

SOCIAL DEVELOPMENT RANKING OF DISTRICTS OF PAKISTAN

by

*Dr. Aisha Ghaus, Dr. Hafiz A. Pasha &
Rafia Ghaus*

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1. INTRODUCTION

International comparisons reveal the lack of correlation between the ranking of countries in terms of levels of economic and social development. Pakistan is an example of a developing country with relatively high per capita income but extremely poor social/human development indicators. The objectives of this paper are two fold: first, determine the extent of variation among districts in the level of social development and second to examine in the spatial context for Pakistan how strong the relationship is between levels of economic and social development and what explains regional differences in the level of social development. The former will help us in particular in identifying districts which have a low ranking within the country in terms of the level of social development. These districts can be targeted for special development allocations within the SAP to reduce the extent of regional disparity in terms of access to basic services like primary education, health, water supply, etc. If it emerges that the socially underdeveloped districts are also economically backward then the underlying reason may be the absence of a strong private sector or the absence of a local tax base or income affordability to finance the provision of these services. As case can then be made for transfer of resources to such regions.

Earlier research at the district level in Pakistan by Pasha, Mallik and Jamal [1990] has, in fact, demonstrated that education and housing indicators are highly correlated with the overall level of development. Districts which have a relatively developed/underdeveloped education sector in terms of literacy and primary enrollment rates generally appear to have higher/lower ranking in terms of the composite level of development. Although it is difficult to come to any definitive conclusions about the direction of causality this finding tends to substantiate the view that regions of the country which have made greater progress are endowed with higher levels of human development.

The paper is organised as follows: Section 2 gives the choice of social development indicators. Section 3 gives the methodology for derivation of the composite indicator of social development while Section 4 gives the resultant ranking of districts. Section 5 presents the regression model and results of determinants of regional variations in the level of social development. Finally, in Section 6 are given the conclusions.

2. CHOICE OF INDICATORS

The choice of development indicators at the district level is governed by a number of considerations. First, an attempt has been made to achieve as wide a sectoral coverage as possible. As such indicators have been selected to highlight development of sectors like education, health, water supply. Second, two alternatives were available regarding the choice of indicators: we could concentrate on measuring the consequences of development or the level of development inputs. Greater reliance in this study is on the latter primarily because of the lack of districtwise data on the former. For example, if the output approach had been adopted to measure development of the education sector, the indicators used would have been, for example, school graduates as a percentage of the labor force both in stock and in flow. But since data is not available on this magnitude the alternative chosen is to quantify the level of inputs in the form of teachers, schools, hospitals, beds, etc. Therefore, while there may be some loss of precision in the quantification of the level of development, the results are perhaps more useful and operational in character from the planning view point.

The lack of data has not only constrained the approach to the construction of social development but it has limited the number of indicators. Nevertheless, it has been possible to identify 11 indicators relating to health, education and water supply. Diverse sources of data have been used for quantifying the indicators. Firstly, data has been taken from the last census of population, housing survey by the FBS and development statistics of the provincial governments. Secondly, relevant data has also been collected from other published documents of the Federal, Provincial governments and FBS.

Described below are the social indicators chosen in each sector. *Education*

Both stock and flow measures have been defined for the education sector. The stock measure is the literacy rate by gender which indicates the level of literacy among the population aged ten years and above in a district which has been taken from district census report of 1981. Measures of flow of output from the education sector relate to enrollment rates at the primary and secondary level (male and female separately). Information regarding enrolments at different levels has been taken from development statistics of the province. The relevant school age going population in each district have been projected on the basis of intercensal growth rates for purposes of deriving the enrollment rates. However, the distribution of census population has

been adjusted according to newly formed districts which has been reported in the publication. Administrative Units of Pakistan, a publication of the Population Census organisation.

Health

Three types of indicators of development of the health sector have been defined. The first relates to health personnel i.e doctors and nurses per 10,000 population, second, to hospital and rural health centre beds per 1,000 population while the third to number of patients treated in relation to total population. The last indicator is essentially an output measure. However, as the information regarding the number of district-wise doctors and nurses for the year 1991/92 was not available for Punjab. Therefore, it has been estimated on the basis of extrapolation of figures given in Health Statistics, a publication of provincial governments.

Housing

Only one indicator has been used to measure the level of social development, that is, access to water supply. The particular indicator use is percentages of households with inside water connections. As the data on water supply was not available for the latest year, the analysis has been done on the information reported in the Housing Survey of 1989 carried out by the FBS.

Ninety four districts (as of 1991-92) and eleven indicators have been included in the analysis. This includes 34 districts from Punjab, 15 from Sindh, 20 from NWFP and 25 from Balochistan. Out of the eleven indicators, 6 relate to education, 4 to health and 1 to water supply.

Indicators	Mean	Variance	Coefficient of Variation
Doctors per 1000 Population	2.03	4.25	0.98
Nurses per 1000 Population	0.87	2.69	0.53
Patients Treated per Population	0.43	0.15	1.10
Primary Enrollment - Boys (%)	73	0.08	2.55
Primary Enrollment - Girls (%)	33	0.07	1.29
Secondary Enrollment - Boys (%)	29	0.04	1.53
Secondary Enrollment - Girls (%)	10	0.01	1.05
Literacy Rate - Male (%)	24.52	190.70	1.78
Literacy Rate - Female (%)	10.50	76.57	1.20
Households with Access to Water (%)	16.77	187.31	1.23
Hospital Beds per 1000 Population	0.50	0.30	0.92

Three summary measures, the mean, variance and the coefficient of variation, have been calculated to describe and compare the distributions of the indicators (see table 1). By doing so we derive the extent of regional variation in social development. It needs to be pointed out that the means of the various indicators do not correspond to the national values of these indicators. This is because they are simple averages and not averages weighted by the population or area of the district depending on the indicator.

3. METHODOLOGY OF MEASUREMENT In the literature on regional development, a number of techniques have been used to reduce the dimensions of the complex multi variate problem associated with the construction of composite development indicator. The first is the Z-sum technique which sums for a particular district its Z-score on each indicator. The Z-score is the standardized score, which has zero mean and unit variance. The higher the Z-sum¹ the more developed the region

The second technique computes the taxonomic distance [Khan and Iqbal (1983) and Nissan and Gracy (1988)], which is the Euclidean distance from the highest (standardised) values observed for different indicators². The lower the taxonomic distance of a region or district, the more developed it is. Both the techniques have the problem of assigning equal importance to all development indicators. Further, the taxonomic distance technique is very sensitive to the *weighting*.

The Z-sum can be computed as follows:

$$(Z \text{ sum})_i = \sum_{i=1}^n Z_{ii}$$

where $Z_{ij} = \lambda_{ij} - \bar{X}_i / S_i$, n = numbers of indicators, \bar{X}_i = mean value of the i th indicator, S_i = Standard deviation of the i th indicator, λ_{ij} = value of the i th indicator in the j th district.

The taxonomic distance can be derived as follows:

$$(TD)_j = [\sum_{i=1}^n (Z_{ij} - Z_i^*)^2]^{1/2}$$

where Z_{ij} = standardised (as described in the previous footnote) value of the i th indicator in the j th region, Z_i^* = highest standardised value of the i th indicator in all regions. The taxonomic distance is an Euclidean measure of the distance of a district from a hypothetical district which has the highest value for all the development indicators.

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The third and the most sophisticated method for indexing a multidimensional phenomenon is Factor Analysis (FA) technique (Adelman and Dalton (1971)). This technique reduces the number of relationships by grouping together all those variables which are most highly correlated with each other into one factor or component. Thus the FA model can be described as follows:

$$X_i = a_{i1} F_1 + a_{i2} F_2 \dots + a_{ij} F_j \quad (1)$$

where,

X_i is the i th indicator.

a_{ij} is called the factor loading and represents the proportion of the variation in X_i which is accounted for by the j th factor.

$\sum a_{ij}$ is called the communality and it is equivalent to the multiple regression coefficient in regression analysis

F_j represents j th factor or component.

Principal Components Analysis (PCA) produces components in descending order of importance. that is. the first component explains the maximum amount of variation in the data, and the last component the minimum. It is often found that the First few components, called principal components, account for a sizeable part of the variation and subsequent components contribute very little. Using factor loadings of these principal components, factor score for each region or unit is computed as follows:

$$(FS)_{kj} = \sum_k e_{ij} * Z_i \quad (2)$$

where,

FS_{kj} represents factor score of the kth region and the jth factor,
 Z_i is the standardised value of the ith indicator,
 Σe_{ij} is the factor loading of the jth factor and the ith indicator.

To compute weighted factor score (WFS), these individual factor scores are derived from the following equation:

$$(WFS)_k = \sum_k e_j (FS)_{kj} \quad (3)$$

where e_j is the eigen value of the factor j and depicts the proportion of variation in the data set explained by the factor j. This WFS is used as an index for ranking regions on the basis of the general characteristics of the variable-set.

In this study, PCA is preferred to explain the grouping of variables, with WFS being used to rank the district due to its more appealing characteristics. However, Z-sum technique is also used to observe the sensitiveness of the results with respect to the choice of technique for deriving the composite indicators. Pasha and Hasan (1982), Pasha et al (1990) also used these two techniques.

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Communality
Secondary Enrollment - Girls (%)	0.88133	0.14516	0.30654	0.1646	0.919
Literacy Rate - Female (%)	0.82926	0.27829	0.24511	-0.07239	0.847
Literacy Rate - Male (%)	0.80951	0.1761	0.30996	0.27688	0.842
Primary Enrollment - Girls (%)	0.79726	0.10043	0.20128	0.40248	0.848
Secondary Enrollment - Boys (%)	0.71632	0.15801	0.20314	0.47522	0.805
Households with Access to Water (%)	0.40003	0.84549	0.06185	-0.10853	0.890
Patients Treated per Population	0.07031	0.80268	0.21396	0.22458	0.745
Hospital Beds per 1000 Population	0.0549	0.75256	0.3051	0.35518	0.789
Doctors per 1000 population	0.25292	0.24332	0.86359	0.0883	0.937
Nurses per 1000 population	0.37494	0.24848	0.85231	-0.02692	0.929
Primary Enrollment - Boys (%)	0.37031	0.26334	-0.03524	0.8318	0.900
Eigenvalues	6.19901	1.49286	1.14938	0.61098	

Table 2 presents the loading of each indicator on different factors. In addition, it gives the eigen values of each factor. Four factors emerge from the principal components analysis. These factors are described below:

Factor 1

Five out of 11 indicators load highly on this factor. It is by far the most important factor and includes most of the indicators from the education sector. As such education can be interpreted the most important service capturing variation in the level of social development.

Factor 2

This factor includes three indicators. It essentially comprises of health and water supply and sanitation

Factor 3

The two indicators in this factor also relate to health. It is essentially a continuation of factor 2 and reflects the same underlying phenomena.

Factor 4

This factor includes only one indicator, primary hoys enrollment rate. This indicator represents the most basic level of education and, therefore, variation in its magnitude is not strongly correlated with the overall level of social development.

4. RANKING. OF DISTRICTS

The rank ordering of districts in 1WO/91 is presented in Table 3. *The* table gives rankings generated by the principal components analysis (weighted factor score) and the Z-sum technique respectively. The correlation between the two rankings is 0.988. This indicates the robustness of the results which is also highlighted by the fact that except for Gujranwala, the top ten districts in WFS are also in the list of top 10 districts indicated by the Z-score.

Karachi and Rawalpindi are the most developed districts in Pakistan in terms of in social indicators according to the WFS while in Z-score ranking Lahore and Quetta displace Karachi and Rawalpindi as the most developed districts. Besides these the list of lop 10 districts include Chakwal. Jhelum, Gujrat, Faisalabad, and Sialkot. Gujranwala and Peshawar rank 10th in the WFS and z-score rankings respectively. These top ten districts account for almost 25 percent of the country's population. It may be noted that according to both the techniques most of the top districts are located in the province of Punjab with one each in the other three provinces. This tends to indicate that Punjab is ahead of the other provinces in terms of social development.

At the lower end of the distribution, seven out often districts are the same in both the rankings. According to WFS, Dera Bugti and Jalmagsi are the least developed districts while Kohistan and Nasirabad emerge as the lowest two districts in Z-score ranking. The other least developed districts according to both the rankings include Zhob, Khuzdar, Kalat, Kharan, Turbat, Balan, Panjgur, Awaran and Killa Saifullah, all districts of Balochistan. Estimates are that about 5 percent of the national population resides in these districts. Nine of these districts are in Balochistan. This implies that Balochistan is least socially developed province in the country.

TABLE 3

DISTRICT WISE RANKING OF SOCIAL DEVELOPMENT IN PAKISTAN

	Districts	Province	WFS	Districts	Province	Z-SCORE
TOP QUARTILE						
1	Karachi	[S]	26.0147	1 Lahore	[PI	33.7790
2	Rawalpindi	[P]	16.9032	2 Quetta	[B]	27.1702
3	Chakwal	i P i	16.2396	3 Rawalpindi	fPI	21.7602
4	Lahore	[i1]	15.8617	4 Jhelum	[P]	15.1961
5	Jhelum	[Pi	13.8476	5 Karachi	[S]	15.0423
6	Quetta	[B]	1 1.4693	6 Faisalabad	[PI	12.4723
7	Gujrat	[Pi	10.6669	7 Chakwal	[PJ	1 1.6895
8	Faisalabad	[Pi	10.2559	8 Saikot	IP]	10.4392
9	Saikot	[PJ	9.5103	9 Gujrat	[P]	10.2695
10	Gujranwala	[PJ	9.0223	10 Peshawar	[NJ	9.6742
SECOND QUARTILE						
11	'1.T. Singh	IP)	8.7161	1 1 Gujranwala	rp]	8.3997
12	M. Baha Liddin	i Pi	7.8838	12 T.T. Singh	1 P 1	7.6672
13	Narowal	[P]	7.4406	13 Haripur	[NJ	7.1679
14	Haripur	[N]	6.3132	14 Shaiwal	[P]	6.8214
15	Attock	[P]	5.4162	15 Attock	[PI	6.6496
16	Sargodha	[P]	5.0561	16 Multan	[P]	5.7214
17	Hyderabad	[S]	4.8612	17 Abbottabad	[N]	5.5262
18	Sliaiwal	IPi	4.3784	18 Sibi	[B1	5.2867
19	Nawshera	[N]	4.0355	19 Nawshera	[N]	4.9870
20	Khanewal	[P]	3.5312	20 Sargodha	[PI	4.7876
21	Multan	[P]	3.3155	21 Narowal	[P]	4.5065
22	Naushero F.	[S]	3.3003	22 M. Baha Uddin	[P]	4.1047
23	Okara	(PI	2.8373	23 Kohat	[N1	4.0671
24	Sheikhupui-a	fP]	2.7449	24 Hyderabad	IS)	4.0355
25	Abbottabad	[Nj	2.7280	25 Charsadda	[N1	3.8821
26	Charsadda	[N]	2.3308	26 Rahim Yar Khan	[P]	3.3607
27	Tank	[N]	2.2013	27 Mainwalai	fP]	3.3278
28	Bahawalnagar	[P]	2.1264	28 Bhawalpur	[P]	3.1852
29	Malakand	[N]	1.6083	29 Tank	[N1	2.8443
30	Peshawar	[N]	1.3097	30 D.I. Khan	[N1	2.7729
				31 Larkana	[S]	2.4750
THIRD QUARTILE						
31	Mirpurkhas	[S]	1.0353	32 Chitral	[N]	2.4402
32	Mainwalai	[P]	1.0231	33 Karak	[N]	2.2741
33	Hafizabad	[P]	0.8930	34 Khushab	[P]	2.2490
34	Karak	[N]	0.7639	35 Bannu	[N1	1.5821
35	Sukkar	[S]	0.6430	36 Nawabshah	[S]	1.5610
36	D.I. Khan	[N]	0.6428	37 Naushero V.	[S]	1.3569
37	Swabi	[N]	0.5445	38 Malakand	[N]	1.3358
38	Vehari	[P]	0.3224	39 Sheikhupura	[P]	1.2868
39	Rahim Yar Khan	[P]	0.2881	40 Lakki	[N1	0.6170
40	Khushab	[P]	0.2413	41 Mirpurkhas	[S]	0.4713
41	Kasur	[P]	0.2153	42 Swat	[N]	0.4668
42	Kohat	[N]	0.1457	43 Khairpur	[SI	0.2289
43	Khairpur	rs]	-0.1975	44 Khanewal	[P]	-0.1656
44	Nawabshah	[S]	-0.1986	45 Sukkar	[Sj	-0.4690
45	Layyah	[P]	-0.2253	46 Bahawalnagar	[P]	-0.7517
46	Jhang	[P]	-0.6348	47 Bhakkar	[P]	-0.7959
47	D.G. Khan	[P]	-0.9605	48 Okara	[P]	-0.9460

"TABYJE 3						
DISTRICT WISE RANKING OF SOCIAL DEVELOPMENT IN PAKISTAN						
	Districts	Province	WFS	Districts	Province	Z-SCORE
48	Buner	[N]	-1.3008	49 .Iliang	[P]	-1.1024
49	Bhawalpur	[P]	-1.4317	50 Buner	IN-)	-1.2584
50	Pakpattan	[P]	-1.4499	51 Swabi	[N]	-1.6588
51	Chitral	[N]	-1.5092	52 Hafizabad	[P]	-1.8140
52	Mardan	[N]	-1.5608	53 Shikarpur	fS]	-1.8390
53	Lodhran	1P1	-1.7701	54 Kasur	rp]	-2.0419
54	Dadu	[S]	-2.1306	55 Mardan	[N]	-2.1385
				56 Ziarat	[BJ	-2.2424
BOTTOM QUARTILE						
55	Shikarpur	[S]	-2.2492	57 Layyah	[P]	-2.3279
56	Muzaffarghar	1 P]	-2.5598	58 Veliari	rpt	-2.3336
57	Bannii	[N]	-2.9875	59 D.G. Khan	fp]	-2.6532
58	Larkana	[S]	-3.0215	60 Dadn	[S]	-3.0322
59	Sanghar	1^1	-3.1303	61 Thalia	[S]	-3.0647
60	Bhakkar	1P1	-3.1602	62 Sanghar	1^J	-3.7943
61	Manshera	[N]	-3.1704	63 Manshera	[S]	-3.8104
62	Swat	[N]	-3.1779	64 Kohlu	[B]	-4.1405
63	Barkhan	[B]	-3.6361	65 Dir	[N]	-4.7799
64	Thatta	[S]	-3.7789	66 Lodhran	[P]	-4.8434
65	Tharparkar	[S]	-3.9269	67 Chagai	[B]	-4.9470
66	Musa Khail	[B]	-3.9667	68 Muzaffarghar	[P]	-4.9657
67	Dir	[N]	-4.1152	69 Barkhan	[B]	-5.2614
68	Sibi	[B]	-4.3073	70 Badin	[S]	-5.3758
69	Ziarat	[B]	-4.3808	71 Pishin	[B]	-5.4476
70	Lakki	[N]	-4.4524	72 .Ihalmagsi	[B]	-5.6175
71	Loralai	[B]	-4.6029	73 Rajanpur	fP]	-5.9379
72	Rajanpur	[P]	-4.7602	74 Pakpattan	[P]	-6.1570
73	Mastung	[B]	-4.7734	75 Gawader	[B]	-6.1616
74	Badin	[S]	-4.8466	76 Jacobabad	[S]	-6.1918
75	Pishin	[B]	-5.0904	77 Lasbela	[B]	-6.7740
76	Chagai	[B]	-5.1677	78 Loralai	rai	-7.7837
77	Panjgur	[B]	-6.0387	79 Mastung	[BJ	-7.9594
78	Kohlu	1B1	-6.0408	80 Tharparkar	fsi	-8.9178
79	Gawader	[B]	-6.3226	81 JafTarabad	[B]	-9.1419
80	Lasbela	[B]	-6.5395	82 Musa Khail	fB]	-9.2995
81	Jacobabad	[S]	-6.5698	83 Bolan	[B]	-9.3237
82	KillaSaifullal	ia [B]	-6.7825	84 Dera Bugti	[B]	-9.4643
83	Jaffarabad	fB]	-6.8593	85 Kharan	[B]	-9.6348
84	Awaran	[B]	-7.1243	86 Khuzdar	[B]	-10.1718
85	Kalat	[B]	-7.1316	87 KillaSaifullaha	[B]	-10.2935
86	Turbat	[B]	-7.2116	88 Awaran	[B]	-10.5132
87	Kharan	[B]	-7.2608	89 Kalat	[B]	-10.8131
88	Kohistan	[N]	-7.3670	90 Panjgur	[B]	-10.8265
89	Khuzdar	[B]	-7.4268	91 Zhob	[B]	-11.0581
90	Bolan	[B]	-7.5248	92 Turbat	[B]	-11.0819
91	Nasirabad	[B]	-7.7698	93 Nasirabad	[B]	-11.1989
92	Zhob	fB]	-7.8430	94 Kohislan	[N]	-12.6158
93	.Ihalmagsi	[B]	-8.7686			
94	Dera Bugti	[B]	-9.4706			

[P]=Punjab , [S]=Sindh , [N]=NWFP , [B]=Balochistan

Table 3 also classifies the 94 districts according to the level of development. Relatively developed districts are those in which the top quartile of population lives. Districts at the intermediate level are those in which the second and the third quartile lives while the relatively under developed districts account for the bottom 25 percent of the population.

According to Z-score ranking, the top quartile consists of 10 districts. All the provincial capitals are in this category. Besides, Faisalabad, Rawalpindi, Gujrat, Saikot and Jhelum are districts with high rate of urbanisation and buoyant industrial activity, except of one district each in Sindh, NWFP and Balochistan all the other districts in this quartile are from Punjab.

The second quartile of population, according to the WFS, resides in 20 districts. Here again we observe the dominance of Punjab, with eleven out of these districts belonging to this province. Like Gujranwala, Toba Tek Singh, Sahiwal and Multan. Out of the remaining districts, seven are from NWFP, including Haripur, Abbotabad, Nowshera, Kohat, Charsadda, D.I. Khan and Tank. The relatively high enrollment rates at primary level along with access to water supply facilities are the prime reason for the relatively high ranking of districts in the province.

Nine each out of 25 districts in the third quartile are from NWFP and Punjab respectively while six are from Sindh. The last quartile which consists of 38 districts is dominated by Balochistan, with 22 districts belonging to this province, followed by Punjab with seven districts and Sindh with six districts.

The population shares of each province in each quartile are presented in Table 4. The share of Punjab in the top three quartiles is larger than its share in national population (excluding FATA etc.) implying that Punjab, by and large, has a high to intermediate level of social development. Sindh has a high share in the first and the fourth quartile, indicating the dualistic pattern of development in the province with Karachi representing one polar extreme. NWFP has an intermediate level of development while Balochistan is the most backward province in terms of social development in the country. It is, however, important to note that even the relatively developed provinces have pockets of low development like the districts in the south of Punjab. Alternatively, even a relatively backward province has some areas with high level of social development. The best example of this is Quetta district in Balochistan.

TABLE 4 PERCENTAGE SHARE OF PROVINCES IN POPULATION QUARTILE BY LEVEL OF DEVELOPMENT (%)					
Quartile	Punjab	Sindh	NWFP	Balochistan	Total
Top Quartile	61.1	31.5	5.6	1.8	100.0
Second Quartile	55.8	23.6	20.4	0.2	100.0
Third Quartile	55.8	23.6	20.4	0.2	100.0
Bottom Quartile	33.4	31.5	8.7	26.3	100.0
Overall Population Share	55.2	24.1	13.9	6.8	100.0

Table 5 gives the zero-order correlation matrix between different indicators. High correlation is observed between doctors and nurses, primary and secondary enrollments, literacy rates and enrollment rates. In particular, girls primary and secondary enrollment rates are strongly related to the male and female literacy rates. There also appears to be a degree of correlation between different sectors. Linkage exists between water supply and health services and education and health services, specifically health personnel. This correlation is a reflection of the spillover and externalities generated by different social services and highlights the presence of synergies between sectors. On the whole, in the profile of development, the key sector appears to be education, in particular, female primary and secondary enrollment rates.

5. DETERMINANTS OF SOCIAL DEVELOPMENT OF DISTRICTS 'the key question that arises is what determines regional variations in the level of social development in Pakistan. From the above discussion it appears that provincial headquarters rank high in terms of development. Also, to the extent the provision of services is characterised by economies of scale and is more efficient and cost effective in larger cities, there may exist a high degree of correlation between urbanisation and regional social development. Moreover, regions with buoyant industrial bases and high level of economic development may have a high demand and a higher ability to pay for social services. Therefore, as recognised generally in international literature, there may exist a close link between urbanisation, industrialisation, economic development and social development in Pakistan also.

TABLE 5

CORRELATION BETWEEN SOCIAL INDICATORS

Indicators	Doctors/ Population [10000pop]	Nurse/ Population [10000pop]	Number of Patients Treated/Population	Pri Enrol Rate Boys 1991-92	Pri Enrol Rate Girls 1991-92	SecEnrol Rate Boys 1991-92	SecEnrol Rate Girls 1991-92	Literacy Ratio [Male] 1981	Literacy Ratio [Female] 1981	% of Households with Inside Piped Water	HOSPITALS + RHC BEDS
Doctors\1000 Pop	1.00000										
Nurses\1000 Pop	0.88090	1.00000									
Patients Treated\Pop	0.40591	0.40132	1.00000								
Primary Enr.-Boys	0.27303	0.16642	0.38080	1.00000							
Primary Enr.-Girls	0.47133	0.51504	0.24912	0.59583	1.00000						
Sec. Enrol.-Boys	0.49811	0.48307	0.38916	0.64211	0.77362	1.00000					
Sec. Enrol.-Girls	0.61623	0.61686	0.28043	0.48885	0.86746	0.73185	1.00000				
Literacy Rate-Male	0.61825	0.54877	0.28096	0.52766	0.79438	0.75025	0.85712	1.00000			
Literacy Rate-Female	0.58983	0.56980	0.34780	0.35702	0.64480	0.66845	0.81675	1.00000			
% HH with Inside-Wate	0.41134	0.44265	0.59216	0.31705	0.38558	0.37318	0.46214	0.41752	0.51800	1.00000	
Hospital + RHC	0.47711	0.42465	0.59562	0.45330	0.37197	0.33016	0.33867	0.34572	0.30970	0.62680	1.00000

Besides, there appear to be substantial interprovincial differences in the level of social development in Pakistan. The previous section indicates that Punjab is further ahead of the other provinces in terms of social development. In addition, the presence of special features, like the existence of sea port. may also have an impact on the spatial ranking of district in terms of social development.

To analyse the determinants of social development in Pakistan we have developed the following regression model:

$$\text{SOCIAL}_i = f(\text{PU}_i, \text{PCVA}_i, \text{ROAD}_i, \text{PHQ}, \text{DUM}, \text{PORT}) \quad (4)$$

+ + + + +/- +

Where:

SOCIAL _i	=	Weighted Factor Score of the 'ith' district
PU _i	=	Percentage of urban population in the 'ith' district
PCVA _i	=	Per capita industrial value added of the 'ith' district
ROAD _i	=	Road network in the 'ith' district
PHQ	=	Dummy for provincial headquarters
DUM	=	Provincial dummies
PORT	=	Dummy for Karachi port

Results:

The above model has been estimated for the 94 districts in Pakistan. The results are as follows:

$$\begin{aligned} \text{SOCIAL}_i = & -0.3157 + 1.3433 \text{PU}_i + 4.26 \times 10^{-5} \text{PCVA}_i + 2.6461 \text{ROAD}_i + 1.0842 \text{PHQ} \\ & (-2.055) \quad (3.686) \quad (1.162) \quad (4.414) \quad (2.515) \\ & -1.0084 \text{BDUM} - 0.8082 \text{SDUM} - 0.4378 \text{NDUM} + 2.2333 \text{POR} \quad (5) \\ & (-6.743) \quad (-5.201) \quad (-3.030) \quad (3.697) \end{aligned}$$

Figures in brackets are t-statistics $\bar{R}^2 = 0.753$ No of Observations = 94

Where:

BDUM	=	Dummy for Balochistan
SDUM	=	Dummy for Sindh province
NDUM	=	Dummy for NWFP province

Equation (5) indicates a high positive correlation between the level of social development of a district and the extent of its urbanisation and economic development. The latter is proxied by road network. Pasha and Hasan (1982). and Pa

The results, however, do not demonstrate a high positive correlation between industrialisation and social development. This is not surprising because according to Pasha et al (1990), the process of industrialisation does not possess a high degree of correlation with the overall process of economic development also. This is in conflict with the perception that large-scale manufacturing generally acts as the leading sector stimulating economic growth. The small share of this sector in the national economy, limited employment creation and its dependence on imported material have reduced its linkages with the rest of the economy. Consequently, districts with higher manufacturing value added are not necessarily the most economically and/or socially developed.

As expected, provincial capitals have a highly developed network of social infrastructure as does the port city of Karachi. The negative provincial dummies substantiate our earlier conclusion that Punjab is the most highly developed province in social indicators followed by NWFP, Sindh and Balochistan. As such, there are clear inter-provincial differences in regional development in Pakistan. This may reflect historical differences in the level of public allocations per capita to the social sectors.

6. CONCLUSIONS

The paper has used eleven indicators relating to the education, health and water supply sectors to rank districts of Pakistan in terms of the level of social development. It also seeks to explain regional variation in the development of social infrastructure across districts. The paper demonstrates the importance of education indicators in determining the overall level of social development, especially in terms of female literacy and enrollment rates. Also, the ranking demonstrate a close correlation between levels of social and economic development spatially with Pakistan. Other important determinants of regional variations in the level of social development include the extent of urbanisation, the administrative development of the districts (location of provincial headquarters), and the geographical/economic significance (indicated by the presence of the sea port). Overall, Punjab appears to have the highest level of social development followed by NWFP, Sindh and Balochistan. However, the results indicate substantial variation among districts within a province in the level of social development. Least developed districts within each province are identified as targets for special development allocations within SAP.

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TABLE A-1

NATION-WISE RANKING OF DISTRICTS IN SOCIAL INDICATORS								
SNo.	Doctors/ Population [10000pop]		Nurse/ Population [10000pop]		Number of Patients Treated/Population		Total Hospital Beds/Population [1000pop]	
1	Lahore	15.702	Lahore	13.642	Quetta	.761	Quetta	3.939
2	Rawalpindi	7.075	Rawalpindi	4.000	Charsadda	.520	Sibi	2.339
3	Bhawalpur	5.478	Sailkot	3.559	Peshawar	.520	Peshawar	1.854
4	Multan	5.177	Quetta	3.529	Nawshera	.520	Lahore	1.806
5	Faisalabad	5.151	Multan	3.144	Lahore	.474	Haripur	1.233
6	Nawabshah	5.036	Gujranwala	2.900	Rahim Yar Khan	1.388	Abbottabad	1.233
7	Quetta	4.855	Bhawalpur	2.898	Kahat	1.376	Bannu	1.103
8	Hyderabad	4.488	Shaiwal	2.628	Rawalpindi	1.059	Lakki	1.103
9	Shaiwal	4.327	Faisalabad	2.415	Chitral	0.978	Jhalmagsi	1.102
10	Jhelum	4.118	Jhelum	2.328	Buner	0.968	Nawabshah	1.033
11	Sailkot	4.096	Attock	2.005	Swat	0.968	Rawalpindi	0.955
12	Mainwalai	3.840	Sheikhupura	.884	Lakki	0.851	Tank	0.945
13	Thatta	3.734	Jhang	.804	Bannu	0.851	D.I. Khan	0.945
14	Khushab	3.613	Mainwalai	.800	Bhawalpur	0.749	Ziarat	0.935
15	Attock	3.547	Gujrat	.786	Tank	0.714	Kohlu	0.889
16	Larkana	3.405	Nawshera	.754	D.I. Khan	0.714	Bhakkar	0.837
17	Gujranwala	3.338	Peshawar	.754	Faisalabad	0.700	Larkana	0.785
18	Peshawar	3.191	Khushab	1.694	Sibi	0.693	Hyderabad	0.733
19	Gujrat	3.159	Rahim Yar	1.618	Gawader	0.621	Bhawalpur	0.730
20	Sargodha	3.117	Sargodha	.461	Karak	0.615	Malakand	0.713
21	Shikarpur	3.079	T.T. Singh	.297	Jhelum	0.614	Kahat	0.679
22	Rahim Yar	3.058	Bhakkar	.241	Ziarat	0.607	Multan	0.655
23	Mirpurkhas	3.019	Rajanpur	.213	Hyderabad	0.563	Manshera	0.639
24	Badin	2.825	Chakwal	.079	Chagai	0.555	Swat	0.623
25	T.T. Singh	2.767	D.G. Khan	.053	Sailkot	0.520	Shaiwal	0.611
26	Chitral	2.739	Kasur	0.979	Larkana	0.511	Jhelum	0.607
27	Bhakkar	2.647	Layyah	0.966	Swabi	0.506	Mandi Baha Uddin	0.604
28	Karachi	2.449	Narowal	0.957	Mardan	0.506	Gujrat	0.604
29	Sukkar	2.322	Larkana	0.930	Mirpurkhas	0.468	Chitral	0.602
30	Malakand	2.189	Bahawalnagar	0.871	Manshera	0.449	Faisalabad	0.544
31	Sheikhupura	2.168	Muzaffargarh	0.806	Gujranwala	0.434	Sailkot	0.539
32	Jhang	2.077	Haripur	0.799	Mainwalai	0.421	Mainwalai	0.526
33	Khairpur	2.064	Abbottabad	0.799	Lasbela	0.419	Attock	0.503
34	Bannu	2.059	Vehari	0.709	Thatta	0.418	Charsadda	0.493
35	Lakki	2.059	Okara	0.695	Dir	0.413	Gujranwala	0.483
36	Dadu	2.040	Khanewal	0.690	Karachi	0.401	Hafizabad	0.483
37	Rajanpur	1.997	Hyderabad	0.682	Sukkar	0.386	Rahim Yar Khan	0.454
38	Haripur	1.923	Lakki	0.628	Shaiwal	0.366	Mardan	0.444
39	Abbottabad	1.923	Bannu	0.628	Abbottabad	0.359	Khushab	0.435
40	Ziarat	1.912	Nawabshah	0.537	Haripur	0.359	Sargodha	0.409
41	Sibi	1.912	Lodhran	0.526	Naushero Feroze	0.346	Dadu	0.385
42	Chakwal	1.909	Tank	0.519	Jhalmagsi	0.342	Chagai	0.382
43	Sanghar	1.883	D.I. Khan	0.519	Pishin	0.340	Thatta	0.379
44	Naushero	1.810	Karachi	0.500	Kohlu	0.327	Karak	0.375
45	D.G. Khan	1.734	Hafizabad	0.472	Multan	0.306	Rajanpur	0.361
46	Tank	1.731	Pakpattan	0.454	Sargodha	0.302	T.T. Singh	0.358
47	D.I. Khan	1.731	Malakand	0.331	Attock	0.300	Nawshera	0.345
48	Gawader	1.713	Mandi Baha	0.291	Bahawalnagar	0.296	Chakwal	0.338

TABLE A-1

r								
CATION-WISE RANKING				OF DISTRICTS IN SOCIAL		INDICATORS		
SNo.	Doctors/ Population 10000pop	Nurse/ Population 10000pop		Number of Patients Treated/Population		Total Hospital Beds/Population 1000pop		
49	Bahawalnagar	1.645	Kahat	0.279	Badin	0.287	Jhang	0.335
50	Layyah	1.591	Sibi	0.225	Nawabshah	0.285	Karachi	0.329
51	Cliagai	1.530	Khairpur	0.186	Khushab	0.273	Mirpurkhas	0.308
52	Jacobabad	1.336	Sukkar	0.180	Gujrat	0.270	Sheikhupura	0.287
53	Muzaffarghar	1.327	Mirpurkhas	0.176	Shikarpur	0.269	Shikarpur	0.283
54	Kahat	.172	Charsadda	0.134	Bolan	0.262	D.G. Khan	0.268
55	Vehari	.168	Dir	0.097	Kharan	0.260	Narowal	0.264
56	Karak	.165	Shikarpur	0.096	D.G. Khan	0.259	Layyah	0.263
57	Lasbela	.157	Manshera	0.089	Dadu	0.254	Dir	0.252
58	Okara	.145	Sanghar	0.083	Khairpur	0.254	Sanghar	0.252
59	Khanewal	.137	Bad in	0.075	Sanghar	0.243	Pishin	0.252
60	Kasur	.127	Thillta	0.045	T.T. Singh	0.237	Sukkar	0.242
61	Narowal	.102	Dadu	0.045	C'hakwal	0.233	Loralai	0.238
62	Jhalmagsi	0.944	Pishin	0.039	Jaffarabad	0.196	Muzaffarghar	0.231
63	Pishin	0.937	Loralai	0.038	Jacobabad	0.178	Khairpur	0.228
64	Kohlu	0.902	Swabi	0.035	Vehari	0.170	Bahawalnagar	0.223
65	Lodhran	0.867	Jacobabad	0.025	Dera Bugti	0.166	Kasur	0.214
66	Charsadda	0.778	Panjgur	0.021	Bhakkar	0.166	Zhob	0.202
67	Pakpattan	0.747	Turbat	0.020	Barkhan	0.163	Khuzdar	0.202
68	Bolan	0.723	Zhob	0.020	Musa Khail	0.163	Okara	0.181
69	Kharan	0.717	Kalat	0.015	Loralai	0.163	Badin	0.175
70	Loralai	0.699	Naushero	0.015	Muzaffarghar	0.163	Gawader	0.171
71	Manshera	0.659	Tharparkar	0.013	Sheikhupura	0.162	Killa Saifullaha	0.165
72	Awaran	0.646	Swat	0.007	Khanewal	0.139	Vehari	0.161
73	Khuzdar	0.646	Jhalmagsi	0.000	Rajapur	0.138	Swabi	0.160
74	Swat	0.641	Awaran	0.000	Kasur	0.138	Khanewal	0.156
75	Kalat	0.565	Jaffarabad	0.000	Killa Saifullaha	0.135	Kharan	0.154
76	Jaffarabad	0.541	Bolan	0.000	Layyah	0.131	Panjgur	0.153
77	Mardan	0.496	Gawader	0.000	Turbat	0.130	Kalat	0.153
78	Dir	0.460	Kharan	0.000	Tharparkar	0.129	Naushero Feroze	0.152
79	Dera Bugti	0.459	Lasbela	0.000	Jhang	0.128	Lodhran	0.143
80	Tharparkar	0.454	Mastung	0.000	Okara	0.125	Barkhan	0.136
81	Swabi	0.453	Khuzdar	0.000	Zhob	0.115	Jacobabad	0.134
82	Ilafizabad	0.404	Chitral	0.000	Mandi Baha Dddin	0.115	Jaffarabad	0.120
83	Mandi Baha Uddin	0.382	Buner	0.000	Narowal	0.114	Bolan	0.115
84	Killa Saifullaha	0.373	Chagai	0.000	Nasirabad	0.108	Pakpattan	0.113
85	Turbat	0.358	Karak	0.000	Panjgur	0.105	Mastung	0.111
86	Zhob	0.317	Kohistan	0.000	Mastung	0.096	Turbat	0.103
87	Nasirabad	0.297	Mardan	0.000	Kalat	0.096	Dera Bugti	0.102
88	Panjgur	0.289	Killa Saifullaha	0.000	Pakpattan	0.086	Musa Khail	0.092
89	Kohistan	0.052	Kohlu	0.000	Hafizabad	0.084	Awaran	0.087
90	Musa Khail	0.000	Dera Bugti	0.000	Khuzdar	0.084	Lasbela	0.072
91	Barkhan	0.000	Nasirabad	0.000	Awaran	0.084	Nasirabad	0.069
92	Buner	0.000	Musa Khail	0.000	Lodhran	0.058	Tharparkar	0.053
93	Nawshera	0.000	Barkhan	0.000	Kohistan	0.036	Kohistan	0.012
94	Mastung	0.000	Ziarat	0.000	Malakanc!	0.000	Buner	0.000
	Mean	2.03		0.87		0.43		0.50:
	Variance	4.25		2.69		0.15		0.30:

TABLE A-1

NATION-WISE RANKING OF DISTRICTS IN SOCIAL INDICATORS								
SNo.	Primary Enrollment Rate-Boys		Primary Enrollment Rate-Girls		Sec. Enrollment Rate-Boys		Sec. Enrollment Rate-Girls	
1	Larkana	.371	Jhelum	1.040	Rawalpindi	0.938	Karachi	0.392
2	Quetta	.288	Chakwal	0.948	Jhelum	0.829	Faisalabad	0.390
3	Sibi	.275	(injr	0.943	Naushero l-elw.e	0.751	Lahore	0.347
4	T.T. Singh	.193	Quetta	0.939	Chakwal	0.744	Rawalpindi	0.320
5	Faisalabad	.188	Rawalpindi	0.921	Khairpur	0.737	Quetta	0.311
6	Jhelum	.177	Shaiwal	0.918	Lahore	0.645	Chakwal	0.306
7	Karak	.136	Narowal	0.875	Gujral	0.596	Jhelum	0.293
8	Haripur	.110	T.T. Singh	0.860	Attock	0.581	Gujranwala	0.276
9	Abbottabad	.080	Sailkot	0.776	Sailkot	0.522	T.T. Singh	0.276
10	Swat	.076	Attock	0.751	Gujranwala	0.493	Gujrat	0.256
11	Gujrat	.066	Mandi Baha Uddin	0.724	Karachi	0.485	Mandi Baha Uddin	0.248
12	Chakwal	.027	Faisalabad	0.680	Okara	0.483	Saikkol	0.248
13	Rawalpindi	.021	Sargodha	0.642	Narowal	0.475	Narowal	0.196
14	Narowal	1.019	Lahore	0.626	Haripur	0.474	Shaiwal	0.193
15	Kahat	0.994	Gujranwala	0.618	Karak	0.471	Multan	0.179
16	Jacobabad	0.990	Karachi	0.606	Mainwalai	0.468	Sheikhupura	0.177
17	Barkhan	0.973	Haripur	0.559	Mandi Baha Uddin	0.434	Khanewal	0.176
18	Mandi Baha	0.959	Hafizabad	0.529	Multan	0.431	Attock	0.172
19	Buner	0.953	Khushab	0.504	T.T. Singh	0.426	Rahim Yar Khan	0.172
20	Chitral	0.953	Mainwalai	0.503	Rahim Yar Khan	0.422	Sargodha	0.172
21	Khairpur	0.940	Abbottabad	0.501	Faisalabad	0.421	Okara	0.148
22	Naushero Feroze	0.938	Karak	0.461	Abbottabad	0.421	Mirpurkhas	0.143
23	Shikarpur	0.937	Malakand	0.446	Chitral	0.419	Bahawalnagar	0.140
24	Shaiwal	0.927	Sheikhupura	0.440	Buner	0.410	Haripur	0.138
25	Attock	0.917	Multan	0.424	Kasur	0.403	Hyderabad	0.137
26	Malakand	0.912	Jhang	0.412	Sibi	0.396	Layyah	0.131
27	Sargodha	0.911	Vehari	0.409	Tank	0.393	D.I. Khan	0.128
28	Khushab	0.908	Bhakkar	0.394	Swabi	0.387	Shikarpur	0.122
29	Charsadda	0.905	Okara	0.380	Khushab	0.383	Vehari	0.121
30	Mirpurkhas	0.887	Nawshera	0.379	Swat	0.375	Malakand	0.121
31	Jalalpur	0.850	Khanewal	0.377	D.I. Khan	0.366	Peshawar	0.116
32	Nawshera	0.836	Swabi	0.376	Nawshera	0.365	Kasur	0.116
33	Sanghar	0.834	Bahawalnagar	0.373	Mardan	0.365	Mainwalai	0.115
34	Dera Rugti	0.832	Kahal	0.369	Malakand	0.364	Lodhran	0.113
35	Bannu	0.830	Layyah	0.363	Charsadda	0.360	Bhawalpur	0.111
36	Sukkar	0.830	D.I. Khan	0.351	Sheikhupura	0.348	Tank	0.106
37	D.I. Khan	0.825	Mardan	0.350	Sargodha	0.335	Khushab	0.104
38	Peshawar	0.822	Sibi	0.348	Layyah	0.331	Larkana	0.100
39	Kohlu	0.820	Kasur	0.337	Khanewal	0.320	Jhang	0.098
40	Sailkot	0.814	Tank	0.329	Kahat	0.313	Hafizabad	0.097
41	Swabi	0.811	D.G. Khan	0.326	Shaiwal	0.305	Nawshera	0.094
42	Lakki	0.800	Bhawalpur	0.324	Lakki	0.300	Abbottabad	0.088
43	Bhakkar	0.784	Peshawar	0.317	Peshawar	0.292	Karak	0.083
44	Gujranwala	0.784	Chitral	0.312	Bahawalnagar	0.288	Chitral	0.083
45	Pishin	0.766	Rahim Yar Khan	0.311	Bhawalpur	0.286	Swabi	0.080
46	Mainwalai	0.760	Swat	0.296	Bhakkar	0.282	Sukkar	0.079
47	Khanewal	0.751	Hyderabad	0.289	Jhang	0.267	Muzaffargarh	0.078
48	Sheikhupura	0.743	Manshera	0.277	Ziarat	0.254	Mardan	0.078

TABLE A-1

NATION-WISE RANKING OF DISTRICTS IN SOCIAL INDICATORS								
SNo.	Primary Enrollment Rate-Boys		Primary Enrollment Rate-Girls		Sec. Enrollment Rate-Boys		Sec. Enrollment Rate-Girls	
49	Dir	0.729	Bannu	0.269	Bannu	0.253	Kahat	0.076
50	Hafizabad	0.724	Buner	0.268	Vehari	0.243	Naushero Feroze	0.076
51	Tank	0.723	Charsadda	0.263	D.G. Khan	0.238	Nawabshah	0.072
52	Jhang	0.711	Lodhran	0.262	Nawabshah	0.236	D.G. Khan	0.069
53	Okara	0.709	Mirpurkhas	0.248	Dir	0.231	Charsadda	0.066
59	Vehari	0.689	Gawader	0.187	Larkana	0.208	Pakpattan	0.057
60	Mullan	0.681	Pirail	0.187	Larkana	0.207	Ziarat	0.056
61	Karachi	0.661	Thatta	0.180	Uafiabad	0.203	Swat	0.053
62	Kasur	0.661	Chagai	0.179	Chagai	0.183	Bhakkar	0.047
63	Lahore	0.655	Lasbela	0.174	Barkhan	0.178	Buner	0.043
64	Chagai	0.645	Nawabshah	0.169	Kohlu	0.173	Bannu	0.043
65	Lodhran	0.624	Rajanpur	0.164	Jaffarabad	0.170	Manshera	0.040
66	Thatta	0.623	Lakki	0.164	Shikarpur	0.163	Rajanpur	0.034
67	Badin	0.615	Dadu	0.162	Lasbela	0.158	Lasbela	0.027
68	Mastung	0.612	Mastung	0.156	Manshera	0.157	Badin	0.026
69	Layyah	0.582	Pakpattan	0.145	Sanghar	0.151	Chagai	0.023
70	Gawader	0.582	Shikarpur	0.136	Lodhran	0.150	Mastung	0.022
71	Manshera	0.573	Pishin	0.127	Rajanpur	0.143	Jacobabad	0.021
72	Bahawalnagar	0.541	Turbat	0.115	Gawader	0.141	Dir	0.019
73	D.G. Khan	0.533	Naushero Feroze	0.109	Pakpattan	0.135	Pishin	0.017
74	Rawalpur	0.506	Barkhan	0.104	Dera Bugti	0.132	Panjgur	0.015
75	Rahim Yar	0.498	Sanghar	0.100	Pishin	0.131	Barkhan	0.012
76	Jaffarabad	0.473	Kharan	0.099	Mastung	0.126	Lakki	0.011
77	Hyderabad	0.468	Killa Saifullaha	0.096	Thatta	0.124	Jaffarabad	0.01
78	Bolan	0.465	Badin	0.093	Jacobabad	0.115	Loralai	0.010
79	Muzaffargarh	0.443	Kohlu	0.092	Kharan	0.113	Tharparkar	0.009
80	Rajanpur	0.365	Panjgur	0.090	Badin	0.104	Khuzdar	0.009
81	Loralai	0.364	Jaffarabad	0.088	Khuzdar	0.099	Gawader	0.009
82	Kharan	0.347	Jacobabad	0.086	Jhalmagsi	0.095	Zhob	0.009
83	Pakpattan	0.324	Khuzdar	0.073	Tharparkar	0.095	Killa Saifullaha	0.008
84	Khuzdar	0.316	Loralai	0.071	Awaran	0.091	Kharan	0.008
85	Awaran	0.316	Awaran	0.058	Bolan	0.073	Kohlu	0.007
86	Killa Saifullaha	0.302	Jhalmagsi	0.056	Loralai	0.057	Awaran	0.006
87	Nasirabad	0.271	Zhob	0.054	Nasirabad	0.056	Turbat	0.005
88	Zhob	0.246	Nasirabad	0.048	Killa Saifullaha	0.047	Jhalmagsi	0.005
89	Tharparkar	0.213	Bolan	0.039	Turbat	0.034	Kalat	0.004
90	Kalat	0.189	Musa Khail	0.036	Zhob	0.032	Bolan	0.004
91	Musa Khail	0.184	Tharparkar	0.033	Musa Khail	0.029	Nasirabad	0.002
92	Turbat	0.159	Dera Bugti	0.029	Kalat	0.028	Musa Khail	0.002
93	Panjgur	0.111	Kalat	0.027	Panjgur	0.025	Dera Bugti	0.001
94	Kohistan	0.042	Kohistan	0.007	Kohistan	0.004	Kohistan	0.000
		0.73		0.33		0.29		0.10
		0.08		0.07		0.04		0.01

TABLE A-1
NATION-WISE RANKING OF DISTRICTS IN SOCIAL INDICATORS

SNo.	Literacy Ratio Male-1981		Literacy Ratio Female-1981		%ofHHWith Inside Piped Water 1987	
1	Rawalpindi	60.770	Karachi	48.840	Quetta	71.400
2	Karachi	60.000	Lahore	40.950	Karachi	66.800
3	Chakwal	54.630	Rawalpindi	31.260	Lahore	63.100
4	Lahore	54.580	Haripur	26.600	Peshawar	49.158
5	Jhelum	53.390	Chakwal	25.660	Hyderabad	34.500
6	Quetta	46.300	Jhelum	24.730	Kohlu	33.200
7	Gujrat	42.780	Quetta	23.200	Loralai	32.764
8	Abbottabad	41.640	Nawshah	23.008	Barkhan	31.999
9	Faisalabad	41.610	Naushero Feroze	23.008	Kahat	31.900
10	T.T. Singh	40.850	Charsadda	21.790	Malakand	31.850
11	Sailkot	40.110	Nawshera	21.790	Musa Khail	31.320
12	Gujranwala	38.170	Faisalabad	20.680	Rawalpindi	31.000
13	Sukkar	37.490	Sailkot	20.560	Nawshera	30.099
14	Attock	36.970	Gujranwala	20.520	Bannu	28.701
15	Hyderabad	36.510	Hyderabad	19.810	Lakki	27.749
16	Khanewal	36.280	T.T. Singh	18.670	Abbottabad	27.385
17	Sargodha	35.870	Gujrat	18.670	Chitral	27.323
18	Shikarpur	35.640	Mandi Baha Uddin	18.670	Sibi	27.237
19	Karak	34.750	Tank	18.430	Swat	27.162
20	Narowal	34.700	Mirpurkhas	16.405	Charsadda	26.760
21	Okara	34.540	Swabi	15.950	Tank	25.957
22	Khairpur	34.230	Narowal	15.470	D.I. Khan	25.172
23	Mainwala	33.660	Okara	13.740	Chakwal	25.100
24	Mandi Baha Uddin	33.400	Khanewal	13.650	Buner	25.000
25	Larkana	32.630	Multan	12.880	Haripur	24.759
26	Multan	32.610	Sukkar	12.810	Sargodha	24.100
27	Dadu	32.480	Sargodha	12.770	Sailkot	23.503
28	Kahat	32.090	Sheikhupura	12.540	Gujrat	22.225
29	Peshawar	31.270	Bhawalpur	12.210	Karak	21.900
30	Sheikhupura	30.900	Shaiwal	11.680	Pishin	21.600
31	Shaiwal	30.480	Ziarat	11.500	Multan	21.443
32	Jhang	30.040	Attock	11.070	Mirpurkhas	20.343
33	Khushab	30.040	Abbottabad	10.900	Gujranwala	20.321
34	Hafizabad	28.600	Peshawar	10.860	Bahawalnagar	20.100
35	Layyah	28.580	Rahim Yar Khan	10.650	Faisalabad	19.800
36	Sanghar	28.460	Larkana	9.930	Dir	18.900
37	Bahawalnagar	28.330	Hafizabad	9.700	Attock	17.800
38	Rahim Yar Khan	28.030	Bahawalnagar	9.600	Shaiwal	17.563
39	Vehari	27.890	Kasur	9.470	Pakpattan	17.083
40	Bhakkar	27.500	Jhang	9.300	D.G. Khan	16.000
41	Bhawalpur	27.440	Khushab	9.300	Manshera	14.833
42	D.I. Khan	27.240	Vehari	9.190	Sukkar	14.700
43	Bannu	27.140	Chagai	9.000	Jhelum	14.400
44	Kasur	26.850	Buner	8.730	Narowal	13.993
45	Haripur	26.600	Shikarpur	8.730	Kohistan	13.500
46	Thatta	26.470	Dadu	8.610	Nawabshah	13.205
47	Malakand	26.400	Sanghar	8.460	Mastung	13.113
48	Mardan	26.080	D.G. Khan	8.120	Mandi Baha Uddin	12.969

TABLE A-1

NATION-WISE RANKING OF DISTRICTS				IN SOCIAL INDICATORS		
SNo.	Literarcy Ratio Male-1981	Literarcy Ratio Female-1981	%ofHHWith Inside Piped Water 1987			
49	Muzanarghai-	25.810	Mainwalai	8.030	Hafizabad	12.724
50	Lakki	25.350	D.I. Khan	8.010	Mainwalai	12.100
51	Pakpattan	24.990	1 harparkar	7.890	Okai-a	1 1.500
52	Chitral	24.120	Pakpattan	7.800	Naushero Feroze	10.430
53	Tharparkar	23.660	Layyah	7.780	Rajanpur	10.400
54	D.G. Khan	23.200	Thatta	7.720	T.T. Singh	10.100
55	Lodhran	23.060	Khairpur	7.050	Lodhran	10.000
56	Naushero Feroze	23.008	Badin	6.790	Kalat	9.411
57	Nawabshah	23.008	Bhakkar	6.610	Bolan	9.395
58	Badin	21.840	Manshera	6.520	Sheikhupura	9.300
59	Nawshera	21.790	Kahat	6.360	Khushab	9.300
M)	Charsadda	21.790	Muz.aHarfjiar	6.330	Mardan	9.076
61	Manshera	20.920	Maslung	6.200	Badin	8.600
62	Tank	18.430	Killa Saifullaha	5.900	Dadu	8.300
63	Sibi	17.600	Gawader	5.800	Bhawalpur	8.300
64	Jacobabad	17.450	Panjgur	5.800	Khanewal	8.200
65	Dir	16.930	Barkhan	5.500	Gawader	8.000
66	Mirpurkhas	16.405	Musa Khail	5.500	Thatta	7.900
67	Swabi	15.950	Malakand	5.410	Sanghar	7.800
68	Rajanpur	15.520	Lodhran	5.340	Jhalmagsi	7.683
69	Swat	15.080	Rajanpur	5.320	Swabi	7.484
70	Pishin	15.000	Mardan	5.100	Chagai	7.100
71	Ziarat	11.500	Jhalmagsi	4.800	Panjgur	7.100
72	Kalat	10.600	Jaffarabad	4.700	Vehari	7.000
73	Lasbela	10.300	Sihi	4.400	Tharparkar	6.915
74	Turbat	9.500	Kharan	4.200	Khuzdar	6.800
75	Chagai	9.000	Awaran	4.200	Rahim Yar Khan	6.600
76	Zhob	9.000	Karak	3.570	Lasbela	6.500
77	Buner	8.730	Bannu	3.420	Ziarat	5.608
78	Loralai	8.700	Jacobabad	3.180	Larkana	5.600
79	Nasirabad	8.100	Chitral	2.930	Bhakkar	5.300
80	Bolan	8.100	Dir	2.770	Turbat	4.900
81	Khuzdar	7.000	Zhob	2.000	Jacobabad	4.800
82	Mastung	6.200	Lakki	1.890	Khairpur	4.400
83	Killa Saifullaha	5.900	Pishin	1.800	Awaran	4.100
84	Kohlu	5.900	Swat	1.730	Nasirabad	3.866
85	Panjgur	5.800	Loralai	1.600	Jhang	3.800
86	Gawader	5.800	Lasbela	1.400	Kasur	3.800
87	Barkhan	5.500	Kalat	1.100	Muzaffargarh	3.700
88	Musa Khail	5.500	Bolan	1.100	Kharan	2.400
89	Jhalmagsi	4.800	Turbat	0.800	Killa Saifullaha	2.295
90	Jaffarabad	4.700	Nasirabad	0.800	Layyah	2.100
91	Kharan	4.200	Kohistan	0.730	Jaffarabad	2.044
92	Awaran	4.200	Khuzdar	0.700	Dera Bugti	1.800
93	Kohistan	1.870	Kohlu	0.600	Zhob	0.784
94	Dera Bugti	0.000	Dera Bugti	0.000	Shikarpur	0.700
		24.52		10.50		16.77
		190.70		76.57		187.31