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The Spatial Pattern of International Labour Flows from and to Pakistan: A Preliminary Analysis

MIR ANJUM ALTAF and OBAIDULLAH

Since the mid-1970s Pakistan has witnessed very high magnitudes of labour out- and in-migration. Most of the earlier studies on the subject either concentrated on the aggregate macro-economic impact of this migration on the national economy or have been in the nature of case studies of specific 'groups of migrants'. In these studies, the analysis of geographical distribution of the labour force has been missing. Given the fact that both out- and return-migrants may have location-specific effects which might lead to uneven economic and social development in the country and as such policies would have to respond in concrete locational terms, such an omission is critical. This paper attempts to identify the international labour flows of Pakistanis focussing on their geographical distribution.

Based on a survey conducted by the Overseas Pakistanis Foundation and the Population Census of 1981 the study suggests that less developed districts are characterised by low out-migration and high return-migration. In addition, structural characteristics (e.g., land tenure) may be important in explaining low mobility from some underdeveloped districts, e.g., those of Sindh and lower Punjab.

On the basis of the information presented, the paper suggests a number of avenues for future research: (i) to relate the indices of out- and return-migration to disaggregated characteristics of the regional socio-economic structure; (ii) to compare the pattern of international out-migration with the pattern of internal out-migrant; (iii) to verify whether the process of internal relocation is of significant magnitude a trace analysis of return migrants to the less developed districts could be attempted; and (iv) to determine the socio-economic and political implications of the patterns of out- and return-migration, as the differential patterns are likely to have significant implications for future development.

I. INTRODUCTION

Pakistan emerged as one of the leading exporters of manpower following the Middle East oil boom in the early 1970s. According to the Pakistan Economic Survey (1984-85, p. 75), over 2 million Pakistanis, almost 10 percent of the labour force, were working in other countries by 1984. The importance of this migration

Mir Anjum Altaf is Senior Research Economist, Applied Economics Research Centre, University of Karachi, Karachi, Pakistan. Obaidullah was Project Economist at the Applied Economics Research Centre, University of Karachi, Karachi, Pakistan, when this paper was written.

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can be gauged from the fact that remittances by workers became the single largest source of foreign exchange earnings for a number of years (*ibid.*).

The collapse of the oil market in the early 1980s and the consequent slump in the Middle East economy sparked a wave of return labour flows, and for a number of years the net in-migration remained positive. Thus, the period beginning in the early 1970s to the present has witnessed very high magnitudes of labour flows in both directions.

Given the importance of international labour migration for Pakistan, the phenomenon has been studied quite extensively. However, most of the studies have either concentrated on the aggregate macro-economic impact on the national economy or have been in the nature of case studies of specific groups of migrants.

A very surprising omission from the focus of analysis has been the entire aspect of the geographical distribution of these labour flows. Given that the impacts of both out- and return-migration would manifest themselves locationally, and that policy measures would have to respond in concrete locational terms, such an omission is critical. It becomes all the more critical when viewed against the political background in which regional issues and tensions continue to assume increasing importance. There is little doubt that uneven out-migration patterns have led to uneven economic and social development in the country. Whether these would be ameliorated or exacerbated by the pattern of return migration is as yet an unexplored question. At the very least, it suggests that a regional focus on the international labour flows of Pakistanis is called for.

This paper is an attempt to lay the foundation for such a focus. The objective at this stage is less analytical and more informational: to identify the data on geographical distribution; to organise it in a manner susceptible to subsequent analysis; to present the results; to make some very obvious and preliminary inferences; and, to suggest some directions for future research. Our hope is that the presentation of the data and the preliminary discussion would spark enough interest in other researchers to lead to the thorough investigation that the issue clearly warrants.

II. DATA SOURCES

(a) Out-Migration

The 1981 population census provides the source of information on international out-migration statistics at the district level. As part of the census, a subsample (4.6 percent of rural households and 11.2 percent of urban households) was asked the following question:

Has any previous (*sic*) member of your household migrated abroad during

the last ten years and still (*sic*) living there? If yes, their number: (*sic*)?'

This provides an estimate of the number of people who had gone abroad during the intercensal period 1972–1981, and who were still residing outside the country.

As a measure of the stock of migrants, the estimate is susceptible to some biases (e. g., it would exclude households which had moved *in toto*, or migrants who were visiting their homes during the period in which the census was being administered).[1] However, our primary interest is in the spatial distribution of the migrants and not in their total stock. In the absence of any evidence that the biases are systematically distributed, the estimates are quite adequate for our purposes.

The credibility of the data is enhanced by the fact that even as a measure of the stock of migrants abroad the estimate is quite reasonable. The population census indicates that about 1.7 million Pakistanis, who had gone abroad during the intercensal years 1972–1981, were still residing outside the country at the end of the period. This estimate compares favourably with most other estimates of the total stock of Pakistani migrants abroad (see Appendix 1).

(b) Return-Migration

Data on return-migration are provided by the airport surveys conducted by the Overseas Pakistanis Foundation (OPF). Three surveys were conducted: in January 1986, November 1986, and November 1987. During each month-long survey, the OPF staff were posted at each port of entry to verify if the Pakistani re-entering the country was a worker abroad; whether he was returning permanently or temporarily; and what his district of residence in Pakistan was.

In the absence of any contrary evidence, we take the pattern revealed by these airport surveys as representative of the spatial pattern of permanent return-migration to Pakistan.[2] It should be kept in mind that the information records the district of origin of the return-migrant and not the district to which he may be intending to return. This distinction is important and we shall comment on it later.

III. INDICES OF OUT- AND RETURN-MIGRATION

(a) Index of Out-Migration

Since we are interested in the spatial distribution of migration, the estimates

[1]These biases are not likely to be severe. Because of the restrictions imposed by the host countries, very few migrants would have managed to take their entire families with them. Further, the 1981 census pre-dates the heavy waves of return-migration, and the number of visitors during the census year would not be a significant proportion of the total stock of migrants.

[2]This permanence need not be absolute. Such migrants could attempt to obtain new jobs abroad. The category only excludes those migrants who were returning exclusively for a temporary visit.

of absolute migration are not sufficient. On the latter basis, Gilani (1983) has studied five high migration districts, but, as we shall show, such an identification can be quite misleading for our purposes.

What we need is an identification of areas with a high density of out-migration. If we had no prior information, we would assume as a starting-point that out-migration was evenly distributed throughout the country, so that each district contributed out-migrants in proportion to its share of the national population. If the distribution was actually uneven (as one would expect), the share would be higher in some districts and lower in others. We would term the former as high-density out-migration districts and the latter as low-density out-migration districts.[3]

Following the suggestion of Unger (1986), we define an out-migration index that would capture the above characteristic as follows:

$$OMI_i = \frac{m_i / \sum_i m_i}{P_i / \sum_i P_i}$$

where,

OMI_i = Out-migration index for district i;
m_i = Total out-migration from district i (1972–1981); and
p_i = Population of district i (1972).

Our choice for the population base (p_i) is the number of males in the age bracket of 10 to 50 years, since this age bracket would constitute the pool of potential migrants during 1972 to 1981. However, the use of total male population as the denominator does not affect the results to any significant extent since there is no reason to expect the pre-migration proportion of working age males in the population to vary systematically across districts. To ensure that this is so, the population data are taken from the 1972 population census which just pre-dates the wave of

[3]In response to a comment by a referee, we feel the need to reiterate that the primary objective of this paper is restricted to identifying the uneven pattern of out- and return-migration. This information would facilitate systematic research, explaining the reasons for the variation in the rates of out- and return-migration. Attempting both tasks comprehensively in one paper is not required, and would make the paper too long. Such systematic research would also go beyond the type of isolated interesting comments made but not followed up in other studies for lack of a complete and comparative data base. For instance, the PLM study (n.d., p. 45) expresses surprise at its finding of a relatively low incidence of out-migration from Sindh, based on its expectation that a higher rate should have been the case because of the location of Karachi in Sindh province. A comprehensive analysis might suggest that this expectation was not well-founded.

out-migration from Pakistan.[4]

The out-migration index can be re-written as:

$$OMI_i = \frac{m_i / p_i}{\sum_i m_i / \sum_i p_i}$$

From this interpretation it is obvious that the index measures the rate of out-migration from a district relative to the national rate of out-migration. If the two are the same, the value of the index would equal unity. If the rate of out-migration from a district is higher (lower) than the national average, the index would be greater (lesser) than unity.

(b) Index of Return-Migration

On exactly the same pattern as above, an index of return-migration can be defined as follows:

$$RMI_i = \frac{r_i / \sum_i r_i}{m_i / \sum_i m_i}$$

where,

RMI_i = Return-migration index for district i;
r_i = Number of return-migrants to district i during the three OPF survey months; and
m_i = Total out-migration from district i (1972–1981).

Thus, if the share of return-migrants to a district is greater than its share of out-migrants, the value of the index would be greater than unity; and vice versa.

Care should be exercised in interpreting the index of return-migration. A value greater than unity for a particular district does not mean that it is attracting returnees who belonged to other districts, but only that migrants who belonged to

[4]The number of districts used in the analysis is based on the 1972 census. Statistics for the districts created after 1972 have been aggregated back into the original number of districts. The details are indicated in Appendix 2.

The primary reason for this decision is that a more detailed analysis of out-migration needs to be based on data predating the large labour outflows of the 1970s. Such data at the district level is only available for the districts that existed at the time of the 1972 census. Further, from the perspective of understanding spatial patterns, a smaller number of larger-sized districts is more appropriate.

the district are returning earlier and in greater numbers compared to other districts. The second-order process may also take place, i.e., returnees to a particular district may be moving after their return (internal migration); but the data is not sufficient to capture this effect. We shall comment on the implications of such a process later.

IV. SPATIAL DISTRIBUTION OF OUT- AND RETURN-MIGRATION

(a) Provincial Level

We are now in a position to compute the indices of out- and return-migration. These are presented in Appendix 3 alongwith the data on which they are based.

It would be useful to look first at the spatial distribution at the provincial level (Table 1).

Table 1

Distribution of Out- and Return-Migrants at the Provincial Level

Province	Population (% of National Population)	Out-Migration (% of National Out-Migrants)	Return-Migrants (% of National Return-Migrants)	Out-Migration Index	Return-Migration Index
Punjab	60.3	43.1	64.4	0.72	1.49
Sindh	23.4	17.6	17.3	0.75	0.98
N.W.F.P.	12.2	34.7	16.2	2.83	0.47
Balochistan	4.1	4.5	2.1	1.11	0.47

The uneven pattern is quite noticeable. In relative terms, out-migration is dominated by the N.W.F.P. while return-migration is dominated by the Punjab. The N.W.F.P. is a high-density out-migration area but a low-density return-migration area, while the reverse is true for the Punjab.

This pattern is largely in contradiction with what little information was previously available on the subject as a by-product of the studies not focussed explicitly on either spatial distribution or international migration. Three such studies, of the problems caused by international migration [OPF (1983)], population, labour force and migration patterns within Pakistan [Irfan, Demery and Arif (1983)], and the

impact of out- and return-migration on domestic employment in Pakistan [ILO-ARTEP (1986)], have presented evidence in passing on the rates of out- and return-migration from Pakistan. Comparative results from these studies are presented in Table 2.

Table 2

Distribution of Out- and Return-Migration at the Provincial Level – Comparative Results

Province	Population (% of National Pop.)	% of National Migrants					
		This Study[1]		OPF Study	PLM Study[2]		ILO-ARTEP Study[3]
		Out-	Return-	Out-	Out-	Return-	Return-
Punjab	60	43	64	70	61	55	52
Sindh	23	18	17	14	11	17	23
N.W.F.P.	12	35	16	12	24	27	18
Balochistan	4	5	2	4	4	2	–

[1]Based on the period 1972–1981.

[2]Based on the period 1972–1979.

[3]The ILO-ARTEP study shows 8 percent of the total return-migrants belonging to Azad Jammu and Kashmir which is not separately identified in the other studies.

It can be noted that the OPF results are quite different from ours. They would lead one to infer that Punjab was a high-density out-migration province while the share of out-migration from the N.W.F.P. was the same as its share in the national population. In fact, the study commented that "[C]uriously enough all provinces are getting a share in overseas migration, roughly proportionate to their population" (p. i). In contrast, our figures show the share of out-migration from the N.W.F.P. to be almost three times its share of the national population.

The PLM study shows lower out-migration from Punjab, but still much higher than our figures. The proportion from both Sindh and the N.W.F.P. is much lower than that reported by us.

Both the PLM and the ILO-ARTEP studies indicate similar return-migration figures for the Punjab, which are consistently lower than those reported in this study. The evidence for Sindh and the N.W.F.P. is mixed. The PLM figure for Sindh is similar to ours, while the ILO-ARTEP figure is much higher. For the

N.W.F.P., the ILO-ARTEP is similar to ours while the PLM figure is much higher.[5] It is also of some interest to observe the impact exerted by the provincial capital on the spatial distribution of out- and return-migration. The relevant information is presented in Table 3.

It can be seen that except for Punjab, where Lahore District has a pattern similar to that of the province in general, the pattern in the other three provinces is quite dissimilar to that in the districts in which their provincial capitals are situated. This can be interpreted as an indicator of uneven development within all provinces excepting the Punjab, or at least of much more uneven development in the other three provinces relative to the Punjab.

The most noticeable such case is that of Sindh, where Karachi District has lower out-migration and much higher return-migration than the province itself. In the N.W.F.P., Peshawar District has higher out-migration and lower return-migration than the province itself. In Balochistan, return-migration is much higher in Quetta District than the provincial average.

(b) District Level

To derive general conclusions at the district level, it would make sense at this preliminary stage of analysis to confine our attention to the most unambiguous cases.[6] Thus, a district would be considered a high-density one if its index was equal to or greater than 1.25, and a low-density one if its index was equal to or less than 0.75; i. e., we include in the analysis only those districts whose migration rate differs from the national average by at least 25 percent.

Using the above criteria, the high- and low-density districts are identified in Table 4.

[5]It should be kept in mind that the primary purpose of the studies mentioned was not a spatial analysis of international migration. The PLM study states this quite explicitly: "[T]he sample selection for the PLM survey . . . was not specifically designed for . . . international migrants . . . . The sample allocation cannot be considered optimal and it is not certain that the sample size is large enough to give a measure of reassurance that reasonable national and subnational estimates may be derived" (p. 42). The PLM estimates of return-migration are based on 930 households, while the ILO-ARTEP figures are based on a sample size of 1327. In contrast, the return-migration statistics reported in this paper are based on information from 23000 return-migrants.

[6]In the subsequent discussion, we ignore the districts of Balochistan. The relatively small magnitude of the populations, and especially the number of out- and return-migrants, make the indices especially prone to error in these districts. Moreover, the structural nature of the migration process is not comparable with that of the other three provinces, being affected by historical links with Oman and employment in her armed forces. For the latter reason, unrecorded flows (from the Mekran coast over the Gulf of Oman) to and from Balochistan are suspected to be much higher as compared to the other provinces. The general conclusions to be derived from the analysis are not affected by the exclusion of Balochistan from the sample. The migration indices show imperceptible changes.

Table 3

Influence of Provincial Capital on Provincial Migration

Province	Out-Migration Index	Return-Migration Index
Punjab	**0.72**	**1.49**
Lahore District	0.76	2.09
Punjab, Excluding Lahore District	0.71	1.42
% Change in Provincial Index	−0.84	−4.70
Sindh	**0.75**	**0.98**
Karachi District	0.51	3.72
Sindh, Excluding Karachi District	0.85	0.31
% Change in Provincial Index	+13.33	−68.37
N.W.F.P.	**2.83**	**0.47**
Peshawar	6.34	0.21
N.W.F.P., Excluding Peshawar District	1.80	0.73
% Change in Provincial Index	−36.39	+55.32
Balochistan	**1.11**	**0.47**
Quetta	0.79	1.03
Balochistan, Excluding Quetta District	1.20	0.37
% Change in Provincial Index	+8.11	−21.28

Table 4

Districts of High and Low Density Migration

High Out-Migration Districts	Low Out-Migration Districts	High Return-Migration Districts	Low Return-Migration Districts
N.W.F.P.			
Peshawar	Bannu	Kohat	Peshawar
Mardan	Chitral	Chitral	Mardan
Hazara	Malakand	Bannu	Hazara
		Dir	
		Malakand	
Punjab			
Bahawalpur	Multan	Rawalpindi	Sheikhupura
R. Y. Khan	Campbellpur	Campbellpur	Bahawalnagar
Muzaffargarh	Sialkot	Sargodha	R. Y. Khan
	Rawalpindi	Jhelum	Muzaffargarh
	Gujranwala	Gujrat	Bahawalpur
	D.G. Khan	Gujranwala	
	Bahawalnagar	Jhang	
	Lyallpur	Sialkot	
	Sargodha	Lyallpur	
	Sahiwal	Lahore	
	Jhang	D.G. Khan	
		Sahiwal	
Sindh			
Sanghar	Dadu	Karachi	Dadu
	Nawabshah	Jacobabad	Larkana
	Tharparkar		Sukkur
	Karachi		Nawabshah
	Khairpur		Khairpur
	Thatta		Hyderabad
	Jacobabad		Tharparkar
			Thatta
			Sanghar

The results present some surprises. The low out-migration districts include both very undeveloped districts (from which push factors might be expected to have led to higher out-migration, e. g., Tharparkar and Thatta) and some of the most dynamic and economically vibrant districts like Karachi, Lyallpur, and Gujranwala. It is also interesting that not one of the high migration districts studied by Gilani (1983) emerges as a district of high-density out-migration.[7]

Further, there is little overlap between the districts of high out- and return-migration. It has been generally assumed, without any evidence, that the districts of high out-migration shall also be the districts of high return-migration. But the evidence does not support such an assumption.

(c) Typology of Districts

The understanding of international labour flows to and from the districts of Pakistan would be advanced by specifying a typology that identifies the following categories:

(i) Districts with high out-migration and high return-migration (HH);
(ii) Districts with high out-migration and low return-migration (HL);
(iii) Districts with low out-migration and high return-migration (LH); and
(iv) Districts with low out-migration and low return-migration (LL).

Such a typology is presented in Table 5.

It can be noticed that even this preliminary level of analysis proves to be a worthwhile and rewarding exercise since it reveals varying provincial patterns which were not so obvious earlier. Thus, the major districts of the N.W.F.P. (Peshawar, Mardan, and Hazara), constituting 58.5 percent of the provincial population, are characterised by high out- and low return-migration. A major area of the Punjab (50.1 percent of provincial population) is characterised by low out- and high return-migration. In Sindh, a substantial area (30.7 percent of provincial population and 43 percent of provincial population excluding Karachi District) is characterised by low out- and low return-migration. It is quite clear that different processes are underway in the three provinces.

[7]The five districts studied were Kohat, Gujrat, Larkana, Turbat, and Mirpur. Mirpur is part of Azad Jammu and Kashmir (AJK), for which data is not available to us. Turbat did not have the status of a district in 1971. Based on the 1981 census data, the out-migration index for Turbat is 0.14.

Table 5

Typology of Districts by Pattern of Migration

High Out- High Return-	High Out- Low Return-	Low Out- High Return-	Low Out- Low Return-
N.W.F.P.			
	Peshawar Mardan Hazara	Bannu Chitral Malakand	
Punjab			
	Bahawalpur Muzaffargarh R.Y. Khan	Campbellpur Sialkot Rawalpindi Gujranwala D.G. Khan Lyallpur Sargodha Sahiwal Jhang	Bahawalnagar
Sindh			
	Sanghar	Karachi Jacobabad	Dadu Nawabshah Tharparkar Khairpur Thatta

V. DISCUSSION

While an explanation of the pattern in each district is not possible at this preliminary level of analysis, some generalisations can still be made. It is evident that most of the high out-migration districts are among the less developed districts of Pakistan so that the push factor in international out-migration can be considered important. At the same time, most districts of low return-migration are also among the less developed districts of the country. The low attractiveness of such districts is plausible from a behavioural point of view. From the perspective of a migrant overseas, if the prospects of employment in his home district are bleak and he has to consider relocating to a more dynamic area, returning loses quite a bit of its attrac-

tiveness. If he is to remain a migrant anyway, he might as well be overseas where the economic returns are much higher.

The districts of high return-migration contain quite a few of the dynamic districts of the country. Thus, the pull factor in international return-migration seems to be of importance.

The general pattern seems to suggest that the less developed districts have high out-migration and low return-migration, whereas the more developed districts, both from an industrial and an agricultural perspective (i. e., canal irrigated), have low out-migration and high return-migration.

The only districts that do not fit into this pattern are the less developed districts of Sindh and lower Punjab, which are characterised by both low out- and return-migration. A plausible explanation can be hazarded by looking at the pattern from another perspective. It can be noted that the less developed districts in areas with large land-holdings and high tenancy ratios (loosely termed as 'feudal'), e. g., lower Punjab and Sindh, have low out-migration and low return-migration. Of the 'non-feudal' districts, the less developed ones are characterised by high out-migration and low return-migration, while the dynamic ones are characterised by low out-migration and high return-migration.

From the above discussion, it seems reasonable to speculate that considerations of land tenure may have a significant role to play in explaining the spatial pattern of international out-migration, in particular the low out-migration from Sindh.[8] Indeed, this evidence supports the position of Standing (1981), who pointed out that immobility as a phenomenon should be studied just as seriously as mobility.

The low attractiveness of underdeveloped districts for return-migrants and the pull of the more developed ones have obvious implications for regional development and planning for the reintegration of the returnees. The conclusion seems to be that the less developed regions are not going to benefit automatically by the cycle of migration, and that the gap between the less developed and the more developed districts may indeed widen. This will be even more true if returnees to the less developed districts relocate as internal migrants to the more developed districts in search of work that is commensurate with their raised expectations and aspirations.

VI. FURTHER RESEARCH

This preliminary analysis suggests a number of avenues for further research.

[8]It should be kept in mind that no information is available on the ethnic composition of out- and return-migrants. Such information may further strengthen the point being made here. Ethnic groups disproportionately employed as tenants might have an even lower out-migration index than that suggested by the district or provincial averages.

First, the most obvious extension would be to relate the indices of out- and return-migration to disaggregated characteristics of the regional socio-economic structure. We shall be reporting the results of such an analysis in a companion paper.

Second, it should be possible to compare the pattern of international out-migration with the pattern of internal out-migration. Unger (1986) concludes from Greek data that the two may not necessarily be the same, and that while international out-migration is driven by push factors, internal migration is more responsive to pull factors.

Third, tracer analysis of returnees to the less developed districts could be attempted to verify if the process of internal relocation is of significant magnitude. Without such a follow-up, erroneous conclusions may be drawn about unemployment amongst return-migrants if only those who remain in their districts of origin are surveyed, as has been the practice in the past [ILO-ARTEP (1986)].

Fourth, an analysis could be attempted to determine the socio-economic and political implications of the patterns identified above. Clearly, the differential patterns are likely to have significant implications for future development. If one were to focus only on the underdeveloped districts, the changes are likely to be quite different in those characterised by high out-migration (e. g., districts in the N.W.F.P.) and those characterised by low out-migration (e. g., districts in Sindh). These differences could be caused both by the economic impact of remittances and by the social impact of new attitudes. If the canal-irrigated districts of the Punjab are considered as a reference, is it likely that the transformation in the districts of the N.W.F.P. would be towards the reference, leading to greater national integration, while the transformation in the districts of Sindh would be away from the reference, leading to decreased national integration?[9] If so, much more attention needs to be focussed on the socio-economic changes underway.

VII. CONCLUSIONS

This paper has presented data on the spatial pattern of international out- and return-migration to and from Pakistan. The evidence suggests that the less developed districts are generally characterised by high out-migration and low return-migration, while the more developed districts are characterised by low out-migration and high return-migration. In addition, structural characteristics (e. g., land tenure) may be important in explaining low mobility from some underdeveloped districts, e. g., those of Sindh and lower Punjab.

[9]The canal-irrigated districts of Punjab constitute a reference only in a dynamic sense. Because of the large absolute migration from the Punjab, and the higher return-migration, the changes in rural Punjab during the last fifteen years have been quite substantive.

On the basis of the information presented, further research is suggested, which would be useful from the perspective of planning for regional development and the reintegration of the growing stream of return-migrants.

Appendices

Appendix 1

Pakistani Migrants Abroad – Estimates of the Total Stock

Source	Number of Migrants	Reference Year
The World Bank	205,800	1975
IMF	500,000	1977
Abbas and Javed	1,041,863	1977-78
Nazir Khan	640,000	1978
M. Akram	1,200,000	1978
Z. Zar	1,500,000	1978
PIPO/PIDE	1,790,000	1979
PLM Survey	1,400,000	1981
Bureau of Emigration	1,680,000	1982
PLM Re-estimate	2,462,000	1982
Population Census (1981)	1,709,000	1981

Source : ILO/ARTEP, Impact of Return-Migration on Domestic Employment in Pakistan: A Preliminary Analysis. April, 1984.

Appendix 2

Changes in Administrative Units between 1972, 1981 and 1987

New Districts Created between 1981 and 1987	Parent District in 1981	Parent District in 1972
	Kohistan	Hazara
	Mansehra	
	Abbottabad	
Karak	Kohat	Kohat
Bhakkar	Mianwali	Mianwali
Khushab	Sargodha	Sargodha
Toba Tek Singh	Faisalabad*	Lyallpur*
Chakwal	Jhelum	Jhelum
Okara	Sahiwal	Sahiwal
Leiah	Muzaffargarh	Muzaffargarh
Rajanpur	D. G. Khan	D. G. Khan
Khanewal	Multan	Multan
	Vehari	
	Kasur	Lahore
	Attock*	Campbellpur*
	Shikarpur	Sukkur
	Badin	Hyderabad
	Pishin	Quetta
	Khuzdar	Kalat
	Turbat	Mekran
	Gawadar	
	Pangur	
	Sibi	Sibi
	Nasirabad	
Dera Bugti Sui	Kohlu Agency	

*Change of name.

Appendix 3

Indices of Out- and Return-Migration at the District Level

	Population	Out-Migration	Out-Migration Index	Return-Migration				Return-Migration Index
				Jan. 86	Nov. 86	Nov. 87	Total	
N.W.F.P.	**2441260**	**591405**	**2.834**	**996**	**1488**	**1238**	**3722**	**0.466**
Peshawar	551945	299156	6.340	248	306	305	859	0.213
Mardan	368824	134561	4.267	54	220	167	441	0.243
Hazara	506808	99692	2.301	127	191	151	469	0.349
Kohat	174389	15025	1.007	196	328	195	719	3.547
Swat	274280	21129	0.901	68	139	138	345	1.210
Dir	154934	11644	0.879	120	64	72	256	1.629
Bannu	154516	6896	0.522	79	111	114	304	3.268
Chitral	50131	1757	0.410	21	40	23	84	3.544
Malakand	55517	1208	0.254	22	N.A.	N.A.	22	1.352
D. I. Khan[2]	149916	337	0.026	61	89	73	223	49.055
Punjab	**12024188**	**735285**	**.715**	**8101**	**3761**	**2948**	**14810**	**1.493**
Bahawalpur	335517	86764	3.025	30	40	32	102	0.087
R. Y. Khan	435910	105989	2.844	71	89	171	331	0.231
Muzaffargarh	478653	60718	1.483	101	41	33	175	0.214
Jhelum	335967	32103	1.117	1023	232	165	1420	3.279
Mianwali	340468	30800	1.058	270	34	34	338	0.813
Sheikhupura	517444	46090	1.041	165	65	55	285	0.458
Gujrat	607136	41254	0.794	806	444	345	1595	2.866

Continued –

Appendix 3 – (*Continued*)

	Population	Out-Migration	Out-Migration Index	Return-Migration Jan. 86	Nov. 86	Nov. 87	Total	Return-Migration Index
Lahore	1257792	81912	0.761	1254	602	458	2314	2.094
Multan	1259059	59126	0.549	305	201	156	662	0.871
Campbellpur	309142	12792	0.484	543	137	77	757	4.387
Sialkot	778345	30905	0.464	290	455	368	1113	2.669
Rawalpindi	602627	22611	0.438	993	445	275	1713	5.616
Gujranwala	650002	24094	0.433	483	230	203	916	2.818
D. G. Khan	350762	9937	0.331	68	106	93	267	1.992
Bahawalnagar[3]	338851	9270	0.320	14	19	15	48	0.384
Lyallpur	1367942	37419	0.319	706	393	238	1337	2.648
Sargodha	668694	15514	0.271	510	104	89	703	3.359
Sahiwal	895959	18919	0.247	179	93	85	357	1.399
Jhang	493916	9068	0.214	290	31	23	344	2.813
Balochistan	**811043**	**77126**	**1.112**	**241**	**124**	**122**	**487**	**0.468**
Sibi	129659	37543	3.387	7	5	7	19	0.037
Chagi	20334	4969	2.858	0	0	0	0	0.000
Kharan	25467	3199	1.469	2	3	1	6	0.139
Lasbela	44276	4928	1.302	8	1	2	11	0.165
Quetta	172178	11670	0.792	102	32	29	163	1.035
Zhob	55880	3645	0.763	11	12	7	30	0.610
Mekran	100144	5113	0.597	87	55	60	202	2.929
Kalat	112924	3877	0.401	18	15	14	47	0.899

Appendix 3 – (*Continued*)

Kachhi	89579	2163	0.282	0	0	0	0	0.000
Loralai	60602	19	0.003	6	1	2	9	35.116
Sindh	**4659323**	**300361**	**.754**	**1838**	**1212**	**919**	**3969**	**0.980**
Sanghar	223032	33631	1.763	29	17	13	59	0.130
Hyderabad	723803	73867	1.193	163	42	38	243	0.244
Sukkur	439900	40439	1.075	130	36	43	209	0.383
Larkana	278680	25317	1.062	48	59	40	147	0.430
Dadu	248495	12517	0.589	43	37	29	109	0.646
Nawabshah	394926	19054	0.564	59	19	18	96	0.373
Tharparkar	341713	15499	0.530	18	9	8	35	0.167
Karachi	1335223	58679	0.514	1268	970	704	2942	3.717
Khairpur	221793	9011	0.475	20	11	2	33	0.272
Thatta	222495	8078	0.424	15	3	0	18	0.165
Jacobabad	229264	4269	0.217	15	9	24	78	1.354
Pakistan	**19935814**	**1704177**	**1.0**	**11176**	**6585**	**5227**	**22988**	**1.0**

[1]Population refers to male population between 10 to 50 years age according to 1972 census.

[2]The out-migration figures for D. I. Khan (337) appear very low especially when seen against the fact that 223 migrants are reported to have returned in just three months. A query to the Population Census Office elicited the response that the out-migration figures were correct. However, because of their implausibility, D. I. Khan has been omitted from subsequent analysis.

[3]The number of return-migrants from Bahawalnagar was not mentioned by the OPF in the 1986 surveys. A query revealed that they had been erroneously allocated to Bahawalpur. The proportions reported in the 1987 survey were used to correct for the error.

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