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DEMOGRAPHIC AND ECONOMIC ASPECTS OF  
FAMILY PLANNING  
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THIS REPORT HAS BEEN WRITTEN AT THE REQUEST  
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TO FAMILY PLANNING FOR MEDICAL STUDENTS

## DEMOGRAPHIC AND ECONOMIC ASPECTS OF FAMILY PLANNING

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### INTRODUCTION

1. Pakistan, like many other developing countries of the world, is experiencing an accelerating growth of population. The total population of Pakistan according to the 1961 Census<sup>1</sup> was 93.72 millions. During the 1951-61 intercensal period the population increased at the rate of 2.2 percent per annum [ 7 ]. Some recent estimates show that the population is currently increasing at a rate in excess of 3 percent per annum [ 12 ]. Moreover, the declining mortality which the country is experiencing will further accelerate this rate of growth [ 6 ]. Even if the current rate of population growth continues, the 1961 population of Pakistan will double in about 20 years and will again double by the end of this century.

### GROWTH OF POPULATION DURING 1901-61

2. The basic facts about growth pattern of the population of Pakistan can be observed from Table 1, which indicates that the population of the country has more than doubled during the

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1 Planning Commission has estimated that the 1961 Census had under-enumeration of about 8.7 percent. On this basis the 1961 Census population was adjusted by them from 93.7 to 101.4 millions.

last 60 years. The net increase of population during the first 5 decades i. e. 1901-51 has been 30.17 millions whereas during the last decade 1951-61 it has been 18.05 millions. These figures show that the rate of population increase has been substantially higher during the decade 1951-61 as compared to the previous decades. The annual rate of growth was only 0.75 percent during 1901-31. It rose to 1.25 percent during

Table 1: Population Growth of Pakistan, 1901-1961

Census year	Population (in 000's)	Percent increase since last census	Average annual rate of increase
1901	45,504	-	-
1911	50,937	8.4	0.81
1921	54,363	6.7	0.65
1931	59,146	8.8	0.85
1941	70,279	18.8	1.74
1951	75,672	7.7	0.74
1961	93,720	23.9	2.17

Source: [7]

1931-51 and 2.17 percent during 1951-61. Comparing the current birth and death rates in Pakistan with those prevalent since 1901, it appears that the death rates have declined substantially while the birth rates have remained more or less constant (Table 2.) This phenomenon of high birth rates and declining death rates can be further explained through the theory of demographic transition.

Table 2: Average Annual Birth and Death Rates for  
Undivided India 1901-41 and For Pakistan 1962-65.

Period	Birth Rate	Death Rate
<u>Undivided India</u>		
1901-11	49	43
1911-21	48	47
1921-31	46	36
1931-41	45	31
<u>Pakistan</u>		
1962-65	52	19

Sources: Undivided India [4]

Pakistan [12]

#### DEMOGRAPHIC TRANSITION

3. According to this theory, in an agrarian peasant economy like that of Pakistan, where 87 percent of the total population lives in rural areas and 74 percent of the labour force is engaged in agriculture, high birth and death rates are usually prevalent [7]. Death rates are high due to poor and inadequate diet, insanitary and poor hygienic conditions and the absence of effective measures of preventive and curative medical facilities. Further, in such societies due to their pro-natalistic socio-cultural norms and beliefs high birth rates prevail in order to survive the hazards of high mortality [16]. Most of the developed countries of the world have passed through this process of demographic transition. Historically speaking, in these countries, both birth and death rates were high until the middle of the 19th century. All of these countries went through a pattern of slowly

declining death rates followed by a diminution of birth rates. Ultimately a more manageable balance was achieved between the two [2]. Unlike the experience of Western countries, the mortality decline in developing countries like Pakistan has been quite spectacular. Recent declines in mortality have been mainly due to the concentrated efforts to control epidemics, better public health facilities and of recent advances and innovations in medical sciences. It is expected that the mortality will continue to decline even if the level of living does not improve substantially. However, economic and technological development will further accelerate the decline in mortality rates. It may also be noted that the birth rates in Europe, even prior to the Industrial Revolution were lower and were in the vicinity of 35 per 1000 population, whereas, in Pakistan even today the birth rate is around 50. The growth of population in the Western countries has never exceeded beyond 1.5 percent per annum during any decade [3]. Thus, the overall base population of these developed countries was quite small when they started their industrial development. This factor encouraged greatly in their take-off and ultimately it helped in their technological and economic development. On the contrary a large base population in Pakistan and other developing countries of Asia is a great hindrance to economic development.

#### FUTURE GROWTH OF POPULATION

4. As pointed out earlier, the recent estimates indicate that the crude birth rate in Pakistan is around 50 per 1000 population while the crude death rate is nearly 20. Migration in and out of the country is negligible compared to the total population. Thus, the rate of growth of population is around 30 per 1000. In case,

the population of Pakistan does not follow the classic pattern of demographic transition the sustained high birth rates and declining mortality rates will accelerate the population explosion. Figure I shows the observed trend of population growth from 1901-61 and the projected trend from 1961 to 1985 under the assumption of constant fertility and declining mortality. The constant fertility and declining mortality will result in the increase of population from 93.7 millions in 1961 to about 247 millions in 1985 [17].

This excessive growth of population will have an adverse effect on the social and economic development of Pakistan.

#### IMPLICATIONS OF ACCELERATING POPULATION GROWTH

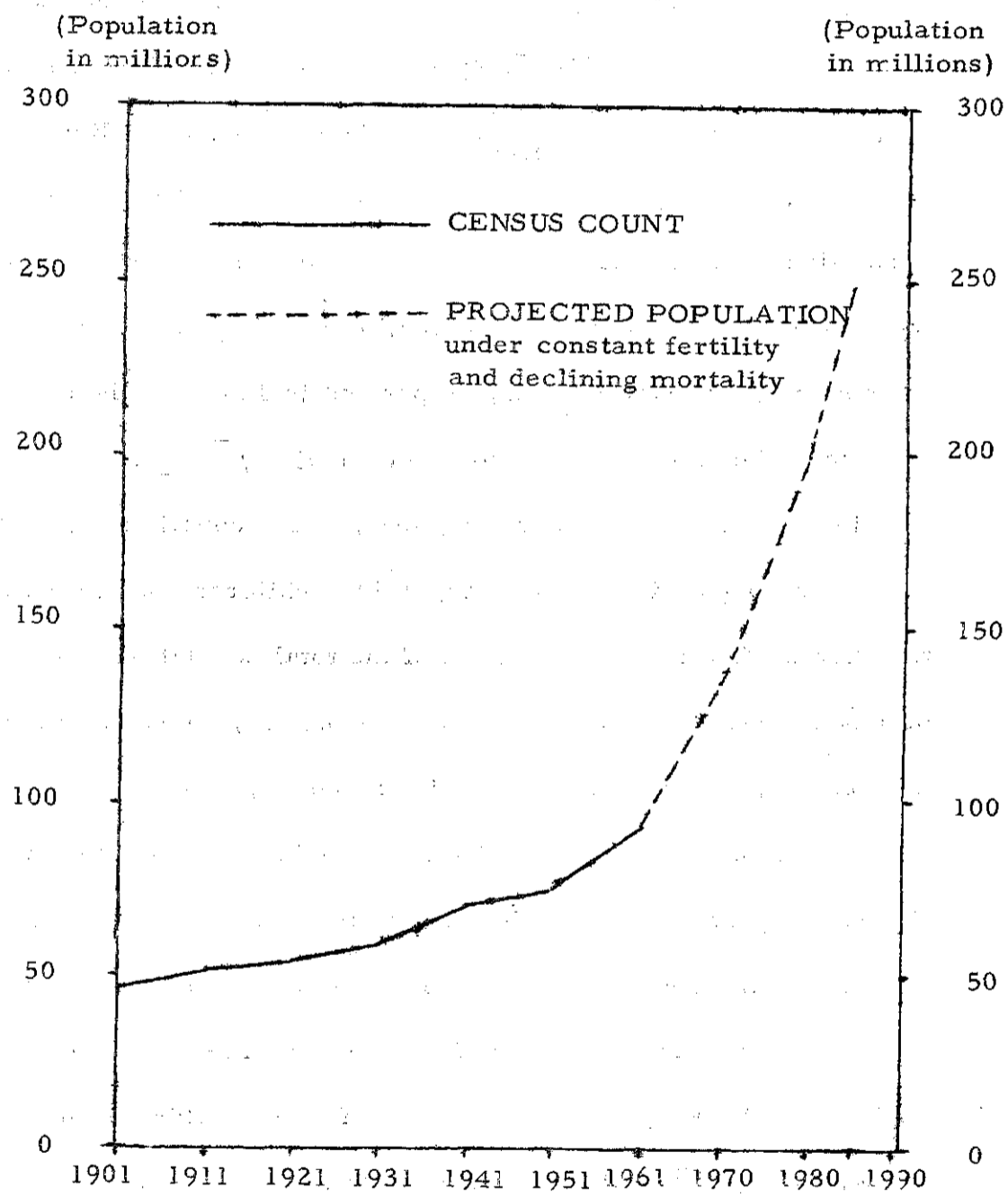
##### Density of Population

5. The total area of Pakistan is 365,529 square miles; of which about 15 percent is in East and 85 percent in West Pakistan.

According to the 1961 Census 922 persons live on one square mile in East Pakistan as compared to 138 persons per square mile in West Pakistan. It may be pointed out that East Pakistan is one of the most densely populated areas of the world.

6. By 1985, the declining mortality and constant fertility will further increase the density of population in East Pakistan to 2538 and in West Pakistan to 346 persons per square mile. East Pakistan which is one of the highest density areas of the world will then have an acute space problem. The situation in East Pakistan will further deteriorate and will become unbearable in the year 2000 when the density of population in East Pakistan will exceed 5000 and in West Pakistan 625 persons per square mile.

FIGURE - I  
TREND OF POPULATION GROWTH IN  
PAKISTAN 1901-1985



Sources: [ 1, 7 ]



### Dependency Burden

7. The children under 15 years of age and persons 65 years and over are considered as dependents and can be regarded as high consuming, low productive age groups, whereas, persons in the age group 15 to 64 are considered to be working or productive population and may be classified as supporters. Relatively constant fertility and declining mortality rates in Pakistan have resulted in a concentration of large number of persons under 15 years of age. According to the 1961 Census there were 41.68 million children under 15 years comprising 44.5 percent of the total population. This is one of the highest proportions when compared with many of the developed countries. For example, the proportion is about 31 percent in U.S.A., 30 percent in Japan and is about 25 percent for most of the European countries [ 13 ]. Dependents also include persons 65 years and over, which constitute 4.1 percent of the total population of Pakistan. Taking children and old persons together we find that 48.6 percent of the total population consists of dependents. This means that there is one dependent for every person in the working ages in Pakistan, compared to one dependent for every 2 persons in the productive ages in the European countries. Another important factor which affects the dependency burden in Pakistan is the low female participation in the labour force, As a result of the high proportion of dependents, a large sum of savings has to be spent on the rearing of young children and upkeep of the old population which otherwise would have been invested in agricultural and industrial development which in turn would have helped to increase the production and ultimately raise the per capita income.
8. The constant fertility and declining mortality particularly of infants and children will further increase the number and

proportion of children in Pakistan. With so many dependent young children, the country's already over-burdened educational institutions will have to face more problems in providing educational facilities. This will further enhance the expenditure on education, particularly in the field of primary education and also on food, health, housing and other social overheads. In each of these fields we are quite backward and the substantial growth of non-productive younger age groups may further place a heavy burden on the development programmes of the country.

#### Education and Job Opportunities

9. According to the 1961 Census about 16 percent of the total population was literate, while only 7 percent of the total literates had 10 or more years of schooling. Low level of education and the shortage of skilled labour are some of the great impediments to the socio-economic development of Pakistan. It may be pointed out that if the fertility level declines, larger sums of investment funds can be diverted from primary to higher and specialised fields of education. This will make it possible to improve the quality, skill and productivity of our population and will also help to attain the desired socio-economic goals rapidly.

10. The total labour force in Pakistan was recorded as 30.2 millions in the 1961 Census. Obviously, births which are taking place currently will have no effect on the size of the labour force for at least 15 years from now. Fertility remaining constant, the labour force is expected to increase by about 144 per cent between 1961 and 1985, reaching a total of about 73.7 millions. Additional jobs will have to be provided to about 44 million persons who will be entering the labour market by 1985. This means that on the average each year about

2.1 million new jobs must be created to absorb those entering the labour force for the first time. According to the Planning Commission [ 10 ] estimates, new jobs will be created for 30 million persons by 1985 and thus 14 million persons will be left unemployed. However, if the fertility declines, the proportion of young people in the country will also decline. Thus, part of the funds allocated for social development can then be transferred to economic development which will generate more job opportunities for the population and will result in increased production, per capita income, and better standards of living.

#### Level of Food and Nutrition

11. The per capita daily food consumption and intake of nutrients for Pakistan are shown in Table 3. It appears from the table that bulk of the diet of the people consists of cereals: rice in East Pakistan and wheat in West Pakistan. The consumption of protective food such as meat, fish, eggs, fruits, vegetables, dairy products etc., is quite meagre and falls short of the requirement of a balanced diet recommended by F. A. O. [ 5 ].

The calorie intake per person is 2152 per day; of this 83 per cent is derived from carbohydrate foods such as cereals, starchy roots and sugar, compared to 57 percent in the developed regions of the world. The per capita daily intake of animal proteins in Pakistan is about 8 grams. This figure is substantially lower compared to 42 grams for Europe, 64 grams for U. S. A. and Canada, 17 grams for Japan and the world average of 24 grams [ 11 ]. Like proteins, the intake of fat is also low in the country. Great deficiency of calcium, vitamins and minerals is also found in the diet of the people. Some recent clinical findings have shown that

poor quality nutritional diets are mainly responsible for malnutrition among children and adults in the form of specific deficiency diseases like Anaemia, Conjunctival Pallor, Kwashiorkor, Marasmus, Conjunctival Dryness, Keratomalacia, Rickets and Osteomalacia etc. [9, 15]. It has been estimated that in Pakistan about one fourth of the population is under nourished and about one half is malnourished. This is consistent with the incidence of under and malnutrition found in other developing countries of the world [11].

Table 3: Per Capita Daily Food Consumption and Nutrient Intake in Pakistan, 1962-66

Food stuffs	Quantity Consumed ( in ozs)	Nutrient intake	Quantity consumed
Cereals	17.48	No. of Calories	2152
Starchy roots	1.40	Total Proteins (gm)	61.6
Sugar and sweets	0.55	Animal Proteins (gm)	8.2
Pulses and nuts	0.86	Fats (gm)	27.8
Vegetables	3.71	Calcium (mg)	365
Fruits	0.25	Vitamin A(i. u)	1648
Meat	0.38	Vitamin C(mg)	34.0
Eggs	0.06		
Fish	0.70		
Milk and milk products	2.52		
Fats and oils	0.44		
Miscellaneous	0.18		

Sources: [9, 15].

12. The accelerating rate of population growth along with continuous deficit of food grains resulting in food imports at the cost of other developmental activities, has become a difficult

problem for the Government. It is expected that the country will become self-sufficient in food by 1970, at least in quantitative terms. However, the qualitative improvement in the dietary standards of the people has to be achieved in order to eliminate the disguised hunger and malnutrition, particularly because a healthy and vigorous population is necessary for better efficiency and ultimately for the rapid development of the country.

#### Housing and Health

13. According to the 1960 Housing Census, on the average 3 persons live in one room. The rapid population growth and low standard of living has deteriorated the living conditions in Pakistan. The housing problem is also complicated because of rapid urbanization which has created permanent slums and overcrowding in the cities. The problem of housing will be further aggravated if the rapid growth of population persists in future.

14. Inadequate nutrition, insanitary and unhygienic living conditions and insufficient medical facilities particularly in rural areas, have contributed to the prevalence of ill health and high morbidity and mortality rates in Pakistan. In spite of the progress achieved in the recent past, the standard of health in the country is still quite low compared to the developed countries. As an illustration, the health facilities available in Pakistan have been compared with those in Britain in Table 4. These figures indicate great disparity in public health facilities and mortality rates between Pakistan and the developed countries like Britain. The public health facilities in Pakistan which are already inadequate, particularly in rural areas, will not be able to cope with the rapidly growing population which will result due to the constant fertility and declining mortality rates.

Table 4: Comparison of Public Health Facilities and Mortality Rates in Pakistan and Britain.

Health facilities/ mortality rates	Pakistan (1965)	Britain (1951)
<u>Ratio of one to total population</u>		
a. <u>Public health facilities</u>		
Doctors	1 : 7,400	1 : 910
Nurses	1 : 32,000	1 : 440
Lady Health Visitors	1 : 115,000	1 : 4,000
Hospital beds	1 : 3,200	1 : 100
T. B. beds	1 : 50 fatal cases	1 : 0.16 fatal cases
<u>Rate per 1,000 population</u>		
b. <u>Mortality</u>		
Crude death rate	19	12.0
Infant mortality rate	143*	22.0*
Maternal mortality rate	30**	0.7**
<u>Rate per 100,000 population</u>		
c. <u>Mortality due to</u>		
Malaria	100	Nil
Diarrhoea/Dysentery	320	Not Available
Tuberculosis	100 - 150	40

Sources: [10, 12]

\* Per 1,000 live births.

\*\* Per 1,000 confinements.

#### Per Capita Income

15. According to some recent estimates, the annual income per capita in Pakistan is Rs. 381 [8]. This figure is substantially lower than that for the developed countries. Even when compared with

the R. C. D. and other developing countries, Pakistan appears to be one of the poorest countries of the world ( Table 5). In view of the unprecedented growth of population in Pakistan, it will require gigantic efforts on the part of the Government to achieve their goal of Rs. 932 per capita income by 1985 [10]. In fact, the accelerated growth of population may even depress the planned increase in per capita income and consequently will reduce the rate of savings and the level of investment. This will ultimately retard our rate of economic development which will create a vicious circle of poverty associated with illiteracy, unemployment, inadequate and poor diet, poor housing and poor health facilities.

Table 5: Annual Per Capita Income for Selected Countries of the World.

Country	Per Capita Income ( In Rs. )	Country	Per Capita Income ( In Rs. )
<u>Developed countries</u>		<u>Developing countries</u>	
U. S. A.	12, 876	Turkey	1, 161
Australia	7, 597	Philippines	1, 051
West Germany	16, 488	Iran	1, 004
U. K.	6, 478	U. A. R.	619
France	6, 350	India	362
Japan	2, 547	Pakistan	381

Sources: [8, 14].

#### CONCLUSIONS

16. Sustained high fertility and declining mortality have accelerated the rate of population growth in Pakistan. If the current growth rate prevails the population will double in about

20 years. This will create problems of density of population relative to land and resources of the country. With the existing high percentage of children to the total population, a high fertility rate will further produce a high proportion of children. Consequently, a large sum of national income will be spent on these non-productive dependents. This will compel the diversion of investment funds to immediate consumption and less productive uses. Reduction in fertility is necessary to decrease the proportion of dependents which will make it possible to divert more resources towards economic development.

17. The low per capita income in Pakistan has created vicious circle of poverty, illiteracy, unemployment, inadequate and poor diet, poor housing and poor health which ultimately has resulted in low working efficiency, low productivity and retardation of economic growth. In spite of the governmental efforts to raise the standard of living of the masses, the accelerated growth of population will have a shattering impact on the social, economic and political conditions in Pakistan. A reduction in birth rate is essential if we want to increase the per capita income and want to eliminate disguised hunger, malnutrition, illiteracy, unemployment and underemployment from the country. Thus, the crux of the problem lies in reducing the fertility of the population. A dedicated family planning programme is a must for the rapid development of the country. A successful family planning programme will retard the growth of population, and will enable the Government of Pakistan to achieve its targets of social and economic development.



## REFERENCES

1. Bean, Lee, L., M. R. Khan and A. Razzaque Rukanuddin, Population Projections for Pakistan 1960-2000, Monograph No. 17 Pakistan Institute of Development Economics, Karachi, 1968.
2. Coale, Ansley J. and Edgar M. Hoover, Population Growth and Economic Development in Low Income Countries, Princeton University Press, Princeton, 1958.
3. Concepcion, Mercedes, B. "The Population of the Philippines" 1st Conference on Population 1965, Population Institute, University of the Philippines, Quezon City, 1966.
4. Davis, Kingsley, The Population of India and Pakistan, Princeton University Press, Princeton, 1951.
5. Food and Agricultural Organization, Third World Food Survey, Freedom From Hunger Campaign, Basic Study No. 11, Rome, 1963.
6. Khan, M. K. H., "Public Health Programmes and Mortality Decline in Pakistan" Proceedings of the Pakistan Statistical Association, Volume 13, 1965.
7. Pakistan, Ministry of Home and Kashmir Affairs, Census of Pakistan, 1961, Volume I, Pakistan Manager of Publications, Karachi.
8. Pakistan, Central Statistical Office, Report on the Quarterly Survey of Current Economic Condition in Pakistan, Household Income and Expenditure, (July, 1963 to June, 1964) 1967.
9. Pakistan, Directorate of Nutrition Survey and Research, Preliminary Report, West Pakistan Nutrition Survey 1964-66.
10. Pakistan, Planning Commission, Third Five Year Plan 1965-70, 1965.
11. Razzaque, A. Rukanuddin, Population Growth and Future Food Requirement for Pakistan, 1960-85, Forthcoming Monograph of the Pakistan Institute of Development Economics, Karachi.
12. Seltzer, William, Benchmark Demographic Data for Pakistan, A Review of Summary Estimates Derived from the PGE Experiment, Research Report No. 66, Pakistan Institute of Development Economics, Karachi, 1968.
13. United Nations, Division of Social Affairs, Demographic Year Book, 1964, New York, 1965.
14. United Nations, Department of Economic and Social Affairs, Yearbook of National Accounts Statistics, 1965, New York, 1966.
15. United States, Department of Health, Education and Welfare, Public Health Service, Nutrition Survey of East Pakistan March 1962-January 1964, 1966.
16. Yusuf, Farhat, Differential Fertility in Lahore, Unpublished Ph. D. dissertation submitted to Australian National University, Canberra, 1966.

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