Research Report No. 25

THE 1998 POPULATION CENSUS

SOCIAL POLICY AND DEVELOPMENT CENTRE

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ABBREVIATIONS

FATA	Federally Administered Tribal Areas
FBS	Federal Bureau of Statistics
GDP	Gross Domestic Product
HDI	Human Development Index
NFC	National Finance Commission
NGO	Non-Governmental Organisation
NIPS	National Institute of Population Studies
PDS	Population and Demographic Surveys
PGS	Population Growth Survey
PIHA	Pakistan Integrated Household Surveys
PPP	Purchase Price Parity
SAARC	South Asia Association for Regional Cooperation
UNDP	United Nations Development Programme

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CHAPTER ONE
INTRODUCTION[1]

Censuses of population are undertaken periodically by nations to enumerate their endowment of human resources. Nations can prosper only if they have a true picture of the human resources and the endowment of skills available. In almost all countries the distribution of seats in the legislature is determined on the basis of the regional scatter of the population. In a number of countries which are formed by a federation of autonomous states, regions or provinces, resources, particularly finances, are shared on the basis of the inter-regional distribution of the population. The information obtained from a census of population is used in a variety of ways. Suffice to say thet these censuses form the bedrock on which all planning for the economic, social, cultural and political well-being of the people rests.

Since the independence of Pakistan, censuses have been conducted five times. The first census took place on 1st of February 1951. Its objective was to collect demographic information along with the broad aspects of social and economic conditions in the country. The second census of 1961 was conducted between 12th January to 1st February. The third census was due in 1971 but due to unfavourable political conditions in the country, was postponed till 16th September 1972. The enumeration lasted till 30th of the month. Then came the *defacto*[2] and *dejure*[3] based 1981 population census. The basic data on sex, age, marital status, religion, literacy, educational attainment and language spoken was collected on complete count basis while the enumeration period was spread over 15 days starting from 1st of March.

The fifth national census was conducted after a gap of 17 years from March 2 to 18, 1998 with the help of the bureaucracy and the army. It has been argued that the presence of the army has helped in the collection of correct data and that the element of under-enumeration has been only marginal. The government acknowledges that this has occurred in Balochistan where vested interests had boycotted the count[4]. Subsequent cross-verification estimates that this was to the tune of not enumerating a total of 521,004 persons from 69,140 households in 360 enumeration

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1 The authors would like to acknowledge the guidance and comments of Dr. Hafiz A. Pasha

2 A *de facto* census enumerates only those households members who reside with the household and are physically within the limits of the settlement where the household is located.

3 A *de jure* census enumerates all household members, even though they may be temporarily absent.

4 Opponents of the government, however, have pointed to several lapses during the count, particularly in the more volatile and strife-torn areas and have also levelled allegations that the results are based on an intent to maintain the status quo regarding the inter-governmental and inter-provincial sharing of resources and power. These reservations can only be set aside through a truly independent cross-check.

blocks. A conscious exclusion from the census were the refugees from Afghanistan and such other foreign nationals. To reduce the time lag between the count and the publication of the statistics derived from this mammoth exercise[5], the Population Census Organisation has used the latest state-of-the-art technology - Optical Mark Readers (OMR) - to scan the completed forms. The use of the OMR has also eliminated transcription errors, thereby, adding to the accuracy of the information. In the first phase national database form was distributed along with house listing during the first three days. In the second phase civilian enumerators besides collecting the database form (the form was required to be attested by armed force or gazetted officer) made entries in the population census forms while army personnel also filled in a form on the basis of the replies from the household.

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[5] 300,000 personnel employed at a cost of Rs. 1.40 billion. The census was completed in 17 days with every enumerator completing at least 20 forms daily. The field staff comprised 180 census district officers, 2,500 charge superintendents, 16,500 circle supervisors and 110,000 enumerators. Each census block consisted of a maximum of 250 households.

CHAPTER TWO
KEY TRENDS

Changes in the demographic profile of population reveal the success or failure of government policies. For instance, a rapid decline in the growth rate of population is a testament to the success of the population planning effort. Similarly, a decline in the rate of urbanisation indicates that the government's policy to spread the benefits of development more evenly across regions and to backwards areas in particular has been successful. This Chapter attempts to trace the changes in such characteristics of the population in Pakistan over the last fifty-odd years.

2.1 Overall Population and its Distribution

According to the 1998 census, Pakistan's population was 130.6 million (see table 1) with an urban-rural composition of nearly 1:2 (32.5 percent in urban areas). This rapid increase in urban population can be attributed to three major factors, two of which are geo-political and only one economic. The geo-political factors are: one, the continued influx of refugees from India after the post-partition period, and two, the influx of refugees following the second partition in 197. The economic factor is the transformation of Pakistan from an agrarian base towards an industrial one.

Table 1 : Pakistan Province Wise Population by Urban / Rural, (1951 - 1998) Census

Figures in Million

Area	1951			1961*			1972			1981			1998		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Pakistan	**33.7**	**6.0**	**27.7**	**46.1**	**10.4**	**35.7**	**65.3**	**16.6**	**48.7**	**84.3**	**23.9**	**60.4**	**130.6**	**42.5**	**88.1**
Punjab	20.6	3.6	17.0	27.4	5.9	21.5	37.6	9.2	28.4	47.3	13.0	34.3	72.6	22.7	49.9
Sindh	6.0	1.8	4.2	9.0	3.4	5.6	14.1	5.7	8.4	19.0	10.8	8.2	30.0	14.7	15.3
NWFP	4.6	0.5	4.1	6.1	0.8	5.3	8.4	1.2	7.2	11.1	1.7	9.4	17.6	3.0	14.6
Balochistan	1.1	0.1	1.0	1.4	0.2	1.2	2.4	0.4	2.0	4.4	0.7	3.7	6.5	1.5	6.5
F. Capital	0.1	.--	0.1	0.1	.--	0.1	0.2	0.1	0.1	0.3	0.2	0.1	0.8	0.5	0.3
FATA	1.3	.–	1.3	2.0	.–	2.0	2.5	.--	2.5	2.2	.--	2.2	3.1	0.1	3.0

Note :- .– represents a number which is less than 0.1 million

* The Planning Commission has estimated that there was under-enumeration in the 1961 census to the tune of 7.50 percent

Source : Population Census Organization; *Census of Population*; several issues

Punjab continues to have an overwhelmingly large proportion of the population, its share has been declining over time from around 61 percent in the 1951 census to less than 56 percent in the 1998 census. From both tables 1 and 2 it would appear that the largest increase in population has been witnessed by Sindh where the population has increased five-fold from about 6 million

in 1951 to about 30 million in 1998. As a consequence, its share in the overall population has increased by more than 5 percentage points from under 18 percent in 1951 to 23 percent in 1998.

Islamabad was carved out as a territory after its creation as the capital in 1961. It is a typical capital city whose population has increased from around 100,000 rural residents in the 1951 census to about 800,000. Statistics on Islamabad's day-time population, which is made of both the residents and a fairly large commuter crowd from nearby Rawalpindi are not available.

Balochistan's population has increased six-fold from 1.1 million in 1951 to about 6 million in the 1998 census. Its population has declined slightly to about 5 percent in 1998. It would appear that over the last seventeen years, there has been some out migration from the province.

Table 2 : Trends in Regional Distribution of Population

(% distribution)

Area	**1951**	**1961***	**1972**	**1981**	**1998**
Pakistan	100	100	100	100	100
Punjab	60.9	59.4	57.6	56.1	55.6
Sindh	17.9	19.4	21.7	22.6	23.0
NWFP	13.5	13.4	12.8	13.1	13.4
Balochistan	3.5	3.2	3.7	5.1	5.0
F. Capital	0.3	0.3	0.4	0.4	0.6
FATA	3.9	4.3	3.8	2.6	2.4
Source : Population Census Organisation; *Census of Population*; several issues					

2.2 Population Growth Rate

The growth rate of population is indicative of the level of social and cultural development in the country as this reflects the level and use of mechanisms to control the growth of population. The benefits of economic growth can be maximised if the natural rate of growth of a country's population is reduced [Devi 1996]. This is indicated through an increase in the per capita income of the people. This can only occur if a demographic transition takes place and the built-in structure of the population changes.

2.2.1 *Demographic Transition*

Demographic transition is the shift from a stable population at high birth and death rates to one at low birth and death rates. Herrick and Kindelberger (1983) state that the stages in the transition are characterised by the following :

1 Initially both birth and death rates are high and reproduction is largely unchecked, yet not at the biologically maximum. Death rates are erratic over time as they are a consequence of famine, epidemics and other natural disasters beyond the control of man.

2 Death rates fall as health delivery systems and technology improve. However, no simultaneous effort is made to check fertility and birth.

3 Fertility and birth rates are curtailed through population planning efforts. Simultaneous efforts to improve health delivery systems and technology continue also to be made.

4 Both birth and death rates finally level off to achieve a stable low rate of growth in the population or continue to coalesce, perhaps exponentially, converging towards zero. International experience [Herrick and Kindelberger 1983, Kirk 1971, Tietelbaum 1975, Tabah 1980] shows that transition can occur at different speeds and is dependant on the following:

1 low growth rate of population occurs due to high death as well as high birth rates

2 growth divergence between high birth rates and falling death rates leads to sharp increase in the population growth and

3 if birth rates tend to fall more rapidly, narrowing the gap between the birth rate and the death rate, then the growth rate of the population will reduce.

These studies argue that in rich countries transition was slower because changes in both the birth rate and the death rate were in step with each other. By contrast, poor countries have seen a rapid decline in mortality, and, therefore, have faced increases in their population growth rates. Indications are that birth rates are now declining far more rapidly owing to concentrated efforts in making people aware of the benefits of low birth rates.

According to the Transitionists, an increase in income initially accelerates the population growth rate, mainly through lower mortality resulting from better nutrition and a greater access to health facilities. However, as higher income levels are attained, birth rates decrease and eventually there is a stabilisation in the growth rate of the population. According to another strand of thinking, technological progress counters the effect of diminishing returns and leads to income growth through the discovery of new resources, a more efficient use of existing resources and

an improvement in the quality of resources. But the latter strand of thinking does not have the same pattern as the first.

2.2.2 *Trends in the Growth of Population*

During the past seventeen years the population of Pakistan has increased by an average of 2.61 percent annually (table 3). The annual growth rate has decreased from 3.06 percent observed during the period 1972-1981. Factors responsible for the decline in the rate of population growth are discussed later. A decline in the rate of growth is witnessed both in the rural and urban areas, but more so in the latter. This implies that the process of urbanisation has slowed down. Urban population growth rate has fallen from 4.88% in 1951-61 to 3.45% in 1981-98. It is generally accepted that this can be attributed to an awareness of the need for planning the size of families which has resulted from both the campaigns for this run by government and non-governmental organisations (NGOs) and the rapid increase in access to education (through the school network) and knowledge(through access to the media). Table 3, shows that this growth rate in urban population remained above four percent in the first four inter-censal periods. However, the results of the latest census indicate that it has fallen to below four percent. This trend reflects a slowing down in the pace of urbanization in the country, which is primarily attributable to a decline in the rate of rural-urban migration.

The growth in the population of the federal capital at more than twice the average for the country in the last seventeen years can be attributed to a variety of factors. Anecdotal evidence attributes this principally to the rapid growth in government employment in the 80s, and to the shift of population and economic activity away from the strife torn urban areas of the rest of Pakistan, particularly Karachi and Lahore. From the figures shown in table 3, the higher than average growth in the populations of both Sindh and the NWFP can be attributed to in-migration. However, this can only be established after the detailed final results of the census are published.

The rate of population growth in the rural areas of Pakistan has been consistently lower than in the urban areas. However, Balochistan has been the outlier, till the latest census. The 1998 census reveals that Balochistan has also joined the ranks of the other regions of Pakistan and that the growth rate of urban population has now outstripped that in the rural areas.

Table 3: Annual Population Growth Rates

Administrative Area	(1951-61)			(1961-72)			(1972-81)			(1981-98)		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
PAKISTAN	**3.18**	**5.66**	**2.57**	**3.04**	**4.13**	**2.7**	**3.06**	**4.38**	**2.58**	**2.61**	**3.45**	**2.25**
Punjab	2.92	5.12	2.4	2.77	3.93	2.43	2.75	4.25	2.23	2.55	3.31	2.24
Sindh	4.06	6.79	2.71	3.98	4.57	3.6	3.56	4.4	2.96	2.71	3.45	2.09
NWFP	3.07	4.91	2.82	2.69	3.36	2.59	3.33	4	3.21	2.75	3.47	2.62
Balochistan	2.23	5.46	1.7	4.51	4.28	4.55	7.09	6.43	7.21	2.48	4.81	1.93
FATA	4.08	-----	3.94	1.97	-5.8	2.04	-1.5	-----	-1.4	2.1	-----	1.94
F. Capital	2.95	-----	2.95	5.34	-----	1.82	4.49	12. 3	-1.8	5.15	5.7	4.22

Source : Population Census Organisation; *Census of Population*; several issues

Estimating the rate of growth in the interregnum between censuses is a prime activity of most statistical agencies around the world. These are used to estimate the size and composition of the population year-to-year and are useful for planners as these are the only source which can discount the effect of migration. In other words, these studies can and do reveal the natural rate of growth in the population. These can also be used as a proxy in the event that census cannot be undertaken for any one or more of a variety of reasons. In Pakistan the Federal Bureau of Statistics (FBS) has conducted these periodically since the early 1960s. These are published as the Population Growth Survey (PGS) and the Population and Demographic Surveys (PDS).

Based on a longitudinal registration method of estimating population growth rate, the FBS in collaboration with the United States Agency for International Development had undertaken the first such exercise in 1962. The results (see table 4) show that the natural rate of increase in population between 1962 and 1965 was 2.7 percent. Compared to the inter-censal growth rate of 3.04 percent observed between 1961 and 1972. A collation of the results from several issues of the PGS and the PDS, in table 4, shows a continuous decline in the natural rate of population growth. According to the PDS, the natural rate declined from an average of 2.97 percent between 1989 and 1993 to 2.76 percent in 1995 after which no demographic surveys have been published. The inter-censal population growth rate of 2.61 percent per year between 1981 and 1998 censuses would, therefore imply that the real growth rate of population at the end of the millennium could well be substantially lower. This contention can only be proved correct after the results from the next post census demographic survey are available.

Table 4: Natural Rate of Increase of Population in Pakistan

Years	Natural Rate of Increase of Population (%)		
	Total	Urban	Rural
1995	2.76	2.48	2.88
1993	2.88	2.55	3.04
1989-93 (average)	2.97	2.68	3.11
1984-88 (average)	3.18	3.01	3.26
1976-79 (average)	3.23	4.03	4.38
1962-65 (LR)	2.70	-	-

LR ~Longitudinal Registration

Source: Federal Bureau of Statistics; *Population Growth Survey*; several issues
Federal Bureau of Statistics; *Population and Demographic Survey*; several issues

The ranking of provinces in terms of population growth rates has been changing from one census period to another. Between 1972 and 1981, the fastest growth rate was observed in Balochistan, due largely perhaps to more comprehensive coverage of the population in the province of the census. Sindh came second, followed by NWFP and the Punjab. This pattern of growth has altered fundamentally between 1981 and 1998. The North West Frontier Province now has the highest growth rate, while Balochistan has the lowest growth rate. Sindh has maintained its position, while Punjab has improved its ranking from the lowest to third.

However, it needs to be emphasized that while the rankings have changed the inter-provincial variation in growth rates has decreased. For example, the co-efficient of variation in growth rates between 1972 and 1981 was 91% which has fallen to 45% between 1981 and 1998. This implies that the phenomenon of inter-provincial migration has declined in importance during the last two decades.

2.3 International Comparisons

How do the key demographic indicators of Pakistan compare with similar countries and with its neighbours and proximate countries in the region? Has its efforts at curtailing the population explosion resulted in lowering this to comparable levels in other countries? Table 5 attempts to answer these questions. The selection of countries was based on two criteria : one, that they either belonged to the comity of nations forming the South Asia Association of Regional Cooperation (SAARC), or two, that they were Islamic countries with 1995 population in excess of 25 million. In table 5 the Human Development Index (HDI) rank for 1998 has been indicated to show where each country stands in their level of development.

Comparing Pakistan's population growth rate to the other countries of the SAARC, it would appear that it has the second highest growth rate over the last three-and-a-half decades. Compared to all sample countries for the period 1970 to 1995, Pakistan's growth rate of population is amongst the highest. The growth rate of population in the last two-and-a-half decades in each of the countries, except Nepal, Bhutan and Iran has shown a decline from that in the 1960s. Sri Lanka and Egypt have shown declines of 0.9 and 0.8 percentage points respectively. Comparatively, Pakistan has been able to achieve a slowing down of the growth rate by only 0.3 percentage points.

Table 5 : Cross-country Comparison on Population Dynamics in Selected Developing Countries

Country	Real GDP per Capita (PPP $) 1995	Population (in millions)			Population Growth Rate (%)		Urban Population as % of total	
		1960	1970	1995	1960 to 1970	1970 to 1995	1970	1995
Pakistan (138)	2,209	46.1*	65.3*	130.6*	3.0	2.7	25*	32*
SAARC Countries								
Bangladesh (147)	1,382	51.4	66.7	118.2	2.6	2.3	8	18
Bhutan (155)	1,382	0.9	1.0	1.8	1.1	2.1	3	6
India (139)	1,422	442.3	554.9	929.0	2.3	2.1	20	27
Maldives (95)	3,540	. . .	0.1	0.3		3.0	13	27
Nepal (152)	1,145	9.4	11.3	21.5	1.9	2.6	4	10
Sri Lanka (90)	3,408	9.9	12.5	17.9	2.4	1.5	22	22
Muslim Countries with large Populations								
Turkey (69)	5,516	27.5	35.3	60.8	2.5	2.2	38	69
Iran (78)	5,480	21.6	28.4	68.4	2.8	3.6	42	59
Indonesia (96)	3,971	96.2	120.3	197.5	2.3	2.0	17	35
Egypt (112)	3,829	25.9	35.3	62.1	3.1	2.3	42	45
Nigeria (142)	1,270	42.3	55.1	111.7	2.7	2.9	20	40

Note : * for the censuses of 1961, 1972 and 1988; Growth rates for Pakistan are inter-censal
Source : United Nations Development Programme; *Human Development Report*; 1991 and 1998
Population Census Organisation; *Census of Population*; several issues

In 1970 Pakistan had about a quarter of its population resident in urban areas. By 1998 this had increased to nearly a third of its population. This was the highest rate of urbanisation in the SAARC region, but substantially lower than in the sample of Islamic countries. Pakistan's rate of urbanisation falls somewhere in between those of countries with similar real per capita GDP to Pakistan's. This would tend to indicate that Pakistan is somewhere mid-way towards the higher rate of large urbanisation seen in the developed countries. One may, therefore, deduce that Pakistan has to wait a while yet before it can join the ranks of even the newly industrialising countries of the world.

2.3 Gender Ratio

The gender ratio is defined as the number of males per 100 females. As family structures in South Asian countries are patriarchal and male children are preferred, the gender ratio has been adverse with respect to women. In addition, there is a tendency for under-reporting of females, especially teenage unmarried daughters, in the more backward areas of the country. Further, in Pakistan, contrary to most other countries, life expectancy for females is lower than that for males. Consequently, the proportion of males to females is likely to exceed 1. The gender ratio has been continuously declining over the last few decades. For the country as a whole, it was 114 in 1972 which fell to 111 in 1981 and has now declined to 108 (see table 6). This may be due partly to an increase in the life expectancy of females as a consequence of the Expanded Programme for Immunisation and better ante-and post-natal care given to women. This could also be attributed to a lessening of societal taboos against reporting the presence of the females.

Table 6: Gender Ratio, Rural and Urban, by Province in Pakistan

Admin. Area	1972	1981	1998
PAKISTAN	**114**	**111**	**108**
Urban	**119**	**115**	**112**
Rural	**113**	**109**	**106**
Punjab	116	111	107
Urban	118	114	110
Rural	115	110	106
Sindh	115	111	112
Urban	121	116	113
Rural	111	107	110
NWFP	108	109	104
Urban	118	117	112
Rural	107	107	103
Balochistan	113	112	115
Urban	120	121	122
Rural	112	110	108
FATA	103	108	109
Urban	145	-	119
Rural	103	-	108
Federal Capital	124	119	116
Urban	149	-	121
Rural	113	-	108

Source: Population Census Organization; *Census of Population*; several issues

The highest gender ratio of 115 is observed in the relatively backward province of Balochistan. This is in direct contrast to all other regions in the country, except the Federally Administered Tribal Areas (FATA), which have seen an improvement in the gender imbalance.

The urban areas have a higher male ratio than the rural areas primarily due to the migration of males in search of jobs. This is borne out by the example of both the NWFP and Balochistan, which are both considered to be provinces which provide the labour force for the others in Pakistan. In NWFP the comparative numbers are 112 and 103 and in Balochistan 122 and 113.

2.4 Age Structure

The structure of population is determined by a number of factors like fertility, mortality and migration. The pyramid is defined as the pattern created when the people are grouped by age so that the size of each group represents the number of people in a given age range. The age profile of the population determines, to some extent, the types of services that may be required. For instance, a disproportionate bulge in the 0-4 years would reveal the need for a more

aggressive population planning programme. A bulge in the proportion of the middle ages in the population pyramid would call for health services geared to cater to this in future years.

The age profile of the population from the several censuses of population (see table 7) has shown little variation across census years (see also chart 1). However, in the 1998 census a slight difference of about 1 percent is observed in the initial age groups of 0-4, 5-9 and 10-14 years. The 5-9 age group represents children of primary school going ages and any decrease in this cohort will automatically result in improving the enrollment rate, provided that the growth in enrollment does not decline. A decline in the 0-4 year cohort represents a future slackening of pressure for the provision of additional school buildings initially at the primary level. This is attributable to the decline in fertility rate.

Table 7: Age Pyramid

AGE PYRAMID	Number (000)			As Percent of Total		
	1972	1981	1998	1972	1981	1998
Total Population	65309	84254	130580	100	100	100
Population 0 -4 Years	9851	12948	19069	15.1	15.4	14.6
Population 5 -9 Years	10624	13485	20435	16.3	16.0	15.6
Population 10 - 14 Years	8198	11083	16893	12.6	13.2	12.9
Population 15 - 19 Years	5568	7947	13519	8.5	9.4	10.4
Population 20 - 24 Years	4757	6560	11774	7.3	7.8	9.0
Population 25 - 29 Years	4855	5606	9801	7.4	6.7	7.5
Population 30 - 34 Years	4143	4731	8303	6.3	5.6	6.4
Population 35 - 39 Years	3467	4301	6296	5.3	5.1	4.8
Population 40 - 44 Years	3205	3958	5780	4.9	4.7	4.4
Population 45 - 49 Years	2427	31476	4605	3.7	3.7	3.5
Population 50 - 54 Years	2425	3029	4181	3.7	3.6	3.2
Population 55 - 59 Years	1235	1641	2765	1.9	1.9	2.1
Population 60 - 64 Pears	1856	2256	2683	2.8	2.7	2.1
Population 65 Years and above	2698	3561	4466	4.1	4.2	3.4

Source : Population Census Organization; *Census of Population*; several issues

2.5 Household Size

The size of the typical household or the family, as the unit of statistical enumeration, is also central to the study of income maintenance, economic dependency, savings, fertility and social welfare. It highlights the role of joint family system, housing pressure, etc. In census parlance a household is defined as the sum total of people sharing a common cooking facility, living and eating together. Thus at one end of the scale a housing unit could comprise of a number of

households even though it may have one dwelling unit, or at the other end of the scale a household could be based on just one individual occupying multiple dwelling units.

The average household size according to the official figures of the 1981 census was 6.7 persons. In 1998 this is reported to be 6.6 persons (see table 8). While the size of rural households has remained static, the average size of an urban household has decreased from 7 persons to 6.5 persons. This highlights either of two phenomena, one, that the tendency is for the formation of nuclear households has increased, or two, that there has been lessening of pressure on housing. In all likelihood, both factors are impacting on the size of households in urban areas. However, if the major cause for a reduction is attributable to the formation of nuclear families, then this would imply substantial pressures on urban physical and social infrastructure for services due to the resulting increase in the number of housing units.

Table 8: Average House Hold Size, Rural and Urban, by Province of Pakistan

Administra-tive Area	1961			1972			1981			1998		
	Over-all	Urban	Rural	Over-all	Urban	Rural	Over-all	Urban	Rural	Over-all	Urban	Rural
PAKISTAN	**6.4**	**6.3**	**6.5**	**6.4**	**6.4**	**6.3**	**6.7**	**6.6**	**7**	**6.6**	**6.8**	**6.5**
Punjab	5.4	5.8	5.3	6.5	6.9	6.4	6.4	6.3	6.9	6.8	6.9	6.7
Sindh	6.2	6.3	6.1	6.2	6.1	6.2	7	7	7	5.8	6.5	5.3
NWFP	8.4	6.8	8.7	6.1	6.1	6	6.9	6.8	7.2	7.6	7.2	7.7
Balochistan	6	5.5	6.1	6.3	6.3	6.3	7.4	7.3	7.6	6.4	7.4	6.2
FATA	---	---	---	---	---	---	8.3	8.3	---	8.7	8.4	8.8
Federal Capital	----	----	----	----	----	----	5.7	6	5.7	5.8	5.6	6.3

Source : Population Census Organization; *Census of Population*; several issues

It is interesting to note that the average household size continued to increase from 1961 to 1981, implying probably a worsening of the shortage of housing in the country. It has fallen somewhat for the first time in 1998 perhaps due to either a decline in fertility or an upsurge in construction. The latter phenomenon is visible in most urban areas in Pakistan. The inflow of home remittances has contributed to an increase in construction activity, expecially in the decade of the 80s.

2.6 Rate of Urbanization

Population explosion, declining land productivity, rising expectations and a search for better employment and living conditions has historically motivated migration from rural to urban areas, thereby contributing the process of urbanization(see table 9). According to the 1998 census, over 32 percent of the population now resides in cities as compared to 28 percent in 1981.

Table 9: Percentage Share of Urban Population

Administrative Area	1951	1961	1972	1981	1998
PAKISTAN	**17.7**	**22.5**	**25.4**	**28.3**	**32.5**
Punjab	17.4	21.5	24.4	27.6	31.3
Sindh	29.2	37.9	40.5	43.3	48.9
NWFP	11.1	13.2	14.3	15.1	16.9
Balochistan	12.4	16.9	16.5	15.6	23.3
FATA	0	1.3	0.5	0	2.7
Federal Capital	0	0	32.6	60.1	65.6

Source : Population Census Organization; *Census of Population*; several issues

The highest rate of urbanization is observed in Sindh province and the federal capital territory of Islamabad, with urban population shares of 49% and 66% respectively. It is likely that in the next few years, the urban population of Sindh will exceed its rural population, with fundamental implications on the pattern of electoral representation. The urbanization rate in Punjab is close to the national average, while the two smaller provinces have relatively low shares of urban population at 23 percent for Balochistan and 17 percent for NWFP.

CHAPTER THREE
IMPLICATIONS OF CENSUS FINDINGS

Information on the size, growth, structure and distribution of population in the periods between censuses of population are based either on samples or on trend extrapolations of the base year's information. These are used in the interim periods for a variety of reasons ranging from the allocation of resources or power or for the estimation of social and other economic indicators. These extrapolations and results from surveys are only proxies for the actual factors derived from censuses, and depending on the biases built into such estimates can skew the results substantially. In this Chapter an attempt has been made to compare the bases for the allocation of resources on the one hand and the performance of the social indicators, which are reflective of the level of development, on the other. The 1998 census has counted the population of Pakistan to be 130.6 million. Estimates of the Planning Commission for 1998 place this at 139.0 million. The divergence of over 8 million people, or 6.4 percent, has had substantial impact on a number of economic and social indicators.

3.1 Per Capita Income

One measure of the economic well being of a nation is its national income, particularly that component which is contributed by its internal economy- the domestic producing, trade and service sectors. The economic well-being of its people is measured as the income per person, or in economic terms the *per capita income*. This is determined as the ratio of the total national income to the total population. Thus this measure of economic well-being is suceptible to any variations in either computing the numerator (national income) or estimating the denominator (the population).

In table 10 the sensitiveness of this measure to the size of the population can be seen clearly. In fiscal year 1981 (corresponding to the year 1981-82) the per capita income was Rs. 2,911 based on a mid-year estimate of the population derived from the 1981 census. However, as a result of the actual derived size of the population, using the 1998 census, this has increased *ex-post* to Rs 2,941, that is by 1.03 percent. By fiscal year 1998 the comparative figure of per capita income use the two denominators, the differential income in current terms had increased by Rs. 1,535 or 8.6

Table 10: Per Capita Income, Pre Census and Post Census at Current Prices

(*Rupees per capita*)

Year	Pre Census	Post Census
1981	2,911	2,941
1990	6,768	7,150
1995	13,003	13,964
1996	14,595	15,732
1997	15,985	17,298
1998	17,860 *(US$ 457)*	19,395 *(US$ 486)*

Source : Ministry of Finance, Economic Adviser's Wing; *Economic Survey 1997-98*; 1998; SPDC Estimates

percent which is not a small number. Translated into dollar terms this represents percapita incomes of US $ 457 using the 1981 based estimates of population and US $ 486 on the basis of the 1998 head count of population.

3.2 Revenue Sharing

Revenue sharing in Pakistan between the several governments is governed initially first by defining the pool of taxes making up the pool and then its sharing between the federal government and the provinces. Once this inter-governmental transfer of revenues has been determined, then the allocation of shares to individual provinces is undertaken. Provincial governments in Pakistan have traditionally agreed to a formula which is based solely on one criterion, the share of population resident in each province. This share is the root cause of acrimony and dispute across between provinces, not only for the sharing of revenues, but also the allocation of seats in the National Assembly, access to both public sector employment and development funds, and in some instances implicitly also to educational and training opportunities within and outside Pakistan.

The new National Finance Commission (NFC) Award was implemented from 1st July 1997 during the period of a caretaker government. This award was delayed as there were substantial differences between the provinces regarding the inter-provincial distribution of population. Each province was arguing for a higher growth rate of its population - using the 1972-1981 inter-censal growth rate as the base. This acrimony was finally settled by adopting a compromise developed on the basis of the studies undertaken by the National Institute of Population Studies (NIPS). These studies suggested that the revised shares were only marginally different from those of the 1981 census. It was agreed in the 1997 Award that irrespective of the results obtained from the next census, the sharing of revenues during the life span of the 1997 Award would remain constant on the basis of the compromise arrived at. This,. Therefore, removed the possibility of any internecine acrimony between the provinces.

It is expected that in future the distribution of population across provinces revealed by the 1998 census will be used as the basis or one of the bases for the Awards. If population is to continue as the only basis for the allocation of revenues, then the implications could be fundamental. A comparison of the implications derived from the 1998 census on the 1997 Award is presented in table 11.

Table 11 : Provinces Share

Province	1981 Share *[%]*	1998 Share *[%]*	Provincial Share in the 1998-99 Federral Budget		
			Pre Census (Million Rupees)	Post Census (Million Rupees)	Percentage Difference
Punjab	57.88	57.29	68,475	67,777	-1.02
Sindh	23.28	23.67	27,542	28,003	1.68
NWFP	13.54	13.86	16,019	16,397	2.36
Balochistan	5.30	5.18	6,270	6,128	-2.26

Source:

- Government of Pakistan, Ministry of Finance; *Explanatory Memorandum to the Budger, 1998-99*; June 1998
- Government of Pakistan, Ministry of Finance; *National Finance Commission Award 1997*; 1997
- SPDC estimates

The compromise resulted in a lowering of the Punjab's and Balochistan's shares in the distribution only marginally - by 0.59 percent in the Punjab's case and by 0.12 percent in the case of Balochistan. Consequential increases of 0.39 percent and 0.32 percent were witnessed in the shares allocated to Sindh and the NWFP respectively. However, table 14 shows that the if the allocation of resources in the 1998-99 federal budget would have been on the basis of the shares revealed by the 1998 census, then the shares of both Sindh and the NWFP would have been disproportionately higher, by 1.68 percent and 2.36 percent respectively. Consequently the shares of both Balochistan and the Punjab would have been lower by 2.26 percent and 1.02 percent lower.

3.3 Magnitude of Social Indicators

The size of the population and its demographic profile are the denominators for computing a number of social indicators which are used to measure the level of social development of a nation. A number of these, such as the literacy rate and the enrollment ratio, are also used in the computation of the Human Development Index by the UNDP each year. These indicators are used by planners and development officials to redress any shortfalls that may be occurring in the availability of social service facilities. For instance, if the number of class rooms available for children of primary school-going age falls below an acceptable level, say 30 children per class room, then additional class rooms will need to be planned for and built. These indicators are used to monitor the performance of the social service delivery system. For instance, the primary school enrollment rate acts as the indicator of the schooling system's efficiency in being able to attract children. If this is below the 100 percent mark, then this indicates either a lack of school

availability or the enrollment of children of school-going age or that the quality of education offered is so poor that parents are unwilling to send their children to such schools. However, caution must be used when using these indicators. In Pakistan, one major draw-back in social sector statistics is the availability of information from the private sector, both its formal and informal and alternative components and another is the lack of timely availability of information from the public system. Time lags in the publication of data at the provincial levels varies from province to province, and could be as long as four to five years. Information at the federal level is published annually and estimates are available in the subsequent year. These lags at times cause difficulties in undertaking anlyses of current status.

3.3.1 *Literacy Rate*

The 1998 population census has indicated that the adult literacy rate is higher than that estimated by either the Planning Commission or the Ministry of Education. This is not the consequence of any change in the definition of a literate, which has remained unchanged between 1981 and 1998 as "a person who can read a newspaper and write a simple letter, in any language". The Economic Survey, 1997-98 estimated the literacy rate to be 40 percent. According to the population census it is 45 percent (see table 12). The biggest jump in relation to pre-census estimates is in Balochistan, from 18.7 percent to 26.6 percent, followed by Punjab, from 41.5 percent to 47.4 percent. The lowest variation has occurred in NWFP where the magnitude of the change was only 3.9 percent, the change from a pre-census level of 35.9 percent to 37.3 percent. Also, there appears to have been a greater acceleration in the spread of literacy among females than among males. Female literacy increased by 16.8 percent compared to 10.8 percent for their male counterparts.

Table 12 : Estimate of Adult Literacy Rate 1997-98

	Pre-Census Estimate	Post-Census Estimate	% Change
Province			
Punjab	41.5	47.4	14.2
Sindh	42.4	46.7	10.1
NWFP	35.9	37.3	3.9
Balochistan	18.7	26.6	42.2
Gender			
Male	51.0	56.5	10.8
Female	28.0	32.7	16.8
Residence			
Urban	60.7	64.7	6.6
Rural	31.2	34.4	10.3
Pakistan	**40.0**	**45.0**	**12.5**

Source: Ministry of Finance, Economic Adviser's Wing; *Economic Survey, 1997-98*
Population Censuses 1998, Provisional Results

The difference in the level of literacy in the rural areas appears to more marked than in the urban areas - 10.3 percent compared to only 6.6 percent. This reflects the effort in spreading the school network far more extensively in the rural areas than in the urban areas as a result of the Social Action Programme. The unexpectedly higher literacy rate is perhaps also an indication that non-

formal basic education and the private sector are also making a bigger contribution to increasing literacy in the country than was hitherto thought to be the case.

3.3.2 *Primary Enrollment Ratio*

The implications of the 1998 population census on gross primary enrollment ratios are also generally favourable. For 1997-98, the post-census estimate is 81 percent for Pakistan, which represents an improvement of 4 percentage points over the pre-census estimate of 77 percent. The improvement in female enrollment ratio is particularly pronounced, from 61 percent to 71 percent (see table 17). However, the decline of 2 percentage points in the male enrollment ratio needs a closer scrutiny. This may well be the result of a shift from public sector schools to private sector schools. Evidence for such a shift in the demand for education is available from the Pakistan Integrated Household Surveys (PIHS) conducted by the FBS.. The 1996-97 PIHS survey shows that of the sampled children, 40 percent were attending private schools. Interestingly, this phenomenon of privatisation of the primary schooling system is also observed in the rural areas where the incidence of attendance at primary schools has increased from about 1 percent in the 1990-91 PIHS to about 10 percent in the 1996-97 PIHS.. As explained earlier, the paucity of data from the private sector could also be a factor in the decline evinced from official statistics

Table 17 : Primary Gross Enrollment Rates
Pakistan 1997-98, Provinces 1994-95

(% of Cohort)

	Pre Census			Post-Census		
	Total	**Male**	**Female**	**Total**	**Male**	**Female**
Pakistan	**77**	**93**	**61**	**81**	**91**	**71**
Punjab	64	69	58	73	79	66
Sindh	59	74	42	67	84	49
NWFP	68	94	39	78	102	52
Balochistan	41	64	20	50	73	23

Source: Ministry of Finance, Economic Adviser's Wing; *Economic Survey, 1997-98*; 1998
Provincial Government; *Development Statistics*; several issues
Population Censuses 1998, Provisional Results

Data on enrollments at the provincial level for all four provinces is available for 1994-95. **Table 16** shows that the magnitude of change has been the highest in NWFP (9.8 percentage points) followed by Balochistan (8.8 percentage points). As a consequence of the 1998 head count, NWFP appears to have very nearly attained the goal of Universal Primary Education for boys with a gross enrollment ratio of 102.3.

3.3.3 *Secondary Enrollment Ratio*

The 1998 population census has also had a positive impact on the secondary enrollment ratio. The overall secondary gross enrollment rate has stayed constant at 33 percent caused by the 2 percentage point shift in the each of the enrollment rates for boys and girls, positively for girls and in the reverse direction for boys (see Table 18).

Table 18 : Secondary Gross Enrollment Rates
Pakistan 1997-98, Provinces 1994-95

(% of Cohort)

	Pre Census			Post-Census		
	Total	**Male**	**Female**	**Total**	**Male**	**Female**
Pakistan	**33**	**40**	**25**	**33**	**38**	**27**
Punjab	30	37	23	32	40	24
Sindh	21	25	16	23	27	17
NWFP	27	40	12	28	42	12
Balochistan	15	23	5	14	23	8

Source : Ministry of Finance, Economic Adviser's Wing; *Economic Survey, 1997-98*; 1998
Provincial Governments; *Development Statistics*; several issues
Population Censuses 1998, Provisional Results

The relative rank of the provinces in comparison to each other has not been impacted as a consequence of the 1998 head count. In each instance there has been an improvement in the enrollment rate. The highest shift at the provincial level for boys is witnessed in the Punjab, a nearly 3 percentage point shift. However, in the context of girls the upward shift observed in both Sindh and the Punjab has been only marginal, about 1 percent.

3.3.4 *Access to Health Facilities*

Availability to health facilities and personnel implicitly indicates the health status of a nation. If personnel and facilities are available in abundance, the health of a nation is potentially better than that of a nation which is poorly endowed. Public health practitioners would argue that the health status of a nation is also dependent on a variety of other factors such as nutrition, hygiene education and access to safe water.

The availability of health facilities has been computed as the availability of hospital beds. The Economic Survey, 1997-98 shows that for Pakistan as a whole one hospital bed catered to the demand of 1,504 persons in 1996-97. The post-census analysis shows that this was actually 1,418 persons. The provincial distributions show similar changes in availability with the largest differential being observed in the context of Balochistan, 1,539 persons per hospital bed against the pre-census estimate of 1,682.

The availability of health service personnel is measured through the population:doctor and population:nurse ratios. Table 19 shows that both improved by 6.1 percent, the differential between the estimated population for 1997 and the revealed population from the 1998 census. Similar to the health facilities, the inter-provincial relative ranking of availability has remained unchanged.

Table 19 : Access to Health Facilities
Pakistan 1996-97, Provinces 1994-95

(*persons per*)

	Hospital Beds		Doctors		Nurses	
	Pre - Census	**Post - Census**	**Pre - Census**	**Post - Census**	**Pre - Census**	**Post - Census**
Pakistan	**1504**	**1418**	**1724**	**1625**	**5460**	**5148**
Punjab	1954	1867	2524	2334	14032	13446
Sindh	1887	1790	988	942	12523	12156
NWFP	1535	1520	2215	2206	5142	5083
Balochistan	1682	1539	3016	2806	4447	4163

Source : Ministry of Finance, Economic Adviser's Wing; *Economic Survey, 1997-98*; 1998
Provincial Governments; *Development Statistics*; several issues
Population Censuses 1998, Provisional Results

Altogether, the 1998 population census results have given many pleasant surprises. The minimal differential in regional shares between those used for the 1997 NFC Award and the results of the 1998 census of population begs the question : How accurate was the head count?

The inter-censal population growth rate is lower, 2.6 percent instead of 3.0 percent. The structure of the population is seeing a dynamic change. The share of the three lowest age cohorts, namely the 0-4 years (pre-school-going), the 5-9 years (primary school-going ages) and 10-14 years (secondary school-going age), have declined by 0.8, 0.4 and 0.3 percentage points respectively. The gender balance is better having declined from 111 in the 1981 census to 108 in the 1998 census. This decline of 3 males per 100 females holds trues for both urban and rural Pakistan. If this trend continues, then it would mean a substantial change in the attitude of civil society towards the girl child has taken root. This could well result in a more tolerant society in the very long-term, say two to three decades hence.

The dependency ratio (the ratio of the number of children aged 0-14 years and the senior citizens aged 65 and over to the total population) is lower. In the 1981 census this was computed to be 48.8 persons per 100 population. In 1998 this had declined to 46.1. Is this a testimony to the success of the government's family planning programme? or, of an awareness created as the result of access to knowledge about the benefits of smaller families derived from higher adult literacy, greater access to education and a wider access to the media, particularly television, and more particularly foreign programmes beamed at Pakistan?

The rate of urbanisation is slower. The population growth rate in urban Pakistan has decreased from 4.38 percent per year in the 1972-81 inter-censal period to 3.45 percent per year in the last seventeen years. Household size has also declined from an overall 6.7 revealed in the 1981 census to 6.6 in the latest. Urban household sizes have increased which would imply that there is more crowding. This could well be the result of migrant families joining the bread earner either in search of a better quality of life or better economic opportunities. This crowding would mean denser urban populations with a consequential impact on lowering the cost of delivering municipal and related services.

The impact of the 1998 census on economic and social indicators has improved Pakistan's performance. Per capita income is higher. The pre-census estimate for 1997-98 was equivalent to 457 US$ in PPP terms. This has improved to 486 US $. The literacy rate improved by 5 percentage points. This sudden improvement may well be accounted for by the major thrust made by both the not-for profit non-formal education system operated by the NGOs and the sudden explosion of profit-making private sector formal schools in both the rural and urban areas. The increase in both the primary and secondary gross enrollment ratio is testiomony to the poor quality of information available to the government.

There remains the lurking suspicion: Is this all too good to be true?

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