	48.1	83.0	2.2	2.0
More developed regions	97.2	94.3	98.5	83.9	89.2	90.5	-2.9	4.2	-0.3	0.3
Less developed regions	96.9	147.9	226.7	35.4	42.6	46.6	51.0	78.8	4.3	2.9
Africa	16.8	30.2	56.9	30.7	41.5	48.9	13.4	26.7	4.0	4.3
Latin America	25.0	37.1	56.2	56.2	66.9	71.2	12.1	19.1	4.0	2.8
Northern America	26.4	22.2	25.6	94.3	96.0	96.3	-4.2	3.4	-1.7	1.0
East Asia	13.1	15.9	14.4	81.9	92.0	92.7	2.8	-1.5	2.0	-0.7
South Asia	50.8	75.7	107.5	30.3	35.5	37.9	24.7	32.0	4.0	2.4
Europe	36.3	39.1	37.2	78.9	87.4	90.1	2.8	-1.9	0.8	-0.3
Oceania	1.8	2.0	2.2	72.8	75.3	73.8	0.2	0.2	1.1	0.6
USSR	23.9	20.1	25.2	78.6	82.2	83.7	-3.8	5.1	-1.7	1.5

Note: Due to rounding, detail may not add to totals.

Excludes the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia.

Source: Calculations derived from UNESCO, Office of Statistics, Division of Statistics on Education, Trends and Projections of Enrolment by Level of Education and by Age, CSR-E-21, Paris; 1977, and special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table 5-3 shows a twofold increase of 18-23-year-old enrolment in the world during the last quarter of the twentieth century — from 53 million to 105 million. Unlike the other age groups, enrolment of 18-23-year-olds rises in the MDR as well as in the LDR. Projected gains are greatest in the latter, whose 1985 total was still below that of the MDR, but by 2000 is expected to be larger (64 million compared with 41 million). Yet the percentage point difference between age-specific enrolment ratios widens: in the MDR the ratio goes from 30.1% to 39.5%, while the advance in the LDR is from 8.9% to 15.1%. Again, throughout the period, Africa and South Asia have the lowest ratios among the LDR. The ratio in Northern America increases from just under 50% to almost 60%. By the end of the century around a third of the 18-23-year-old population in Europe, the U.S.S.R., and Latin America is projected to be enrolled, and more than a fourth in East Asia and Oceania.

Table 5-4 gives enrolment of the entire 6-23 age group at all levels. In 1975, 47.4% of the people of these ages were in school — a total of 546 million; by 2000, 53.0% are expected to be enrolled — 937 million students. Numbers grow constantly in Africa, Latin America, South Asia, and Oceania. Because of the declining population in this age group, Northern America and the U.S.S.R. experience small decreases between 1975 and 1985, and between 1985 and 2000, East Asia and perhaps Europe will undergo declines as well.

Financing Education

In most countries the major obstacle to the expansion of education is limited financial resources. The world's income (expressed as Gross National Product at market prices in U.S. dollars) is not evenly distributed. As Table 5-5 shows, the MDR have only 26.8% of the population, but 80.4% of the total GNP; the proportions in the LDR are almost reversed: 73.2% of the people and only 19.6% of the GNP.

Table 5-3. Enrolment of 18-23 age group, by major region, medium variant, 1975, 1985 and 2000

Region	Enrolment (18-23)			Age-specific enrolment ratios			Change in enrolment between:		Average annual rate of change between:	
	1975	1985	2000	1975	1985	2000	1975-85	1985-2000	1975-85	1985-2000
	Millions			Percentage			Millions		Percentage	
World	53.0	77.4	105.4	16.0	18.8	19.9	24.4	28.0	3.9	2.1
More developed regions	33.4	40.6	41.0	30.1	36.0	39.5	7.2	0.4	2.0	0.1
Less developed regions	19.6	36.8	64.4	8.9	12.3	15.1	17.2	27.6	6.5	3.8
Africa	2.6	5.5	12.1	5.9	9.2	12.5	2.9	6.6	7.8	5.4
Latin America	7.2	14.4	24.4	19.6	29.6	35.7	7.2	10.0	7.2	3.6
Northern America	12.8	13.8	14.2	48.3	52.3	59.4	1.0	0.4	0.8	0.2
East Asia	3.0	4.6	4.8	19.5	28.5	30.0	1.6	0.2	4.4	0.3
South Asia	9.1	15.7	26.3	6.8	8.6	10.3	6.6	10.6	5.6	3.5
Europe	11.2	14.5	13.7	25.2	31.1	34.2	3.3	-0.8	2.6	-0.4
Oceania	0.4	0.6	0.7	17.4	21.8	25.2	0.2	0.1	4.1	1.0
USSR	6.7	8.4	9.2	24.2	30.4	32.7	1.7	0.8	2.3	0.6

Note: Due to rounding, detail may not add to totals.

Excludes the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia.

Source: Calculations derived from UNESCO, Office of Statistics, Division of Statistics on Education, Trends and Projections of Enrolment by Level of Education and by Age, CSR-E-21, Paris; 1977, and special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table 5-4. Enrolment of 6-23 age group, by major region, medium variant, 1975, 1985 and 2000

Region	Enrolment (6-23)			Age-specific enrolment ratios			Change in enrolment between:		Average annual rate of change between:	
	1975	1985	2000	1975	1985	2000	1975-85	1985-2000	1975-85	1985-2000
	Millions			Percentage			Millions		Percentage	
World	546.2	692.6	936.8	47.4	50.5	53.0	146.4	244.2	2.4	2.0
More developed regions	231.2	230.6	242.6	68.9	72.0	75.4	-0.6	12.0	-0.0	0.3
Less developed regions	315.0	462.0	694.2	38.6	43.9	48.0	147.0	232.2	3.9	2.8
Africa	52.4	90.7	164.9	31.7	40.6	47.4	38.3	74.2	5.6	3.2
Latin America	72.6	106.8	162.1	54.6	63.4	68.8	34.2	55.3	3.9	2.8
Northern America	63.0	57.2	65.4	80.1	80.8	85.9	-5.8	8.2	-1.0	0.9
East Asia	32.3	37.3	35.4	67.6	74.0	74.5	5.0	-1.9	1.5	-0.4
South Asia	178.7	251.6	352.4	35.8	39.3	42.0	72.9	100.8	3.5	2.3
Europe	91.1	93.1	92.6	66.5	70.4	74.7	2.0	-0.5	0.2	-0.0
Oceania	4.5	4.9	5.5	61.6	61.3	61.8	0.4	0.6	0.9	0.8
USSR	51.6	50.9	58.6	61.4	64.4	66.8	-0.7	7.7	-0.1	1.0

Note: Due to rounding, detail may not add to totals.

Excludes the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia.

Source: Calculations derived from UNESCO, Office of Statistics, Division of Statistics on Education, Trends and Projections of Enrolment by Level of Education and by Age, CSR-E-21, Paris; 1977, and special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table 5-5. Population and gross national product at market prices, world and major regions, mid-1978

Region	Total population (millions)	G.N.P. (\$billions U.S.)	G.N.P. per capita (\$U.S.)	Percentage distribution	
				Population (%)	G.N.P. (%)
Africa	435	229	527	10.5	2.6
Latin America	346	478	1,382	8.3	5.5
Northern America	242	2,334	9,647	5.8	26.9
East Asia	1,105	1,355	1,226	26.6	15.6
South Asia	1,267	480	379	30.5	5.5
Europe	479	2,717	5,668	11.5	31.3
Oceania	21	132	6,224	0.5	1.5
USSR	261	966	3,696	6.3	11.1
World	4,156	8,690	2,091	100.0	100.0
More developed regions	1,114	6,982	6,267	26.8	80.4
Less developed regions	3,042	1,708	562	73.2	19.6

Note: Includes only countries with a total population of one million or more (except Uganda, Democratic Kampuchea, Iran and Lebanon), and smaller countries that are members of the World Bank Organization. Because most of the countries excluded are less developed, the percentage distribution of the population and GNP shown for the LDR is slightly underestimated.

Source: Adapted from the 1979 World Bank Atlas: Population, Per Capita Product, and Growth Rates. Washington, World Bank, 1979

Table 5-5 is somewhat simplistic, even though the World Bank attempted to render the different countries' economic systems comparable (e.g, centrally planned economies and western industrialized societies). Another shortcoming is that the table cannot take into account all relative price differences in the various regions. For example, assume that educating a pupil at the primary level in the MDR now costs an average \$500 (U.S.); the same education

could be provided in a developing country for less. However, the table does give an approximation of the uneven distribution of resources among regions. The fact is that while the LDR population grew faster in the past, and is expected to grow faster in the future, they have fewer resources to devote to education. The following statistics also illustrate the disparity.

Table 5-6. Percentage of GNP spent on public education, selected years, 1960 to 1976

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1976</u>
World	3.8	4.9	5.3	5.7	5.7
More developed regions	4.0	5.1	5.6	6.0	6.0
Less developed regions	2.3	3.0	3.3	3.9	4.1
(Percentage point difference)	(1.7)	(2.1)	(2.3)	(2.1)	(1.9)

Source: UNESCO Statistical Yearbook, 1977 and 1978-79 editions. UNESCO, Paris. Excludes Namibia, South Africa, The People's Republic of China, the Democratic People's Republic of Korea, Laos, Democratic Kampuchea, and the Socialist Republic of Vietnam.

Both MDR and LDR have increased their support for education, the former assigning about two percentage points more of their GNP than the latter since 1965. The LDR, with a much larger school-age population and a markedly smaller budget, do not spend the same proportion on education, even taking account of the price differential. The 6.0% of their GNP that the MDR spent on education in 1976 amounted to about \$319 billion (U.S.); the 4.1% spent by the LDR came to only \$42 billion. The same year, the MDR had around 265 million children enrolled in school¹ while enrolment in the LDR was approximately 342 million. Therefore, the corresponding average expenditures per student were \$1,204 and \$122, respectively.

Because of these contrasts between the MDR and LDR, implications of population trends for education must be examined separately.

¹Figures refer to enrolment at all levels of education (including pre-primary) and to both public and private schools. Countries listed in the note to Table 5-6 are excluded.

Less Developed Regions

Enrolment and Dropouts

A large proportion of the 6-11-year-olds in the LDR do not attend school. Even if the enrolment ratio rises as projected, by 1985 the number not in school would be 129 million, and by 2000, 130 million. Of course, some might enroll at a later age, but it is likely that a considerable percentage would never become literate.

Enrolment data for any age group must be interpreted with caution, because the ratios tend to give an unrealistically auspicious impression. For example, while a fairly large proportion of the 6-11 age group may be enrolled in a given year, this many children will not necessarily complete primary school. Table 5-7 shows the percentage of pupils in the LDR who remain in school through the first five grades: 30% of those in Grade 1 in 1970 did not reach Grade 2, and only 45% of the original group stayed till Grade 5. This was an improvement of only 4 percentage points over the 1965 cohort. Retention through Grades 1 to 5 in the subregions ranged from a low of 36% in Tropical South America and Middle South Asia to a high of 87% in Northern Africa. Thus, the dual problem facing education systems in these regions is first to enrol more children, and then, to keep them in school.

Breakdowns by sex have been omitted from the demographic data in this study, but with regard to school retention rates, it is a distinction worth making. The MDR have about the same proportion of boys and girls enrolled up to age 17, and only a few percent more males in the 18-23 age group are full-time students. As Chart 5-2 and Table 5-7 show, this is not the case in the LDR, where the disparity in both enrolment and retention favours males. The enrolment gap between the sexes is projected to narrow, but even in 2000 a significant margin remains.

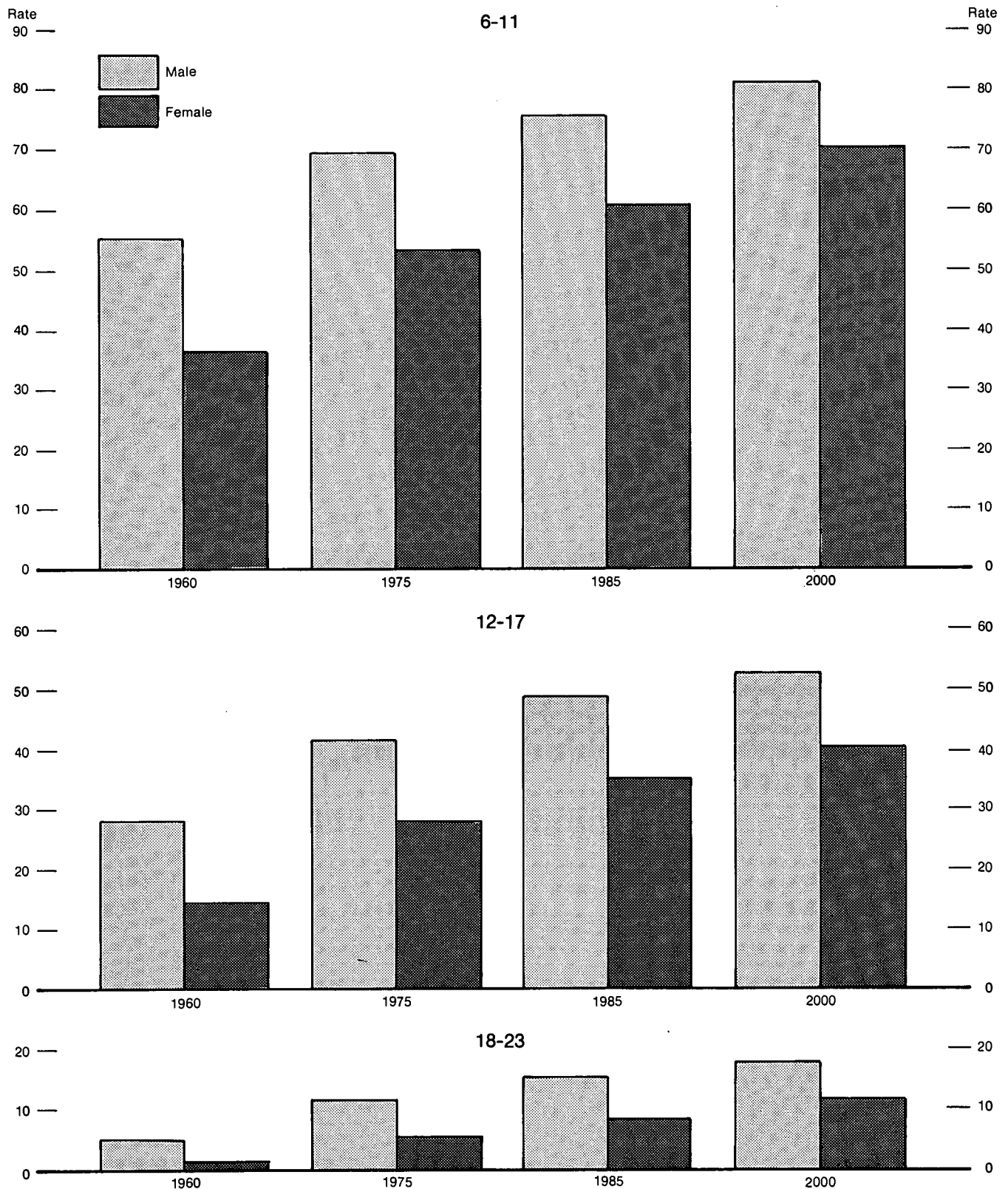
Table 5-7 . Approximate education survival rates for the 1965 and 1970 cohorts, both sexes

Region	Sex	% of pupils enrolled in Grade 1 in 1965 reaching:					% of pupils enrolled in Grade 1 in 1970 reaching:				
		Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
Less developed regions	MF	100	67	58	50	41	100	70	61	54	45
	M	100	67	59	51	42	100	70	62	55	47
	F	100	66	56	49	38	100	70	60	52	43
AFRICA	MF	100	78	71	61	52	100	83	78	72	64
Eastern Africa	MF	100	78	71	56	50	100	80	73	66	55
Middle Africa	MF	100	62	52	43	37	100	69	62	50	45
Northern Africa	MF	100	89	84	79	64	100	95	93	97	87
Western Africa	MF	100	80	74	60	53	100	82	77	68	62
LATIN AMERICA	MF	100	58	48	44	43	100	64	54	47	41
Caribbean	MF	100	59	48	45	36	100	64	57	54	48
Middle America	MF	100	67	56	50	39	100	70	62	54	46
Temperate South America	MF	100	74	68	62	55	100	83	77	71	65
Tropical South America	MF	100	53	42	41	27	100	59	47	40	36
SOUTH ASIA	MF	100	68	59	50	41	100	70	61	53	43
South East Asia	MF	100	83	75	64	47	100	83	75	65	50
Middle South Asia	MF	100	60	50	42	35	100	64	53	46	36
South West Asia	MF	100	94	100	83	70	100	88	84	81	75

Source: UNESCO, Office of Statistics, Division of Statistics on Education, Trends and Projections of Enrolment by Level of Education and by Age, (CSR-E-21), September, 1977.

Chart — 5-2

Age-Specific Enrolment Ratios In Less Developed Regions, by Age Group and Sex, Selected Years, 1960 to 2000



Note: The age-specific enrolment ratio is the number of persons in a particular age group enrolled in school, expressed as a proportion of that age group.
Excludes the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia.

Illiteracy

In 1950, according to a recent UNESCO study,¹ 700 million people aged 15 and older were illiterate² — 44.3% of the world's adults. By 1970 the proportion had dropped to 34.2%. But despite this impressive percentage decrease, with the rapidly rising population the absolute number had grown to 742 million. While a further proportional decline to 28.9% in 1980 is projected, the number of illiterates is expected to reach 814 million. Chart 5-3 shows projected 1980 illiteracy rates by region and sex. The high levels in the LDR result from a combination of rapid population growth, insufficient education facilities, lack of teachers, and for females in particular, tradition.

Rural-urban settlement patterns also impede LDR efforts toward literacy. In 1950, 84.3% lived in rural areas; by 1975 the proportion had fallen only to an estimated 72.7% (compared with 30.8% in the MDR). Many rural populations are in remote regions without adequate transportation and communications. This geographic isolation often presents an additional impediment to literacy in that many groups have only an unwritten language.

It is an almost classic example of a vicious circle: the school-age population is large, but isolation prevents many children from receiving education; a concomitant of the lack of education is ignorance of family planning; the result is a high birth rate, and ultimately, more children without schooling. Thus, it is not surprising that UNESCO's 1978-79 Statistical Yearbook reveals that in most countries, rural illiteracy rates are considerably higher than urban.³

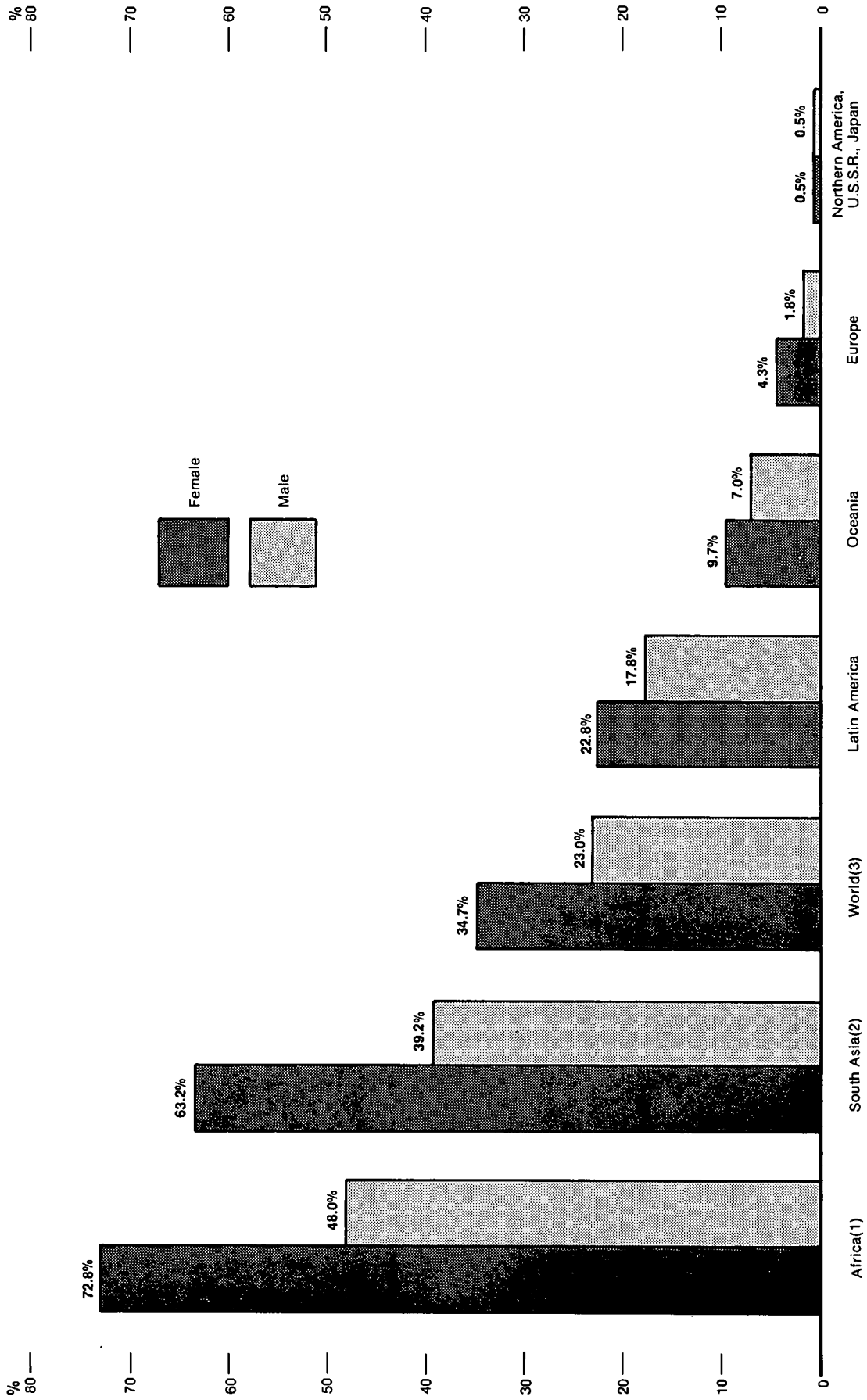
¹UNESCO, Office of Statistics, Division of Statistics on Education, Estimates and Projections of Illiteracy, (CSR-E-29, Paris, 1978).

²Definitions of illiteracy vary. In this study, ability to both read and write a simple sentence is the criterion of literacy.

³UNESCO. Statistical Yearbook 1978-79, Paris, 1980.

Chart — 5-3

Percentage Illiterate Aged 15 and Over, by Sex and Major Region, Estimate for 1980



(1) Excludes Namibia.

(2) Excludes Socialist Republic of Vietnam.

(3) Excludes the People's Republic of China, the Democratic People's Republic of Korea, the Socialist Republic of Vietnam, and Namibia.

Employment

Paradoxically, the problem of illiteracy in the LDR coexists with poor employment prospects for young people with high levels of academic attainment. Failure to link the education system to a country's economy has resulted in much unemployment or underemployment.¹ Many developing countries modeled their schools on institutions in the MDR, adapting their schedules to urban rather than rural needs, and their furniture, lay-out, and curriculum to the foreign prototypes.

The increase in the number of graduates outstripped job creation, particularly in government and industry. The situation is worsened by a steady rise in qualification requirements for such jobs. This prompts unemployed graduates at all levels to redouble their efforts to get into higher education institutions. Hence, there is pressure to extend second and third level facilities, although primary instruction may be inadequate. Meanwhile, an acute shortage of skilled labour prevents the improvement of industry and agriculture, and there is often a failure to provide relevant education for the many who will not find white collar urban employment, but must necessarily remain in the traditional sector.

Some of the worst effects might be slowly mitigated by reducing urban-rural salary differentials, which are often as great as 20 to 1, by increasing the personal costs of post-primary schooling, and by switching resources from higher institutions to the primary level; and by relying more on apprenticeships and other nonformal vocational training, leaving primary schools to serve the needs of the majority. Then second and third level students could focus on gaining the knowledge to do jobs that have to be done instead of gaining the qualifications to get jobs that do not exist.²

¹Ronald P. Dore, "The Future of Formal Education in Developing Countries," International Development Review, XVII (No. 2, 1975), 7-11.

²Ibid.

Expansion of the Education System

One of the most urgent tasks is to supply sufficient numbers of teachers to provide basic education to the growing number of children and also to the masses of illiterate adults. This need for qualified primary teachers means that teacher education should be improved and enlarged without delay. Teachers should be trained to help students achieve not only "literacy," but "functional literacy," which implies mastery of concepts and skills that facilitate life in a modernizing society. A reduction in the prevailing student/teacher ratio should give the teacher the opportunity to devote more attention to the progress of individuals and thereby help reduce the dropout rate. Children should be given the chance to contribute to and benefit from the evolution of their country.

Expansion of facilities to meet the needs of a growing school-age population should be planned carefully to make optimal use of human and financial resources. For instance, constructing a modern vocational school is easier than establishing an industry that would employ its graduates.

Experience suggests that the period of compulsory learning should be lengthened gradually in relation to a country's economic growth. The highest rate of return seems to derive from primary education. Therefore, the maximum contribution to growth would be attained if the education budget were devoted largely to that level. Losses due to misallocation of investments in education may be substantial because in many countries the funding of primary instruction has been insufficient.

Today, the two main influences on the allocation of resources to education around the world are inertia and political pressure. Administrators tend to follow past investment decisions with little more than lip service to the need for departing from established trends. As part of the same syndrome, it has been all too fashionable for politicians to advocate increased expenditure on education without reference to the level that should receive priority.¹

¹Christopher Dougherty and George Psacharopoulos, "Measuring the Cost of Misallocation of Investment in Education," The Journal of Human Resources, XII (Fall, 1977), 457.

One international body with a policy designed to remedy this situation is the World Bank. If a developing country cannot secure sufficient financial resources to cope with growing education needs, assistance is available from the Bank under the following broad criteria:¹

- There should be at least a minimum basic education for all as fully and as soon as available resources permit and the course of development requires.
- Further education and training beyond the basic level should be provided selectively to improve quantitatively and qualitatively the knowledge and skills necessary for the performance of economic, social, and other developmental roles.
- A national system of education should be viewed as a comprehensive learning system embracing formal, nonformal, and informal education, and working with maximum possible external efficiency.
- In the interest of both increased productivity and social equity, educational opportunities should be equalized as fully as possible.

¹"Education: Working Paper. World Bank and International Development Association", Ekistics, XLI (May, 1976), 291.

More Developed Regions

Background

While all three school-age population groups in the LDR increase steadily between 1960 and 2000, trends in the MDR fluctuate and disrupt the education systems. Chart 5-4 shows the medium variant of the three age groups over the forty years, and Chart 5-5, the low variant, which in the short term is perhaps closer to reality. These charts depict age groups, not levels of enrolment. However, because primary education is compulsory (to at least age 11) in virtually all developed countries, the three age groups tend to be associated with the three successive levels of education. That is, most students at the primary level are 6-11; at the secondary level, 12-17, and at the tertiary level, 18-23. The population waves, so unmistakable on these charts, have produced "roller coaster" enrolment distinctly different from the continuous rise in the LDR.

To better understand implications of the population trends for education, it is necessary to explain some of the forces that raised secondary and tertiary enrolment ratios to their 1975 value.¹ Attendance at primary school has long been compulsory in most countries of the MDR.

In 1960 enrolment of 6-11-year-olds totalled 98 million, and the age-specific enrolment ratio of the 6-11 age group was 90.8%; by 1970 numbers had increased to more than 106 million, close to the all-time high, and the ratio had risen to 92.9%, almost full participation.² Although participation had fallen just half a percentage point by 1975, enrolment had dropped off more than 5% and stood at 101 million.

The steady advance of primary enrolment ratios, and more important, the growing numbers caused by the baby boom, led directly to enrolment increases at the secondary and tertiary levels. Moreover, the general recovery after the Second World War provided an environment favourable to expansion. Before the war, secondary and tertiary instruction in many countries were apt to be the preserve of the socially and financially privileged, whereas in the fifties and sixties a broader cross-section of the population were attending

¹The gross level enrolment ratios and age-specific enrolment ratios are compared in Chart 5-1.

²In some countries the compulsory starting age is later than 6.

Chart — 5-4

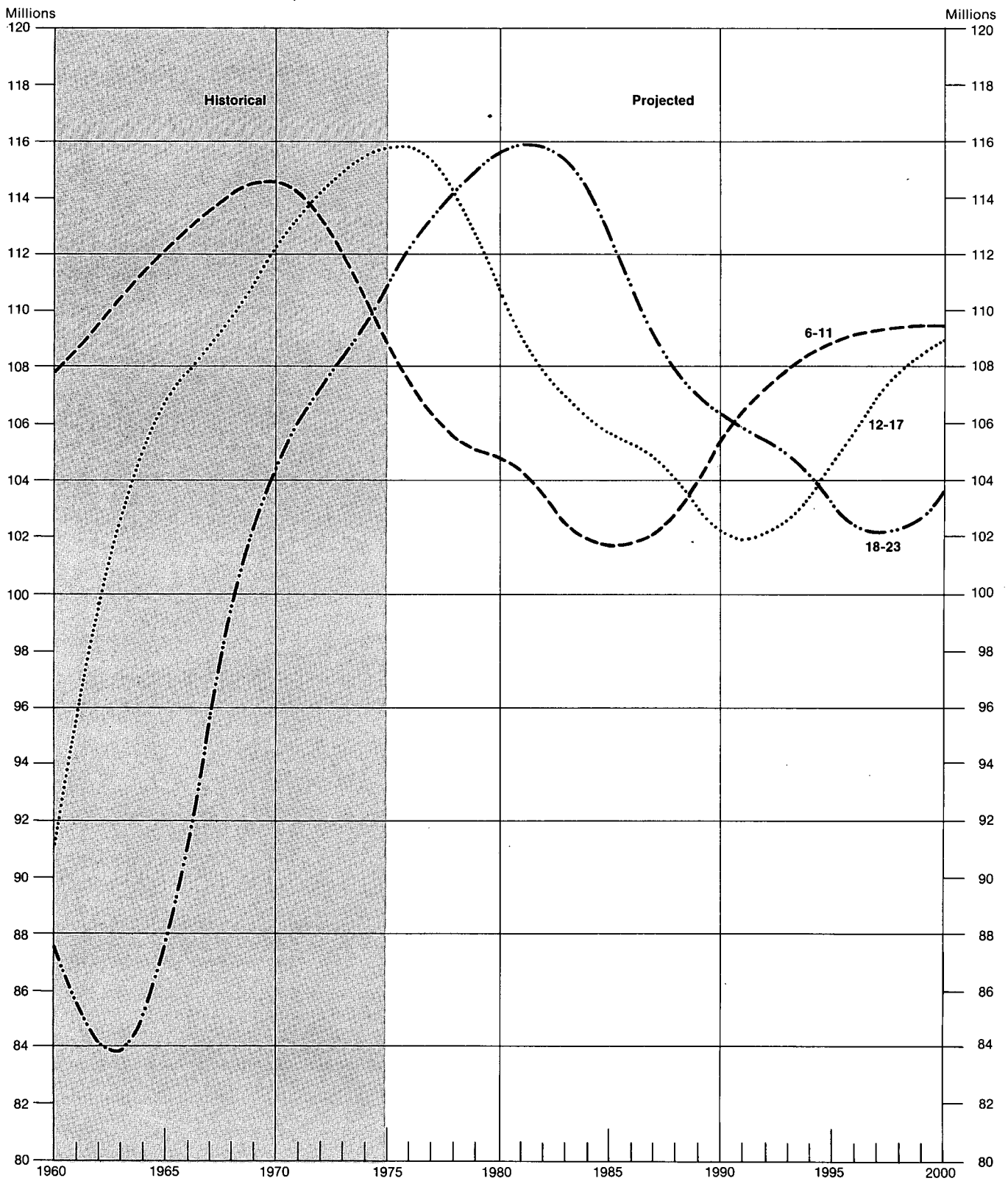
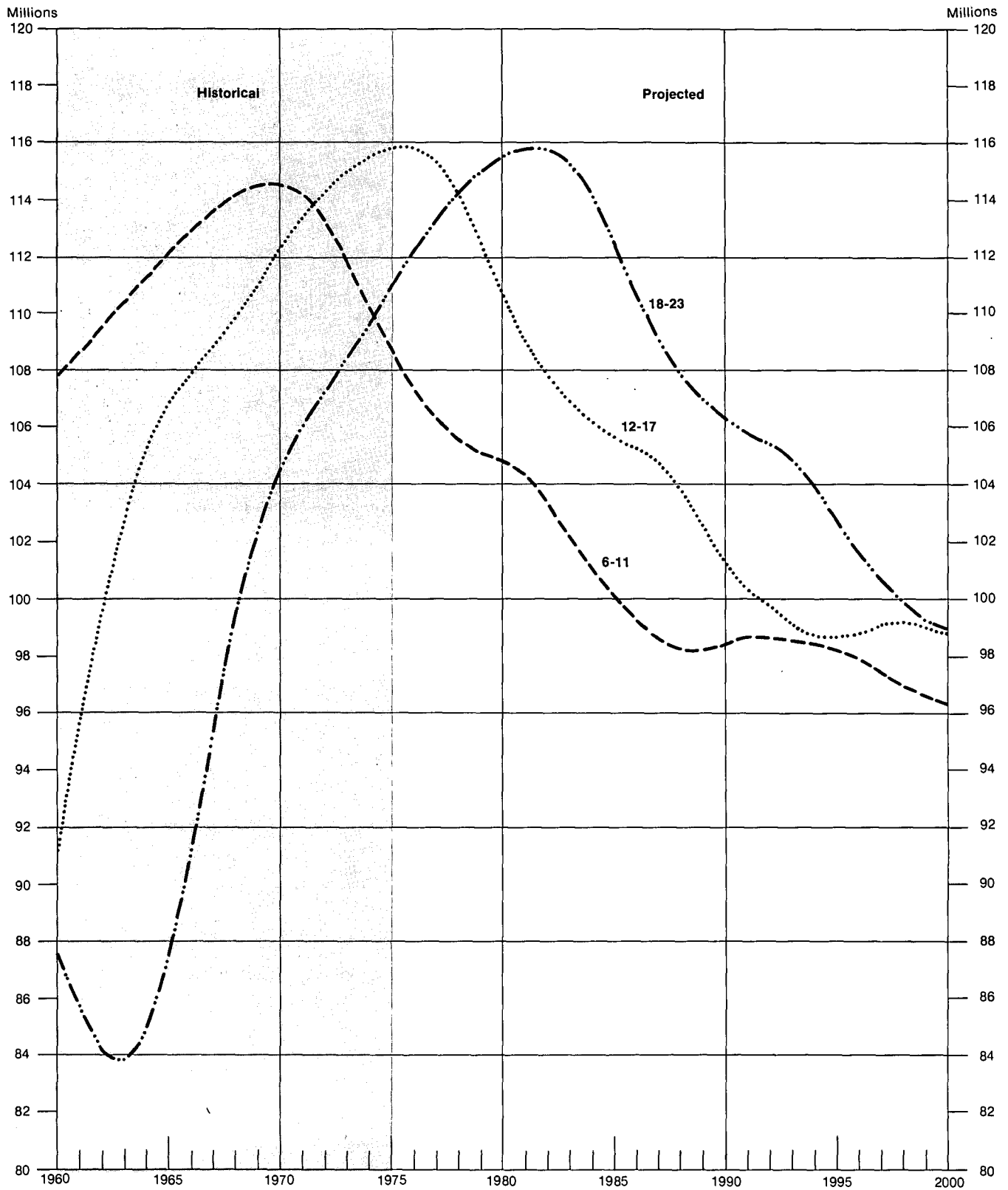
**School-age Population, by Age Group, More Developed Regions,
Medium Variant, 1960 to 2000**

Chart — 5-5

**School-age Population, by Age Group, More Developed Regions,
Low Variant, 1960 to 2000**

high school and postsecondary institutions.

In 1960 more than 66 million students aged 12-17 were enrolled; by 1975, about 97 million. The corresponding age-specific enrolment ratios were 73.2% and 83.9%; by the end of this century, more than 90% of the 12-17-year-old population are expected to be in school. The combination of the baby boom and rising participation of both sexes produced this enrolment growth. As a matter of fact, the age-specific enrolment ratio of 12-17-year-old girls has recently been somewhat above that of boys.

The increasing number of students in secondary school required more teachers, whose training automatically inflated third level enrolment. Another cause of growing participation in tertiary education was simply the larger group of secondary graduates each year: in 1960 total third level enrolment amounted to 9.5 million, which represented a gross level enrolment ratio of 10.8% (14.1% for males, 7.7% for females); and by 1975 enrolment had risen to 25.5 million, and the enrolment ratio to 23.0% (25.5% for males, 20.5% for females). The ratio projected for 2000 is 30.1%.

Doubling of the ratio and third level enrolment between 1960 and 1975 was not, of course, only a result of the need for more teachers and growth of the relevant age group. Economic theories popular in most Western countries during the fifties and early sixties championed education as a means of generating higher productivity. In addition, expanding economies demanded more highly qualified manpower of all kinds. Education became a prerequisite for career success, a prime component of social status, and the mark of a cultured individual.

However, as the baby boom generation emerged from the education system in growing numbers, job creation was unable to keep pace. The current situation in each nation depends on the size of the postwar baby boom, the extent of the changing trend in births, the ability of the labour market to absorb school leavers, and government policies. In countries where long-range planning is common, it is more likely that problems can be or have been reduced. "Roller coaster" population trends affect all aspects of education: enrolment, teachers, schools, finance, students, and government.

Enrolment

In developed countries primary education is compulsory. Hence, enrolment parallels the appropriate age group, although it may exceed the size of the group because of under- and over-age pupils. In the past, an annual increase of primary pupils had been the norm, but the rate of gain accelerated as the postwar baby boom children entered school. When the bulk of this cohort was aged 6-11, first level enrolment reached a record high, with the maximum occurring between the late fifties and early seventies, depending on the country. For the developed regions as a whole, the peak year was 1970. Shortly thereafter, elementary schools had a unique experience: declining enrolment caused by the sharp drop in annual births. Enrolment is still falling and will reflect the general downtrend of the age group until 1985, when primary enrolment will rise again.

Of course, it is uncertain whether school-age population trends will follow the medium or low variant. Nonetheless, after a few more years of contraction primary enrolment will rise again in many countries. If the medium variant proves correct, the gain will not match that of the sixties. The peak will occur in the mid-nineties, putting pressure on the system before another slump after the turn of the century. If the low variant materializes, the increase at the end of the eighties will be minimal, succeeded almost immediately by further decline.

With a six-year time-lag, the secondary age group (12-17) takes the same route, and so does enrolment; but because attendance until age 17 is seldom mandatory, enrolment is less than the relevant population. On the other hand, many students stay in the system beyond compulsory age, though their decision may be influenced by employment opportunities, i.e., a favourable job market with a strong demand for young people could prompt some of them to drop out. Contrarily, in a tight job market students may stay in school longer, hoping that more education will improve their competitive position.

It is possible that in the early nineties (or whenever the secondary age group reaches a low) the supply of workers with secondary education will be limited. The relative ease of securing employment may draw a higher proportion

of students into the labour market, thereby reducing secondary enrolment, and perhaps further deepening the decline. As a general rule, however, in almost every more developed country, secondary enrolment will likely follow the trends of the 12-17 age group indicated on Chart 5-4 or 5-5.

The "ups" and "downs" of enrolment at the two levels do not always coincide: at times, while the 6-11 cohort declines, the 12-17 still rises, and vice versa. Coping with these countertrends is more difficult in countries where primary and secondary education are administered separately.

As demonstrated in an earlier chapter, population patterns in individual countries can follow different directions, or at any rate exhibit different degrees of change than those of the region in which they are classified. Even within a country, many deviations (e.g., urban-rural, metropolitan-suburban) from the national model are produced by fertility variations and population movement, which in turn, complicate education planning.

The charts suggest that the major problems facing the education system in the future will be those created by the rapid fall and rise of enrolment; but another inherent irregularity is not immediately evident - "waves in the waves." As the enrolment trend changes direction, the decrease or increase is not evenly distributed by grade or by year of study - the reversal initially takes place at the lower levels, and later at the higher. In other words, when primary enrolment started to fall, first Grade 1 declined, next year Grade 2, then Grade 3, and so on. Meanwhile, Grades 5 and 6 still grew, and in some places, for the first time, there were more pupils in Grade 6 than in Grade 1.

The tertiary level is even more complex. Primary, and to a great extent secondary, schools have a "captive" audience because of compulsory education. Although third level enrolment, too, is influenced by the shape of the relevant age group (18-23), the participation rate plays a greater role. If current trends were to continue, participation would rise steadily and counterbalance the declining population. But since tertiary education is affected far more by economic and social factors than earlier levels, enrolment ratios may not rise as projected. Enrolling at a higher level is normally at the discretion of students, whose decisions are swayed by employment prospects and other

factors, which can change faster than educational institutions can adjust their programs. Particularly in Western industrialized countries, the job market for young people, including university graduates, has deteriorated. Degree-holders in the humanities, social sciences, and education are particularly vulnerable, and many students are now looking for job-oriented technical or professional training.

Consequently, shifting demographic trends are unlikely to have the same effect on enrolment in all higher education institutions. In those where admission has always been selective, or where the focus is on practical instruction, the reduced age group may be more than offset by growing participation rates. On the other hand, institutions offering liberal arts and teacher training are likely to suffer a decrease.

Teachers

When the baby boom hit the education system, one of the biggest problems was hiring enough qualified teachers. An obstacle in many countries was that teachers, specifically at the lower levels, were ill-paid. The situation slowly improved as teacher training institutions started to raise the quantity and quality of their students. With their professional skills in demand, teachers' salaries increased, and they obtained benefits such as job security, pensions, and a lighter teaching load.

The enrolment decline itself tends to reduce the student/teacher ratio, for it is difficult to release teachers in proportion to decreasing student numbers. Regardless of the size of classes, certain subjects must be taught. Nor is the need for specialists diminished, owing to the increasing variety of subjects, particularly in vocational and technical fields. Furthermore, the number of academic nonteaching personnel is relatively insensitive to enrolment fluctuations.

Some appropriately qualified primary teachers may find employment in secondary schools, while numbers there are still growing. However, with the actual and impending declines at both levels, more teachers will become unemployed, their propensity to change jobs will lessen, and opportunities for new teachers will get narrower every year. Upward mobility within the

profession is also limited, because the median age of the teaching force, even principals and vice-principals, is now relatively young.

The hiring slowdown produces a teaching force that ages simultaneously. This presents a potential problem. The enrolment slump could be followed by a relatively steep increase, in at least some subregions. If adequate provision is not made, qualified teachers might be scarce. The standard of education could suffer, as a shortage might leave no option but to engage some who lack the requisite academic attainment and experience. Those who left the profession in the years of decline would be reluctant to return if they have established another career, especially if they must take refresher courses. And after a prolonged period of little or no demand for teachers, young people will be wary of entering the field. In many parts of the world training takes several years. Therefore, aspiring teachers would have to begin their studies while demand is still low, in anticipation of an upturn.

School Buildings

Education in the MDR usually occurs in specialized buildings. Massive construction was necessary in the past to:

- Accommodate the ever-rising number of students.
- Consolidate schools (i.e., close small schools and build large central institutions).
- Rebuild or modernize old schools.
- Serve new communities.
- Extend vocational and technical training.

This enterprise required an unprecedented capital investment.

When primary education started to decline, surplus space became a problem. Interchanging facilities, a stopgap measure at best, is possible only for the few years when the slump at the primary level coincides with secondary increases, and vice versa. In addition, special secondary equipment (e.g., science laboratories, technical and trades shops, etc.) is not available in primary schools.

The question of what to do with schools during an enrolment decline is complicated by the possibility that in several years enrolment might rise again. Using them for other purposes often means renovations that would have to be removed if the schools were needed for education again. Ultimately, authorities must decide at what point enrolment has dropped so low as to justify closure or conversion to an alternate use. Yet paradoxically, even in a period of general decline, new construction may be necessitated by population shifts, primarily from cities to suburban areas.

Finance

During the baby boom explosion, education expenditures increased at an even faster rate than enrolment. In 1960 the MDR allocated 4.0% of their GNP to public education; by 1975 the proportion had climbed to 6.0%. Although primary enrolment started to taper off around 1970, education spending as a percentage of GNP still rose, but much more slowly. Although a slight reduction is expected in the future, it will in no way match the drop in enrolment. Expenditures cannot be pared in proportion to the enrolment decline. In fact, on a per student basis, operating a school is more expensive when fewer are enrolled because:

- Maintenance and administration must continue, whatever the number of students.
- The student/teacher ratio is lower.
- Average teachers' wages, at constant prices, tend to increase because few new teachers are hired; layoffs usually affect younger teachers whose earnings are lower, and annual increments reflect the increasing experience of those who continue to be employed.
- Vocational, technical and professional training are unlikely to decline so sharply, but since these courses are more expensive, the average unit cost increases.
- The shift in the relative weight of financing from the primary and secondary to the tertiary level adds to unit costs.

- At the tertiary level the greater concentration of students in professional and graduate schools raises unit costs. Such education entails low student/teacher ratios, specialized instructors and equipment, more research and laboratory work, etc.
- Finally, to attract even a reduced number of students, programs cannot become obsolete. Keeping up with the latest scientific and technological knowledge requires continual investments in facilities, equipment, books, etc.

Thus, any savings that might accrue from waning enrolment tend to be offset by rising average unit costs. And if the next population is high, the education system will need more financial resources, probably amounting to a larger share of the GNP.

School Leavers

Waves in the school-age population affect not only educators, but also students in and emerging from the education system. Since 1950, average years of schooling have risen,¹ largely because prerequisites for almost every job are higher. Completion of primary education was considered adequate between the First and Second World Wars. However, in the fifties and sixties, secondary school graduates proliferated. This meant that they had to accept positions that once would have been occupied by elementary-educated persons. Hence, tertiary completion became the favoured level of certification. But by the seventies, university graduation, too, was losing its value, particularly general degrees. A growing number of third level graduates now compete for jobs that formerly would have been filled by people with only a high school diploma. This raising of educational requirements has been named the "qualification spiral." It accelerated when the greatest number of school leavers were joining the labour force, which was also the time of a general slowdown in demand.

One significant employer, the education system itself, no longer needs a massive annual infusion of new teachers: the 6-11 age group has been

¹For example, the median years of schooling of adults in the United States increased from about nine to more than twelve between 1950 and 1975.

shrinking since 1970, and will continue to drop at least until 1985. In the mid-seventies, the 12-17 age group started what looks to be a minimum 15-year decrease.

Another leading source of jobs has been government. Yet more often than not, governments, too, have recently restricted hiring. Absorbing the new graduates, then, falls to other sectors, which may be unable to offer these graduates jobs requiring their level of education.

To have been born at the height of the baby boom is a disadvantage in itself. The early baby boom children found appropriate positions with relative ease. Now, and for years to come, they will block employment and advancement opportunities for people just ten years younger.

Nearly every developed country has had difficulty utilizing the large number of young people leaving the school system.¹ Several nations have attempted to retrain former students who have discovered that their formal education provided them with few marketable skills. This, as noted earlier, has had repercussions for the education system, which is now under pressure to offer courses more responsive to the demands of the economy.

But retraining students and restructuring education cannot prevent high unemployment and underemployment in many countries. Because the last of the baby boom generation is still in the education system, the number of school leavers and graduates will continue to rise for a few more years. They are entering the labour force much faster than they can be absorbed by the economy of most industrialized nations. Adding to the influx are females of all ages, whose participation rate is rising steadily.

Several problems are typical of countries where the school-age population coincides with the more developed pattern:

- Youth unemployment has recently increased.
- Teaching and government jobs are scarce.
- The job market value of nonspecialized education seems to have suffered.
- Because of the surplus of educated manpower, employers use qualifications as a screening device.

¹ A recent Statistics Canada survey found that 34% of the 1976 university graduates were underemployed in the spring of 1978.

Students who leave school a few years after the output peak may have better job prospects, because at that time the supply to the labour force from the education system will be low. Nonetheless, they may have to compete with a baby boom backlog.

Government

During the fifties and sixties, in almost every developed country, taxpayers approved government spending on all levels of education. Rising enrolment justified the need for more and better teachers, buildings, and equipment. Education was widely regarded as a prime ingredient of national and personal progress.

But during the sixties, disillusion set in. Although nearly everyone still recognizes the importance of education, the former enthusiasm is now tinged with skepticism. Furthermore, governments are responsible for other social services — family allowances, medical and hospital care, social security — to name just a few. And of course, many more fields require investment: energy, environment, transportation, defense, resource development, etc. Education is an important concern in every society, but it is not the only one. As the baby boom generation ages, governments will be compelled to spend a larger proportion of resources to satisfy the needs appropriate to their stage of life, and thus, less on education.

Appendix ADATA

The following tables supplement chapters 3 and 4. The medium variant of total population data and annual rates of growth is shown by region for selected years from 1950 to 2000 in Tables A-1 and A-3; Tables A-2 and A-4 provide the same breakdowns of the high and low variants for 1985 and 2000. Table A-5 shows the percentage distribution of three age groups (0-14, 15-64, and 65+) in major regions, subregions, and selected countries for 1970, 1985 and 2000. Tables A-6 to A-11 give all variants of school-age data for the major regions at five-year intervals from 1960 to 2000. A subregional breakdown, according to the medium variant, is in Tables A-12 to A-14; Tables A-15 to A-17 contain the high and low variants, but only for 1985 and 2000.

Charts representing the school-age population were based on these figures, which were taken from a special UNESCO tabulation showing each year from 1960 to 2000.

Table A-1. Total population, by major region and subregion, medium variant, selected years, 1950 to 2000

Region	1950	1960	1975	1985	2000
	Millions				
World	2,513	3,027	4,033	4,830	6,199
More developed regions	832	945	1,093	1,169	1,272
Less developed regions	1,681	2,082	2,940	3,661	4,927
Africa	219	275	406	545	828
Eastern Africa	61	77	115	156	243
Middle Africa	29	34	47	61	86
Northern Africa	52	65	94	125	184
Southern Africa	16	20	28	38	54
Western Africa	62	79	121	165	261
Latin America	164	215	323	421	608
Caribbean	17	20	28	33	43
Middle America	36	49	79	109	172
Temperate South America	25	31	38	44	51
Tropical South America	86	115	177	234	341
Northern America	166	199	236	258	289
East Asia	673	816	1,063	1,204	1,406
China	557	682	895	1,015	1,190
Japan	84	94	112	120	129
Other East Asia	33	39	57	69	88
South Asia	706	867	1,255	1,606	2,206
Eastern South Asia	177	221	325	415	559
Middle South Asia	486	590	845	1,079	1,482
Western South Asia	43	57	85	113	164
Europe	392	425	474	492	520
Eastern Europe	89	97	106	114	122
Northern Europe	72	76	82	82	85
Southern Europe	109	118	134	144	156
Western Europe	122	135	152	153	158
Oceania	13	16	22	24	30
Australia and New Zealand	10	13	17	19	22
Melanesia	2	2	3	4	6
Micronesia and Polynesia	1	1	1	1	2
USSR	180	214	254	280	312

Note: Due to rounding, detail may not add to total.

Source: United Nations, Department of International Economic and Social Affairs, Population Division, Selected Demographic Indicators by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978 (ST/ESA/SER.R/38), forthcoming.

Table A-2. High and low variants of total population in major regions and subregions, 1985 and 2000

Region	High variant		Low variant	
	1985	2000	1985	2000
	Millions			
World	4,896	6,509	4,764	5,856
More developed regions	1,180	1,319	1,160	1,229
Less developed regions	3,716	5,190	3,604	4,627
Africa	548	868	537	761
Eastern Africa	156	254	154	220
Middle Africa	61	91	59	78
Northern Africa	126	192	124	176
Southern Africa	38	57	37	51
Western Africa	166	274	163	236
Latin America	426	645	413	563
Caribbean	34	45	33	41
Middle America	110	180	107	160
Temperate South America	44	53	43	49
Tropical South America	238	367	230	313
Northern America	265	314	254	273
East Asia	1,220	1,452	1,186	1,341
China	1,030	1,228	999	1,132
Japan	120	131	119	126
Other East Asia	70	93	68	82
South Asia	1,636	2,348	1,581	2,081
Eastern South Asia	423	595	407	524
Middle South Asia	1,100	1,582	1,062	1,399
Western South Asia	114	171	112	157
Europe	494	531	490	505
Eastern Europe	114	125	113	119
Northern Europe	83	87	82	81
Southern Europe	144	159	143	153
Western Europe	154	161	152	152
Oceania	25	31	24	28
Australia and New Zealand	18	23	19	21
Melanesia	4	6	4	5
Micronesia and Polynesia	2	2	2	2
USSR	281	320	278	304

Note: Due to rounding, detail may not add to total

Source: United Nations, Department of International Economic and Social Affairs, Population Division, Selected Demographic Indicators by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978 (ST/ESA/SER.R/38), forthcoming.

Table A-3. Estimated annual rates of total population growth, by major region and subregion, medium variant, selected years, 1950 to 2000

Region	1950-60	1960-75	1975-85	1985-2000
	Percentage			
World	1.9	1.9	1.8	1.7
More developed regions	1.3	1.0	0.7	0.6
Less developed regions	2.2	2.3	2.2	2.0
Africa	2.3	2.6	3.0	2.8
Eastern Africa	2.3	2.8	3.0	3.0
Middle Africa	1.9	2.0	2.6	2.4
Northern Africa	2.3	2.5	2.9	2.6
Southern Africa	2.2	2.6	2.8	2.4
Western Africa	2.5	2.9	3.2	3.1
Latin America	2.8	2.7	2.7	2.5
Caribbean	1.9	2.1	1.8	1.7
Middle America	3.1	3.3	3.3	3.1
Temperate South America	1.9	1.5	1.3	1.1
Tropical South America	3.0	2.9	2.8	2.5
Northern America	1.8	1.2	0.9	0.8
East Asia	1.9	1.8	1.2	1.0
China	2.1	1.8	1.3	1.1
Japan	1.2	1.1	0.7	0.5
Other East Asia	1.8	2.4	2.0	1.6
South Asia	2.1	2.5	2.5	2.1
Eastern South Asia	2.2	2.6	2.5	2.0
Middle South Asia	2.0	2.4	2.5	2.1
Western South Asia	2.7	2.8	2.8	2.5
Europe	0.8	0.7	0.4	0.4
Eastern Europe	0.9	0.6	0.7	0.5
Northern Europe	0.5	0.5	0.1	0.2
Southern Europe	0.9	0.8	0.7	0.6
Western Europe	0.9	0.8	0.0	0.2
Oceania	2.2	2.0	1.5	1.3
Australia and New Zealand	2.3	1.9	1.2	1.0
Melanesia	1.8	2.4	2.7	2.4
Micronesia and Polynesia	2.8	2.5	2.0	1.5
USSR	1.8	1.1	0.9	0.7

Source: Based on United Nations, Department of International Economic and Social Affairs, Population Division, Selected Demographic Indicators by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978 (ST/ESA/SER.R/38), forthcoming.

Table A-4. High and low variants of estimated annual rates of total population growth in major regions and subregions between selected years, 1975 to 2000

Region	High variant		Low variant	
	1975-85	1985-2000	1975-85	1985-2000
	Percentage			
World	2.0	1.9	1.7	1.4
More developed regions	0.8	0.7	0.6	0.4
Less developed regions	2.4	2.3	2.1	1.7
Africa	3.0	3.1	2.8	2.4
Eastern Africa	3.1	3.3	2.9	2.4
Middle Africa	2.7	2.7	2.4	1.9
Northern Africa	3.0	2.8	2.8	2.3
Southern Africa	2.9	2.7	2.6	2.1
Western Africa	3.2	3.4	3.0	2.5
Latin America	2.8	2.8	2.5	2.1
Caribbean	1.9	2.0	1.7	1.5
Middle America	3.4	3.3	3.1	2.7
Temperate South America	1.4	1.2	1.2	0.9
Tropical South America	3.0	2.9	2.6	2.1
Northern America	1.1	1.1	0.7	0.5
East Asia	1.4	1.2	1.1	0.8
China	1.4	1.2	1.1	0.8
Japan	0.8	0.6	0.7	0.3
Other East Asia	2.2	1.8	1.8	1.3
South Asia	2.7	2.4	2.3	1.8
Eastern South Asia	2.7	2.3	2.3	1.7
Middle South Asia	2.7	2.5	2.3	1.9
Western South Asia	2.9	2.8	2.7	2.3
Europe	0.4	0.5	0.3	0.2
Eastern Europe	0.7	0.6	0.6	0.4
Northern Europe	0.1	0.3	+0.0	-0.1
Southern Europe	0.7	0.7	0.7	0.4
Western Europe	0.1	0.3	-0.0	+0.0
Oceania	1.6	1.6	1.3	1.0
Australia and New Zealand	1.4	1.3	1.0	0.7
Melanesia	2.9	2.8	2.5	2.1
Micronesia and Polynesia	2.2	1.8	1.8	1.2
USSR	1.0	0.9	0.9	0.6

Source: Based on United Nations, Department of International Economic and Social Affairs, Population Division, Selected Demographic Indicators by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978 (ST/ESA/SER.R/38),

Table A-5. Percentage distribution of age groups in major regions, subregions and selected countries, medium variant, 1970, 1985 and 2000

Region	Percentage of total population								
	1970			1985			2000		
	0-14	15-64	65+	0-14	15-64	65+	0-14	15-64	65+
World	37.3	57.2	5.4	34.2	60.1	5.8	31.6	62.0	6.4
More developed regions	26.5	63.8	9.7	22.3	66.5	11.2	21.6	65.3	13.1
Less developed regions	41.6	54.6	3.7	38.0	58.0	4.0	34.2	61.2	4.6
Africa	44.6	52.4	3.0	45.0	51.9	3.0	42.3	54.4	3.3
Eastern Africa	45.1	52.1	2.8	46.2	51.0	2.9	44.3	52.7	3.0
Middle Africa	42.8	54.0	3.2	43.7	53.0	3.3	40.0	56.4	3.6
Northern Africa	44.6	51.9	3.5	42.8	53.8	3.3	38.4	57.8	3.8
Southern Africa	41.9	54.1	4.1	41.9	54.0	4.2	37.1	58.3	4.6
Western Africa	45.6	51.9	2.5	46.8	50.6	2.6	45.1	52.1	2.8
Latin America	42.6	53.6	3.8	40.1	55.7	4.1	37.2	58.2	4.6
Caribbean	41.7	53.5	4.9	34.9	59.7	5.5	31.7	62.5	5.8
Middle America	46.4	50.2	3.4	44.8	52.0	3.3	41.7	54.8	3.5
Temperate South America	31.4	62.0	6.6	28.8	63.0	8.3	26.0	64.5	9.5
Tropical South America	43.8	53.1	3.1	40.9	55.6	3.6	37.3	58.5	4.3
Northern America	28.4	61.9	9.7	22.2	66.3	11.5	21.7	66.2	12.1
East Asia	36.5	58.3	5.2	28.3	65.5	6.3	24.3	67.9	7.8
China	37.7	57.2	5.1	28.7	65.3	6.0	24.5	68.3	7.2
Japan	24.0	68.9	7.1	21.5	68.8	9.6	18.6	67.3	14.1
Other East Asia	42.2	54.4	3.4	33.8	61.9	4.3	28.8	65.5	5.7
South Asia	43.3	53.7	3.0	41.0	55.9	3.1	35.7	60.6	3.7
Eastern South Asia	43.7	53.4	2.9	40.7	56.2	3.1	34.3	61.6	4.1
Middle South Asia	43.2	53.9	2.9	41.1	55.9	3.0	36.1	60.4	3.5
Western South Asia	42.8	53.3	3.9	41.4	54.9	3.7	37.5	58.1	4.4
Europe	24.9	63.7	11.4	21.0	66.6	12.4	20.6	65.1	14.3
Eastern Europe	24.7	65.0	10.4	23.5	65.6	10.8	21.2	65.6	13.2
Northern Europe	24.2	63.2	12.7	19.4	65.8	14.8	20.4	65.0	14.6
Southern Europe	26.4	63.7	9.8	22.6	65.8	11.7	21.1	64.3	14.6
Western Europe	24.2	63.0	12.8	18.5	68.4	13.1	19.7	65.6	14.7
Oceania	32.2	60.6	7.3	28.3	63.5	8.2	26.1	65.0	8.9
Australia and New Zealand	29.4	62.3	8.4	24.4	66.0	9.6	22.1	67.2	10.7
Melanesia	42.4	54.6	3.1	42.4	54.3	3.3	38.7	57.7	3.6
Micronesia and Polynesia	44.6	52.6	2.8	39.0	57.5	3.4	33.1	62.2	4.7
USSR	28.6	63.6	7.8	24.8	65.6	9.6	23.8	64.2	12.0
<u>Selected countries</u>									
Somalia (E.Af.)	46.5	51.6	1.9	45.0	52.8	2.2	42.6	54.7	2.7
Zimbabwe (E.Af.)	46.5	50.8	2.7	47.3	49.9	2.8	43.9	53.2	3.0
Algeria (N.Af.)	48.1	47.6	4.3	47.4	49.4	3.3	43.4	53.6	3.0
Jamaica (Carib.)	47.0	47.5	5.5	36.1	57.7	6.2	28.2	65.5	6.3
Bangladesh (M.S.Asia)	46.2	51.1	2.7	45.4	52.0	2.6	41.2	55.9	2.8
Israel (W.S.Asia)	33.1	60.2	6.7	33.7	58.4	7.9	28.0	64.0	8.0
German Democratic Republic (E.Eur.)	23.4	61.1	15.5	18.6	67.2	14.2	17.3	67.9	14.8
Hungary (E.Eur.)	20.8	67.6	11.5	22.0	65.6	12.4	20.2	65.2	14.6
Finland (N.Eur.)	24.6	66.2	9.2	19.8	68.3	11.9	19.6	67.2	13.1
Greece (S.Eur.)	24.9	64.0	11.1	21.7	64.9	13.4	21.5	62.3	16.2

Source: Based on United Nations, Department of International Economic and Social Affairs, Population Division, World Population and Its Age-Sex Composition by Country, 1950-2000: Demographic Estimation and Projection as Assessed in 1978 (ESA/P/WP.65), 2 January, 1980.

Table A-6. Population 6-11, by major region, high, medium and low variants, selected years, 1960 to 2000
(millions)

Region	Variant	1960	1965	1970	1975	1980	1985	1990	1995	2000
World	High					599.8	651.7	728.3	801.5	860.8
	Medium	424.4	485.2	534.4	567.5	599.7	636.7	686.2	738.5	773.9
	Low					599.7	622.3	643.0	666.3	678.7
More developed regions	High					104.8	103.5	112.9	120.8	123.4
	Medium	107.8	112.1	114.5	108.9	104.8	101.7	105.3	108.8	109.4
	Low					104.7	100.2	98.4	98.2	96.3
Less developed regions	High					495.0	548.2	615.4	680.7	737.4
	Medium	316.6	373.1	419.9	458.5	495.0	535.0	581.0	629.7	664.4
	Low					495.0	522.1	544.5	568.1	582.4
Africa	High					77.2	91.3	108.5	127.8	147.2
	Medium	43.4	50.3	58.2	66.8	77.1	90.8	106.4	121.6	135.4
	Low					77.1	89.6	101.6	111.2	117.0
Latin America	High					57.3	65.6	76.6	88.0	99.1
	Medium	34.4	40.3	46.2	51.7	57.2	64.4	72.8	80.9	88.2
	Low					57.1	62.9	67.8	71.7	74.7
Northern America	High					22.3	22.6	29.2	32.5	32.7
	Medium	24.4	26.8	27.2	24.2	22.3	21.3	24.6	26.2	25.7
	Low					22.3	20.4	21.4	22.2	21.2
East Asia	High					144.0	141.6	141.4	144.0	147.9
	Medium	120.1	136.6	143.1	144.1	143.9	136.9	130.8	135.1	135.7
	Low					143.7	132.8	119.8	117.6	119.8
South Asia	High					227.6	259.6	297.5	329.4	352.3
	Medium	130.4	155.4	181.4	205.7	227.6	252.8	279.1	300.0	313.7
	Low					227.6	246.7	263.3	275.0	278.5
Europe	High					44.1	41.2	41.8	44.1	46.0
	Medium	43.7	44.7	46.1	46.5	44.1	40.8	40.4	41.5	42.5
	Low					44.1	40.3	38.4	38.0	37.8
Oceania	High					2.7	2.8	3.0	3.3	3.5
	Medium	2.0	2.2	2.5	2.6	2.7	2.7	2.8	3.0	3.1
	Low					2.7	2.7	2.6	2.6	2.7
USSR	High					24.9	27.0	30.3	32.4	32.1
	Medium	26.1	28.9	29.7	26.0	24.9	27.0	29.2	30.2	29.5
	Low					24.9	27.0	28.1	28.0	27.0

Note: Insignificant discrepancies between variants are caused by estimation techniques.
Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-7. Population 12-17, by major region, high, medium and low variants, selected years,
1960 to 2000
(millions)

Region	Variant	1960	1965	1970	1975	1980	1985	1990	1995	2000
World	High					556.6	587.8	633.6	707.8	783.5
	Medium	340.3	404.6	468.5	520.8	556.2	587.2	623.2	670.3	724.4
	Low					555.8	586.7	613.3	632.6	657.3
More developed regions	High					110.9	105.7	103.3	111.0	120.2
	Medium	91.1	106.8	112.2	115.8	110.8	105.7	102.2	104.6	108.9
	Low					110.8	105.7	101.4	98.7	98.8
Less developed regions	High					445.7	482.1	530.3	596.7	663.3
	Medium	249.2	297.8	356.4	405.0	445.3	481.5	520.9	565.8	615.5
	Low					445.0	481.0	511.9	534.0	558.5
Africa	High					63.4	73.1	86.4	103.1	122.1
	Medium	35.6	40.4	47.0	54.8	63.3	73.0	86.0	101.4	116.8
	Low					63.3	72.9	85.1	97.4	107.5
Latin America	High					50.2	55.6	63.2	73.9	85.3
	Medium	27.1	32.5	38.6	44.5	50.2	55.5	62.4	70.7	79.0
	Low					50.1	55.4	61.4	66.4	70.6
Northern America	High					25.3	23.1	22.2	28.4	32.6
	Medium	20.2	24.1	26.9	28.0	25.3	23.1	21.5	24.4	26.5
	Low					25.3	23.1	21.0	21.4	22.7
East Asia	High					143.3	143.7	141.6	140.6	142.9
	Medium	90.6	113.5	132.8	141.1	143.2	143.5	138.3	130.4	133.6
	Low					143.1	143.1	135.5	120.8	116.9
South Asia	High					198.4	220.5	249.5	287.9	321.5
	Medium	107.8	123.3	147.5	173.6	198.2	220.3	244.6	271.6	294.1
	Low					198.0	220.1	240.2	257.5	270.8
Europe	High					46.6	44.8	41.5	41.4	43.7
	Medium	39.5	43.5	44.4	46.0	46.6	44.8	41.3	40.2	41.3
	Low					46.6	44.7	41.0	38.6	38.1
Oceania	High					2.6	2.7	2.8	3.0	3.3
	Medium	1.7	2.0	2.2	2.5	2.6	2.7	2.7	2.8	3.0
	Low					2.6	2.7	2.7	2.6	2.7
USSR	High					26.8	24.5	26.5	29.5	32.1
	Medium	17.8	25.2	29.0	30.4	26.8	24.4	26.5	28.7	30.1
	Low					26.8	24.4	26.5	27.9	28.0

Note: Insignificant discrepancies between variants are caused by estimation techniques.
Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics
on Education, 1980.

Table A-8. Population 18-23, by major region, high, medium and low variants, selected years, 1960 to 2000
(millions)

Region	Variant	1960	1965	1970	1975	1980	1985	1990	1995	2000
World	High					504.7	544.7	574.2	616.3	686.3
	Medium	304.8	324.1	382.2	449.2	504.5	544.0	574.0	609.7	654.0
	Low					504.3	543.5	573.8	603.4	621.8
More developed regions	High					115.6	112.7	106.4	103.6	108.9
	Medium	87.6	87.6	104.4	110.9	115.6	112.7	106.4	103.1	103.6
	Low					115.5	112.6	106.3	102.7	98.9
Less developed regions	High					389.1	431.9	467.8	512.7	577.4
	Medium	217.2	236.5	277.8	338.3	388.9	431.4	467.6	506.6	550.4
	Low					388.8	430.9	467.5	500.7	522.9
Africa	High					51.7	60.1	69.4	81.8	97.9
	Medium	29.9	33.3	37.6	44.2	51.7	60.1	69.3	81.4	96.5
	Low					51.7	60.1	69.1	80.7	93.2
Latin America	High					42.6	48.5	53.8	60.7	71.1
	Medium	22.4	25.6	30.4	36.7	42.6	48.5	53.7	60.3	68.5
	Low					42.6	48.5	53.6	59.7	64.9
Northern America	High					28.3	26.4	23.8	22.1	27.4
	Medium	15.5	19.5	23.8	26.5	28.3	26.4	23.8	21.8	23.9
	Low					28.3	26.3	23.8	21.6	21.3
East Asia	High					138.5	142.2	142.3	141.5	139.7
	Medium	79.4	85.9	106.1	128.7	138.4	142.1	142.2	139.5	130.6
	Low					138.4	141.9	142.1	137.7	122.3
South Asia	High					165.3	190.5	213.1	239.5	277.6
	Medium	95.4	103.0	115.7	138.6	165.2	190.1	212.8	236.1	263.5
	Low					165.1	189.9	212.7	233.2	251.0
Europe	High					45.6	46.6	45.3	42.1	41.1
	Medium	37.5	38.6	42.8	44.5	45.6	46.6	45.3	41.9	40.1
	Low					45.6	46.6	45.3	41.8	38.8
Oceania	High					2.5	2.6	2.7	2.8	2.9
	Medium	1.4	1.7	2.0	2.2	2.5	2.6	2.7	2.8	2.8
	Low					2.5	2.6	2.7	2.7	2.6
USSR	High					30.2	27.7	24.2	26.0	28.6
	Medium	23.3	16.5	23.7	27.7	30.2	27.7	24.2	26.0	28.1
	Low					30.2	27.7	24.1	26.0	27.6

Note: Insignificant discrepancies between variants are caused by estimation techniques.
Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-9. Percentage changes in the 6-11 age group, by major region, high, medium and low variants, five-year intervals, 1960 to 2000

(percentage)

Region	Variant	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-2000
World	High				5.7	8.7	11.8	10.1	7.4
	Medium	14.3	10.1	6.2	5.7	6.2	7.8	7.6	4.8
	Low				5.7	3.8	3.3	3.6	1.9
More developed regions	High				-3.8	-1.2	9.1	7.0	2.2
	Medium	4.0	2.1	-4.9	-3.8	-3.0	3.5	3.3	0.6
	Low				-3.8	-4.3	-1.8	-0.2	-1.9
Less developed regions	High				8.0	10.7	12.3	10.6	8.3
	Medium	17.8	12.5	9.2	8.0	8.1	8.6	8.4	5.5
	Low				8.0	5.5	4.3	4.3	2.5
Africa	High				15.6	18.3	18.8	17.8	15.2
	Medium	15.9	15.7	14.8	15.4	17.8	17.2	14.3	11.3
	Low				15.4	16.2	13.4	9.4	5.2
Latin America	High				10.8	14.5	16.8	14.9	12.6
	Medium	17.2	14.6	11.9	10.6	12.6	13.0	11.1	9.0
	Low				10.4	10.2	7.8	5.8	4.2
Northern America	High				-7.9	1.3	29.2	11.3	0.6
	Medium	9.8	1.5	-11.0	-7.9	-4.5	15.5	6.5	-1.9
	Low				-7.9	-8.5	4.9	3.7	-4.5
East Asia	High				-0.1	-1.7	-0.1	1.8	2.7
	Medium	13.7	4.8	0.7	-0.1	-4.9	-4.5	3.3	0.4
	Low				-0.3	-7.6	-9.8	1.8	1.9
South Asia	High				10.6	14.1	14.6	10.7	7.0
	Medium	19.2	16.7	13.4	10.6	11.1	10.4	7.5	4.6
	Low				10.6	8.4	6.7	4.4	1.3
Europe	High				-5.2	-6.6	1.5	5.5	4.3
	Medium	2.3	3.1	0.9	-5.2	-7.5	-1.0	2.7	2.4
	Low				-5.2	-8.6	-4.7	-1.0	-0.5
Oceania	High				3.8	3.7	7.1	10.0	6.1
	Medium	10.0	13.6	4.0	3.8	0.0	3.7	7.1	3.3
	Low				3.8	0.0	-3.7	0.0	3.8
USSR	High				-4.2	8.4	12.2	6.9	-0.9
	Medium	10.7	2.8	-12.5	-4.2	8.4	8.1	3.4	-2.3
	Low				-4.2	8.4	4.1	-0.4	-3.6

Source: Based on special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-10. Percentage changes in the 12-17 age group, by major region, high, medium and low variants, five-year intervals, 1960 to 2000

(percentage)

Region	Variant	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-2000
World	High				6.9	5.6	7.8	11.7	10.7
	Medium	18.9	15.8	11.2	6.8	5.6	6.1	7.6	8.1
	Low				6.7	5.6	4.5	3.1	3.9
More developed regions	High				-4.2	-4.7	-2.3	-7.5	8.3
	Medium	17.2	5.1	3.2	-4.3	-4.6	-3.3	2.3	4.1
	Low				-4.3	-4.6	-4.1	-2.7	0.1
Less developed regions	High				10.0	8.2	10.0	12.5	11.2
	Medium	19.5	19.7	13.6	10.0	8.1	8.2	8.6	8.8
	Low				9.9	8.1	6.4	4.3	4.6
Africa	High				15.7	15.3	18.2	19.3	18.4
	Medium	13.5	16.3	16.6	15.5	15.3	17.8	17.9	15.2
	Low				15.5	15.2	16.7	14.5	10.4
Latin America	High				12.8	10.8	13.7	16.9	15.4
	Medium	19.9	18.8	15.3	12.8	10.6	12.4	13.3	11.7
	Low				12.6	10.6	10.8	8.1	6.3
Northern America	High				-9.6	-8.7	-3.9	27.9	14.8
	Medium	19.3	11.6	4.1	-9.6	-8.7	-6.9	13.5	8.6
	Low				-9.6	-8.7	-9.1	1.9	6.1
East Asia	High				1.6	0.3	-1.5	-0.7	1.6
	Medium	25.3	17.0	6.3	1.5	0.2	-3.6	-5.7	2.5
	Low				1.4	0.0	-5.3	10.8	-3.2
South Asia	High				14.3	11.2	13.2	15.4	11.7
	Medium	14.4	19.6	17.7	14.2	11.2	11.0	11.0	8.3
	Low				14.1	11.2	9.1	7.2	5.2
Europe	High				1.3	-3.9	-7.4	-0.2	5.6
	Medium	10.1	2.1	3.6	1.3	-3.9	-7.8	-2.7	2.7
	Low				1.3	-4.1	-8.3	-5.9	-1.3
Oceania	High				4.0	3.8	3.7	7.1	10.0
	Medium	17.6	10.0	13.6	4.0	3.8	0.0	3.7	7.1
	Low				4.0	3.8	0.0	-3.7	3.8
USSR	High				-11.8	-8.6	8.2	11.3	8.8
	Medium	41.6	15.1	4.8	-11.8	-9.0	8.6	8.3	4.9
	Low				-11.8	-9.0	8.6	5.3	0.4

Source: Based on special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-11. Percentage changes in the 18-23 age group, by major region, high, medium and low variants, five-year intervals, 1960 to 2000
(percentage)

Region	Variant	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95	1995-2000
World	High				12.4	7.9	5.4	7.3	11.4
	Medium	6.3	17.9	17.5	12.3	7.8	5.5	6.2	7.3
	Low				12.3	7.8	5.6	5.2	3.0
More developed regions	High				4.2	-2.5	-5.6	-2.6	5.1
	Medium	0.0	19.2	6.2	4.2	-2.5	-5.6	-3.1	0.5
	Low				4.2	-2.5	-5.6	-3.4	-3.7
Less developed regions	High				15.0	11.0	8.3	9.6	12.6
	Medium	8.9	17.5	21.8	15.0	10.9	8.4	8.3	8.6
	Low				14.9	10.8	8.5	7.1	4.4
Africa	High				17.0	16.2	15.5	17.9	19.7
	Medium	11.4	12.9	17.6	17.0	16.2	15.3	17.5	18.6
	Low				17.0	16.1	15.2	16.8	15.5
Latin America	High				16.1	13.8	10.9	12.8	17.1
	Medium	14.3	18.8	20.7	16.1	13.8	10.7	12.3	13.6
	Low				16.1	13.8	10.5	11.4	8.7
Northern America	High				6.8	-6.7	-9.8	-7.1	24.0
	Medium	25.8	22.1	11.3	6.8	-6.7	-9.8	-8.4	9.6
	Low				6.8	-7.1	-9.8	-9.2	-1.4
East Asia	High				7.5	2.7	0.1	-0.6	-1.3
	Medium	8.2	23.5	21.3	7.5	2.7	0.1	-1.9	-6.4
	Low				7.5	2.5	0.1	-3.1	-11.2
South Asia	High				19.3	15.2	11.9	12.4	15.9
	Medium	8.0	12.3	19.8	19.2	15.1	11.9	10.9	11.6
	Low				19.1	15.0	12.0	9.6	7.6
Europe	High				2.5	2.2	-2.8	-7.1	-2.4
	Medium	2.9	10.9	4.0	2.5	2.2	-2.8	-7.5	-4.3
	Low				2.5	2.2	-2.8	-7.7	-7.2
Oceania	High				13.6	4.0	3.8	3.7	3.6
	Medium	21.4	17.6	10.0	13.6	4.0	3.8	3.7	0.0
	Low				13.6	4.0	3.8	0.0	-3.7
USSR	High				9.0	-8.3	-12.6	7.4	10.0
	Medium	-29.2	43.6	16.9	9.0	-8.3	-12.6	7.4	8.1
	Low				9.0	-8.3	-13.0	7.4	6.2

Source: Based on special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-12. Population 6-11, by major region and subregion, medium variant, selected years, 1960 to 2000

(millions)

Region	1960	1970	1975	1980	1985	1990	1995	2000
World	424.4	534.4	567.5	599.7	636.7	686.2	738.5	773.9
More developed regions	107.8	114.5	108.9	104.8	101.7	105.3	108.8	109.4
Less developed regions	316.6	419.9	458.5	495.0	535.0	581.0	629.7	664.4
Africa	43.4	58.2	66.8	77.1	90.8	106.4	121.6	135.4
Eastern Africa	12.1	16.6	19.1	22.3	26.4	31.3	36.3	41.1
Middle Africa	5.3	6.5	7.4	8.5	9.8	11.3	12.6	13.6
Northern Africa	10.4	13.9	15.5	17.4	20.3	23.3	25.9	27.8
Southern Africa	3.0	4.0	4.5	5.2	6.0	6.9	7.5	7.9
Western Africa	12.6	17.2	20.2	23.8	28.2	33.7	39.4	45.0
Latin America	34.4	46.2	51.7	57.2	64.4	72.8	80.9	88.2
Caribbean	3.1	4.1	4.6	4.6	4.5	4.7	5.1	5.4
Middle America	8.2	11.8	13.6	15.7	18.4	21.6	24.7	27.7
Temperate South America	3.9	4.5	4.6	4.7	5.0	5.2	5.3	5.3
Tropical South America	19.1	25.8	29.0	32.2	36.5	41.3	45.8	49.8
Northern America	24.4	27.2	24.2	22.3	21.3	24.6	26.2	25.7
East Asia	120.1	143.1	144.1	143.9	136.9	130.8	135.1	135.7
China	101.9	124.8	125.2	123.5	116.9	112.0	116.1	115.9
Japan	12.1	9.7	10.4	11.6	10.8	9.2	9.0	9.7
Other East Asia	6.1	8.7	8.5	8.7	9.2	9.6	10.0	10.1
South Asia	130.5	181.4	205.7	227.6	252.8	279.1	300.0	313.7
Eastern South Asia	33.3	46.9	53.7	59.5	64.9	70.8	75.3	77.0
Middle South Asia	88.0	122.6	138.3	152.8	170.1	188.1	202.3	212.4
Western South Asia	9.2	11.9	13.7	15.4	17.7	20.2	22.5	24.3
Europe	43.7	46.1	46.5	44.1	40.8	40.4	41.5	42.5
Eastern Europe	11.1	10.0	9.7	10.1	10.7	11.0	10.6	10.2
Northern Europe	7.2	7.9	7.9	7.3	6.2	6.0	6.4	6.9
Southern Europe	12.6	13.5	14.0	13.7	12.8	12.6	13.0	13.2
Western Europe	12.8	14.6	14.9	13.0	11.0	10.8	11.5	12.3
Oceania	2.0	2.5	2.6	2.7	2.7	2.8	3.0	3.1
Australia and New Zealand	1.5	1.8	1.9	1.9	1.8	1.8	1.9	1.9
Other Oceania	0.5	0.7	0.7	0.8	0.9	1.0	1.1	1.2
USSR	26.1	29.7	26.0	24.9	27.0	29.2	30.2	29.5

Note: Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-13. Population 12-17, by major region and subregion, medium variant, selected years, 1960 to 2000

(millions)

Region	1960	1970	1975	1980	1985	1990	1995	2000
World	340.3	468.5	520.8	556.2	587.2	623.2	670.3	724.4
More developed regions	91.1	112.2	115.8	110.8	105.7	102.2	104.6	108.9
Less developed regions	249.2	356.4	405.0	445.3	481.5	520.9	565.8	615.5
Africa	35.6	47.0	54.8	63.3	73.0	86.0	101.4	116.8
Eastern Africa	9.8	13.4	15.5	18.0	21.0	24.8	29.6	34.6
Middle Africa	4.4	5.4	6.1	6.9	8.0	9.3	10.8	12.1
Northern Africa	8.5	11.2	13.2	15.0	16.7	19.5	22.6	25.2
Southern Africa	2.4	3.3	3.7	4.4	5.0	5.8	6.7	7.3
Western Africa	10.4	13.7	16.2	19.0	22.4	26.6	31.8	37.5
Latin America	27.1	38.6	44.5	50.2	55.5	62.4	70.7	79.0
Caribbean	2.6	3.2	3.9	4.5	4.6	4.5	4.6	5.0
Middle America	6.2	9.5	11.3	13.1	15.0	17.7	20.8	24.0
Temperate South America	3.4	4.1	4.4	4.5	4.6	4.9	5.2	5.3
Tropical South America	14.9	21.7	24.9	28.1	31.2	35.4	40.2	44.8
Northern America	20.2	26.9	28.0	25.3	23.1	21.5	24.4	26.5
East Asia	90.6	132.8	141.1	143.2	143.5	138.3	130.4	133.6
China	73.4	115.5	122.8	124.5	123.4	118.1	111.6	114.7
Japan	12.4	10.1	9.6	10.2	11.5	11.2	9.4	9.0
Other East Asia	4.8	7.3	8.6	8.5	8.6	9.0	9.5	9.9
South Asia	107.8	147.5	173.6	198.2	220.3	244.6	271.6	294.1
Eastern South Asia	27.3	38.3	44.7	51.6	57.6	63.0	69.0	74.0
Middle South Asia	73.6	99.2	117.1	133.3	147.8	164.5	183.1	198.2
Western South Asia	7.0	10.0	11.8	13.3	14.9	17.1	19.6	21.9
Europe	39.5	44.4	46.0	46.6	44.8	41.3	40.2	41.3
Eastern Europe	8.9	11.4	10.2	9.6	10.0	10.6	11.0	10.6
Northern Europe	7.2	7.1	7.7	8.0	7.5	6.4	6.0	6.4
Southern Europe	11.6	12.5	13.5	14.0	13.8	13.0	12.5	12.9
Western Europe	11.8	13.4	14.6	15.1	13.5	11.3	10.7	11.4
Oceania	1.7	2.2	2.5	2.6	2.7	2.7	2.8	3.0
Australia and New Zealand	1.3	1.7	1.9	1.9	1.9	1.9	1.8	1.9
Other Oceania	0.4	0.5	0.6	0.7	0.8	0.8	1.0	1.1
USSR	17.8	29.0	30.4	26.8	24.4	26.5	28.7	30.1

Note: Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-14. Population 18-23, by major region and subregion, medium variant, selected years, 1960 to 2000

(millions)

Region	1960	1970	1975	1980	1985	1990	1995	2000
World	304.8	382.2	449.2	504.5	544.0	574.0	609.7	654.0
More developed regions	87.6	104.4	110.9	115.6	112.7	106.4	103.1	103.6
Less developed regions	217.2	277.8	338.3	388.9	431.4	467.6	506.6	550.4
Africa	29.9	37.6	44.2	51.7	60.1	69.3	81.4	96.5
Eastern Africa	8.3	10.7	12.5	14.6	17.0	19.8	23.4	28.0
Middle Africa	3.7	4.5	5.1	5.8	6.5	7.5	8.8	10.2
Northern Africa	7.1	8.6	10.5	12.5	14.5	16.1	18.6	21.8
Southern Africa	2.1	2.6	3.1	3.6	4.2	4.8	5.5	6.4
Western Africa	8.7	11.2	13.0	15.3	17.9	21.1	25.1	30.0
Latin America	22.4	30.4	36.7	42.6	48.5	53.7	60.3	68.5
Caribbean	2.1	2.6	3.0	3.6	4.3	4.4	4.4	4.4
Middle America	5.1	7.2	9.0	10.7	12.6	14.4	17.0	20.0
Temperate South America	3.0	3.7	4.0	4.4	4.5	4.6	4.8	5.1
Tropical South America	12.2	17.0	20.7	23.9	27.1	30.3	34.1	39.0
Northern America	15.5	23.8	26.5	28.3	26.4	23.8	21.8	23.9
East Asia	79.4	106.1	128.7	138.4	142.1	142.2	139.5	130.6
China	65.0	88.4	111.5	120.4	123.6	122.6	119.1	111.7
Japan	10.3	12.5	10.4	9.5	10.0	11.1	11.5	9.6
Other East Asia	4.1	5.2	6.7	8.5	8.5	8.5	8.9	9.3
South Asia	95.4	115.7	138.6	165.2	190.1	212.8	236.1	263.5
Eastern South Asia	25.1	28.8	36.0	42.4	49.4	55.6	61.0	66.9
Middle South Asia	64.5	79.1	93.2	111.5	128.0	142.9	158.7	177.6
Western South Asia	5.8	7.9	9.3	11.3	12.9	14.4	16.5	18.9
Europe	37.5	42.8	44.5	45.6	46.6	45.3	41.9	40.1
Eastern Europe	8.6	10.2	11.4	10.5	9.5	9.9	10.4	10.9
Northern Europe	6.0	7.5	7.0	7.5	8.1	7.7	6.7	6.1
Southern Europe	11.2	11.9	12.4	13.3	13.9	13.8	13.2	12.5
Western Europe	11.7	13.1	13.7	14.4	15.1	14.0	11.6	10.6
Oceania	1.4	2.0	2.2	2.5	2.6	2.7	2.8	2.8
Australia and New Zealand	1.0	1.6	1.7	1.9	2.0	2.0	1.9	1.9
Other Oceania	0.4	0.4	0.5	0.6	0.6	0.7	0.9	0.9
USSR	23.3	23.7	27.7	30.2	27.7	24.2	26.0	28.1

Note: Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-15. High and low variants of 6-11 age group, by major region and subregion, 1985 and 2000

(millions)

Region	High variant		Low variant	
	1985	2000	1985	2000
World	651.7	860.8	622.3	678.7
More developed regions	103.5	123.4	100.2	96.3
Less developed regions	548.2	737.4	522.1	582.4
Africa	91.3	147.2	89.6	117.0
Eastern Africa	26.5	44.4	26.1	35.0
Middle Africa	9.9	15.1	9.6	11.2
Northern Africa	20.5	30.4	20.1	25.5
Southern Africa	6.0	8.8	5.8	7.0
Western Africa	28.4	48.5	27.9	38.3
Latin America	65.6	99.1	62.9	74.7
Caribbean	4.6	6.0	4.4	4.8
Middle America	18.6	30.1	18.1	23.8
Temperate South America	5.0	5.7	4.8	4.9
Tropical South America	37.4	57.2	35.5	41.3
Northern America	22.6	32.7	20.4	21.2
East Asia	141.6	147.9	132.8	119.8
China	121.3	126.1	113.2	102.4
Japan	10.8	10.4	10.7	8.6
Other East Asia	9.5	11.4	8.9	8.8
South Asia	259.6	352.3	246.7	278.5
Eastern South Asia	66.7	86.7	63.2	66.8
Middle South Asia	174.9	239.4	166.1	189.5
Western South Asia	17.9	26.3	17.5	22.2
Europe	41.2	46.0	40.3	37.8
Eastern Europe	10.7	11.3	10.6	9.4
Northern Europe	6.4	7.5	6.2	5.6
Southern Europe	12.9	14.0	12.7	12.2
Western Europe	11.2	13.2	10.8	10.6
Oceania	2.8	3.5	2.7	2.7
Australia and New Zealand	1.8	2.2	1.8	1.7
Other Oceania	0.9	1.3	0.9	1.0
USSR	27.0	32.1	27.0	27.0

Note: Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-16. High and low variants of 12-17 age group, by major region and subregion, 1985 and 2000

(millions)

Region	High variant		Low variant	
	1985	2000	1985	2000
World	587.8	783.5	586.7	657.3
More developed regions	105.7	120.2	105.7	98.8
Less developed regions	482.1	663.3	481.0	558.5
Africa	73.1	122.1	72.9	107.5
Eastern Africa	21.0	36.1	21.0	31.8
Middle Africa	8.0	12.8	8.0	10.8
Northern Africa	16.7	26.4	16.7	23.9
Southern Africa	5.0	7.9	5.0	6.6
Western Africa	22.4	39.0	22.3	34.4
Latin America	55.6	85.3	55.4	70.6
Caribbean	4.6	5.4	4.5	4.6
Middle America	15.1	25.3	15.0	21.3
Temperate South America	4.7	5.5	4.6	4.9
Tropical South America	31.3	49.0	31.2	39.8
Northern America	23.1	32.6	23.1	22.7
East Asia	143.7	142.9	143.1	116.9
China	123.6	122.2	123.0	99.7
Japan	11.5	9.6	11.5	8.3
Other East Asia	8.6	11.1	8.6	8.9
South Asia	220.5	321.5	220.1	270.8
Eastern South Asia	57.6	81.1	57.6	67.3
Middle South Asia	148.0	217.5	147.7	182.8
Western South Asia	14.9	22.9	14.9	20.8
Europe	44.8	43.7	44.7	38.1
Eastern Europe	10.0	11.4	10.0	9.8
Northern Europe	7.5	6.8	7.5	5.5
Southern Europe	13.8	13.5	13.8	12.2
Western Europe	13.6	12.0	13.5	10.5
Oceania	2.7	3.3	2.7	2.7
Australia and New Zealand	1.9	2.1	1.9	1.7
Other Oceania	0.8	1.2	0.8	1.0
USSR	24.4	32.1	24.5	28.0

Note: Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Table A-17. High and low variants of 18-23 age group, by major region and subregion, 1985 and 2000

(millions)

Region	High variant		Low variant	
	1985	2000	1985	2000
World	544.7	686.3	543.5	621.8
More developed regions	112.7	108.9	112.6	98.9
Less developed regions	431.9	577.4	430.9	522.9
Africa	60.1	97.9	60.0	93.2
Eastern Africa	17.0	28.4	17.0	27.1
Middle Africa	6.5	10.4	6.5	9.7
Northern Africa	14.5	22.2	14.5	21.3
Southern Africa	4.2	6.5	4.1	6.0
Western Africa	17.9	30.4	17.9	29.0
Latin America	48.5	71.1	48.5	64.9
Caribbean	4.3	4.6	4.3	4.2
Middle America	12.6	20.5	12.6	19.2
Temperate South America	4.5	5.2	4.5	4.8
Tropical South America	27.1	40.8	27.1	36.8
Northern America	26.4	27.4	26.3	21.3
East Asia	142.2	139.7	141.9	122.3
China	123.7	119.8	123.4	104.1
Japan	10.0	9.9	10.0	9.4
Other East Asia	8.5	10.0	8.4	8.8
South Asia	190.5	277.6	189.9	251.0
Eastern South Asia	49.2	70.7	49.1	63.2
Middle South Asia	128.3	187.5	127.9	169.4
Western South Asia	13.0	19.4	12.9	18.4
Europe	46.6	41.1	46.6	38.8
Eastern Europe	9.5	11.1	9.5	10.5
Northern Europe	8.1	6.3	8.1	5.8
Southern Europe	13.9	12.7	13.9	12.2
Western Europe	15.1	11.0	15.1	10.3
Oceania	2.6	2.9	2.6	2.6
Australia and New Zealand	2.0	2.0	1.9	1.8
Other Oceania	0.6	0.9	0.6	0.8
USSR	27.7	28.6	27.7	27.6

Note: Due to rounding, detail may not add to total.

Source: Special tabulation prepared by UNESCO, Office of Statistics, Division of Statistics on Education, 1980.

Appendix BCHARTS

This appendix contains 16 of the 21 charts showing the school-age population in the subregions. The other five (4-13 to 4-17 - Caribbean, Other East Asia, Japan, Eastern Europe, and Northern Europe) are presented in chapter 4 as examples of variations from trends in the major regions.

Chart — B-1

School-age Population, by Age Group, 1960 to 2000

EASTERN AFRICA

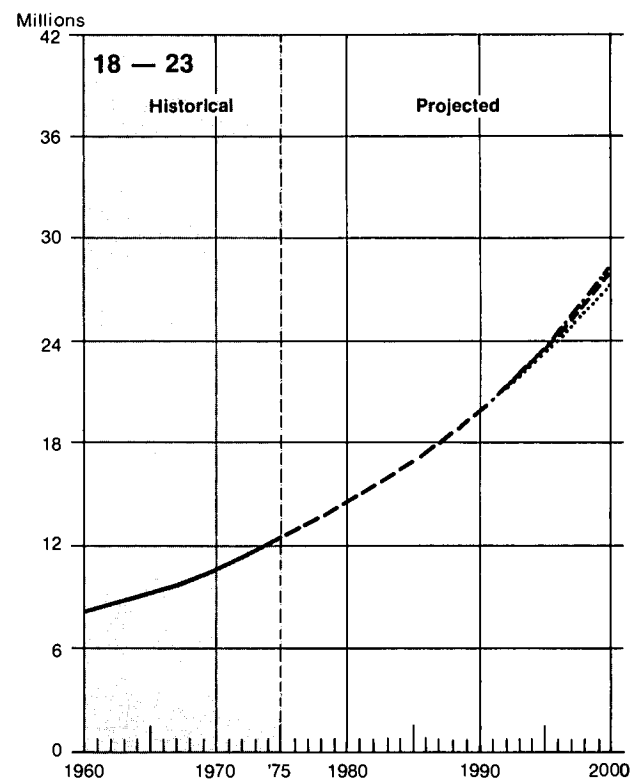
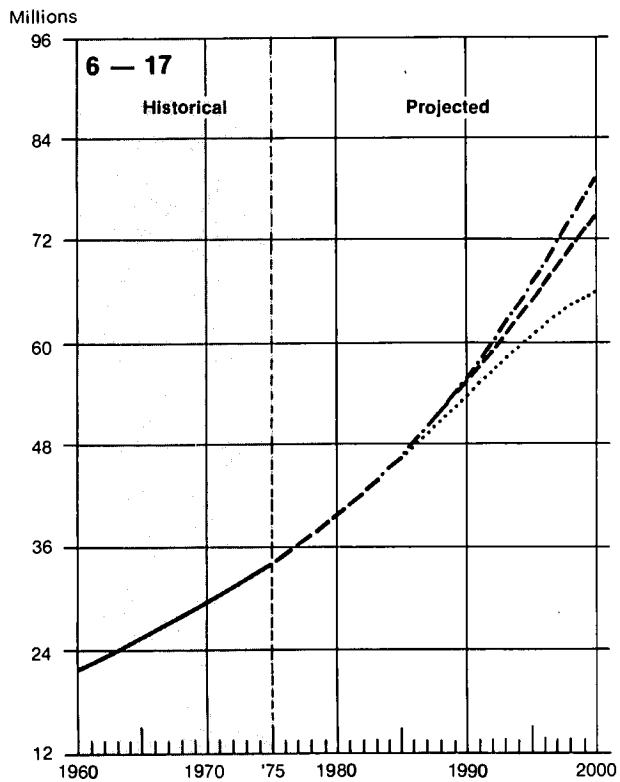
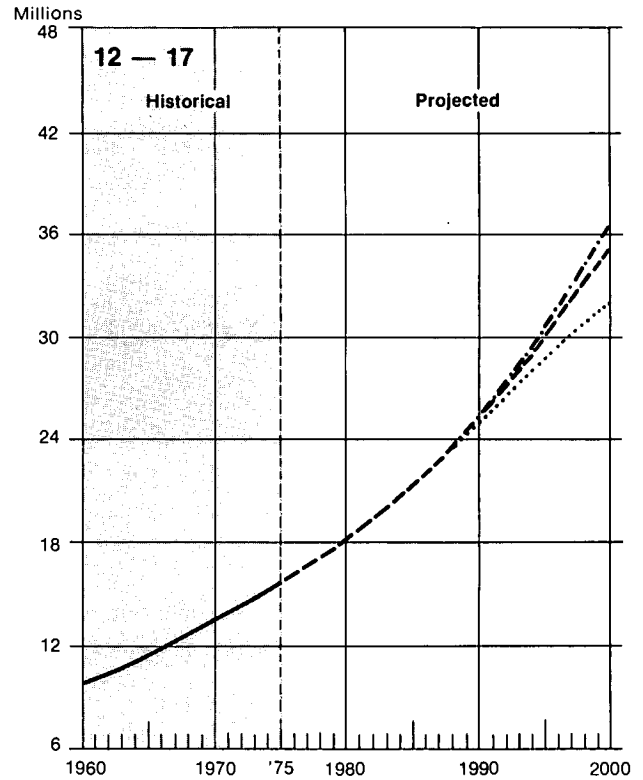
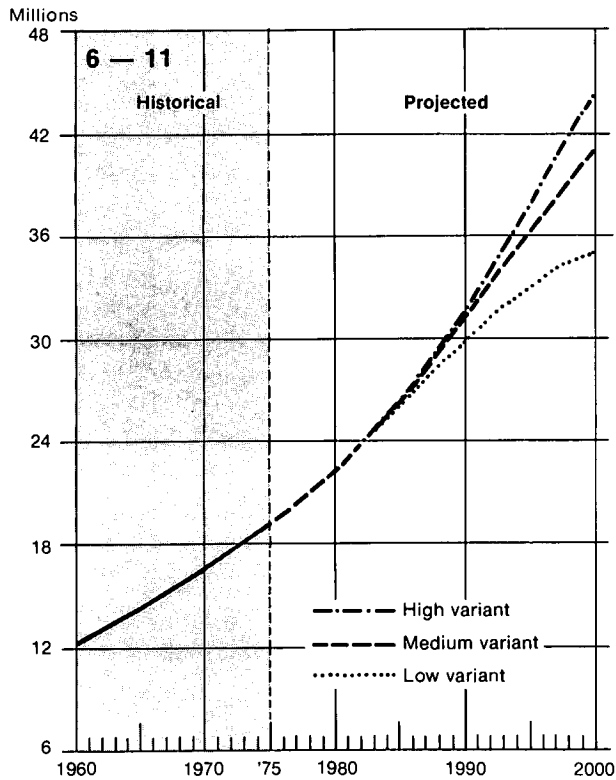


Chart — B-2

School-age Population, by Age Group, 1960 to 2000

MIDDLE AFRICA

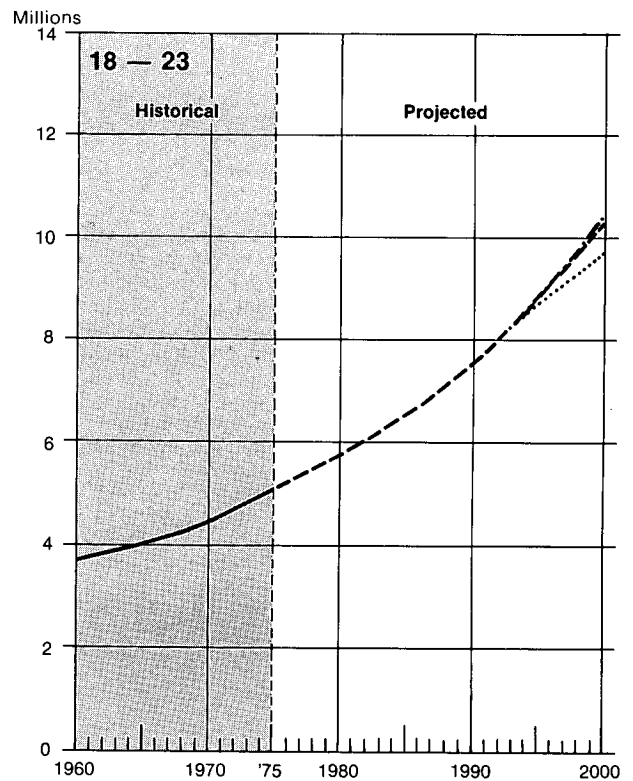
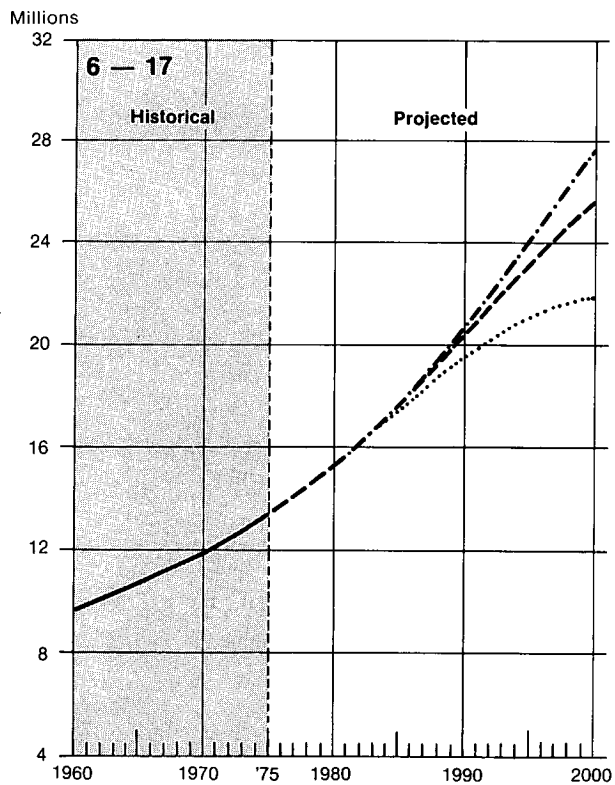
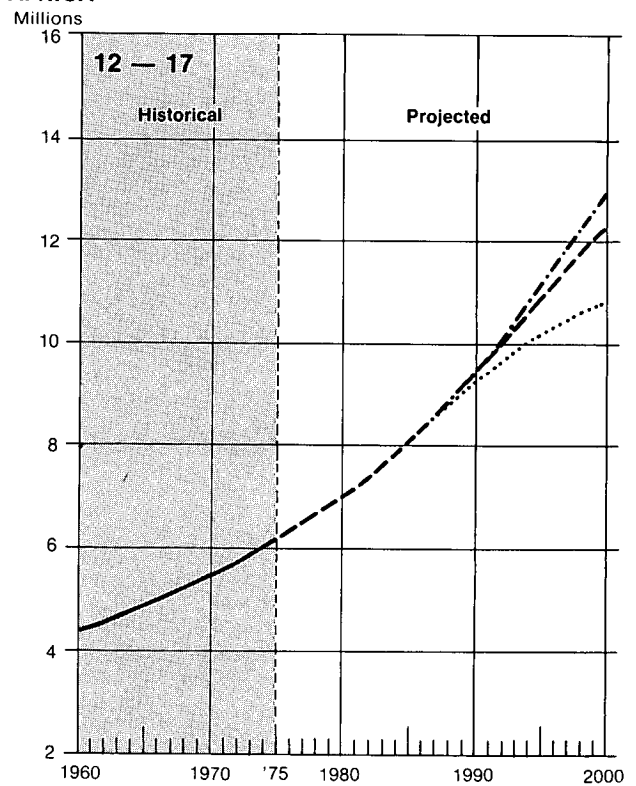
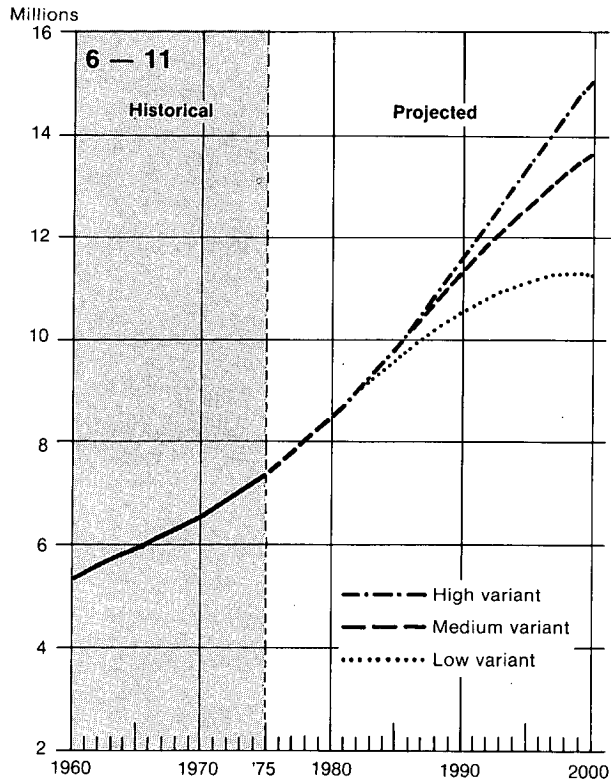


Chart — B-3

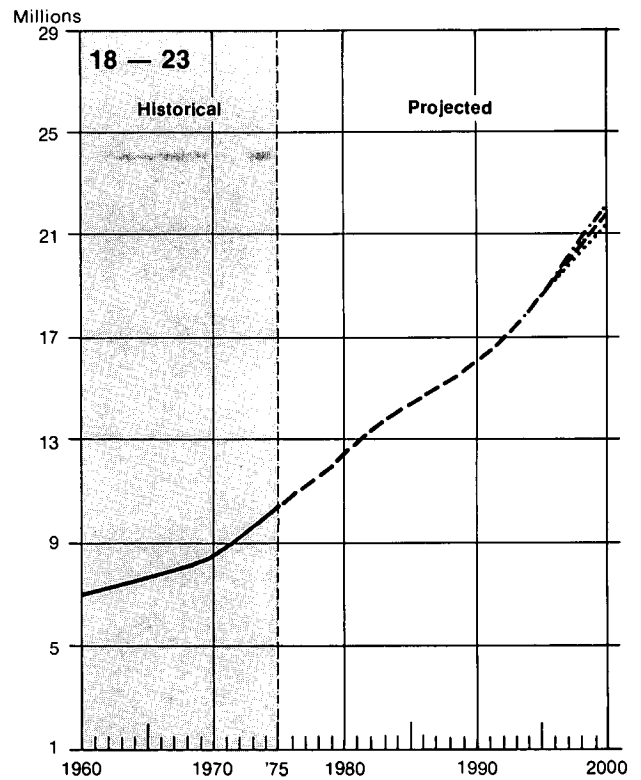
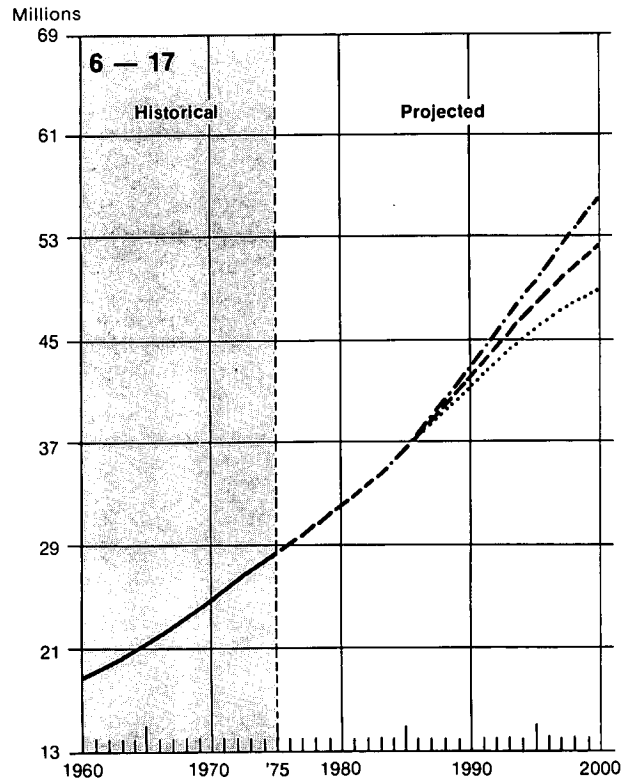
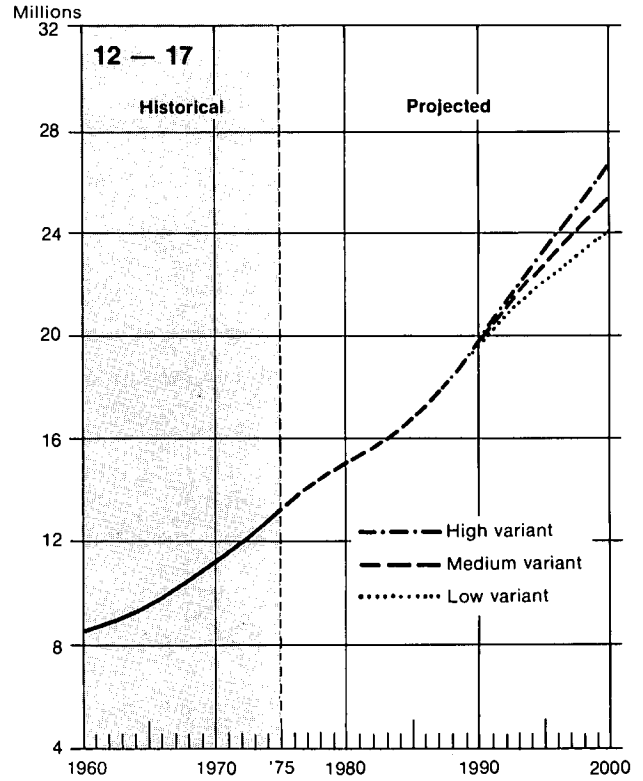
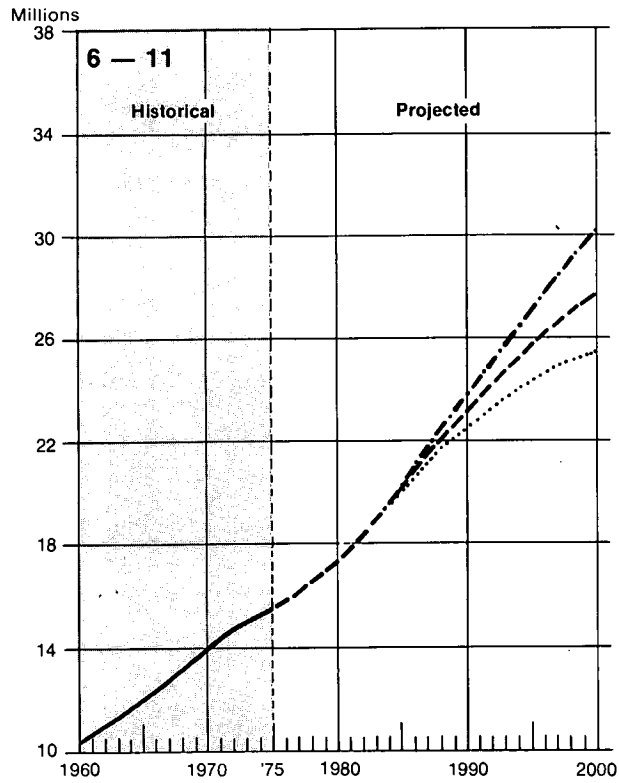
School-age Population, by Age Group, 1960 to 2000**NORTHERN AFRICA**

Chart — B-4

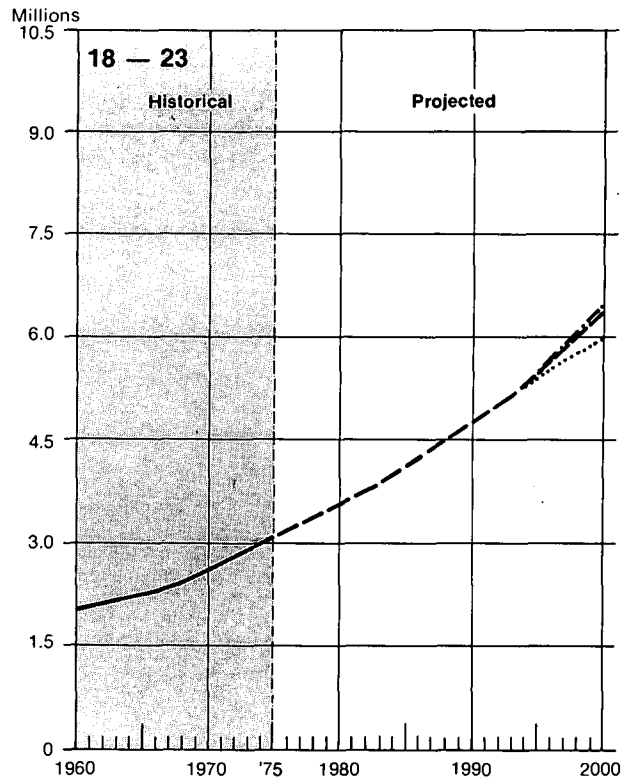
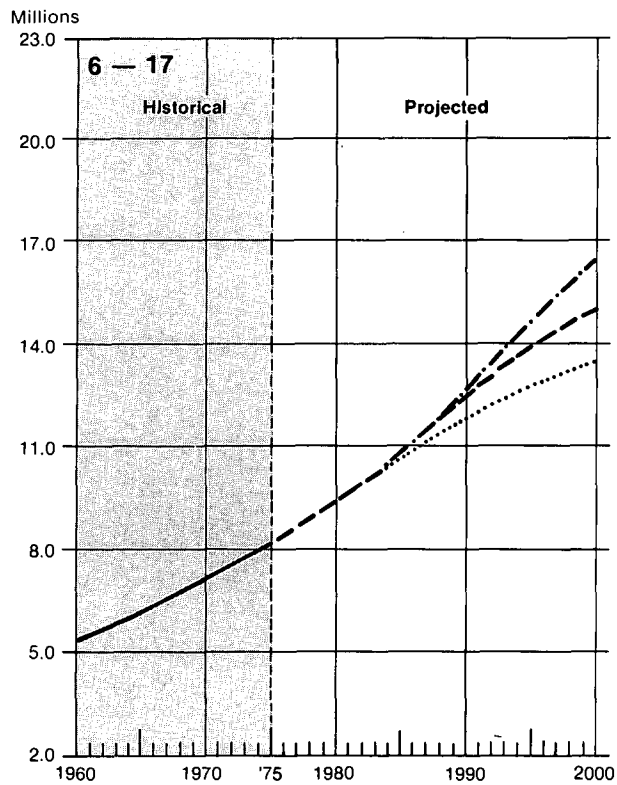
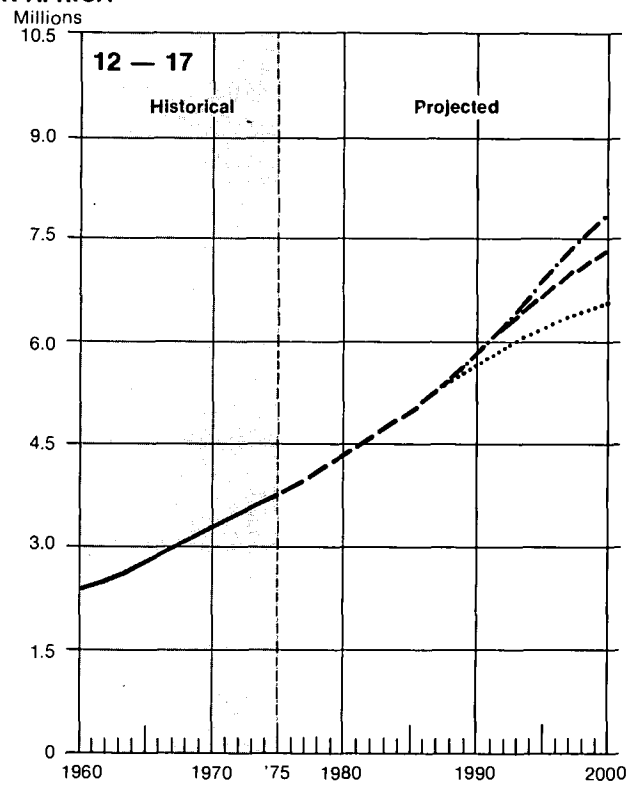
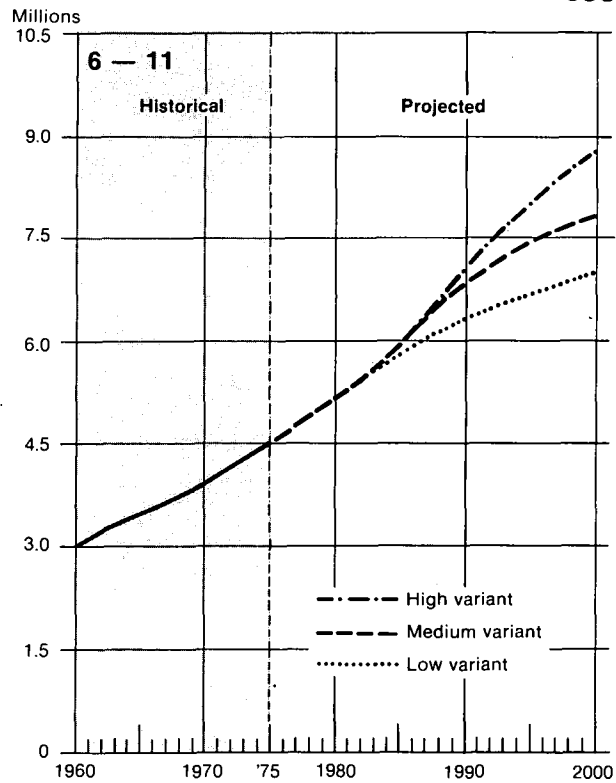
School-age Population, by Age Group, 1960 to 2000**SOUTHERN AFRICA**

Chart — B-5

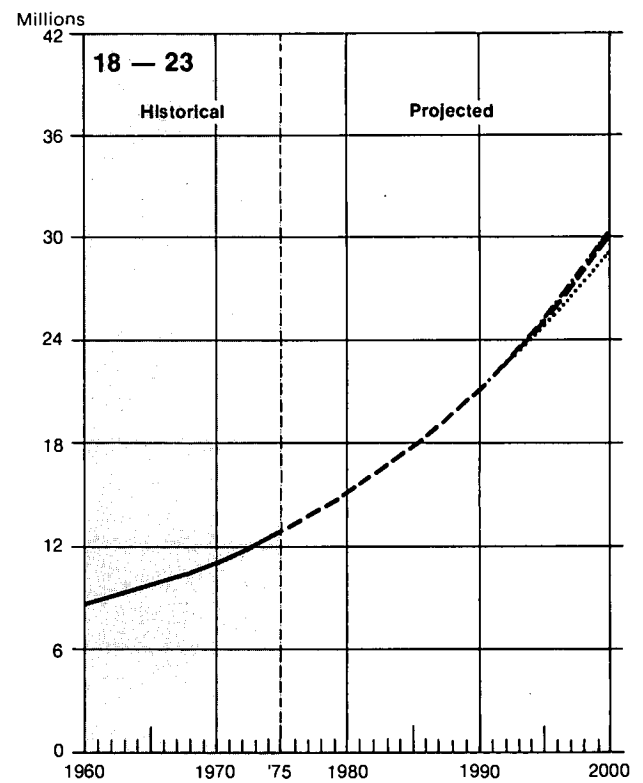
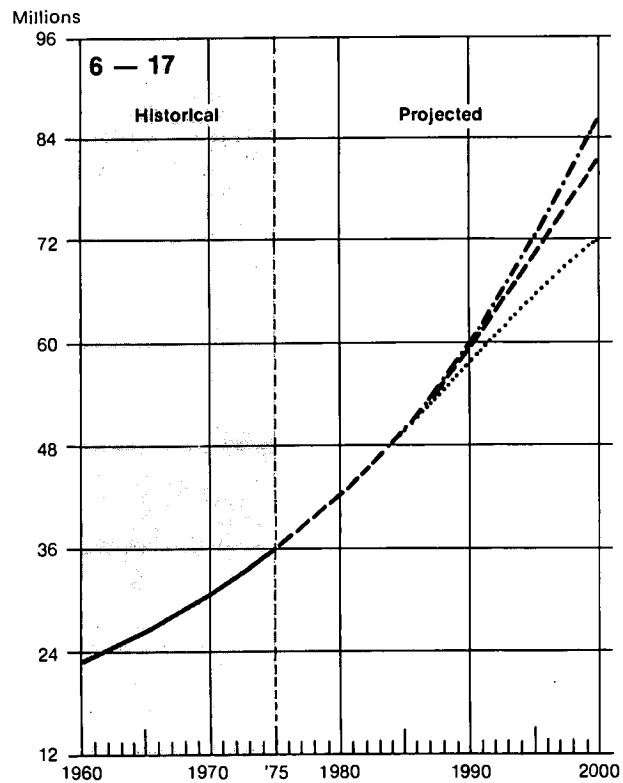
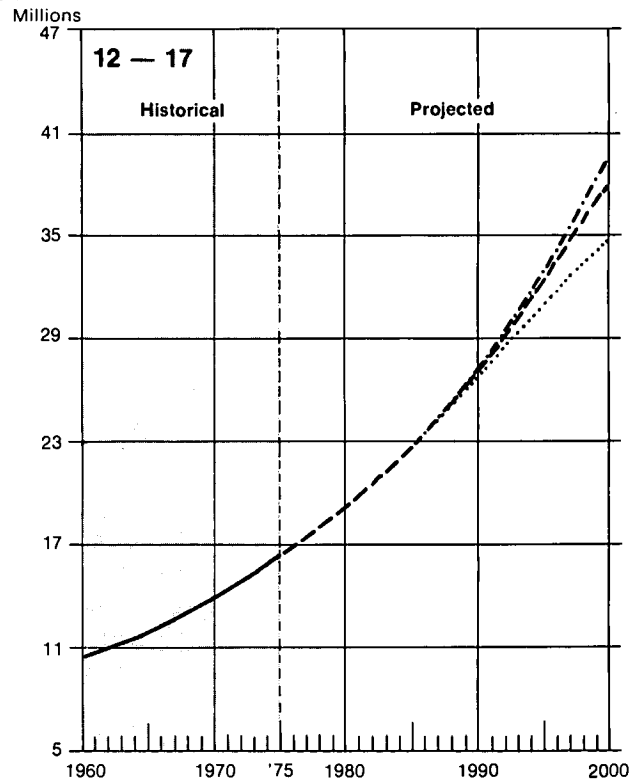
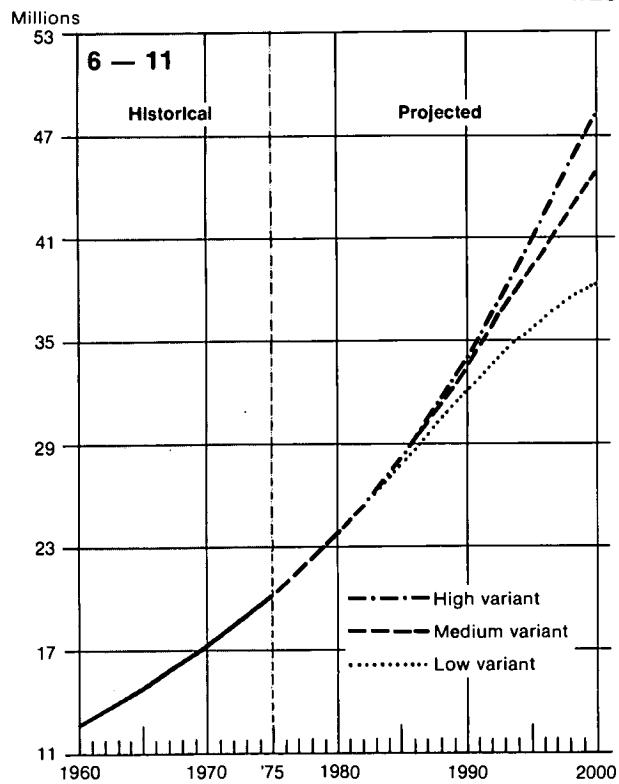
School-age Population, by Age Group, 1960 to 2000**WESTERN AFRICA**

Chart — B-6

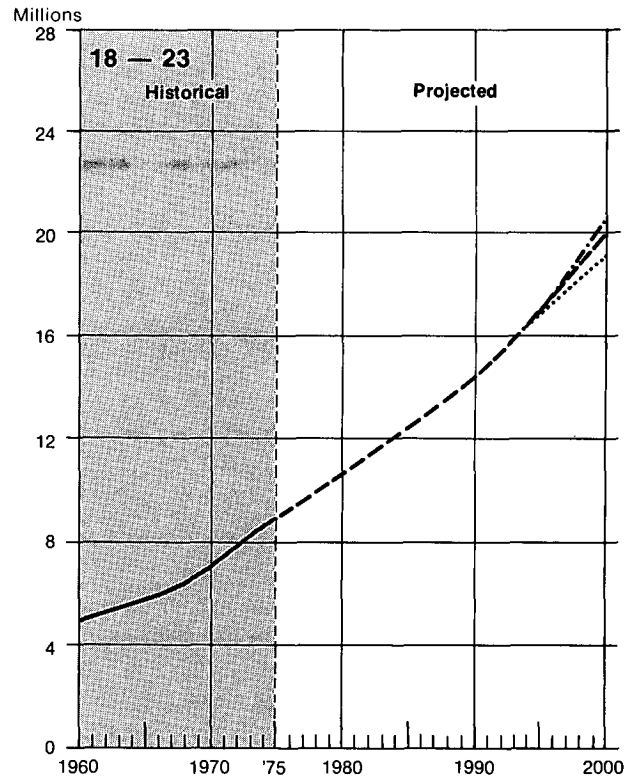
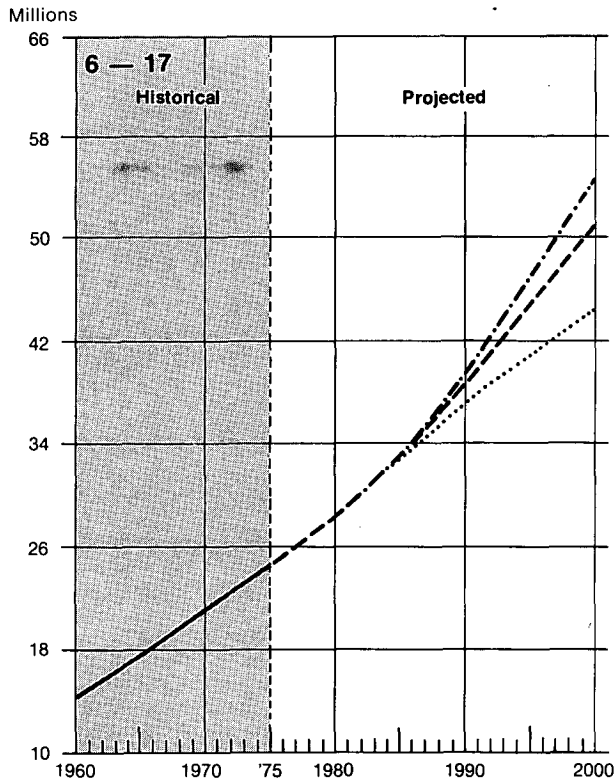
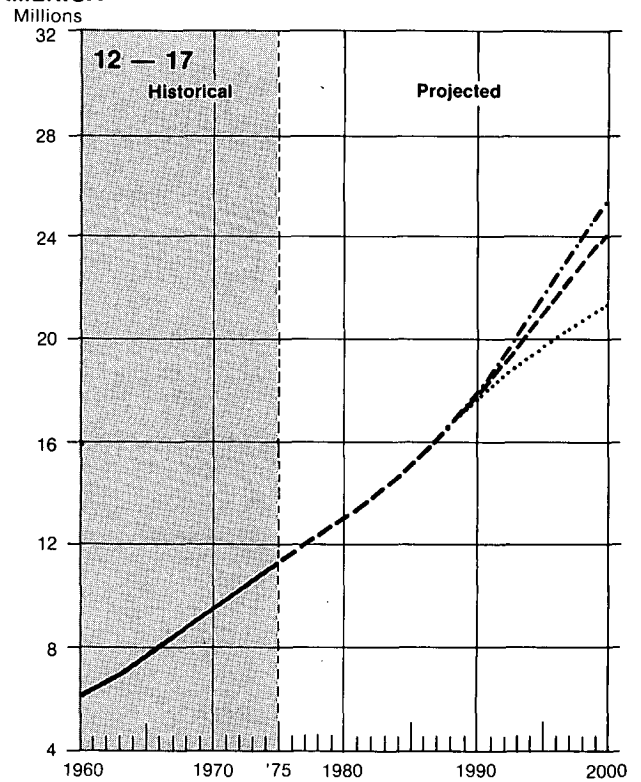
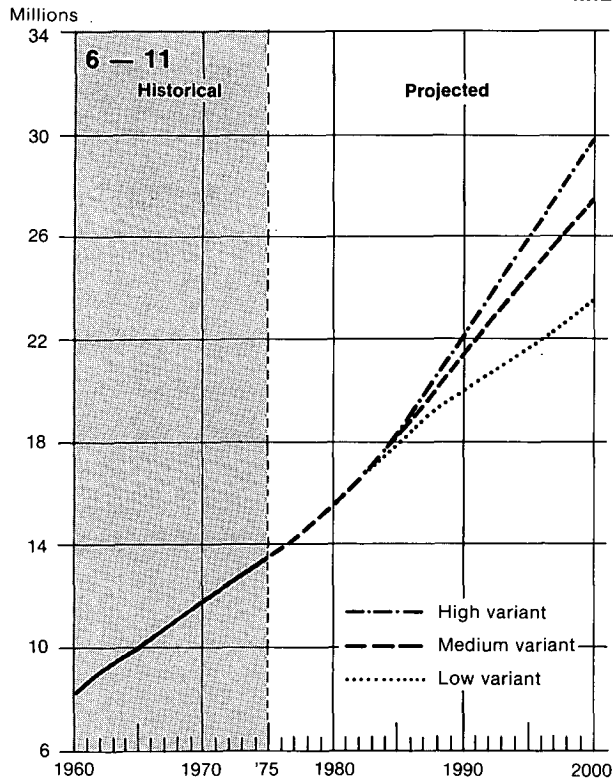
School-age Population, by Age Group, 1960 to 2000**MIDDLE AMERICA**

Chart — B-7

School-age Population, by Age Group, 1960 to 2000

TEMPERATE SOUTH AMERICA

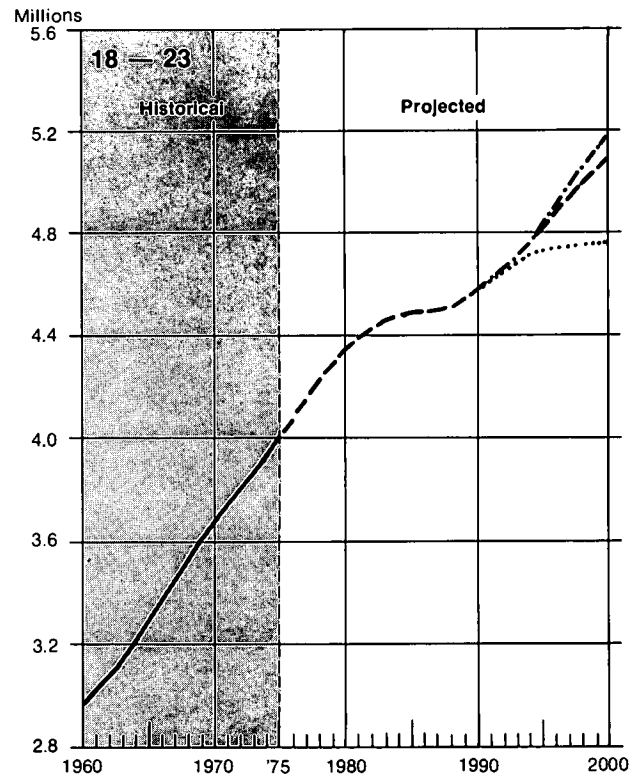
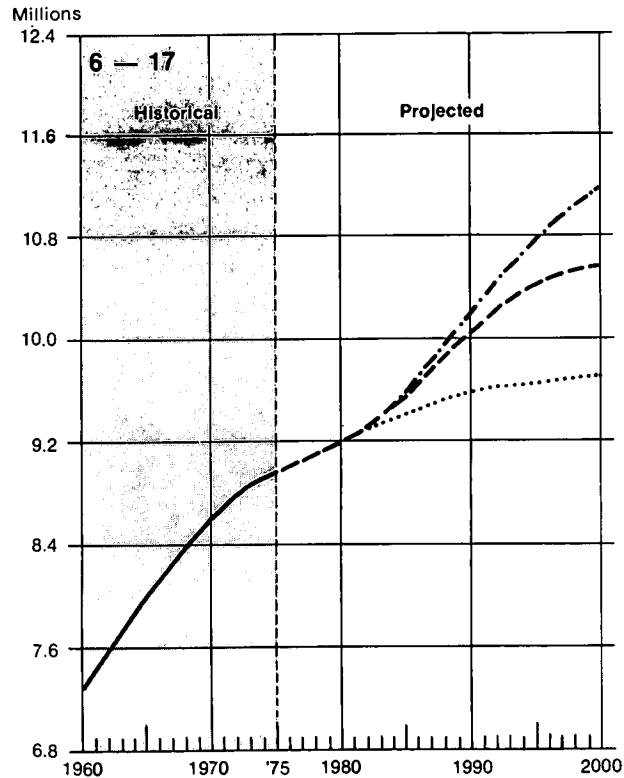
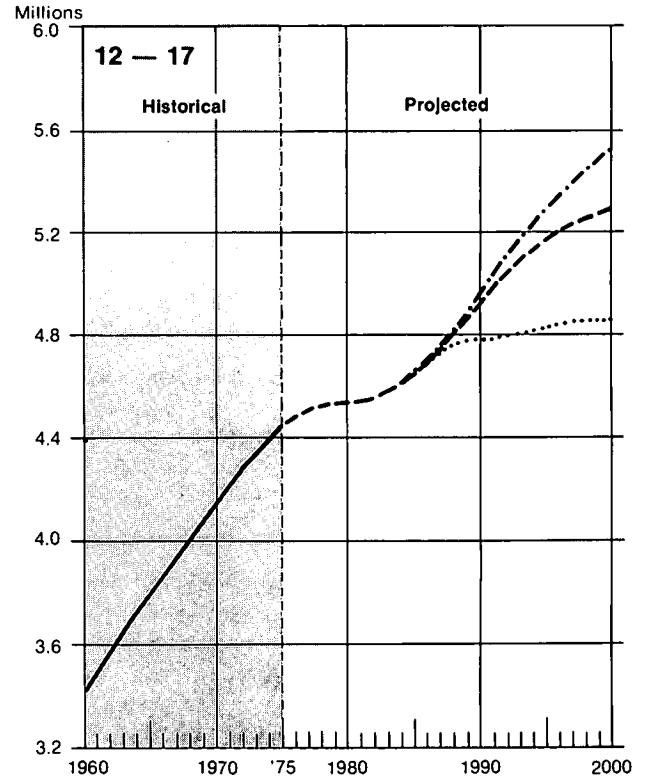
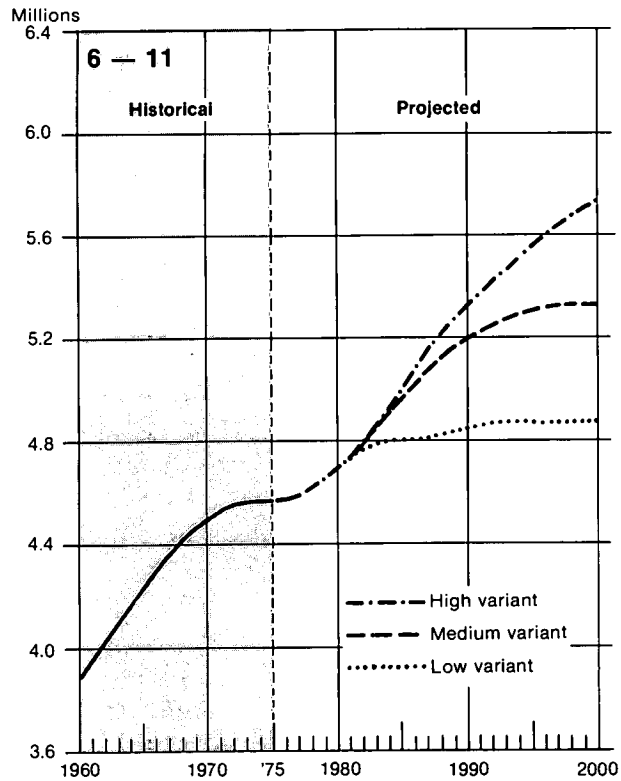


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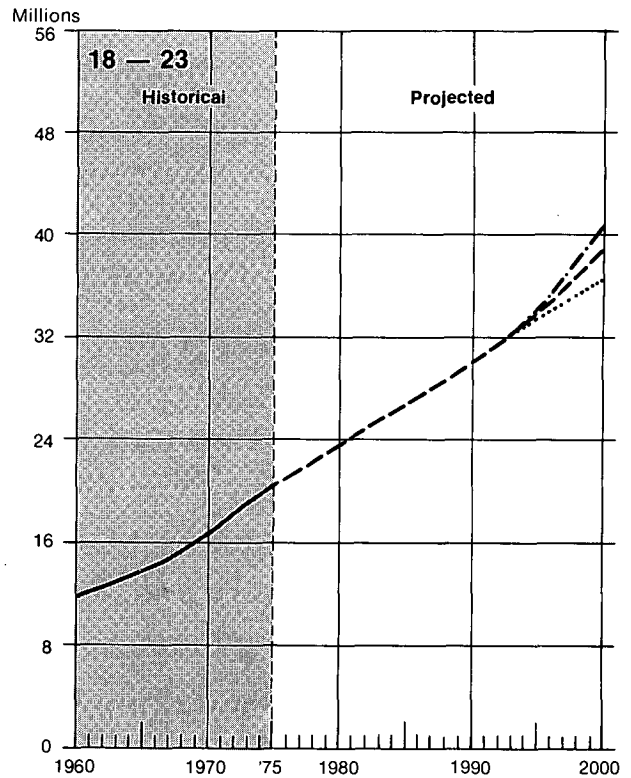
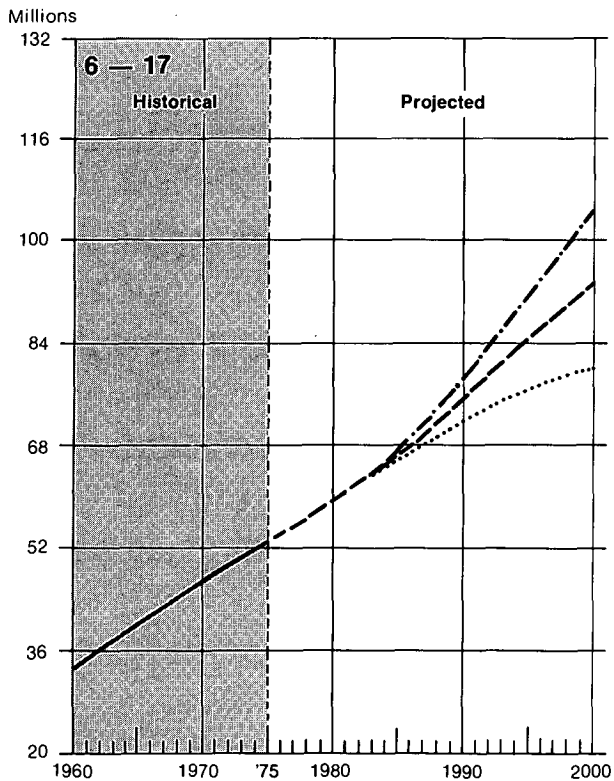
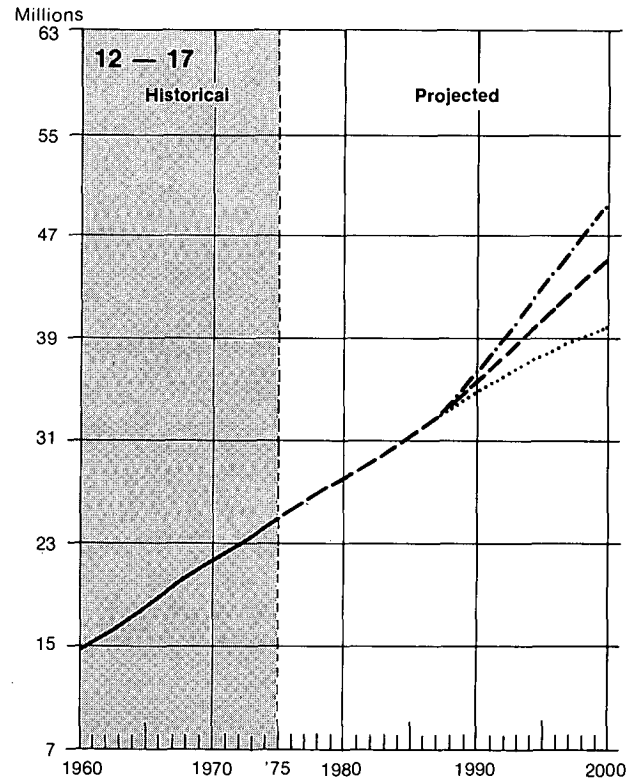
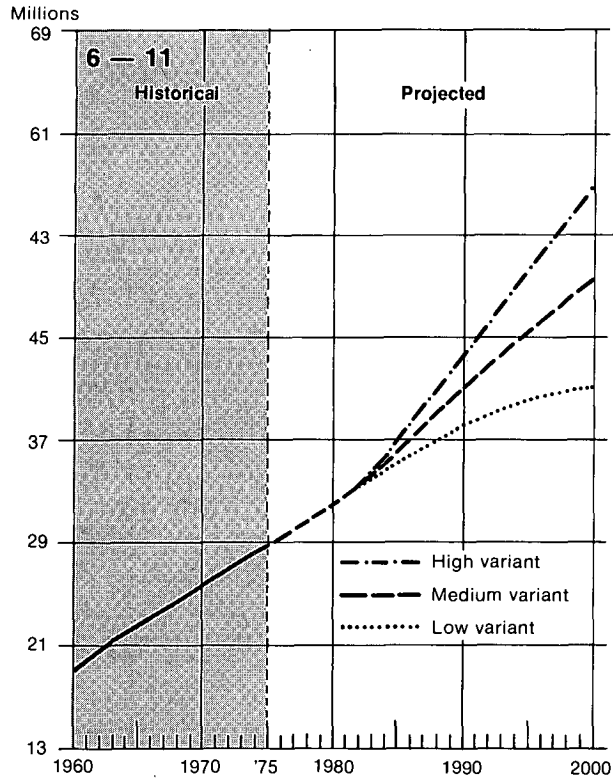
School-age Population, by Age Group, 1960 to 2000**TROPICAL SOUTH AMERICA**

Chart — B-9

School-age Population, by Age Group, 1960 to 2000

CHINA

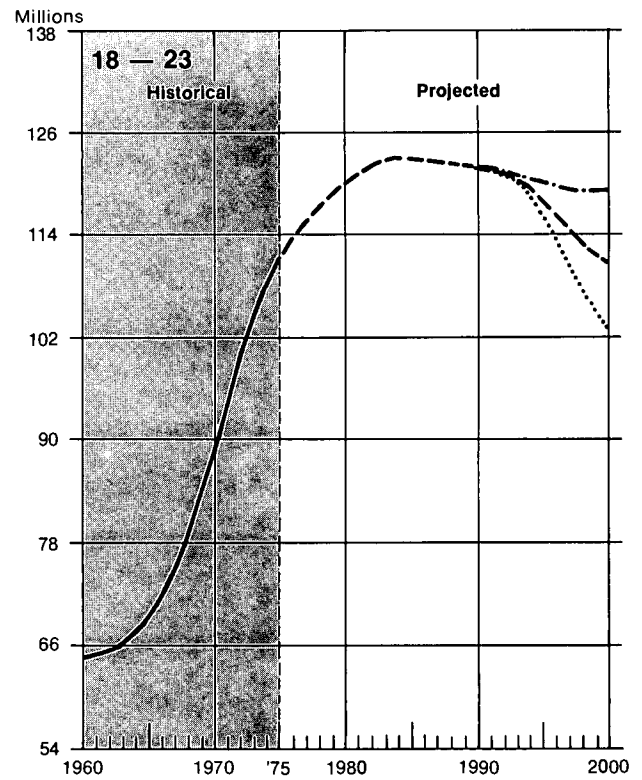
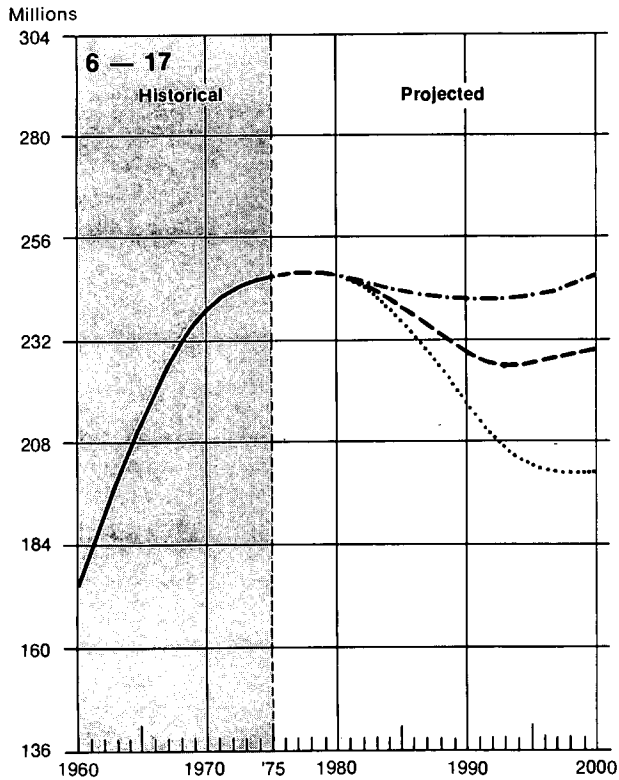
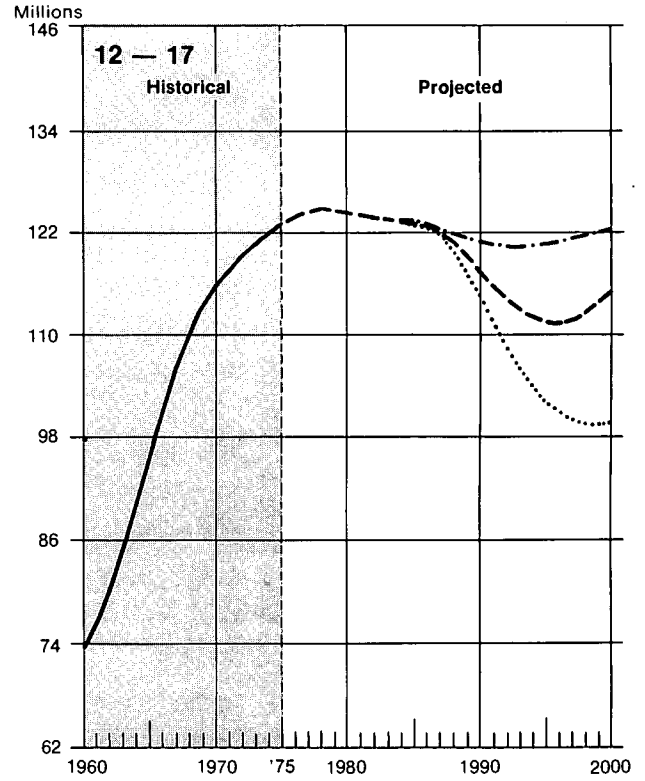
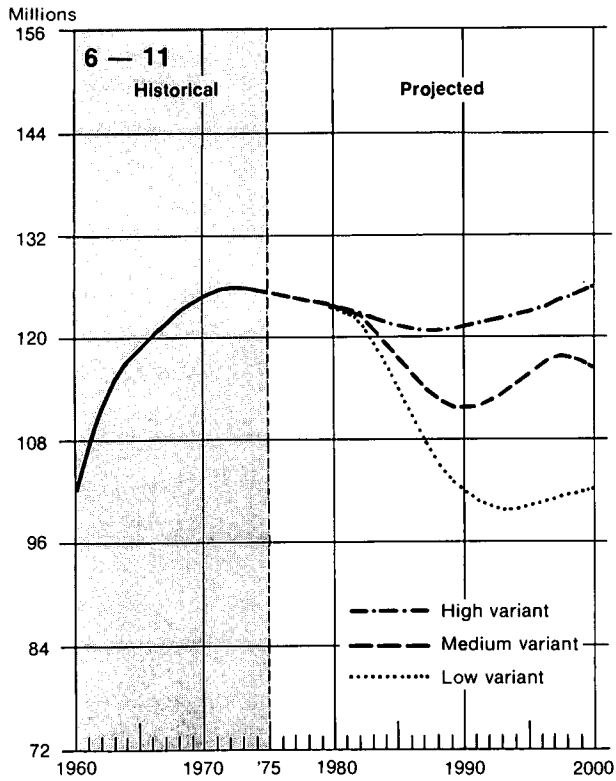


Chart — B-10

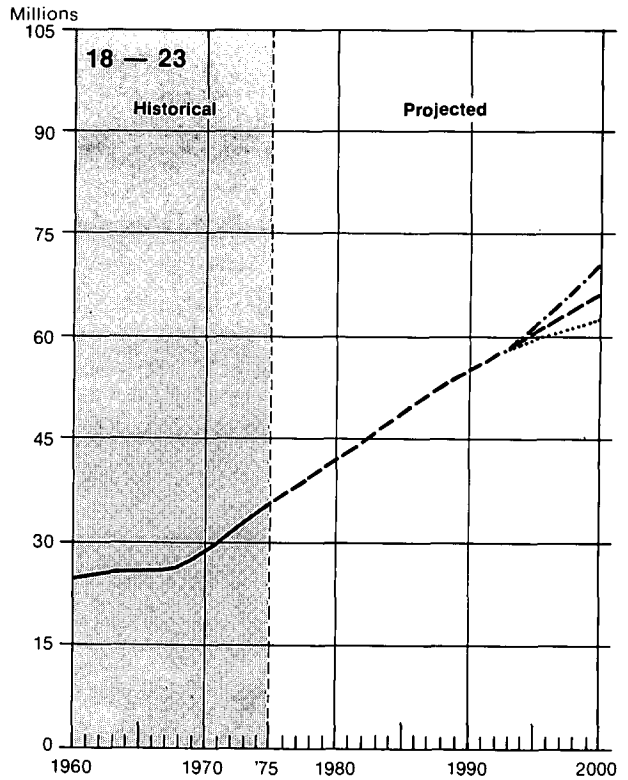
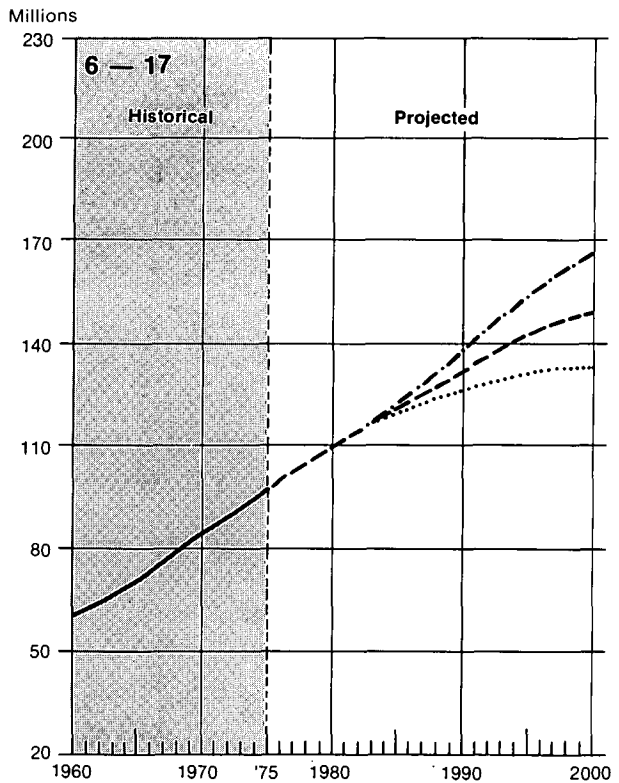
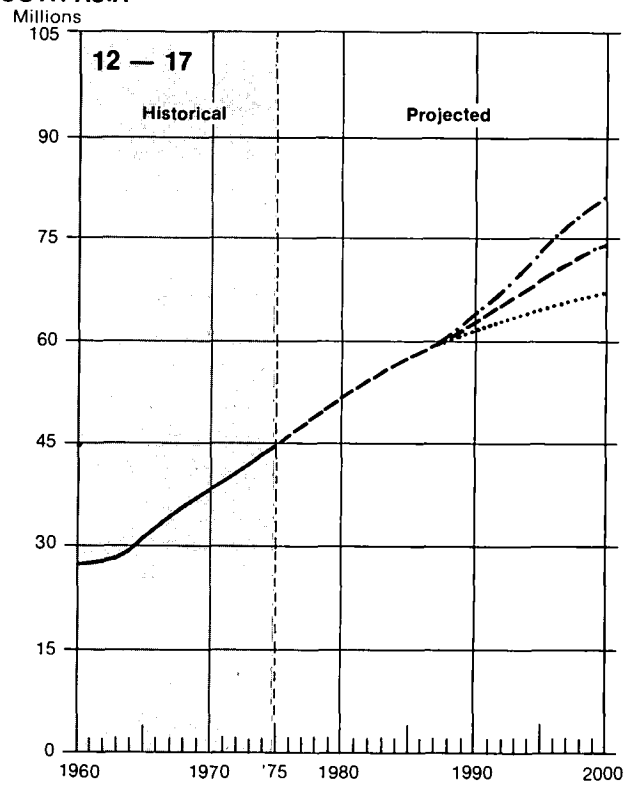
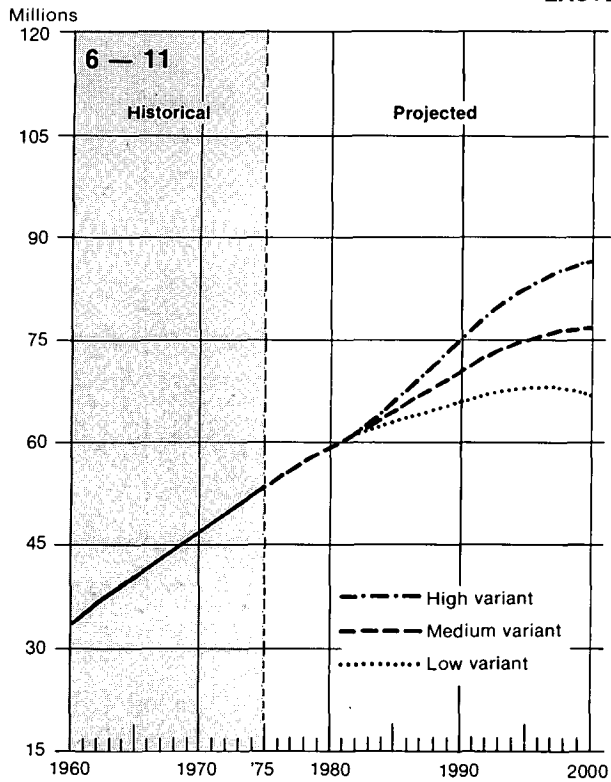
School-age Population, by Age Group, 1960 to 2000**EASTERN SOUTH ASIA**

Chart — B-11

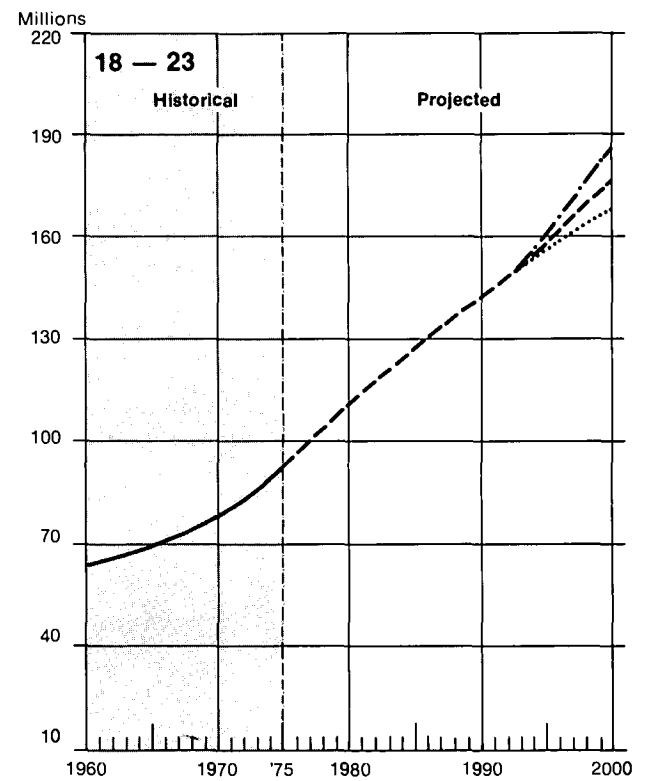
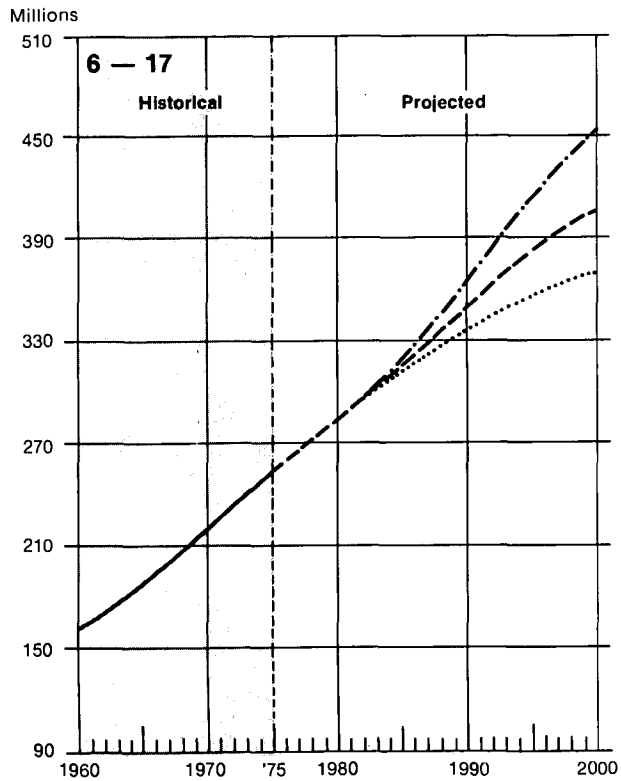
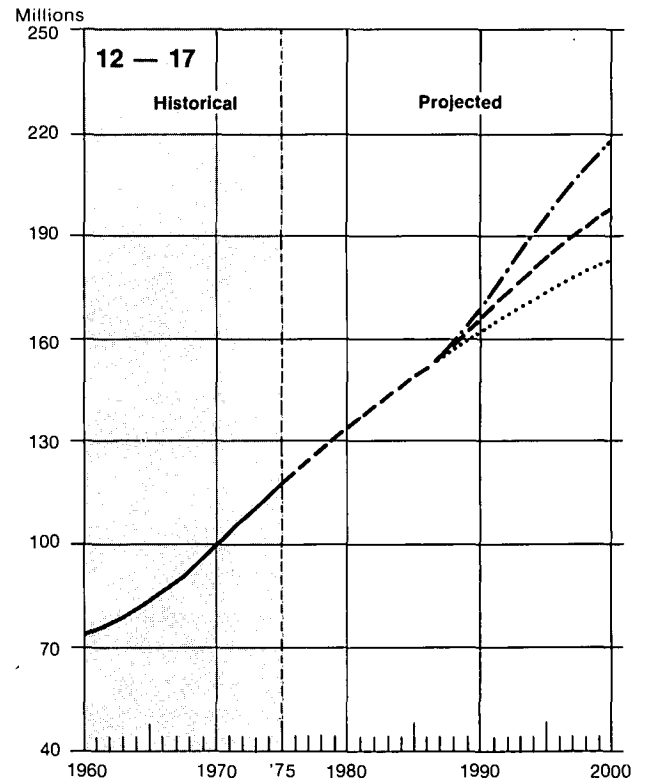
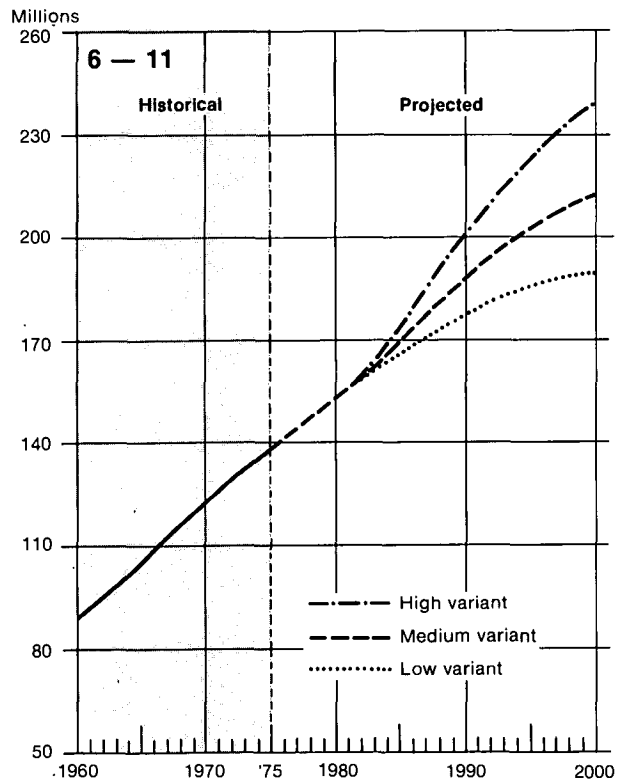
School-age Population, by Age Group, 1960 to 2000**MIDDLE SOUTH ASIA**

Chart — B-12

School-age Population, by Age Group, 1960 to 2000

WESTERN SOUTH ASIA

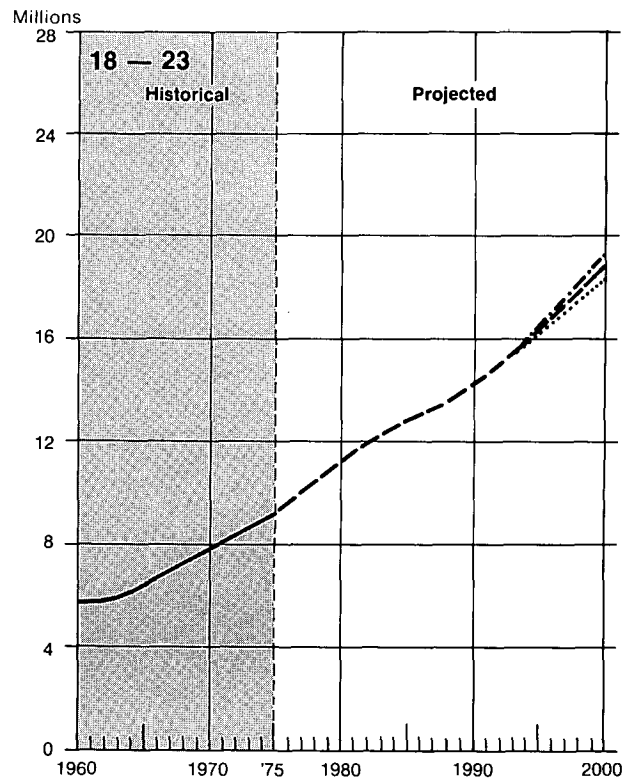
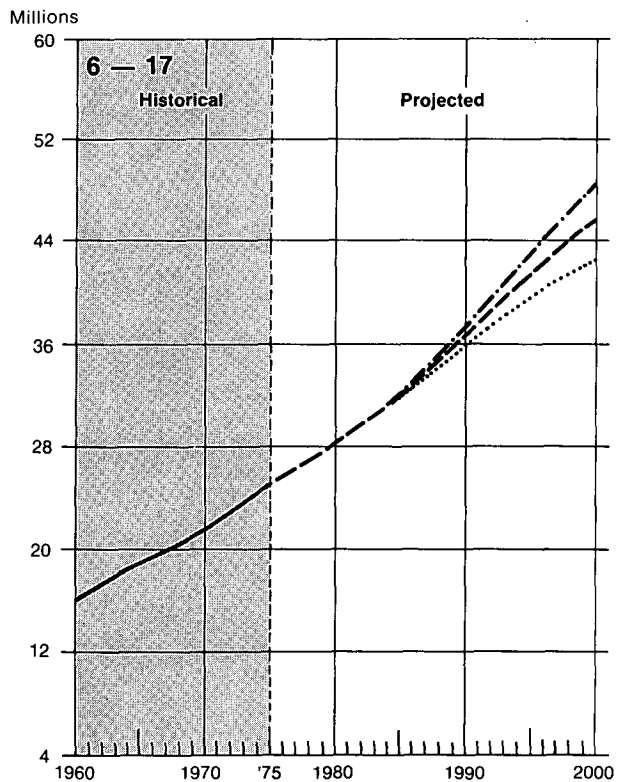
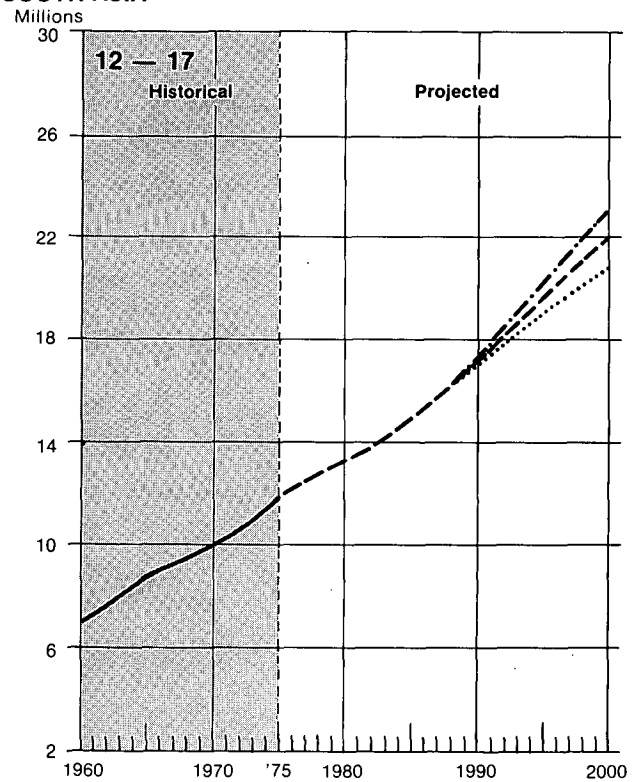
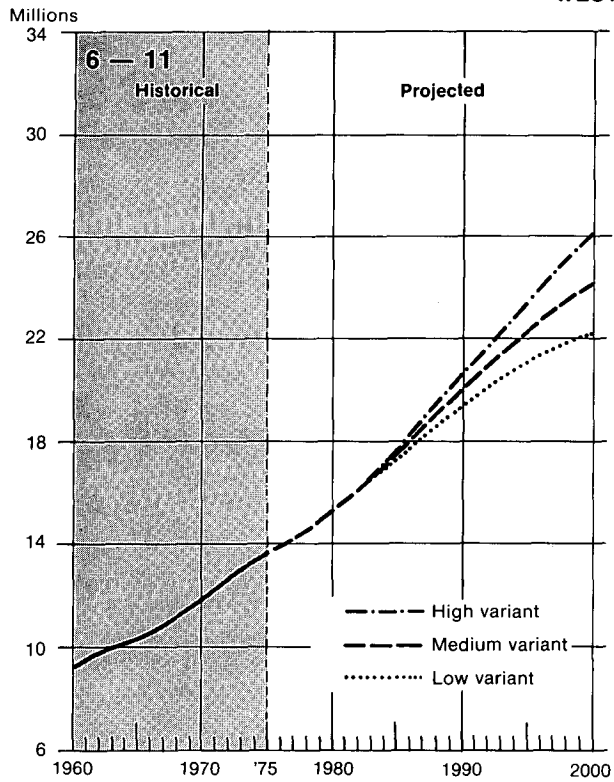


Chart — B-13

School-age Population, by Age Group, 1960 to 2000 **SOUTHERN EUROPE**

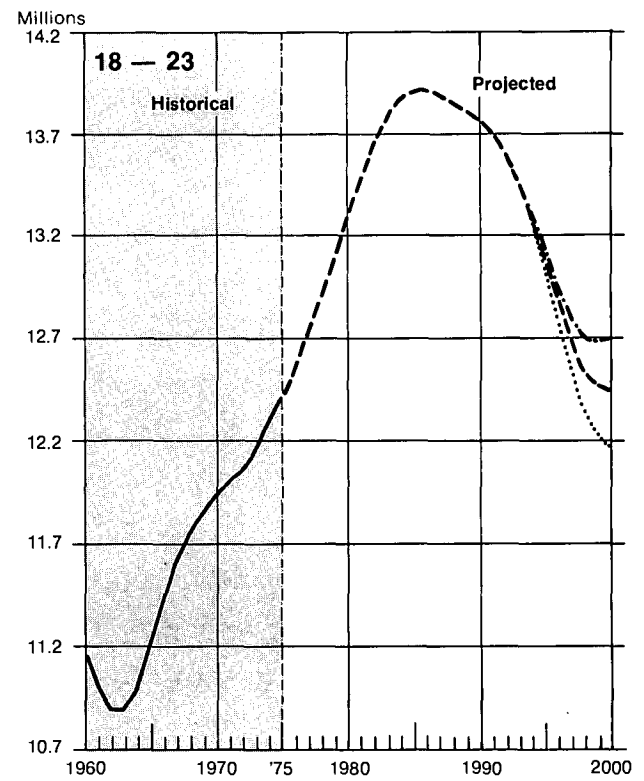
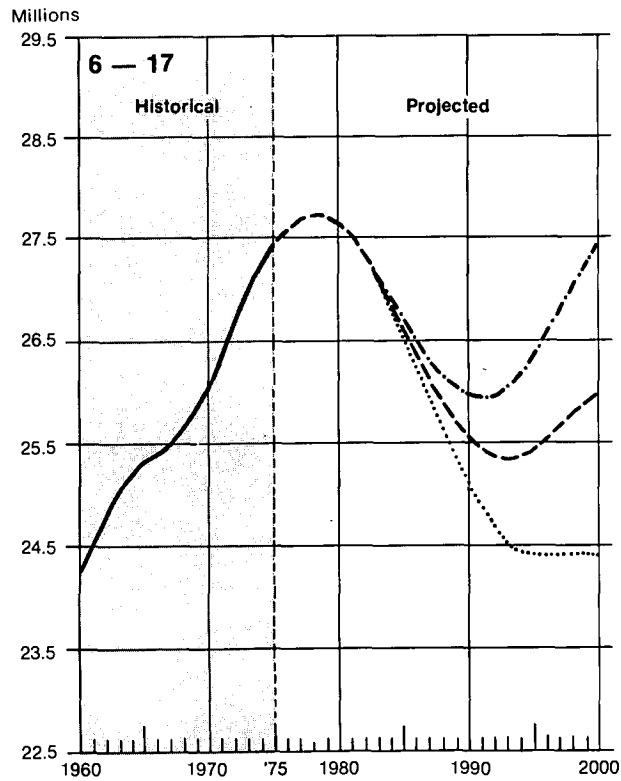
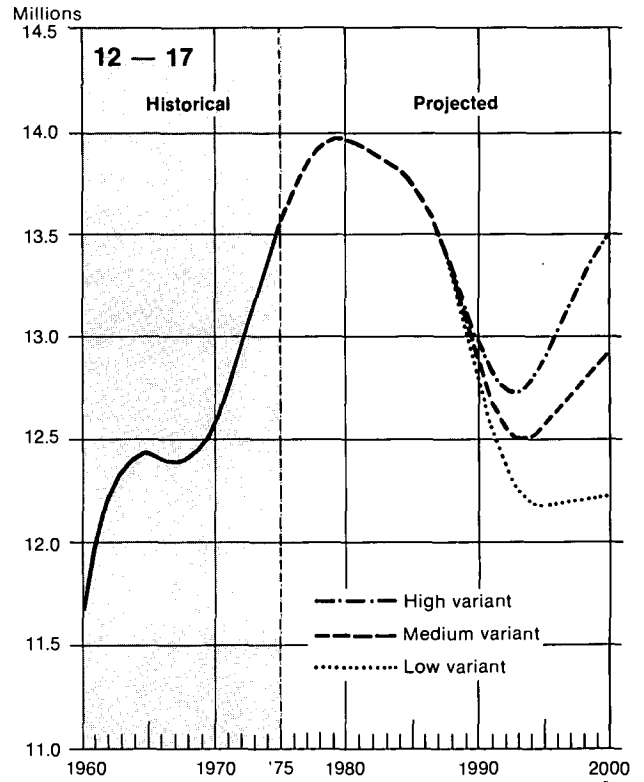
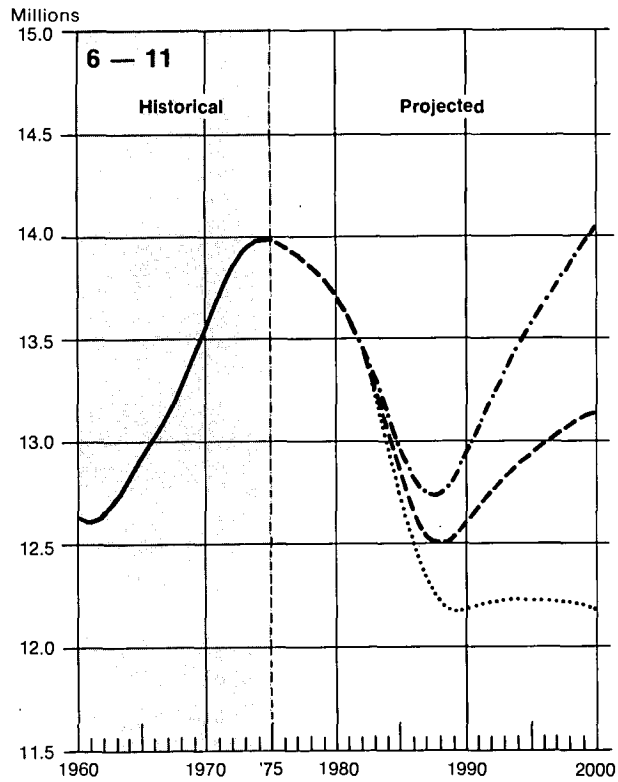


Chart — B-14

School-age Population, by Age Group, 1960 to 2000

WESTERN EUROPE

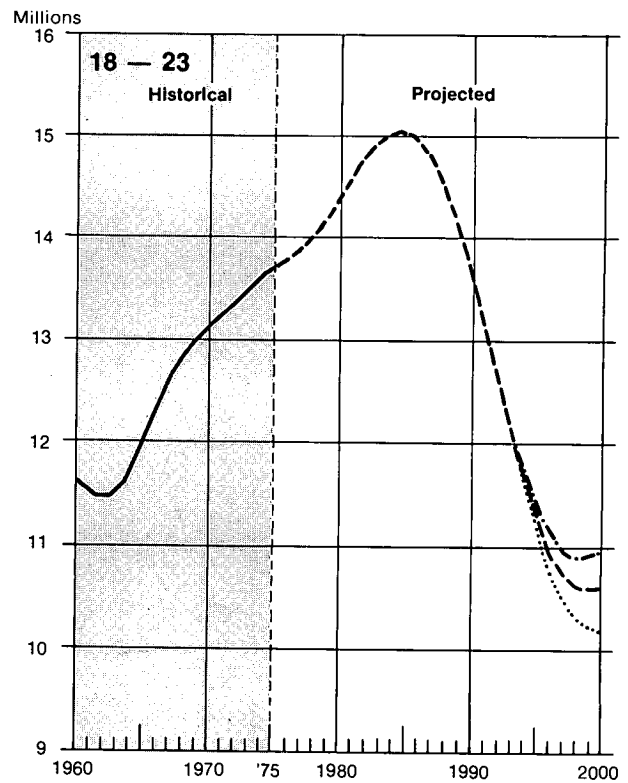
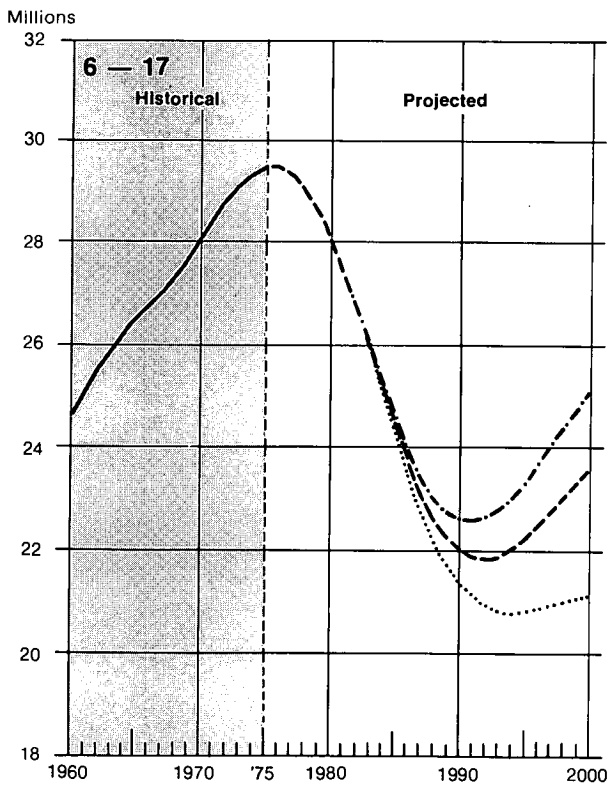
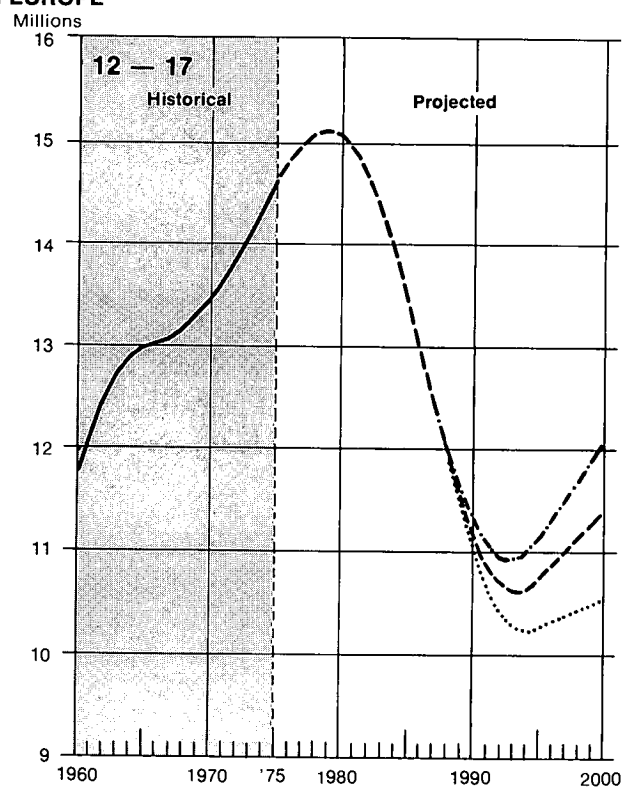
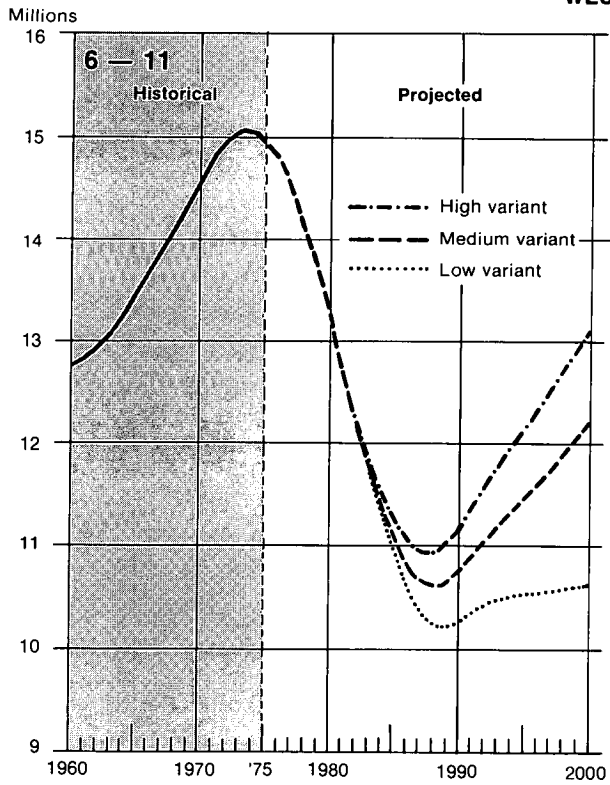


Chart — B-15

School-age Population, by Age Group, 1960 to 2000 **AUSTRALIA AND NEW ZEALAND**

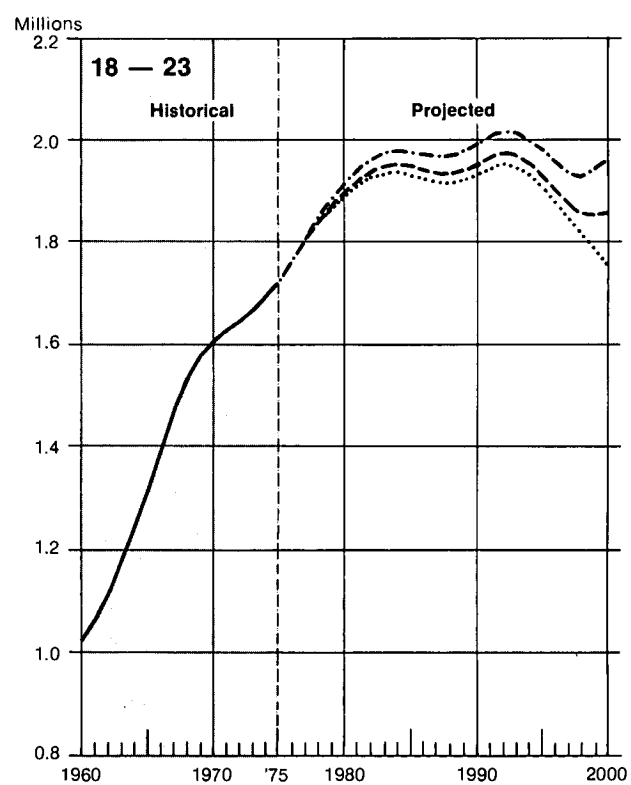
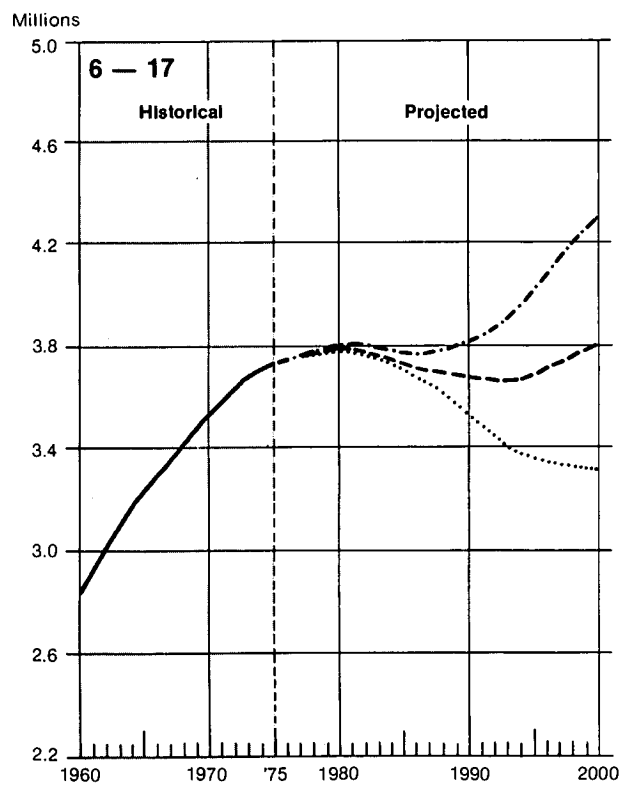
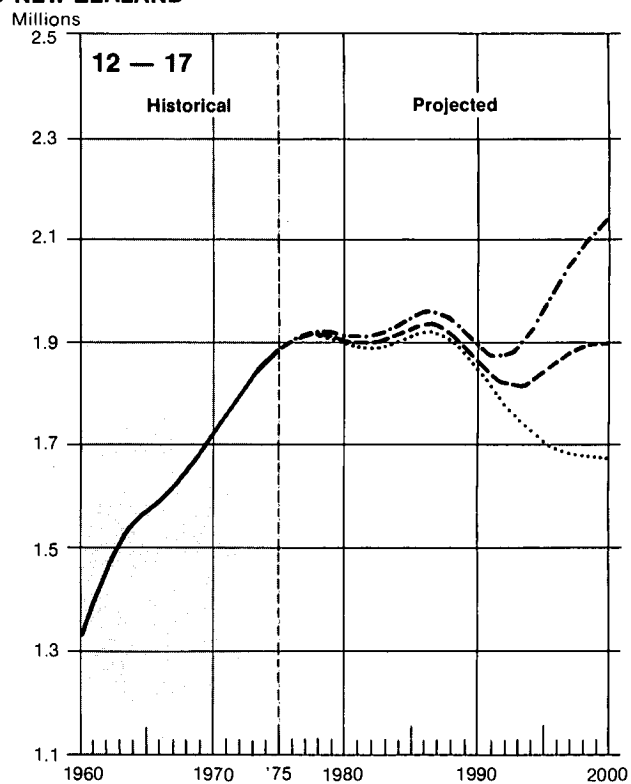
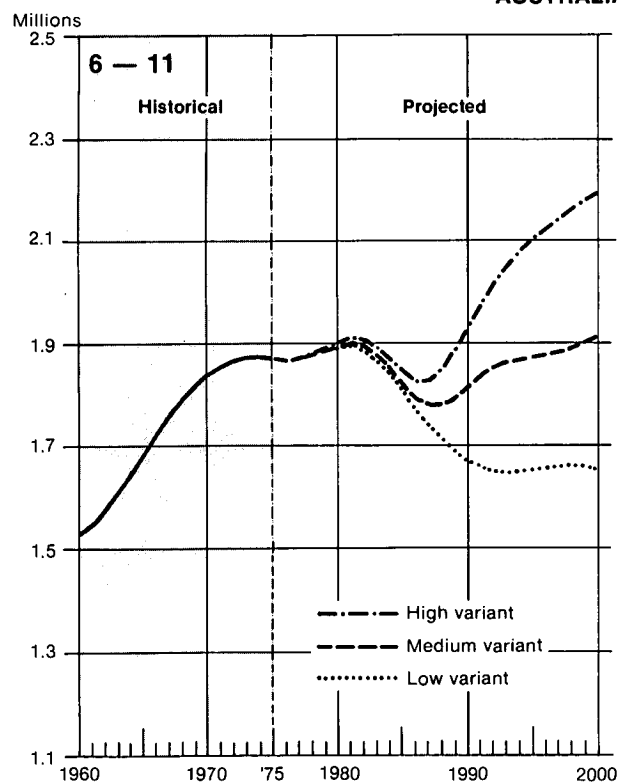
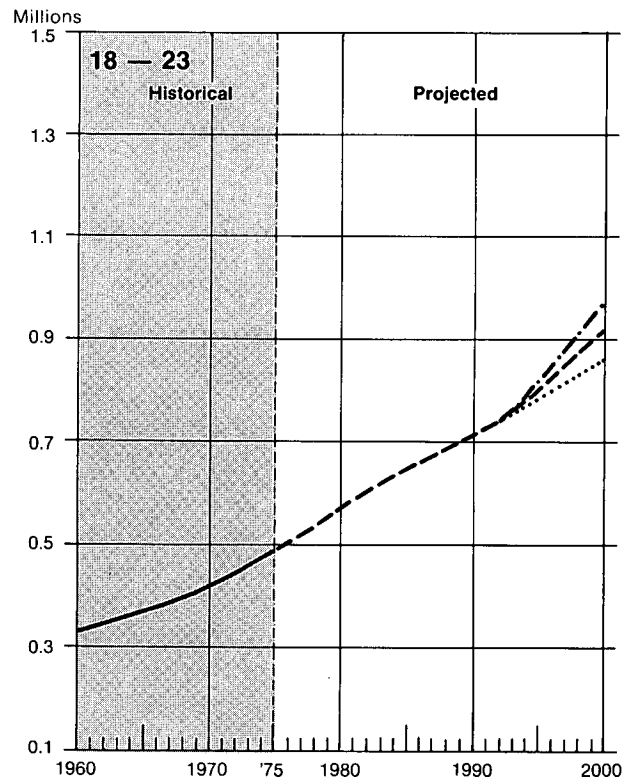
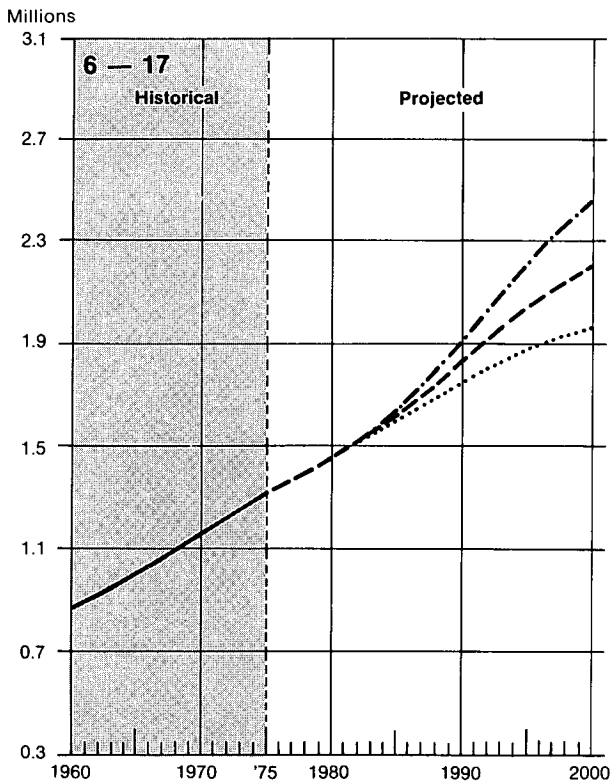
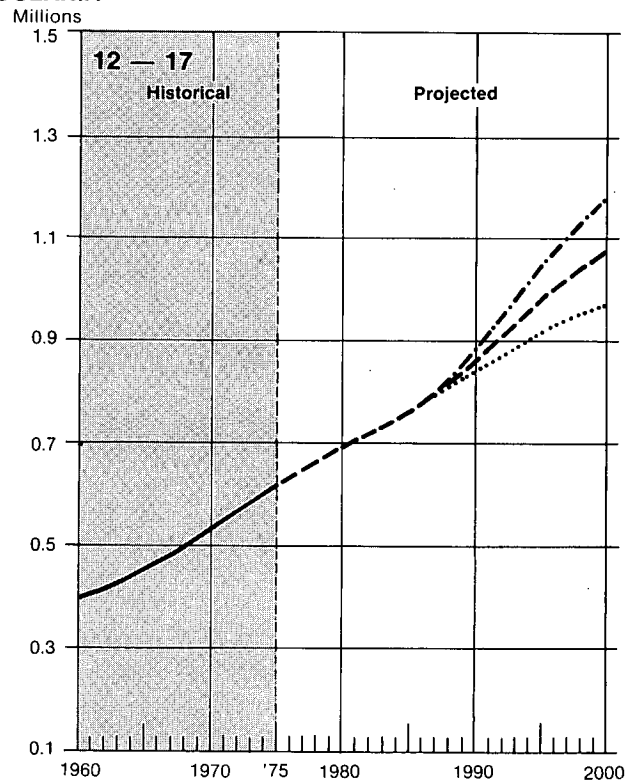
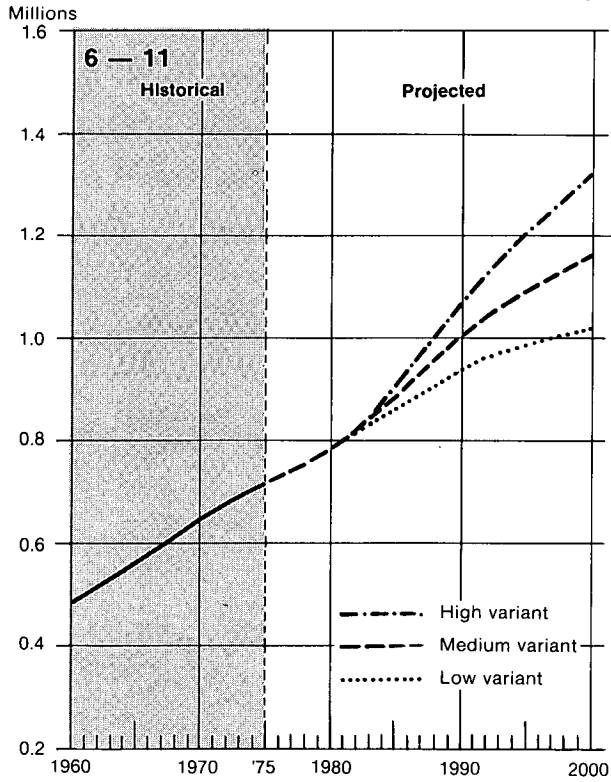


Chart — B-16

School-age Population, by Age Group, 1960 to 2000

OTHER OCEANIA



Appendix CGEOGRAPHIC CLASSIFICATION OF REGIONS AND COUNTRIES

The following list shows the countries and subregions that make up the major regions, according to the United Nations' Department of International Economic and Social Affairs' geographic classification. UNESCO uses the same classification for school-age population and enrolment projections.

Regions designated "more developed" are marked with an asterisk.

In comparing data in this study with those previously published, it should be noted that whereas Temperate South America was considered before as an MDR, it is now classified as an LDR. This study uses this new classification.

Appendix CGEOGRAPHIC CLASSIFICATION OF REGIONS AND COUNTRIESREGION AND COUNTRY

WORLD TOTAL
*MORE DEVELOPED REGIONS
LESS DEVELOPED REGIONS

AFRICA

Eastern Africa

British Indian Ocean Territory
Burundi
Comoros
Djibouti
Ethiopia
Kenya
Madagascar
Malawi
Mauritius
Mozambique
Reunion
Rwanda
Seychelles
Somalia
Uganda
United Republic of Tanzania
Zambia
Zimbabwe

Middle Africa

Angola
Central African Republic
Chad
Congo
Equatorial Guinea
Gabon
Sao Tome and Principe
United Republic of Cameroon
Zaire

Northern Africa

Algeria
Egypt
Morocco
Socialist People's Libyan Arab Jamahiriya
Sudan
Tunisia
Western Sahara

cont'd...

Southern Africa

Botswana
 Lesotho
 Namibia
 South Africa
 Swaziland

Western Africa

Benin
 Cape Verde
 Gambia
 Ghana
 Guinea
 Guinea-Bissau
 Ivory Coast
 Liberia
 Mali
 Mauritania
 Niger
 Nigeria
 Senegal
 St. Helena
 Sierra Leone
 Togo
 Upper Volta

LATIN AMERICA

Caribbean

Antigua
 Bahamas
 Barbados
 British Virgin Islands
 Cayman Islands
 Cuba
 Dominica
 Dominican Republic
 Grenada
 Guadeloupe
 Haiti
 Jamaica
 Martinique
 Montserrat
 Netherlands Antilles
 Puerto Rico
 St. Kitts-Nevis-Anguilla
 St. Lucia
 St. Vincent and the Grenadines
 Trinidad and Tobago
 Turks and Caicos Islands
 United States Virgin Islands

cont'd...

Middle America

- Belize
- Costa Rica
- El Salvador
- Guatemala
- Honduras
- Mexico
- Nicaragua
- Panama
- former Canal Zone

Temperate South America

- Argentina
- Chile
- Falkland Islands (Malvinas)
- Uruguay

Tropical South America

- Bolivia
- Brazil
- Colombia
- Ecuador
- French Guiana
- Guyana
- Paraguay
- Peru
- Surinam
- Venezuela

*NORTHERN AMERICA

- Bermuda
- Canada
- Greenland
- St. Pierre and Miquelon
- United States of America

EAST ASIA

- China
- *Japan
- Other East Asia
 - Korea, Democratic People's Republic of
 - Korea, Republic of
 - Hong Kong
 - Macau
 - Mongolia

cont'd...

SOUTH ASIA

Eastern South Asia

Brunei
 Burma
 Democratic Kampuchea
 East Timor
 Indonesia
 Lao People's Democratic Republic
 Malaysia
 Philippines
 Singapore
 Socialist Republic of Viet Nam
 Thailand

Middle South Asia

Afghanistan
 Bangladesh
 Bhutan
 India
 Iran
 Maldives
 Nepal
 Pakistan
 Sri Lanka

Western South Asia

Bahrain
 Cyprus
 Iraq
 Israel
 Jordan
 Kuwait
 Lebanon
 Oman
 Qatar
 Saudi Arabia
 Syrian Arab Republic
 Turkey
 United Arab Emirates
 Yemen
 Yemen, People's Democratic Republic of

*EUROPE

*Eastern Europe

Bulgaria
 Czechoslovakia
 German Democratic Republic
 Hungary
 Poland
 Romania

cont'd...

*Northern Europe

Channel Islands
 Denmark
 Faeroe Islands
 Finland
 Iceland
 Ireland
 Isle of Man
 Norway
 Sweden
 United Kingdom

*Southern Europe

Andorra
 Albania
 Gibraltar
 Greece
 Holy See
 Italy
 Malta
 Portugal
 San Marino
 Spain
 Yugoslavia

*Western Europe

Austria
 Belgium
 France
 Germany, Federal Republic of
 Liechtenstein
 Luxembourg
 Monaco
 Netherlands
 Switzerland

OCEANIA

*Australia and New Zealand

Australia
 New Zealand

Melanesia

New Caledonia
 Norfolk Island
 Papua New Guinea
 Solomon Islands
 Vanuatu

cont'd...

Micronesia and Polynesia

Micronesia

Guam

Kiribati

Nauru

Niue Island

Pacific Islands

Other Micronesia

Polynesia

American Samoa

Cook Islands

Fiji

French Polynesia

Samoa

Tonga

Wallis and Futuna Islands

*UNION OF SOVIET SOCIALIST REPUBLICS (U.S.S.R.)

*more developed region

Appendix DDEMOGRAPHIC INDICATORS BY COUNTRY

As noted in this study, population trends and demographic indicators in a subregion do not always conform with the general direction in the main region, and countries may differ, too. By necessity, the report had to concentrate on large geographic areas, but Statistics Canada believes that some basic information about individual nations would be a valuable supplement. Therefore, an abridged version of the 1980 World Population Data Sheet, prepared by Carl Haub and Douglas W. Heisler of the Population Reference Bureau, has been included. This information allows each country to determine its relative position regarding several key demographic indicators.

Region or country ¹	Population estimate mid-1980 (millions) ²	Birth rate ³	Death rate ³	Rate of natural increase (annual, %) ⁴	Number of years to double population ⁵	Population projected for 2000 (millions) ⁶	Infant mortality rate ⁷	Total fertility rate ⁸	Population under age 15 (%)	Population over age 64 (%)	Life expectancy at birth (years) ⁹	Urban population (%) ¹⁰	Per capita gross national product (US\$) ¹¹
WORLD	4,414	28	11	1.7	41	6,156	97	3.8	35	6	61	39	2,040
MORE DEVELOPED ¹	1,131	16	9	0.6	111	1,272	20	2.0	24	11	72	69	6,260
LESS DEVELOPED	3,283	32	12	2.0	34	4,884	110	4.4	39	4	57	29	560
AFRICA	472	46	17	2.9	24	832	140	6.4	45	3	49	26	530
Northern Africa	110	42	13	3.0	23	186	121	6.2	44	3	54	42	790
Algeria	19.0	48	13	3.4	20	36.9	142	7.3	47	4	56	55	1,260
Egypt	42.1	38	10	2.7	26	64.9	90	5.3	40	4	55	44	400
Socialist People's Libyan Arab Jamahiriya	3.0	47	13	3.5	20	5.7	130	7.4	49	4	55	60	6,910
Morocco	21.0	43	14	3.0	23	37.3	133	6.9	46	2	55	42	670
Sudan	18.7	48	18	3.1	22	31.8	141	6.6	44	3	46	20	320
Tunisia	6.5	33	8	2.5	28	9.7	125	5.7	44	4	57	50	950
Western Africa	141	49	19	3.0	23	262	159	6.8	46	3	46	21	460
Benin	3.6	49	19	3.0	23	6.6	149	6.7	46	4	46	14	230
Cape Verde	0.3	28	9	1.8	38	0.4	105	3.0	36	4	60	20	160
Gambia	0.6	48	23	2.4	28	1.0	217	6.4	41	2	41	16	230
Ghana	11.7	48	17	3.1	22	21.2	115	6.7	47	3	48	36	390
Guinea	5.0	46	21	2.5	27	8.2	175	6.2	44	3	44	23	210
Guinea-Bissau	0.6	41	23	1.8	39	0.9	208	5.5	39	4	41	26	200
Ivory Coast	8.0	48	18	2.9	24	14.0	154	6.7	45	2	46	32	840
Liberia	1.9	50	17	3.2	21	3.5	148	6.7	48	2	48	29	460
Mali	6.6	49	22	2.7	26	11.6	190	6.7	48	1	39	17	120
Mauritania	1.6	50	22	2.8	25	2.9	187	6.9	42	6	42	23	270
Niger	5.5	51	22	2.9	24	10.0	200	7.1	47	3	42	11	220
Nigeria	77.1	50	18	3.2	22	148.9	157	6.9	47	2	48	20	560
Senegal	5.7	48	22	2.6	27	9.7	160	6.5	44	3	42	32	340
Sierra Leone	3.5	46	19	2.6	26	6.0	136	6.4	41	5	46	16	210
Togo	2.5	49	19	3.0	23	4.7	163	6.7	46	3	46	15	320
Upper Volta	6.9	48	22	2.6	27	11.8	182	6.5	44	3	42	5	160
Eastern Africa	135	48	19	3.0	23	244	132	6.6	46	3	47	13	240
Burundi	4.5	47	20	2.7	25	7.8	140	6.3	44	2	42	5	140
Comoros	0.3	40	18	2.2	31	0.4	148	5.2	43	3	46	11	180
Djibouti	0.4	48	24	2.5	28	0.6	-	-	-	-	-	70	450
Ethiopia	32.6	50	25	2.5	28	55.3	162	6.7	45	3	39	13	120
Kenya	15.9	53	14	3.9	18	32.3	83	8.1	50	2	56	10	320
Madagascar	8.7	45	19	2.6	27	15.1	102	6.1	43	3	46	16	250
Malawi	6.1	51	19	3.2	22	11.5	142	7.0	44	4	46	9	180
Mauritius	0.9	27	7	2.0	34	1.3	35	3.1	37	4	67	44	830
Mozambique	10.3	45	19	2.6	27	17.9	148	6.1	45	2	46	8	140
Reunion	0.5	26	6	1.9	36	0.7	41	2.8	38	4	65	56	3,060
Rwanda	5.1	50	19	3.0	23	9.6	127	6.9	47	3	46	4	180
Seychelles	0.1	26	8	1.8	38	0.1	43	4.5	42	6	65	37	1,060
Somalia	3.6	48	20	2.8	25	6.3	177	6.1	44	2	43	31	130
Tanzania, United Republic of	18.6	47	16	3.1	22	35.0	125	6.5	46	3	50	13	230
Uganda	13.7	45	14	3.0	23	25.5	120	6.1	45	3	52	7	-
Zambia	5.8	49	17	3.2	22	10.7	144	6.9	46	3	48	39	480
Zimbabwe	7.4	47	14	3.4	21	14.0	129	6.6	47	3	54	20	480
Middle Africa	54	45	20	2.6	27	87	167	6.0	43	3	45	29	300
Angola	6.7	48	23	2.4	28	11.2	203	6.4	44	3	41	22	300
Cameroon, United Republic of	8.5	42	19	2.3	30	13.1	157	5.7	41	4	44	29	460
Central African Rep.	2.2	42	19	2.2	31	3.6	190	5.5	41	4	42	42	250
Chad	4.5	44	21	2.3	30	7.4	165	5.9	42	4	44	18	140
Congo	1.6	45	19	2.6	27	2.5	180	6.0	43	3	46	39	540
Equatorial Guinea	0.4	42	19	2.3	30	0.6	165	5.7	42	4	46	51	-
Gabon	0.6	33	22	1.1	62	0.8	178	4.3	33	6	44	32	3,580
Sao Tome and Principe	0.1	45	11	3.4	21	0.1	64	-	-	-	-	24	490
Zaire	29.3	46	19	2.8	25	48.1	160	6.1	45	3	46	30	210
Southern Africa	32	39	11	2.8	25	52	101	5.2	42	4	59	44	1,380
Botswana	0.8	51	17	3.4	21	1.4	97	6.5	50	3	56	12	620
Lesotho	1.3	40	16	2.4	29	2.1	111	5.4	40	4	50	4	280
Namibia	1.0	44	15	2.9	24	1.7	142	5.9	44	3	51	32	1,080
South Africa	28.4	38	10	2.8	25	46.3	97	5.1	42	4	60	48	1,480
Swaziland	0.6	47	19	2.8	25	0.9	168	6.4	48	3	46	8	590

Note: See footnotes at end of table.

Region or country ¹	Population estimate ² mid-1980 (millions)	Birth rate ³	Death rate ³	Rate of natural increase (annual, %) ⁴	Number of years to double population ⁵	Population projected for 2000 (millions) ⁶	Infant mortality rate ⁷	Total fertility rate ⁸	Population under age 15 (%)	Population over age 64 (%)	Life expectancy ⁹ at birth (years)	Urban population (%) ¹⁰	Per capita gross national product (US\$) ¹¹
LATIN AMERICA	360	34	8	2.6	26	595	85	4.5	42	4	64	61	1,380
Middle America	91	38	7	3.1	22	168	72	5.3	46	3	64	59	1,180
Costa Rica	2.2	31	4	2.7	26	3.4	28	3.8	44	4	70	41	1,540
El Salvador	4.8	40	7	3.3	21	8.6	51	6.0	46	3	62	39	600
Guatemala	7.0	43	12	3.1	23	12.3	76	5.7	45	3	58	36	910
Honduras	3.8	47	12	3.5	20	7.1	103	7.1	48	3	57	31	480
Mexico	68.2	37	6	3.1	22	128.9	70	5.2	46	3	65	65	1,290
Nicaragua	2.6	47	12	3.4	20	4.8	122	6.6	48	3	55	49	840
Panama (former Canal Zone)	1.9	28	6	2.2	31	2.9	47	4.1	44	4	70	51	1,290
Caribbean	30	28	8	1.9	36	42	72	3.8	40	5	65	50	1,160
Bahamas	0.2	25	5	2.0	34	0.3	25	3.5	44	4	69	58	2,620
Barbados	0.3	16	8	0.9	80	0.3	27	2.2	32	10	70	44	1,940
Cuba	10.0	18	6	1.2	59	12.7	25	2.5	37	6	72	64	810
Dominica	0.1	21	5	1.6	43	0.1	20	—	—	—	58	27	440
Dominican Republic	5.4	37	9	2.8	25	8.5	96	5.4	48	3	60	49	910
Grenada	0.1	27	6	2.2	32	0.1	24	—	—	—	63	15	530
Guadeloupe	0.3	17	6	1.1	65	0.4	35	3.2	32	6	69	48	2,850
Haiti	5.8	42	16	2.6	26	9.9	130	5.9	41	4	51	24	260
Jamaica	2.2	29	7	2.2	31	2.8	15	3.7	46	6	70	41	1,110
Martinique	0.3	16	7	0.9	80	0.4	32	3.0	32	6	69	50	3,950
Netherlands Antilles	0.3	28	7	2.2	32	0.4	25	3.1	38	6	62	48	3,150
Puerto Rico	3.5	23	6	1.7	42	4.5	20	2.4	36	6	73	62	2,720
St. Lucia	0.1	35	7	2.8	25	0.1	36	—	50	5	67	17	630
Trinidad and Tobago	1.2	25	6	1.9	37	1.4	29	2.6	38	4	67	49	2,910
Tropical South America	198	36	9	2.7	26	333	98	4.6	42	3	62	60	1,430
Bolivia	5.3	44	19	2.5	28	8.9	168	6.8	42	4	47	34	510
Brazil	122.0	36	8	2.8	25	205.1	109	4.4	41	3	64	61	1,570
Columbia	26.7	29	8	2.1	33	42.2	77	3.9	45	3	62	60	870
Ecuador	8.0	42	10	3.1	22	14.6	70	6.3	44	4	60	43	910
Guyana	0.9	28	7	2.1	33	1.2	50	3.9	40	4	69	40	550
Paraguay	3.3	39	8	3.1	22	5.6	64	5.8	45	3	64	40	850
Peru	17.6	40	12	2.8	25	29.2	92	5.3	44	3	56	62	740
Surinam	0.4	30	7	2.3	30	0.7	30	—	46	4	67	66	2,110
Venezuela	13.9	36	6	3.0	23	25.7	45	4.9	43	3	66	75	2,910
Temperate South America	41	24	9	1.5	45	51	44	2.9	30	7	68	80	1,750
Argentina	27.1	26	9	1.6	43	32.9	45	2.9	28	8	69	80	1,910
Chile	11.3	21	7	1.4	48	15.2	40	3.0	35	5	66	80	1,410
Uruguay	2.9	21	10	1.1	65	3.5	46	2.7	27	10	69	83	1,610
NORTHERN AMERICA	247	16	8	0.7	98	289	13	1.8	23	11	73	74	9,650
Canada	24.0	15	7	0.8	88	29.0	12	1.9	26	8	73	76	9,170
United States	222.5	16	9	0.7	99	260.4	13	1.8	22	11	73	74	9,700

Note: See footnotes at end of table.

Region or country ¹	Population estimate ² mid-1980 (millions)	Birth rate ³	Death rate ³	Rate of natural increase (annual, %) ⁴	Number of years to double population ⁵	Population projected for 2000 (millions) ⁶	Infant mortality rate ⁷	Total fertility rate ⁸	Population under age 15 (%)	Population over age 64 (%)	Life expectancy ⁹ at birth (years)	Urban population (%) ¹⁰	Per capita gross national product (US\$) ¹¹
ASIA	2,563	28	11	1.8	39	3,578	103	3.9	37	4	58	27	760
Southwest Asia	98	40	12	2.7	25	164	117	5.8	43	4	56	46	2,280
Bahrain	0.4	44	9	3.6	20	0.7	78	7.4	44	3	63	78	4,100
Cyprus	0.6	19	8	1.1	64	0.7	17	2.1	25	10	73	53	2,110
Iraq	13.2	47	13	3.4	20	24.5	104	7.0	48	4	55	66	1,860
Israel	3.9	25	7	1.8	38	5.5	15	3.5	33	8	73	87	4,120
Jordan	3.2	46	13	3.3	21	5.9	97	7.0	48	3	56	42	1,050
Kuwait	1.3	42	5	3.7	19	3.1	39	7.0	44	2	69	56	14,890
Lebanon	3.2	34	10	2.5	28	4.9	65	4.7	43	5	65	60	-
Oman	0.9	49	19	3.0	23	1.7	142	7.2	45	3	47	5	2,570
Qatar	0.2	44	14	3.0	23	0.4	138	7.2	45	3	48	69	12,740
Saudi Arabia	8.2	49	18	3.0	23	15.5	150	7.2	45	3	48	24	8,040
Syrian Arab Republic	8.6	45	13	3.2	21	16.2	114	7.4	49	4	57	49	930
Turkey	45.5	35	10	2.5	28	69.6	119	5.0	40	4	58	45	1,210
United Arab Emirates	0.8	44	14	3.0	23	1.6	138	7.2	34	3	48	65	14,230
Yemen	5.6	48	25	2.3	30	9.5	160	6.8	47	4	45	11	580
Yemen, People's Democratic Republic of	1.9	48	21	2.7	26	3.4	155	7.0	49	4	45	33	420
Middle South Asia	938	37	16	2.2	32	1,422	137	5.5	42	3	51	21	180
Afghanistan	15.9	48	21	2.7	26	26.4	226	6.9	45	3	37	11	240
Bangladesh	90.6	46	20	2.6	27	156.7	153	6.3	44	3	46	9	90
Bhutan	1.3	43	21	2.2	31	2.0	147	6.2	42	3	43	4	100
India	676.2	34	15	1.9	36	976.2	134	5.3	41	3	52	21	180
Iran	38.5	44	14	3.0	23	66.1	112	6.3	44	4	58	47	-
Maldives	0.1	50	23	2.7	26	0.2	119	-	44	2	-	11	150
Nepal	14.0	44	20	2.4	29	22.0	133	6.4	40	3	43	4	120
Pakistan	86.5	44	16	2.8	25	152.0	142	6.3	46	3	52	26	230
Sri Lanka	14.8	28	7	2.2	32	20.0	42	3.4	39	4	63	22	190
Southeast Asia	354	36	13	2.2	31	539	96	4.7	42	3	53	21	400
Brunei	0.2	28	4	2.4	29	0.3	20	5.1	43	3	66	64	10,640
Burma	34.4	39	14	2.4	29	53.7	140	5.5	40	4	52	24	150
Dem. Kampuchea	6.0	33	15	1.8	39	9.1	150	4.7	42	3	44	12	-
East Timor	0.8	44	21	2.3	30	1.1	175	6.1	42	3	42	12	-
Indonesia	144.3	35	15	2.0	34	210.6	91	4.1	42	2	50	18	360
Laos People's Democratic Republic	3.7	44	20	2.4	29	5.7	175	6.2	42	3	39	15	90
Malaysia	14.0	31	6	2.5	28	20.7	44	4.4	41	3	61	27	1,090
Philippines	47.7	34	10	2.4	28	78.1	80	5.0	43	3	61	32	510
Singapore	2.4	17	5	1.2	59	3.0	12	1.9	31	4	71	100	3,260
Thailand	47.3	32	9	2.3	30	75.5	68	4.5	43	3	60	13	490
Vietnam, Socialist Republic of	53.3	41	18	2.3	30	80.9	115	5.8	41	4	48	19	170
East Asia	1,173	18	6	1.2	57	1,453	51	2.3	31	6	65	32	1,200
China ¹²	975	18	6	1.2	58	1,212.3	56	2.3	32	6	64	26	460
Hong Kong	4.8	18	5	1.2	56	6.2	12	2.6	29	6	72	92	3,040
Japan	116.8	15	6	0.9	79	129.4	8	1.8	24	8	75	76	7,330
Korea, Democratic People's Republic of	17.9	33	8	2.4	28	27.4	70	4.5	40	4	62	33	730
Korea, Republic of	38.2	23	7	1.6	44	51.1	38	3.2	38	4	62	48	1,160
Macao	0.3	30	8	2.2	32	0.3	78	-	38	5	-	97	1,460
Mongolia	1.7	37	8	2.9	24	2.7	70	5.3	43	3	62	47	940

Note: See footnotes at end of table.

Region or country ¹	Population estimate mid-1980 (millions) ²	Birth rate ³	Death rate ³	Rate of natural increase (annual, %) ⁴	Number of years to double population ⁵	Population projected for 2000 (millions) ⁶	Infant mortality rate ⁷	Total fertility rate ⁸	Population under age 15 (%)	Population over age 64 (%)	Life expectancy ⁹ at birth (years)	Urban population (%) ¹⁰	Per capita gross national product (US\$) ¹¹
EUROPE	484	14	10	0.4	176	521	19	2.0	24	12	72	69	5,650
Northern Europe	82	13	11	0.1	476	84	13	1.8	23	14	72	74	6,140
Denmark	5.1	12	10	0.2	385	5.3	9	1.7	22	14	74	67	9,920
Finland	4.8	14	9	0.4	161	5.1	9	1.7	22	11	72	59	6,820
Iceland	0.2	19	6	1.2	57	0.3	11	2.3	30	9	76	87	8,320
Ireland	3.3	22	10	1.1	61	4.0	16	3.4	31	11	71	52	3,470
Norway	4.1	13	10	0.3	248	4.4	9	1.8	24	14	75	44	9,510
Sweden	8.3	11	11	0.0	1,386	8.6	8	1.7	21	15	75	83	10,210
United Kingdom	55.8	12	12	0.1	1,155	56.5	14	1.7	23	14	72	78	5,030
Western Europe	153	12	11	0.1	918	158	12	1.6	22	14	72	82	8,970
Austria	7.5	11	12	-0.1	-	7.6	15	1.6	23	15	72	52	7,030
Belgium	9.9	12	12	0.1	990	10.7	12	1.7	22	14	71	95	9,070
France	53.6	14	10	0.3	198	57.5	11	1.9	24	14	73	73	8,270
Germany, Federal Republic of	61.1	9	12	-0.2	-	59.8	15	1.4	21	15	72	92	9,600
Luxembourg	0.4	11	12	-0.0	-	0.4	11	1.5	20	13	70	68	10,410
Netherlands	14.1	13	8	0.4	158	15.5	10	1.6	25	11	75	88	8,390
Switzerland	6.3	11	9	0.2	301	6.4	10	1.5	22	13	73	55	12,100
Eastern Europe	110	18	11	0.7	102	121	23	2.3	23	11	71	59	3,670
Bulgaria	8.9	16	10	0.5	139	9.5	22	2.3	22	11	71	60	3,200
Czechoslovakia	15.4	18	12	0.7	100	17.2	19	2.4	23	12	70	67	4,720
German Democratic Republic	16.7	14	14	0.0	-	16.6	13	1.8	21	16	72	76	5,660
Hungary	10.8	16	13	0.3	267	11.2	24	2.2	21	13	70	52	3,450
Poland	35.5	19	9	1.0	71	40.9	22	2.3	24	10	71	57	3,660
Romania	22.3	20	10	1.0	69	25.7	31	2.6	25	10	70	48	1,750
Southern Europe	140	15	9	0.7	105	157	24	2.3	26	11	71	60	3,290
Albania	2.7	30	8	2.2	32	3.8	87	4.2	37	5	69	34	740
Greece	9.6	16	9	0.7	98	10.6	19	2.3	24	12	73	65	3,270
Italy	57.2	12	9	0.3	224	61.3	18	1.9	24	12	72	67	3,840
Malta	0.3	17	10	0.8	92	0.4	16	2.0	25	9	71	94	2,160
Portugal	9.9	17	10	0.7	99	11.6	39	2.5	28	10	69	29	2,020
Spain	37.8	17	8	0.9	75	43.9	16	2.6	28	10	72	70	3,520
Yugoslavia	22.4	17	9	0.9	80	25.7	34	2.2	26	9	68	39	2,390
OCEANIA	23	20	9	1.1	61	30	42	2.8	31	8	69	71	6,020
Australia	14.6	16	8	0.8	86	17.9	12	2.1	27	9	73	86	7,920
Fiji	0.6	27	4	2.3	30	0.8	41	4.0	41	2	71	37	1,440
New Zealand	3.2	16	8	0.8	83	3.9	14	2.2	29	9	72	83	4,790
Papua New Guinea	3.2	41	16	2.5	27	5.1	106	6.0	44	4	50	13	560
Samoa	0.2	37	7	3.0	23	0.2	40	5.8	50	3	63	21	-
Solomon Islands	0.2	41	10	3.1	22	0.4	78	6.2	44	3	57	9	430
USSR	266	18	10	0.8	82	311	31	2.4	24	10	70	62	3,700

Note: See footnotes at end of table.

General Notes

Sources of data: Most of the data were taken from various United Nations' publications, as well as from the World Bank and other sources. Some data were estimated by the Population Reference Bureau.

Figures for the regions and the world: Population totals (columns 1 and 6) take into account small areas not listed on the Data Sheet. These totals may not equal the sum of their parts because of independent rounding. All other regional and world figures are weighted averages for countries for which data are available.

Footnotes

¹The Data Sheet lists all geopolitical entities with a population larger than 200,000 and all members of the United Nations (UN) regardless of population size. Classification of "more developed" and "less developed" regions follows the latest (1979) practice of the UN. The "more developed" regions comprise all of Europe, North America (Canada and the United States), Australia, New Zealand, Japan, and the USSR.

²Based on a population total from a very recent census or on the most recent official country or UN estimate; for almost all countries the estimate was for mid-1978. Each estimate was updated by the Population Reference Bureau to mid-1980 by applying the same rate of growth as indicated by population change during part or all of the period since 1970.

³Annual number of births or deaths per 1,000 population. For the more developed countries with complete or nearly complete registration of births and deaths, nearly all the rates shown pertain to 1977 or 1978. For most less developed countries with incomplete registration, the rates refer to the 1975-80 period. These rates were used in the medium variant estimates and projections as assessed by the UN in 1978 (UN, World Population Trends and Prospects...). These figures should be considered as rough approximations only.

⁴Birth rate minus the death rate. Since the rates were based on unrounded birth and death rates, some rates do not exactly equal the difference between the birth and death rates shown because of rounding.

⁵Based on the current unrounded rate of natural increase and assuming no change in the rate.

- ⁶ For most countries, projected by the Population Reference Bureau by applying the 1980-2000 growth rate implied by the UN medium variant projections to the country's estimated mid-1980 population total.
- ⁷ Annual number of deaths to infants under one year of age per 1,000 live births. For countries with complete or nearly complete registration of births and deaths, nearly all rates pertain to 1977 or 1978. For many less developed countries with incomplete registration, rates are the latest available estimates generally obtained from the sources noted above.
- ⁸ The total fertility rate (TFR) indicates the average number of children that would be born to each woman in a population if each were to live through her childbearing lifetime (usually considered ages 15-49) bearing children at the same rate as women of those ages actually did in a given year. A TFR of 2.1 to 2.5, depending upon mortality conditions, indicates "replacement level" fertility - the level at which a country's population would eventually stop growing (or declining), leaving migration out of account. Most TFRs shown here refer to the 1975-80 period and are from UN, World Population Trends and Prospects....
- ⁹ Average number of years a newborn child could be expected to live if current mortality conditions were to continue throughout his or her lifetime. For the more developed countries with reliable mortality data, nearly all estimates shown pertain to part or all of the 1970-77 period. For most of the less developed countries with unreliable mortality data, estimates refer to some part of the period since 1970.
- ¹⁰ Percentage of total population living in areas termed urban by that country.
- ¹¹ Data refer to 1978 and are provisional. All data for individual countries are from the World Bank, World Bank Atlas: Population, Per Capita Product, and Growth Rates, 1979.
- ¹² Opinions vary widely on demographic measures for China. Those shown here come from official sources quoted in the Guangming Daily and People's Daily and UN sources noted above. Their accuracy is unknown. The projected population for 2000 shown here could be high in light of China's recently announced policy to encourage the one-child family and reduce population growth to zero by 2000.

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