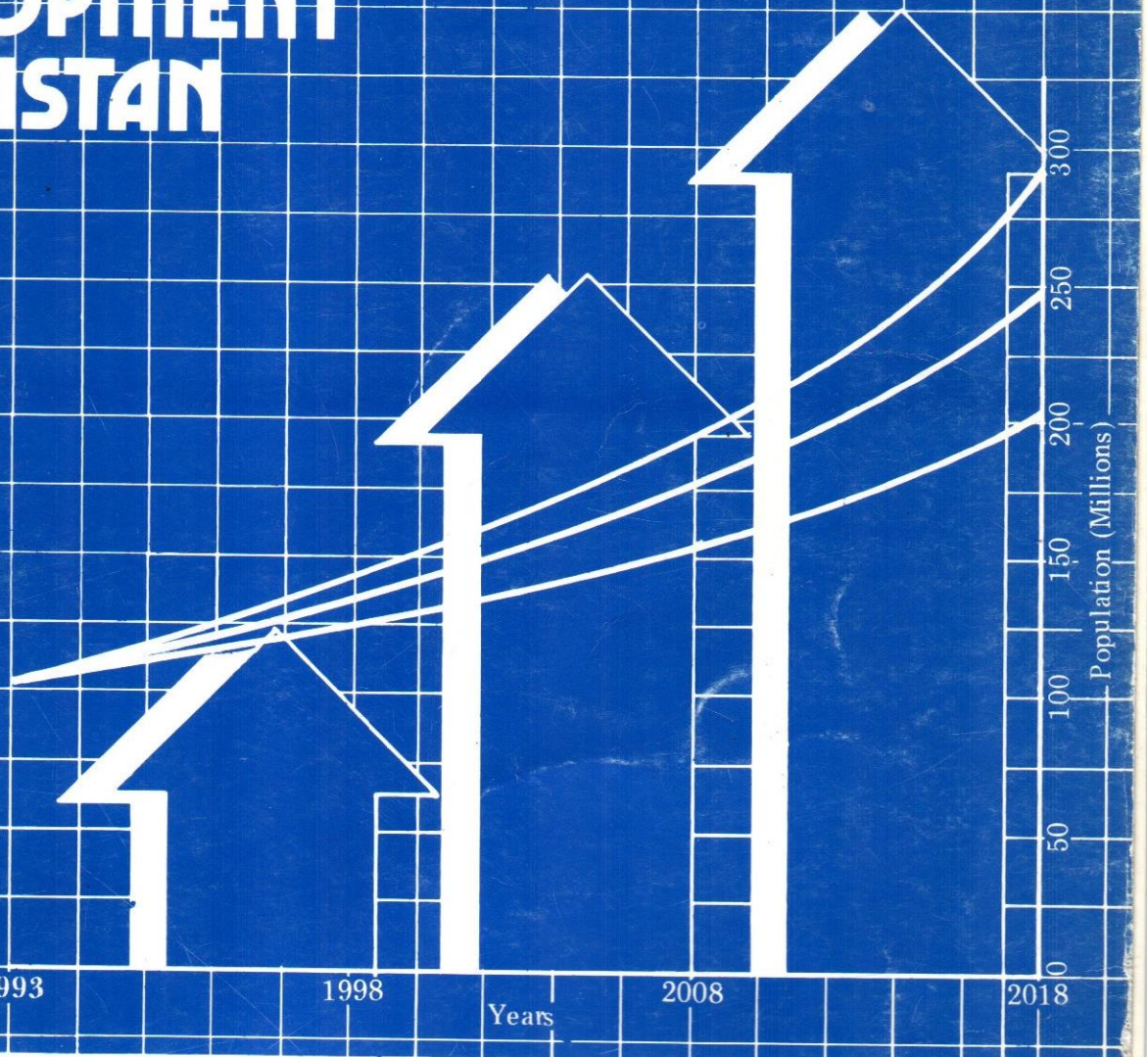
EFFECTS OF RAPID POPULATION GROWTH ON SOCIAL AND ECONOMIC DEVELOPMENT IN PAKISTAN



NIPS

national institute of population studies

1994

EFFECTS OF RAPID POPULATION GROWTH ON SOCIAL AND ECONOMIC DEVELOPMENT IN PAKISTAN

Up dated

by
Abdul Hakim

National Institute of Population Studies
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FOREWORD

The current trends of rapid population growth in Pakistan call for serious thinking and actions by all concerned, particularly policy makers, planners and administrators for integrating population concerns and its remedy into their policies, plans and programmes. Needless to emphasize that consequences of rapid population growth are extremely harmful for all development programmes.

2. The National Institute of Population Studies (NIPS) has presented information on selected parameters of population growth and their inter-linkages with various social services in this booklet. The effects of rapid population growth on social and economic development in Pakistan have been projected on the basis of Bench mark data of 1993-94, the first year of the 8th Five Year Plan. I expect that different Government Agencies would take the message further.

3. I appreciate efforts of Dr. Abdul Hakim, Director NIPS for up dating this presentation. I am also grateful to the Future Group of United States of America which initially, in 1990, assisted the National Institute of Population Studies in the development of this information

July, 1994

Tewfiq Fehmi
Executive Director
NIPS

ACKNOWLEDGEMENT

Initially the Future Group of United States of America assisted NIPS in the development of this information in 1990 basing the projecting on the starting year of the seventh plan (1988)

Keeping in view the efforts of the future group, the presentation in this booklet has been up dated basing our projection from the first year of the 8th five year plan 1993-94. The bases provided by the future group of United States of America are gratefully acknowledged. I am also grateful for the assistance provided by Mrs. Aysha Sheraz, Associate Fellow, Miss. Talat Mushtaq, Research Associate, Mr. Mushtaq Ahmad, Programmer and Mr. Nawazish Ali Asim, Technical Editor in up dating and printing of this work. Above all I am extremely grateful to Mr. Tewfiq Fehmi Executive Director, NIPS for his encouragement and support due to which this work have been completed.

July, 1994

Dr. Abdul Hakim
NIPS

INTRODUCTION

The World Population Plan of Action, adopted by 136 countries, including Pakistan, at the World Population Conference in Bucharest in 1974, recognized as a principle that "population and development are interrelated: population measures should be integrated into comprehensive social and economic plans and programmes and this integration should be reflected in the goals, instrumentalities, and organizations for planning within the countries." (Paragraph 95) The International Population Conference held in Mexico in 1984 reaffirmed the validity of these principles and objectives.

Population is only one of the elements that must be taken into consideration in the process of development. However, as indicated by the World Bank's World Development Report 1984, high rates of population growth, high fertility and very young age distributions pose particularly difficult problems in the key sectors of development, notably employment, education, health, agriculture and urban development. Although population is not the only factor that influences development, it is important that development plans and policies consider population growth and its effect on each sector of society.

The Government of Pakistan recognizes the need for an effective population planning policy in the Five Year Plans. The 1993-1998 plan calls for special attention to be given to increasing the level of investment in the population programme. The emphasis is to be on lowering the population growth rate.

The analysis presented here is intended to illustrate some of the problems caused by rapid population growth and high fertility and to demonstrate the benefits to be achieved by a successful population programme. Its purpose is to aid decision makers in better understanding the effects of population growth in Pakistan and to help them make informed decisions about the direction of the population programme.

The data and assumptions are based on the Eighth Five Year Development Plan (1993-1998) and the Perspective Plan (1988-2003). Additional data are from the Economic Survey of Pakistan 1993-94, The State of Population in Pakistan 1987 and other recent demographic surveys, studies and projections of NIPS.

CONTENTS

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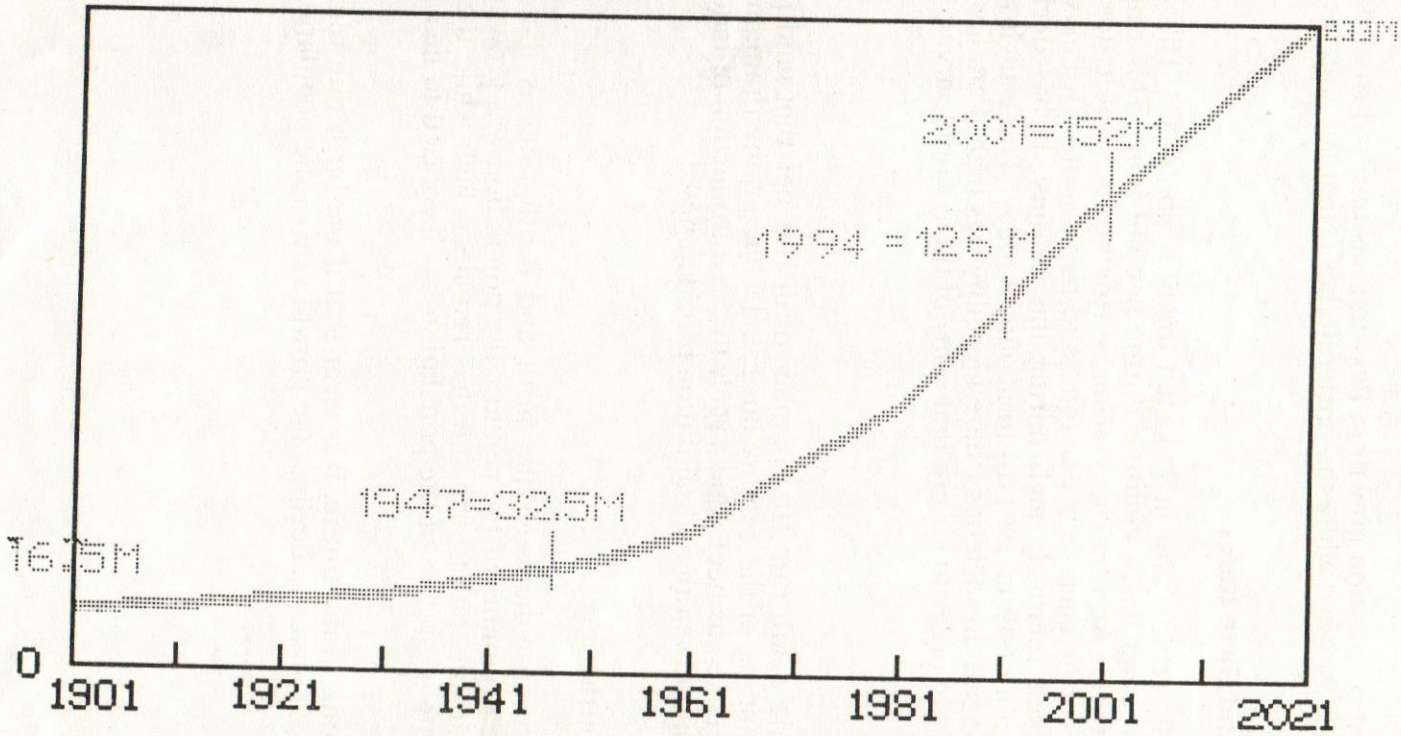
POPULATION DYNAMICS

HISTORICAL TREND OF POPULATION GROWTH

The population of Pakistan has grown from 16.6 million in 1901 to 32.5 million at the time of independence in 1947. Today it is estimated to be around 126 million. During this period, 1901-1994, the world population grew by three times, the population of developing countries increased by 5 times and the population of Pakistan increased by 7 times.

If the population continues to grow at the same rate, it will reach over 148 million by the year 2000 and 229 million by 2020. This means that the population of Pakistan will grow nine-fold over one century (1901-2000), compared to the population of the world which will increase four times and the population of the developing countries which will increase six-fold.

HISTORICAL POPULATION GROWTH



M = POPULATION IN MILLIONS

BIRTH RATES, DEATH RATES, AND POPULATION GROWTH RATE

The rapid population growth in Pakistan has resulted from declines in death rates over the last 94 years while the birth rate has remained largely unchanged.

Fertility Rate And Birth Rates

The total fertility rate in Pakistan today is about 5.9. This means that, on average, each woman has 6 children during her life time. This rate is among the highest in the world. An other way of measuring births is the crude birth rate (the number of live births each year per thousand population). In Pakistan crude birth rate has remained relatively high during this century. It has declined only very gradually from about 49 in 1901-10 to about 39 today. These high birth rates were typical of rural-agrarian societies where mortality was high. Families wanted a large number of births in order to ensure that some of them would survive to adulthood.

Death Rates

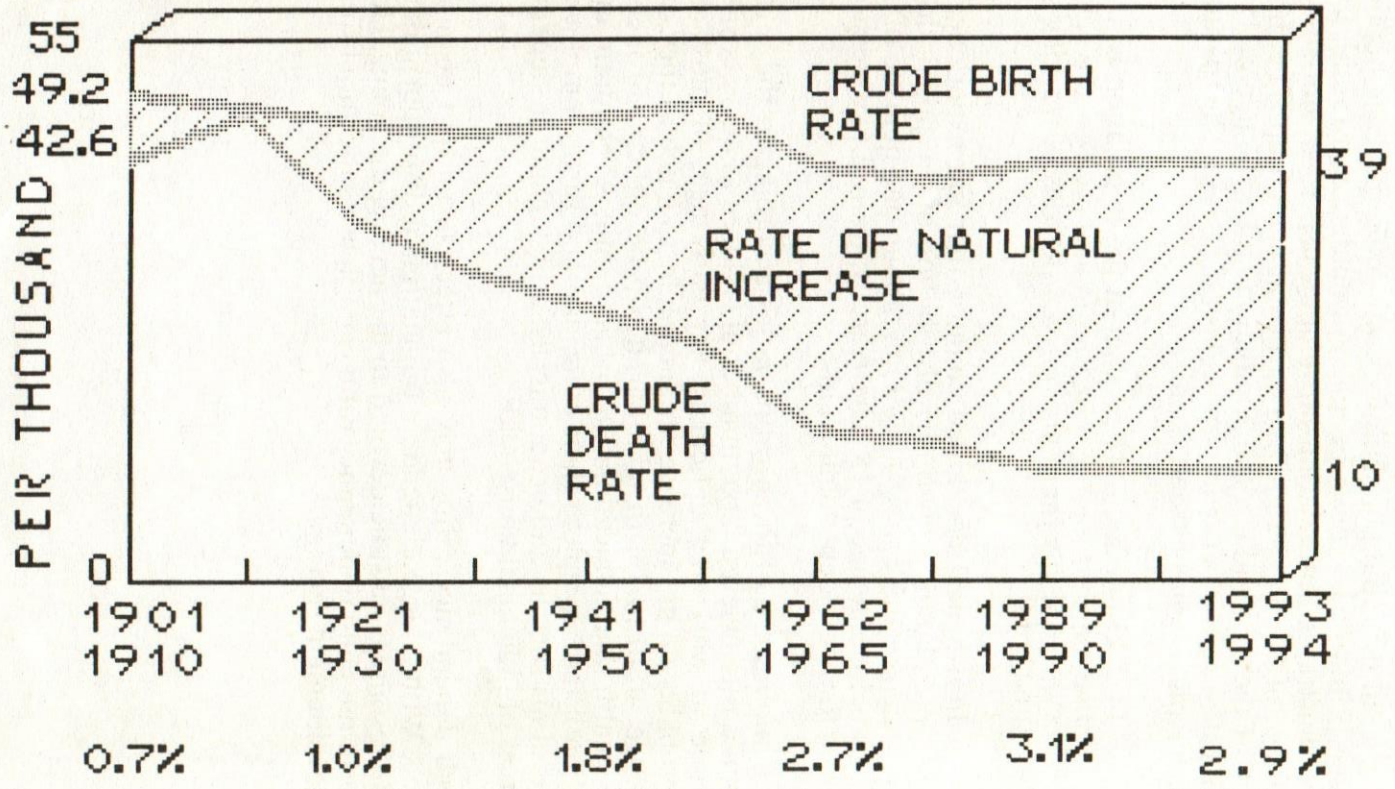
The crude death rate (the number of deaths per thousand population) was high at the beginning of the century but has declined quite dramatically during this century. The decline has been due largely to the introduction of modern antibiotics, the success of public health and sanitation programmes.

Population Growth

The difference between the birth and death rates is the rate of natural increase. In the beginning of the century, the population was growing at less than 1 percent per year. Since the birth rate has remained high while the death rate has declined, the rate of growth of the population has increased to nearly 3 percent per year today.

As we look to the future, it is clear that if the birth rate remains high while the death rate continues to decline, the growth rate of the population would remain high.

RATE OF NATURAL INCREASE



AGE DISTRIBUTION AND THE DEPENDENT POPULATION

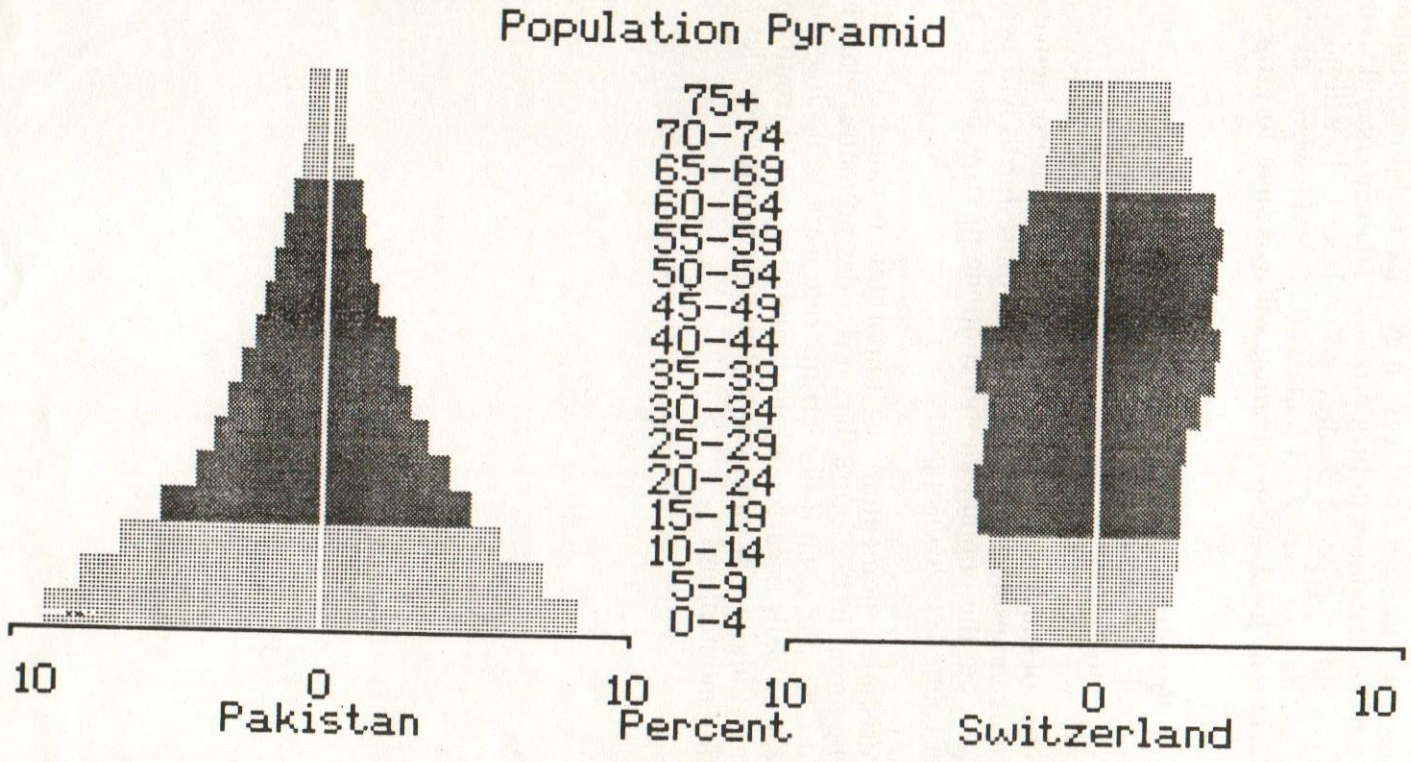
As a result of rapid population growth in the past the population of Pakistan is composed primarily of young people. A population pyramid, like the one in the next chart, illustrates this relationship graphically. Each horizontal bar represents the percentage of the population in a particular age group. The three shaded bars at the bottom of the pyramid are the population under the age of 15. The pyramid on the left illustrates the situation in Pakistan today. The pyramid on the right represents a typical industrialized country.

- In Pakistan about 41 percent of the population is under age 15. Fifty-five percent of the population is between the ages of 15 and 64. Consequently there are only 1.3 persons of working age for each child under 15.

- In a typical developed country, that has experienced slower rates of population growth, the distribution of the population is roughly even across the age groups. Only about one-quarter of the population is below the age of 15. There are typically 2 to 3 persons of working age for every dependant child.

The importance of these ratios varies according to the sector of the society. Rural families often view a large number of children as an asset since they can begin to contribute to work in the field at any early age. In most situations, though, children probably do not increase production by as much as they consume until they reach the age of 10 to 15. In addition, it can be difficult to meet basic needs for nutrition, health and education. In urban families, children must generally be supported until they complete their education and secure employment. Thus as the country develops socially and economically, a high children dependency ratio strain the resources of individual households.

High dependency ratios may also affect social and economic development programme. With a large, dependent population, a disproportionate share of public and private resources must be devoted to the need of the young. Hence, a significant reductions in the child dependency ratio can release substantial sums for investment in other development sectors.


Population Pyramid
75+
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4
10
0
10
Pakistan
10
Percent
10
0
10
Switzerland

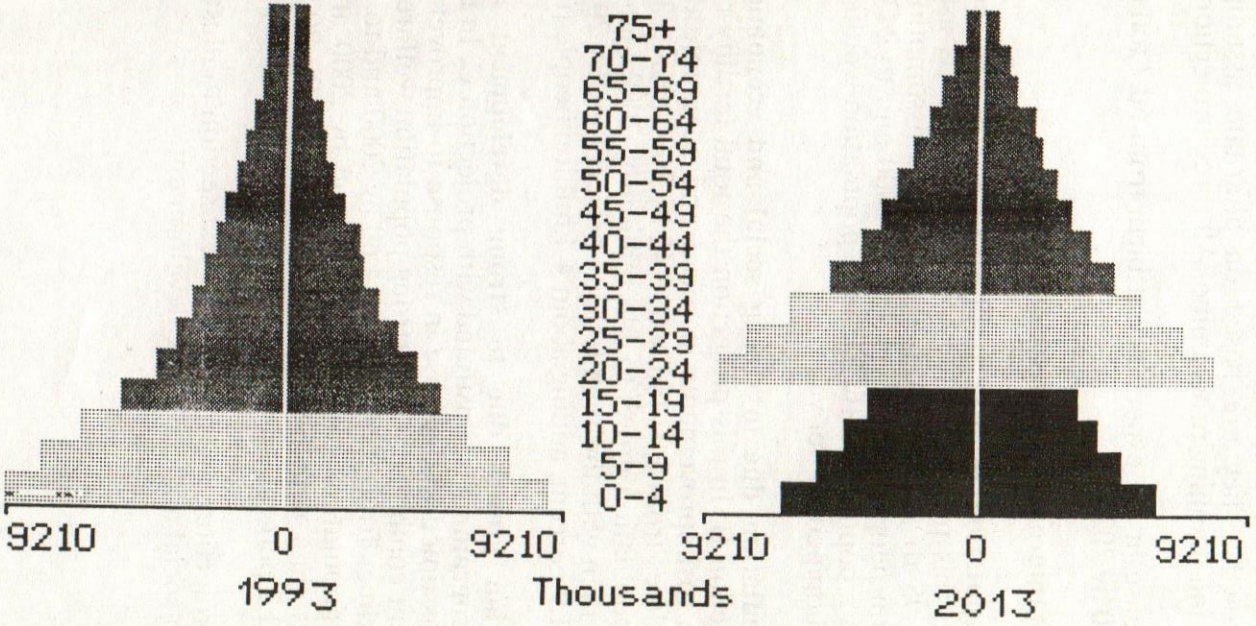
THE MOMENTUM OF POPULATION GROWTH

Each women in Pakistan produces on average 6 children, out of which 3 are daughters. These three daughters in turn produce 9 daughters and so on. Only when each couple starts producing just 2 children, to replace itself, will population growth eventually stop, resulting in a constant population size. However, even after fertility declines to replacement level the population will continue to grow for at least 40 years.

This lag of 40 years is due to the age composition of the population. Since fertility has been high in the past, the population today is composed of a relatively large number of young people and relatively small number of older people. Consequently, the number of young women entering their reproductive years exceeds the number of older women moving out of their reproductive years. Even if young couples limit themselves to two offspring, more births will occur than death for about 40 years, and the population will continue to grow until the disproportion in the number of young people disappears.

This irresistible momentum is important because it means that the population will be larger in the future than it is today no matter what happens to the fertility rate. For example, even if the fertility rate were to decline the replacement level today (a very unlikely occurrence) the population would continue to grow from 126 million today at about 170 million over the next several decades because of the built-in population momentum.

MOMENTUM OF POPULATION GROWTH



THIS PYRAMID SHOWS THE AGE DISTRIBUTION IN 1993

THIS PYRAMID SHOWS THE PYRAMID IN 2013 IF THE TFR DROPPED IMMEDIATELY TO REPLACEMENT LEVEL

POPULATION GROWTH UNDER DIFFERENT FERTILITY ASSUMPTIONS

The extent of future population growth will depend largely on future fertility levels. Three projections are presented here to demonstrate the likely range of future population growth. They are based on alternate assumptions about the success of the population planning programme. All three projections assume

- an increase in life expectancy at birth from 60.7 today to 63.0 by 2000 and 72.0 by 2020.

- zero net international migration.

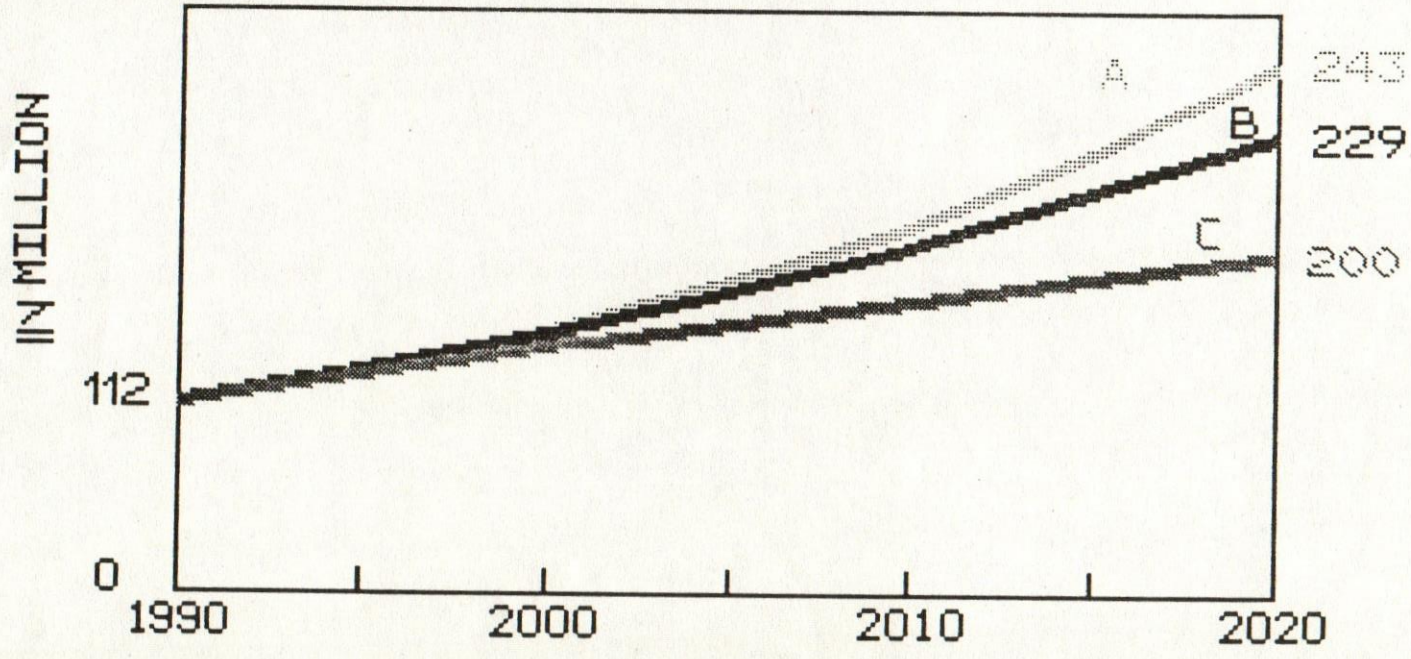
Continued Rapid Population Growth is illustrated with projection A, the high fertility projection. In this projection the total fertility rate is assumed to remain high at 5.97 in 1990-95 to 3.94 in 2015-20. With this assumption the population grows from 126 million people in 1994 to 149 by 2000 and to 243 million by 2020, almost doubling today's population. By 2020 the population would be growing at 2.3 percent, adding 5 million people per year.

Moderate population due to strong social and economic development is illustrated with projection B. In this projection the total fertility rate is assumed to decrease in response to improvements in social and economic development. The total fertility rate declines from 5.97 today to 5.42 by 2000 and to 3.23 by 2020. With this assumption the population grows to 148 million by 2000 and to 229 million by 2020, 13 percent less than with the high fertility projections. By 2020 the population would be growing at 1.9 percent, adding about 4.4 million people per year.

Slow population growth due to strong development and an effective population welfare programme is illustrated with projection C. In this projection the total fertility rate is assumed to decrease in response to improvement in social and economic development combined with a strong population welfare programme. The total fertility rate declines from 5.97 today to 4.60 by 2000 and to 2.1 by 2020. With this assumption the population grows to 144 million by 2000 and 200 million by 2020, 28 percent less than with high fertility projection. By 2020 the population would be growing at 1.2 percent, adding about 2.4 million people per year.

These three projections are used in the next section to illustrate the effects of population growth on social and economic development.

TOTAL POPULATION



THE EFFECTS OF POPULATION GROWTH ON SOCIAL AND ECONOMIC DEVELOPMENT

LABOUR FORCE AND CHILD DEPENDENTS

The population between the ages of 10 and 65 numbers about 73 million people today. About 43 percent (or 31 million people) are considered to be in the labour force. Rapid population growth in the past has resulted in a high rate of labour force growth and has produced the conditions for continued rapid growth in the future. The labour force is currently growing at above 2.9 percent per year. The large size of the young population today ensures that labour force will continue to grow rapidly in the future.

With a continued labour force participation rate of 43 percent the labour force will grow to about 62 million by 2000 under all three population projections. By 2020 it will reach 102 million with continued rapid population growth, 96 million with the medium fertility projection and 84 million with the low fertility projection.

The size of the labour force is not substantially affected by declines in fertility for 15 to 20 years, since most people do not enter the labour force until they reach the age of 15 to 20.

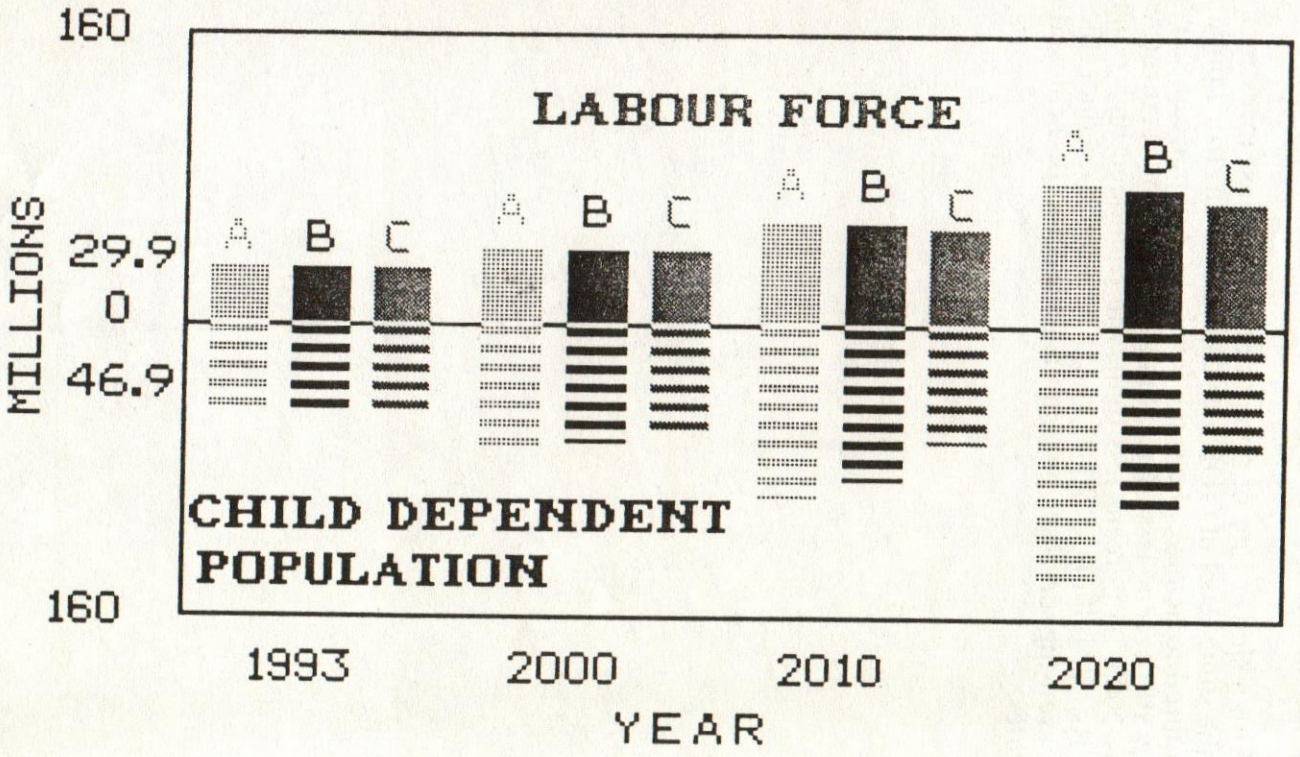
Although the size of the labour force will not be greatly affected by a decline in fertility today, the ratio of workers to dependents will change quickly and dramatically. Today there are only 65 people in the work force to support each 100 dependent children.

With continued rapid population growth this ratio will decline to 40 workers for each 100 dependent children by 2020.

With reduced population GROWTH due to a strong population planning programme the dependency ratio will improve to 100 workers per 100 dependent children by 2020.

A better dependency ratio means that more resources may be devoted to the care of each child. Each family may be able to provide better nutrition, education and health care for each of its children. At the national level, the dependency ration is directly related to the country's ability to provide expenditures for schools, health care, nutrition, and other maternal and child services.

LABOUR FORCE AND CHILD DEPENDENTS

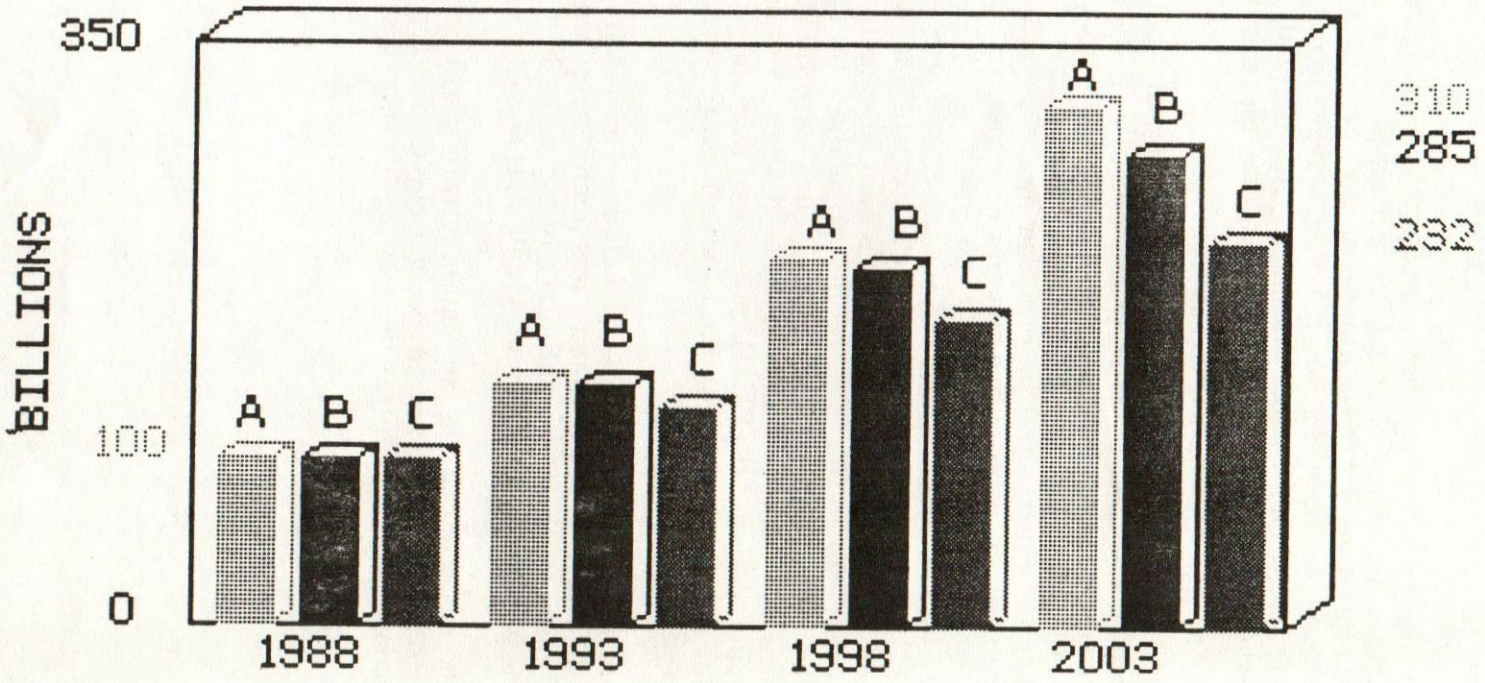


INVESTMENT REQUIRED

The Seventh and Eighth Five Year Plans projects that the Gross domestic Product (GDP) will grow between 6 to 7 percent through 2003. The investment required to achieve this growth is 20 to 21 percent of GDP and will increase from about Rs.100 billion in 1988 to Rs.313 billion in 2003.

With a slower rate of population growth less investment would be needed to achieve the same level of GDP per capita. With a strong population programme the GDP required to achieve the same level of GDP per capita as projected in the Plan would be 10 percent less. The annual investment required would be only Rs.230 billion by 2003, 26 percent less than with continued high population growth. These savings, Rs. 80 billion in 2003, could be used to reduce the budget deficit or to produce even higher GDP per capita than could be achieved with high population growth rates.

INVESTMENT REQUIRED (1988-2003)



URBANISATION

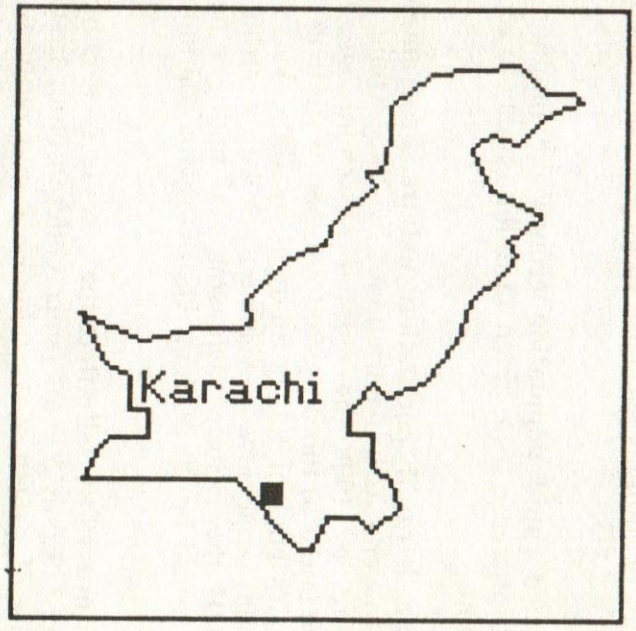
One area requiring significant investment is urban infrastructure. While the total population is growing at about 2.9 percent per year, the urban population is growing even faster, over 4 percent per year. As a result it has been very difficult to provide investment required to maintain and expand the necessary urban infrastructure. According to the Housing Census of 1980, 30 to 40 percent of all urban households lack basic facilities: electricity, piped water, toilets, and bathing facilities.

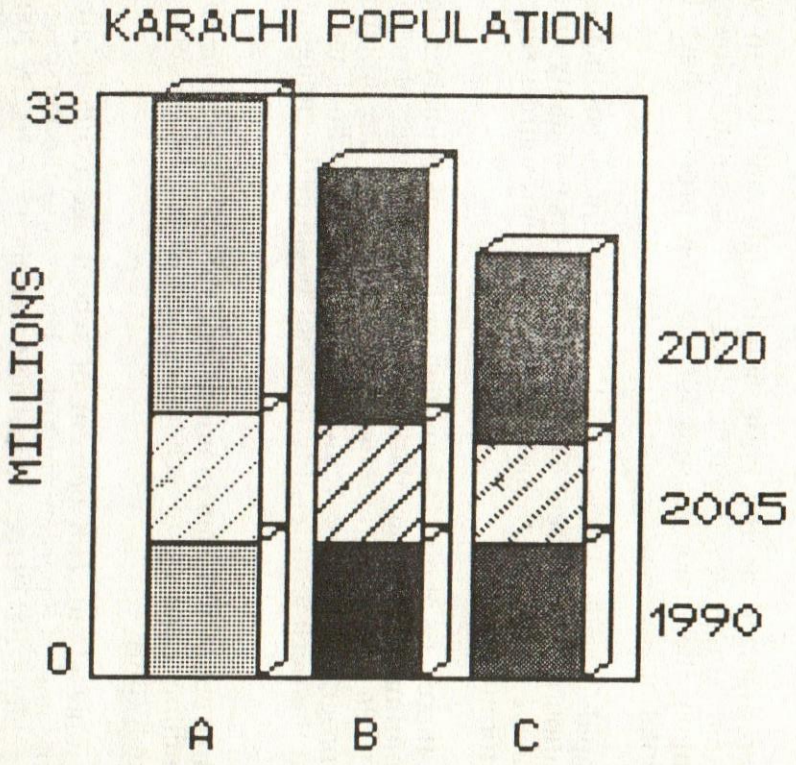
With the urban population increasing at almost 4 percent per year, all urban services need to increase at that rate as well to keep up with new demand. This means a growing need for new housing, transportation, electricity, water, sewerage, sanitation and police services. Some of these requirements are provided by the private sector but others must be provided by the government. In addition, when families are unable to afford urban amenities, squatter settlements spring up.

As we look to the future we can see the effects of continued rapid population growth on Pakistan's cities. Karachi today is a city of 8 to 9 million people. By 2000 it will grow to between 11 and 12 million. Within 30 years it could grow to 30 million people, which is about the size of the population of Pakistan at the time of independence. This is larger than any city in the world today. The largest cities today, Mexico City and Sao Paulo have about 15 to 18 million people. Even under the lowest population GROWTH projection Karachi will grow to 22 million. However, the difference between the high and low projections, 8 million people, is the size of Karachi today.

There is a similar situation in Lahore. Today Lahore has about 5 million people. By 2000 it will have between 7 and 8 million and within 30 years it will grow to 13 to 17 million. Again the difference between the high projection and the one with a strong population programme, 4 million, is near the size of Lahore in 1991.

Without a reduction in population growth it will be very difficult to provide necessary services to all the new urban households that can be expected in the next 15 to 30 years, as well as address the existing backlog of services for today's urban dwellers.


Karachi


KARACHI POPULATION
33
0
MILLIONS
2020
2005
1990
A
B
C

EDUCATION

Education is recognized as the basic human right and key to socio-economic, demographic and human development. However, it has made slower progress than it desired. Among the major reasons for the slow progress have been the rapid growth of population.

The rapid growth of the school age population has made it difficult to provide education to all children. The goal of universal primary enrollment will be difficult to achieve due to the tremendous increase in resources required to provide school places for all children.

Today there are about 16.5 million children of primary school age, 5 to 9 years. **With continued rapid population growth,** the number of school age children will increase to 26 million within 16 years. Even under the projection of a strong development programme, there would still be 25 million school age children with 15 years, because the decline in fertility does not begin early enough to influence this number.

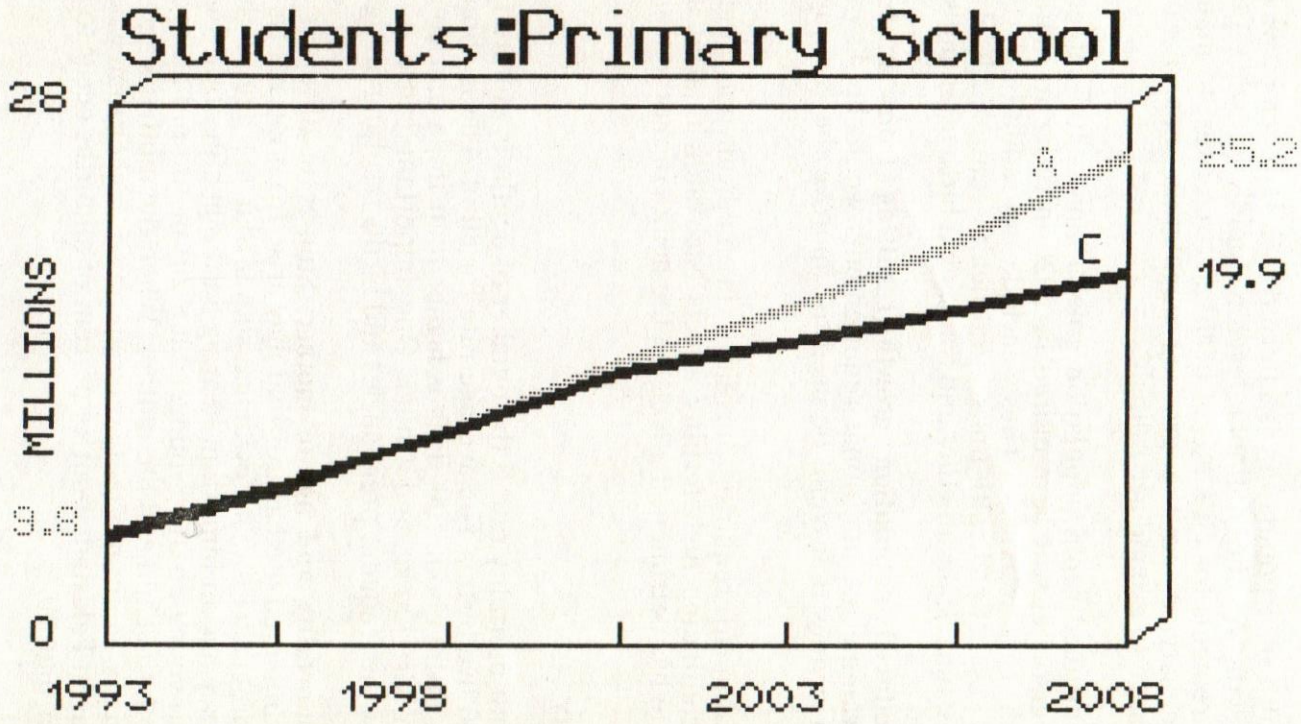
With a strong population planning programme the decline in fertility results in only 20 million children of school age by 2010, 20 percent less than with continued high fertility.

Today only about 71.8 percent of school age children are in school (86 percent for boys and 54.8 percent for girls). The goal of the Perspectives Plan (1988-2003) was to achieve 100 percent enrollment within 15 years, by 2003. If this goal is achieved, the number of students will have to increase until it equals the number of school age children in 2003.

With continued rapid population growth the number of primary school students will have to increase from about 14 million today to 25 million by 2003, an increase of 79 percent.

With continued rapid population welfare Programme, the number of students required to achieve full enrollment by 2003 would increase to only 20 million. Furthermore, by 1998 the number of school age children under this projection would be equal to the projected number of students required to achieve the Perspective Plan's goal of full enrollment by 2003. This means that the full enrollment goal could be achieved 5 years earlier with a strong population welfare programme. By 2003 the costs of achieving and maintaining universal primary school enrollment would be 20 percent less than with continued rapid population growth.

A reduction in fertility will affect the amount of resources required for the education of children in only 5 years (since children enter first grade at the age of 5). The reduced rate of growth of the school age population will make it easier to achieve education enrollment goals, such as universal primary school enrollment. In the long run a reduction in population growth will produce resource savings that also can be applied to increasing the quality of education at all levels.


Students :Primary School
28
MILLIONS
9.8
0
1993
1998
2003
2008
A
C
25.2
19.9

HEALTH

Health Facilities and Personnel

The health of a population is affected in a number of ways by the rate of population growth. At the national level a rapidly growing population means increased requirements for all kinds of health services. Just to maintain the current level of health services to the growing population, health care facilities and personnel will have to expand accordingly.

With continued rapid population growth almost 100 percent increase in all facilities and personnel will be required by 2020 in order to maintain the current level of health care services. These include an additional 100% of today's requirement in respect of health units, rural health centres, MCH centres, hospital beds, physicians, nurses, paramedics and traditional birth attendants.

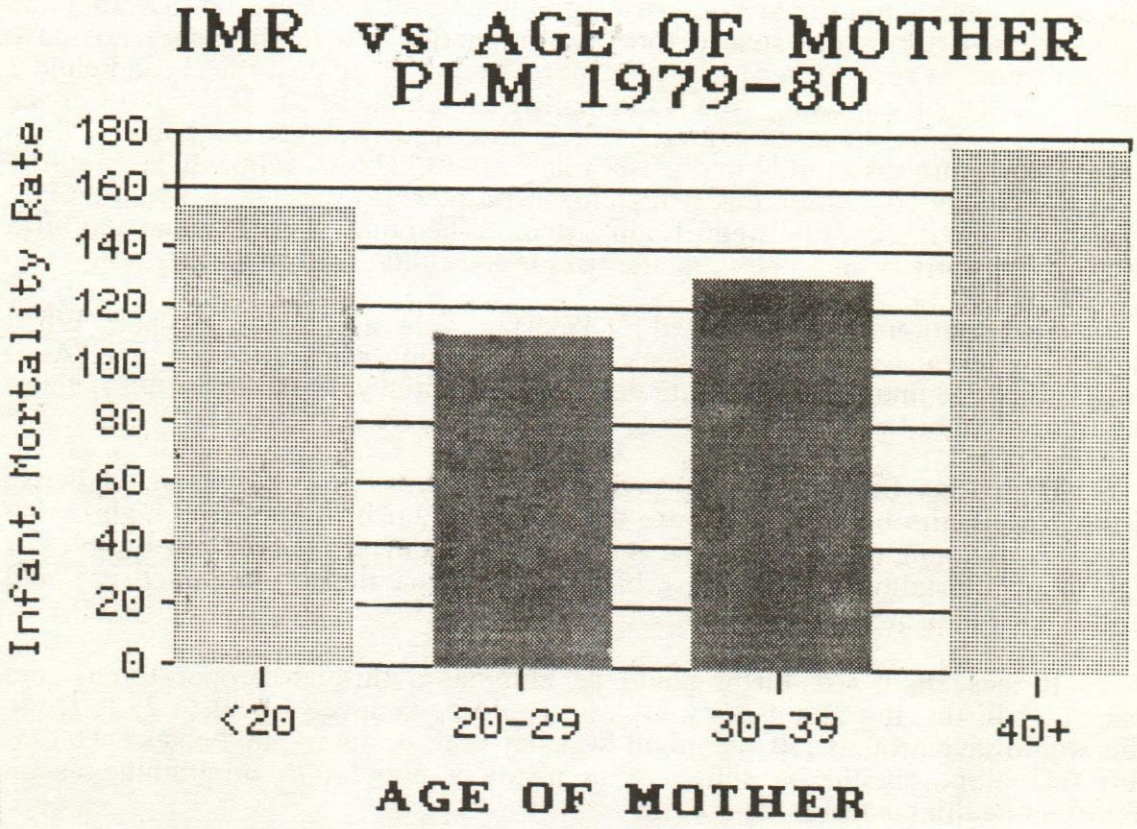
With reduced population growth resulting from a strong population planning programme the additional requirements would be 42 percent less. This would result in savings that could be used to improve the coverage and quality of health services.

In addition to requiring increases in medical personnel, facilities and expenditures, continuing high fertility affects each individual at a family level. A high fertility rate has detrimental effects on the health of mothers and children.

Infant Mortality

The infant mortality rate is the number of deaths of children under the age of 1 after per 1000 live births. The average rate for all of Asia is about 80. In Pakistan the rate seems to be about 100. This is higher than India and considerable higher than Indonesia, Sri Lanka and China. One important cause of this high infant mortality rate is the frequent pregnancies and births resulting in high fertility.

Infant mortality and age of mother. Studies in different countries of the world have documented the hazards that may arise from too many, too frequent and poorly timed pregnancies. The evidence shows that the age of the mother at the time of pregnancy has an important bearing on the health of the infant. Pregnancies occurring at too young an age (younger than 20) or too old an age (40 and above) are risky for both the child and the mother. When the mother's age is less than 20 or more than 40 years, infant mortality rates are much higher than when she is 20 to 39 years old. Today in Pakistan about 15 percent of all births occur to mothers younger than 20 or older than 40.


IMR vs AGE OF MOTHER
PLM 1979-80
Infant Mortality Rate
180
160
140
120
100
80
60
40
20
0
<20
20-29
30-39
40+
AGE OF MOTHER

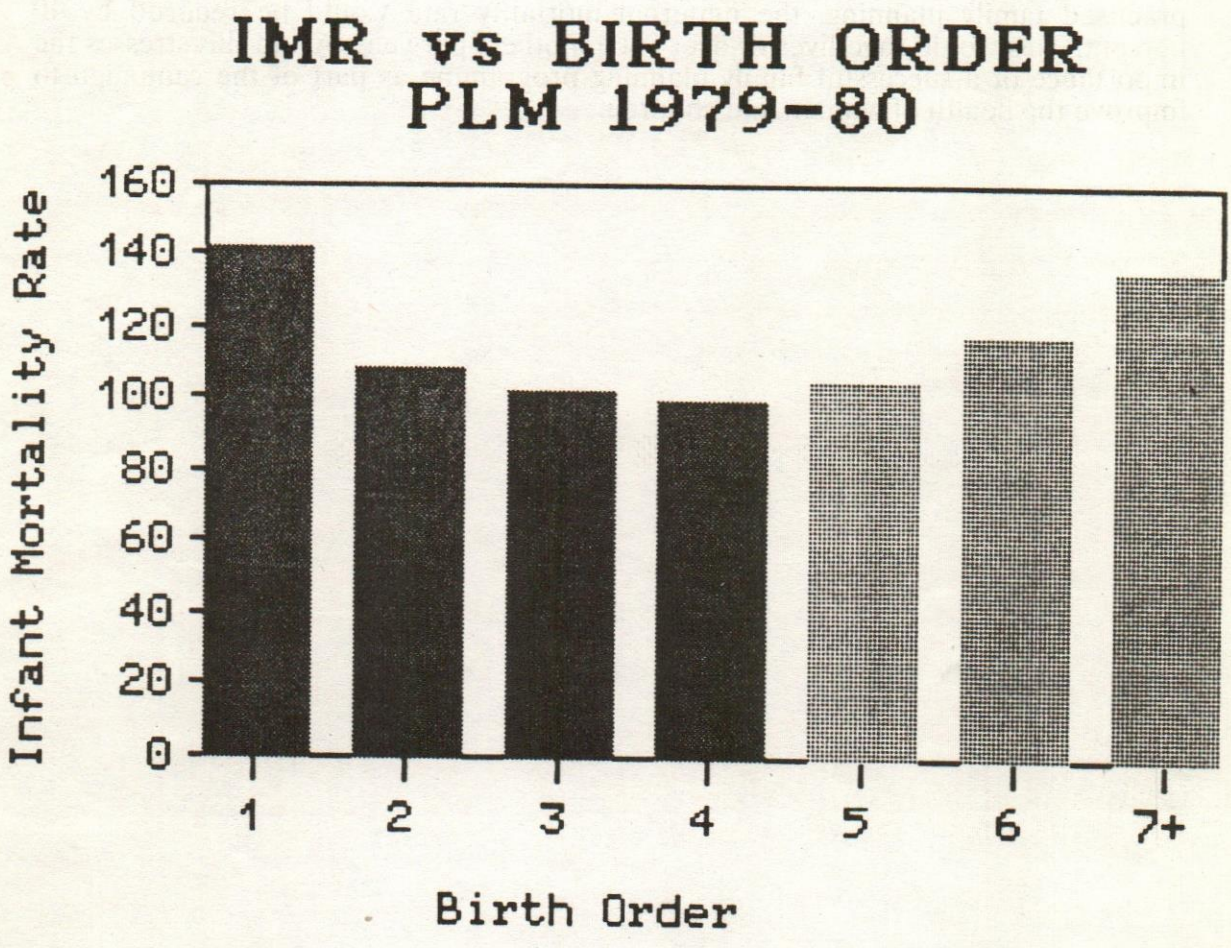
Infant mortality and Birth Order. A second important factor is the relationship between infant mortality and birth order (the total number of births delivered by the women). The risk is typically high for the first born child. Then it declines substantially for the second, third and fourth children, but it begins to increase again for the fifth, sixth and seventh children. Since the average number of children per woman in Pakistan is around 6, it is clear that a large number of births are of order 4, 5, or higher. In fact, about one-third of all births are of order 5 or higher.

Infant Mortality and the Spacing of Pregnancies. The length of time between one birth and the next also exerts an important influence on maternal and child health. If births are spaced too closely together the mother does not have sufficient time to recover her physical resources required to give the second child a start in life. This is especially true if the mother is malnourished. This can lower the mother's resistance to disease and result in low birth weights for babies, which makes them more susceptible to disease. Chances of fatal loss, stillbirth, prematurity and early childhood death are very high for birth interval of less than 1 year and, to a lesser degree, intervals between 1 and 2 years. When mothers are young and birth intervals are short at the same time, the risks to the child are even greater.

This relationship is illustrated for Pakistan in the accompanying chart. When the birth interval is less than 2 years, infant mortality rates are very high. As it lengthens to 2, 3 and 4 years the rate declines substantially. In Pakistan today, about one-third of all births have an interval of less than 2 years.

High Risk Births. Over 40 percent of all births in Pakistan are high risk births; that is, the birth intervals are too short, the birth order is too high or the mother is to young or too old. This is one of the important factors responsible for high infant mortality rates. If these high risk births could be eliminated it would substantially improve infant health.

If these high risk births could be eliminated through proper timing and spacing of births, the infant mortality rate could be reduced by 20 to 25 percent. This would save around 110,000 infant lives per year, or about 300 babies each day. This fact alone should be sufficient to justify a population programme as an important health measure.


IMR vs BIRTH ORDER
PLM 1979-80
Infant Mortality Rate
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7+
Birth Order

Maternal Mortality

The health of mothers is also affected by the timing and spacing of pregnancies. Too many births, spaced to closely together and beginning at an early age, are particularly stressful for mothers, depleting maternal nutrition and increasing susceptibility to diseases and complication during pregnancy. Pakistan has a very high rate of maternal mortality, around 500 maternal deaths per 100,000 live births. This means that about 24,000 mothers die in child birth each year.

If all women who report that they do not want any more children now practised family planning, the maternal mortality rate would be reduced by 40 percent. This would save lives of over 9600 mothers per year. Again this stresses the importance of a successful family planning programme as part of the campaign to improve the health of women and children.

Reduction in Maternal Mortality
Through the Use of Family Planning
Maternal Deaths per
100,000 Live Births
700
600
500
400
300
200
100
0
40%
Current Rate
Reduced Rate
Over 12,000 lives would be saved per year

THE EFFECTS OF POPULATION PROGRAMMES

EFFECTS OF A DELAY IN REDUCING FERTILITY

The rapid growth of the population has produced a large young population. the size of this young population grows larger every year as long fertility remains high. Today's young children are the parents of tomorrow. Therefore, a large young population means continued population growth for at least 40 years as today's children reach adulthood and have their own children.

Due to this built-in momentum of population growth, even a few years delay in starting a programme to reduce fertility will significantly increase the future size of the population. Assuming that a programme were implemented to reduce the fertility rate of replacement level (about 2 children per family) within 40 years, the effects of delaying the start of the programme by just 5 or 10 years are as follows:

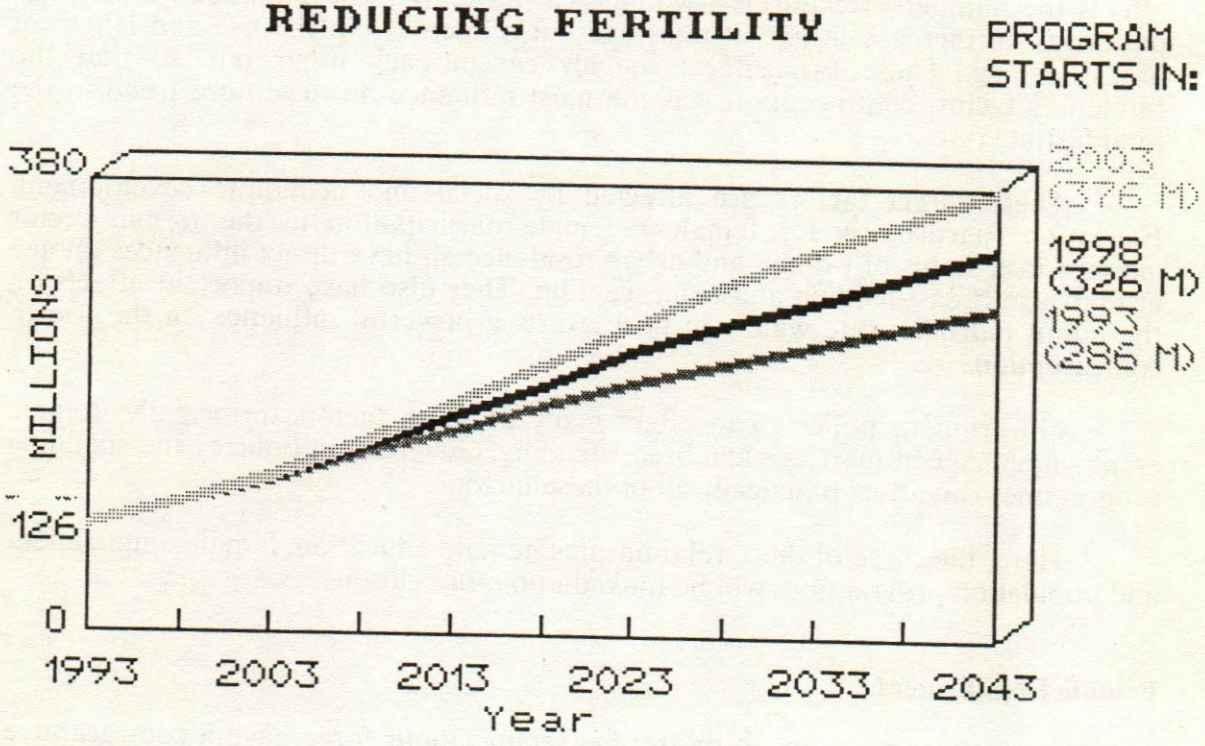
If the programme begins today, the population would grow from 126 million today to 286 million in 50 years.

If the programme were delayed just 5 years, the population would grow to 346 million in 50 years, 40 million larger than if the programme started today.

If the programme were delayed 10 years, the population would grow to 376 million in 50 years.

Each 5-years delay in starting an effective population programme means an additional 40 to 50 million people in the population.

THE EFFECTS OF DELAY IN REDUCING FERTILITY



THE IMPACTS OF SOCIOECONOMIC DEVELOPMENT AND POPULATION PROGRAMMES ON FERTILITY

The fertility rate is the most important determinant of the size and growth rate of the population. It has an important effect on social and economic development, particularly on child dependency, investment requirements and the social well-being of the population.

This relationship is not one-sided, however, for fertility is affected by social and economic development. The factors that most directly affect fertility are age at marriage, breast-feeding and the use of contraception. Age at marriage affects the amount of time a woman is married and, therefore, can affect the number of children she has. Breast-feeding can act to naturally space births and, therefore, also affects the number of children a women will have. With development, the typical pattern is an increase in age at marriage but a decrease in the use and length of breast-feeding. These two effects roughly cancel each other out, so that the remaining factor, contraception, has the most influence on the future trend in the total fertility rate.

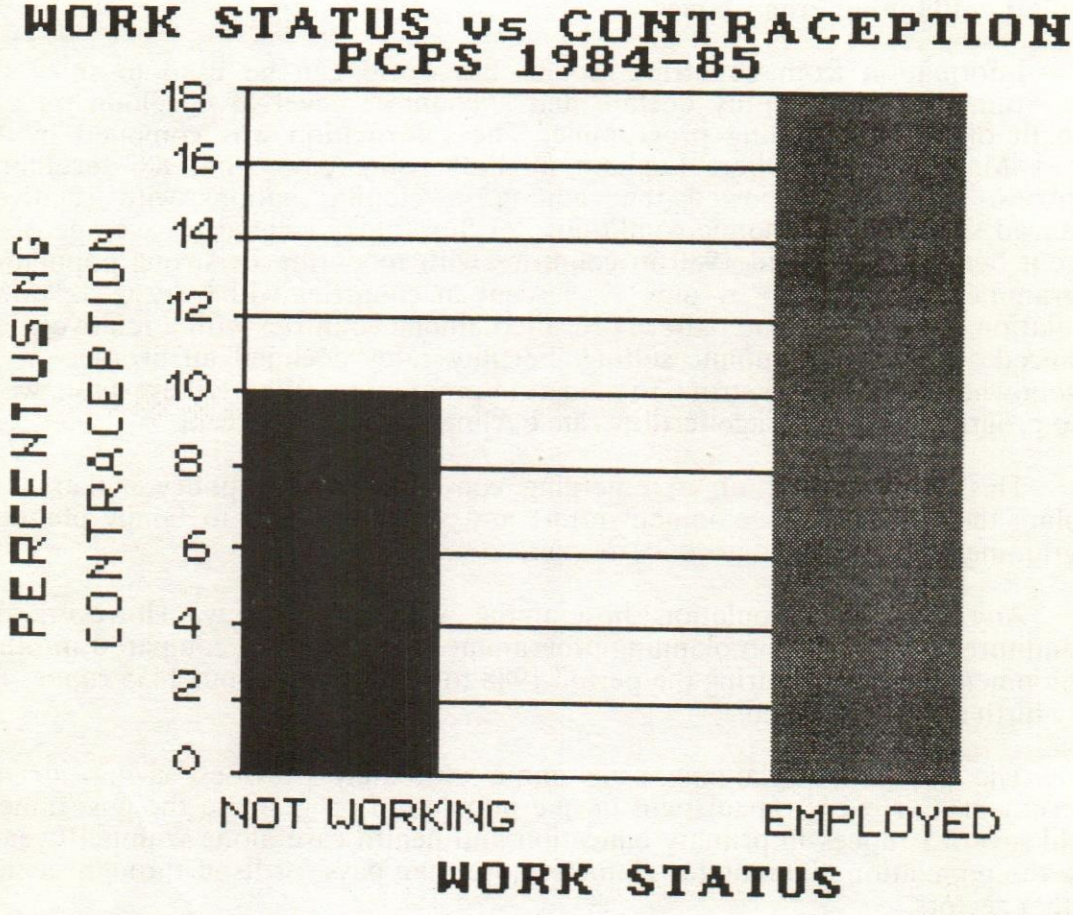
These direct factors are affected by social and economic development. Education (particularly for females), female participation in the formal sector labour force, status of women and urban residence all have direct influences on age at marriage breast-feeding and contraception. They also have important effects on the infant mortality rate which, in turn, exerts a powerful influence on the use of contraception.

Government policies can affect many of these factors, principally: female employment, age at marriage and breast-feeding. Government policies and spending programmes can affect practically all of these factors.

Here, the three of these relationships: female education, female employment and population programmes will be looked into more closely.

Female Employment

Women who are not in the formal sector labour force have a contraceptive use rate of less than 10 percent. Those in the formal labour force have a much higher rate, around 18 percent, Unfortunately today less than 5 percent of women are employed in the formal sector.


WORK STATUS vs CONTRACEPTION
PCPS 1984-85
PERCENT USING CONTRACEPTION
18
16
14
12
10
8
6
4
2
0
NOT WORKING
EMPLOYED
WORK STATUS

Education

Women with no education have contraceptive prevalence rates of around 8 percent. Women with some education have higher rates, and those with secondary or college education have prevalence rates of 30 to 40 percent.

Women with no education have an average of 6 children. Even women with 1 to 6 years of education have about 5 children on average. However, women with more than 7 years of education have an average of about 3 children. It appears that about 7 years of education are required to have a significant effect on the number of children.

Population Planning Programmes

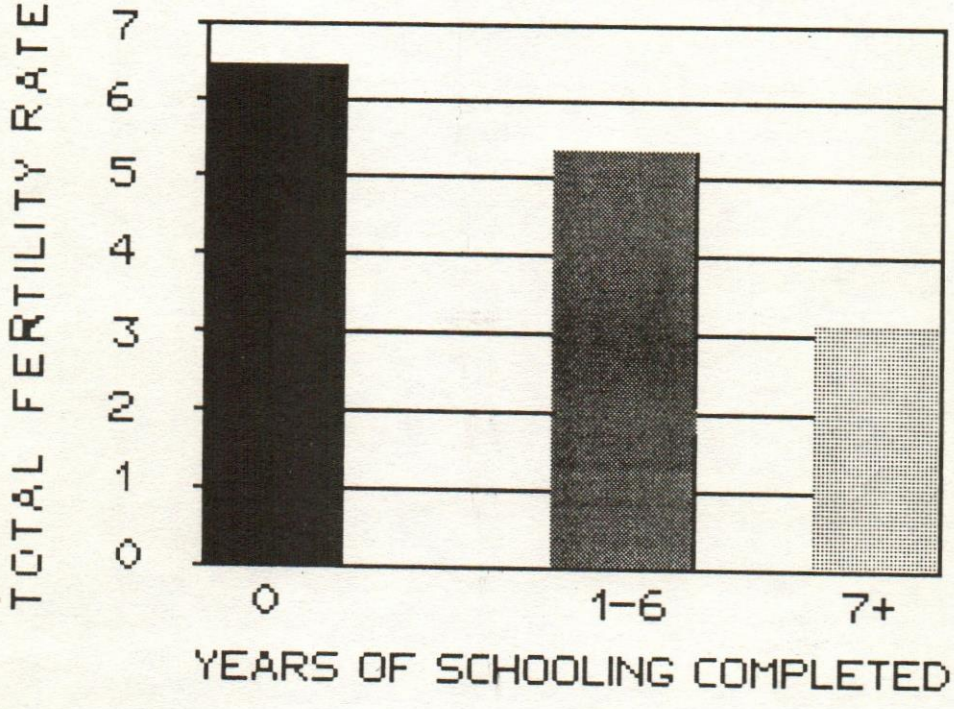
Information from countries around the world can be used to show the relationship between fertility decline and a country's level of development and strength of family planning programme. The information was compiled by W. Parker Mauldin and Robert Lapham in 1984 using data from 88 developing countries. This study showed that among developing nations with relatively advanced social and economic conditions, fertility rates declined an average of 42 percent between 1965 and 1980 in countries with moderate or strong population programmes but declined by only 17 percent in countries with very weak or no population efforts. the same pattern prevailed among countries with a relatively less advanced social and economic setting. Fertility rates declined an average of 29 percent where there was a strong to moderate programme. Where there was a weak or no programme the average fertility rate decline was only 7 percent.

This study is part of an emerging consensus among policy makers and scholars that a strong development effort and a commitment to family planning programmes must be pursued concurrently.

Any effective population programme will cost money. However, the expenditures for population planning programmes are quite low compared to other development activities. During the period 1988 to 1993 it cost about 1455 rupees for every birth that was averted.

The population planning programme ultimately provides savings to the government. For every rupee spent on the population programme the government would save 2.5 rupees in primary education and health care alone within 10 years. thus, the population planning programme more than pays for itself through savings in other sectors.

EDUCATION vs TOTAL FERTILITY
PDHS, 1990-91



CONCLUSION

Rapid population growth has a number of short- term effects on social and economic development that hinder the achievement of development objectives. An effective population planning programme to reduce the rate of population growth can enhance the development effort in a number of ways.

A reduction in the fertility rate would have an immediate effect on the health of mothers and children and would begin to affect school enrollment rates and education expenditures in just 5 years. Dependency ratios would also be affected immediately. long-term effects include those on the requirements for urban services and investment.

Due to the high momentum of population growth, any delay in providing effective family planning services to the population would lead to even greater burdens in the future. The population would grow to 286 million in 50 years if an effective programme is started now. Even a 10 year delay in implementing the programme, however, would mean an additional 90 million people in the population within 50 years.

The current population programme suffers from several constraints, including lack of adequate coverage (only 25 percent of the population is covered by public or private services) and a difficult socioeconomic environment (particularly low rates of education and labour force participation for women).

In order for the programme to succeed several factors are required. The most important of these are:

- Strong political commitment by top leaders at all levels.
- Inter-sectoral approach emphasizing improved female education and employment opportunities.
- Effective health and family planning information provided through mass media and interpersonal channels.
- Provision of family planning services through all health outlets.
- Increased participation of the private sector in family planning.
- Increased funding.
- Maximum coverage, particularly of rural areas and Kachi Abadis.

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