

## CHAPTER 2

# LABOR MIGRATION FROM RURAL PAKISTAN: EVIDENCE FROM VILLAGES IN A RAIN-FED AREA OF PUNJAB<sup>1</sup>

Hisaya Oda

### 1. INTRODUCTION

Lack of employment opportunities and insufficient income from farming are considered major forces that cause labor migration from rural areas. For poor villagers, migrating to the urban or overseas for work is one of the limited options available to them.

The New Economics of Labor Migration (NELM) proposed by Stark and Bloom (1985) and Stark (1991) assumes that migration decisions are not taken by individuals but they are collectively taken within a group of related people such as a family and a household. In the theory, members of the group view migration as a part of their strategy in order not only to maximize income but also to overcome their constraints and risks facing them. Because of its relevance in the context of developing countries, the NELM type of analysis has been increasingly gaining momentum.

In the existing literature of migration pertaining to Pakistan, the focus has been placed on migration decisions by individuals and little attention has been paid to those from the viewpoint of families or households<sup>2</sup>. Part of this can be explained by lack of appropriate data for analysis. Several recent empirical studies use data from the *Pakistan Integrated Household Survey* and the *Labor Force Survey* to examine individuals' migration decisions.<sup>3</sup> Unfortunately the migration data reported in these surveys are not suitable for the analysis of migration decisions at household levels for

---

<sup>1</sup> I would like to thank Dr. M. Jameel Khan, Director of Punjab Economic Research Institute (PERI) for providing me with enumerators for field surveys and his advice at every step of research. Without his help, this paper would have not been completed. I am indebted to PERI field staff members; Mr. Ghulam Hussain, Mr. Ghulam Abbas Khan, Mr. Muhammad Imran, and Mr. Zafar Abbas Zafar. I am also thankful to Mr. Khawar Ata of PERI for keeping things in order. His critical comments on initial and subsequent questionnaires were valuable. I benefited from Mr. Muhammad Avais Tahir, Mr. Muhammad Faisal, Mr. Muhammad Shafique, Mr. Nayab Sarwal, Mr. Ahmad Yar Siddiquee, Mr. Noor Ahmad of PERI on various counts. Discussions with Dr. Abid A. Burki, Dr. Mushtaq A. Khan and Dr. S.M. Turab Hussain of LUMS, and Mr. Raishad of the Federal Bureau of Statistics were useful in identifying problems in labor migration in Pakistan. The materials provided by Dr. S. Hirashima helped me understand non-farm households in a Pakistani village. I am also grateful to Mr. Saad Paracha for the valuable comments. Last but not least, I am deeply indebted to all the villagers who kindly spared their time for this study. I am, of course, responsible for remaining errors.

<sup>2</sup> Exceptions to this are Nabi (1981, 1984) and Ilahi and Jafarey (1999).

<sup>3</sup> For example, Khan and Shehnaz (2000), and Akram et al. (2002).

several reasons. For example, the data were collected in migrant-receiving areas. To analyze households' migration decisions, it is more appropriate to use household level data collected in migrant-sending areas.

In an attempt to fill this gap, this paper analyzes labor out-migration from a household perspective based on data from a survey of migrant-sending areas. Through comparative studies of migrant and non-migrant households, the paper aims to identify household characteristics that influence migration decisions. It also pays attention to the low incidence of migration among a certain class of households. By presenting possible reasons and examining their livelihoods, the paper argues that migration opportunities are not equally distributed and therefore some segments of the population have no chances to migrate, leaving them below the subsistence level.

Chakwal district, one of four rain-fed (*barani*) districts in Punjab, is selected for this study. Labor migration from the *barani* areas has a long tradition. Because of the weather-dependent agriculture and lack of employment opportunities, migration has been used as one of important sources of income and has become a part of life for villagers. Though labor migration has been actively adopted as a household strategy in the region, there is a sizeable number of households with no migrants.

Section 2 describes the study villages where our field survey was carried and explains the methodology of data collection. Section 3 presents the profile of migrants and migrant households in comparison with non-migrant households, and discusses factors that might affect migration decisions at household levels. Section 4 analyses the determinants of labor migration based on the field survey data, and Section 5 briefly refers to remittance issues. Section 6 discusses non-migrant households and their livelihoods. Section 7 concludes.

## **2. DATA COLLECTION AND PROFILE OF STUDY VILLAGES**

### **2.1. Data Collection**

The study was conducted in three villages of Chakwal district in Northern Punjab: one of four rain-fed (*barani*) districts in the Punjab province<sup>4</sup>. The district is situated on the Potohar plateau and lies north of *Salt Range*. Because of its *barani* nature, the production of farm crops is dictated by the whims of weather. As a result, migration has been used to supplement low and fluctuating household income and has become a part of life for villagers. The area has been known as one of the main recruiting grounds for the military in Pakistan. High rates of labor migration, therefore, were expected before the study was conducted. This is one of reasons why Chakwal district was selected for the research.

Three villages were selected on a basis of distance from Rawalpindi, the nearest commercial center in the region<sup>5</sup>. Thanks to improved roads and availability of

---

<sup>4</sup> The others are Jhelum, Rawalpindi, and Attock. Chakwal district was created by combining parts of Attock and Jhelum and was given the status of district in 1985.

<sup>5</sup> The population of Rawalpindi city is 1.4 million. Combined with Islamabad, the total population of the two cities exceeds 2 million. This constitutes one of the largest urban centers in Pakistan. See *Population census 1998*.

transportation, commuting between rural areas and nearby big cities is getting more common; villagers leave home early in the morning in a coach or by motorbike to the nearby urban center and come back in the evening. While these commuters might have migrated in the past, but they now live in the village and work outside. Since this type of labor movement is beyond our scope, we therefore discarded villages within a forty-mile (64km) radius of Rawalpindi from our study villages to exclude possible commuters.

The urban sector in Chakwal is very small and the industrial sector is not developed. Around 85 % of total district population lives in rural areas<sup>6</sup>. For villagers, chances of being a commuter within Chakwal district are very limited. They need to migrate outside the district for employment opportunities. This is another reason that Chakwal district was chosen as a study district.

For the selection of households for interviews, first, a basic village census was conducted. At the basic village census stage, information on access to farm land, size of land owned, size of cultivated land, number of migrants (both internal and external), and occupation in case of non-farm households was collected from all the households in each village. Based on the census results, households in the village were stratified into several categories. Sample households for the interview were selected randomly from each category according to their actual prevalence in order for the sample to represent each village population. The number of sample households per village was weighted according to the actual number of households per village.

In total, 171 households were selected for interviews<sup>7</sup>. Sixty-seven, forty-six, and fifty-eight households were chosen from Village A, B, and C respectively. Throughout this chapter, instead of their actual names, Village A, B, and C are used for protection of privacy. Complete household migration is not included in the survey<sup>8</sup>.

## 2.2. Definition

Before proceeding further, some important definitions are provided below. Most of the definitions used in this paper closely follow those used in the *Pakistan Integrated Household Survey* (PIHS), the *Labor Force Survey of Pakistan* (LFS), and *Agricultural Census*, but are not necessarily the same.

A household is defined as a collective of individuals who usually sleep in the same house, eat meals together, share the same kitchen and food expenses. Persons who live in the same house but do not eat meals together and do not share food expenses are not included in the same household.

Household members are defined as persons who normally live and eat in the household. Those who are temporarily absent for reasons such as traveling, attending schools, admitted in hospitals, etc. are treated as household members. Absent

---

<sup>6</sup> *Population census 1998* reports that the district's population is around 1,060,000 (in 1998). Only 12.3% of the population lives in the urban areas.

<sup>7</sup> The basic census was conducted in December, 2004. The field survey was carried out in March 2005. Prior to the field survey, questionnaires were tested in Sheikhpura district, Punjab in January 2005.

<sup>8</sup> This may be a source of selectivity bias as no information is available on these entire households' migration. See Bilborrow et al. (1984) for discussions on selectivity bias arising from sampling.

household members such as migrant workers are also considered to be part of the household.

A household with at least one migrant is defined as a migrant household. Migrant households are further categorized; a household with only internal migrants is defined as an internal migrant household; a household with only external migrants is defined as an external migrant household; and a household with both internal and external migrants is called a mixed migrant household.

The definition of labor (out-) migrant is a person who is currently away from the village for the purpose of work for more than one year. If villagers left the village within the past twelve months preceding the interview, only those who have an intention not to return to the village within one year after the departure are considered as labor migrants. This excludes temporary migrant workers such as seasonal laborers, and returned migrants. Since no labor in-migrants are found in the three villages, labor migrants in this study mean labor out-migrants. We consider only labor migration in this paper, so that the word "migration" and "labor migration" are used interchangeably.

Farm households are defined as households which operate any farm area irrespective of its ownership. Non-farm households are defined as households not operating any farm area. Households which own land but do not operate any of it are also considered as non-farm households.

The reference period in general is for the past twelve months preceding the interview. This reference period covers two distinct cropping seasons in Punjab: *kharif* season (monsoon season) and *rabi* season (non-monsoon season). In case of farm households, they are asked about their agricultural activities and outputs during *rabi* 2003 season (planted from November to December 2003 and harvested from April to early June 2004) and *kharif* 2004 season (planted May to August 2004 and harvested from October to November/December 2004).

### 2.3. Profile of Study Villages

The study villages are located within the range of 25-30km north of Chakwal town. The distance to Rawalpindi, the largest commercial center nearby, is around 50-55 miles. Village A is most conveniently located and is on a main road to Rawalpindi. Village B is 12km off the main road to west and Village C is most remote and is 10km west of Village B.

Table 1 summarizes key statistics of the study villages. Farm households constitute around 70% of total sample households. Non-farm households in our sample need some explanation. Because of limited nature of agricultural activities in the region, the number of non-farm households which provide traditional services to farm households is also limited<sup>9</sup>. This presents a sharp contrast to villages in irrigated areas in Punjab where we still observe a sizeable number of non-farm households which keep a traditional complementary relationship with farm households<sup>10</sup>.

---

<sup>9</sup> The landowning castes are called *zamindars* and the classes which provide various services to *zamindars* called *kammees*, who are considered inferior to *zamindars*. The traditional complementary relationship between *zamindars* and *kammees* is called *seypidar* in the local language.

<sup>10</sup> For studies on non-farm households in Pakistan, see Hirashima (1978). Our parallel study

Though limited in size, the number of non-farm households is clearly related to agricultural activities in the study villages. Among three villages, Village B (Village C) is most active (inactive) in farming as the size of cultivated area per household is largest (smallest) and gross values of crops are highest (lowest). The proportion of non-farm households to total sample households is highest (lowest) accordingly. Although non-farm work is of heterogeneous nature and therefore it is not appropriate to bundle them under a single category of non-farm households, we treat them here as a counterpart to farm households due to small sample size.

The ratio of land ownership among farm households is very high. The average of three villages is 96%. This figure is higher than the average of Punjab, which is around 90%<sup>11</sup>. Except Village A, renting and sharecropping seem not usual practices in the study villages.

Because of hilly terrain and forests, parts of land owned are not available for cultivation. This is especially so in Village B where around 10 acres of land owned per household on average were not utilized during the last year.

As for the size of cultivated land, which is defined as farm land net of uncultivated land, more than 50% of farm households' holdings fall into the range of 0 to 5.0 acres. Only six out of 122 farm households; that is, less than 5% of farm households possess cultivated areas greater than 12.5 acres in our sample.

The major crops grown in the region are wheat during *rabi* and fodder during *rabi* and *kharif* seasons. Wheat production occupies 40-50 % of total cultivated area in the *rabi*. Its by-product, wheat straw, is used as fodder. Though higher than the *barani* average, low yields of wheat production compared to those in irrigated areas indicate the limitation of agricultural activities in the *barani* areas<sup>12</sup>. Only a few farm households keep surplus wheat and enjoy higher prices when they sell it during off-peak periods.

*Sarson* (mustard), intercropped with wheat during *rabi*, and *jowar* (sorghum) and *bajra* (millet) during *kharif* are grown as fodder crops<sup>13</sup>. Around 30% of cultivated area is devoted to fodder crops, reflecting the importance of livestock in these village economies. Pulses are also grown during both *rabi* and *kharif* seasons. Most of farm households in Village B grow *moongphali* (groundnuts) in *kharif* season as a cash crop.

Overall, crops are grown mainly for home consumption and for feeding livestock. Little is grown for commercial purposes.

Around 90 % of farm households keep milk animals such as she-buffaloes and cows. Milk is an important source of protein as well as an alternative source of cash income. The contribution of income from milk production to household income is large in the study villages.

---

conducted in irrigated villages in Sargodha district observed quite a large proportion of non-farm households that provide traditional services to *zamindars*

<sup>11</sup> The figure is taken from *Agricultural census 2000*. It is the ratio of the combined number of owner and owner-cum-tenant farms to total farms.

<sup>12</sup> The average yield per acre of wheat in irrigated areas in Punjab in 1999/2000 was 32.7 *maunds* (see Saleem and Jami (2001)).

<sup>13</sup> *Jowar* and *Bajra* can also serve as a food crop but these are mainly used as fodder in the study villages. Please refer to Byerlee et al. (1992) for farming in the *barani* areas of Pakistan.

Table 1  
Key Statistics of Sample Households and Study Villages

	Village A	Village B	Village C	Total Sample
<b>Household</b>				
No. of sample households	67	46	58	171
No. of sample farm households	45	29	48	122
Sample non-farm households /total sample households (%)	32.8	36.9	17.2	28.6
Farm households with off-farm income/total farm households (%)	26.7	37.9	14.6	24.6
Farm households holding milk animals/ total farm households (%)	84.4	93.0	91.7	89.3
Household size (numbers)	6.91 (2.78)	7.48 (3.09)	7.74 (3.09)	7.36 (2.97)
Household size (MAE*)	3.64 (1.51)	3.97 (1.85)	4.05 (1.60)	3.87 (1.63)
<b>Land Access</b>				
Land ownership among farm HHs**	44/45	27/29	46/48	95.9%
Land owned per HH (acres)	4.54 (5.88)	17.41 (15.68)	8.53 (6.38)	8.99 (10.37)
Cultivated area per HH (acres)	5.93 (6.17)	7.50 (5.13)	4.71 (2.88)	5.82 (4.93)
% of farm households with farm size less than 5 acres	55.6	34.5	68.8	55.7
<b>Crop</b>				
Wheat area (acres)	3.02 (2.68)	3.13 (1.59)	2.11 (1.18)	2.70 (2.00)
Wheat yield ( <i>maund</i> ***)	18.89 (6.63)	13.60 (7.47)	12.36 (6.83)	15.13 (7.48)
Gross value of farm output/HH (Rs.)	44,096 (68,820)	51,675 (54,371)	26,527 (20,339)	38,985 (51,739)
Gross value of farm output per acre per HH (Rs.)	6,877 (2,907)	6,251 (3,280)	5,849 (3,383)	6,341 (3,188)
<b>Livestock</b>				
Milk animals per farm HH (AU****)	2.72 (2.20)	3.71 (2.92)	2.34 (1.84)	2.74 (2.25)
Draught animals per farm HH (AU****)	0.48 (0.62)	0.28 (0.44)	0.47 (0.46)	0.43 (0.52)

Source: Author's calculation. Standard deviations appear in parentheses.

\*MAE stands for male adult equivalent units. It is a unit of labor and a weighted sum of male and female workers. The weights are: for male, 16-60 years=1.0 MAE, above 60 years and 12-15 years=0.5 MAE, 10-12 years=0.25 MAE, and below 10 years=0; for female, 16-60 years=0.5 MAE, Above 60 years and 12-15 years=0.25 MAE, 10-12 years=0.12 MAE, and Below 10 years=0.

\*\*HH stands for "household".

\*\*\**Maund* is a local unit of weight. 1 *maund* is about 40kg.

\*\*\*\*AU stands for adult equivalent units. It is a weighted sum of adult and young livestock animals. The weights used are: for draught animals, 1.0 for adult bullocks/he-buffaloes/horses, 0.57 for young bullocks/he-buffaloes and adult donkeys, 0.28 for young donkeys; for milk animals, 1.28 for adult she-buffaloes, 0.96 for young she-buffaloes, 0.72 for adult cows, 0.54 for young cows, and 0.20 for adults goats/sheep. Adult animals are defined as those of 3 years and older. Young are those age under 3 years. However, for sheep and goat, the threshold between adult and young is one year old.

### 3. PROFILE OF LABOR MIGRANTS AND THEIR HOUSEHOLDS

This section describes profiles of current labor migrants and their households in the study villages.

#### 3.1. Profile of Migrants

##### 3.1.1. Overview

Table 2 reports the current migration status of individuals from our sample. At the time of interview, 137 villagers of three villages are either internal or external migrants. The rate of labor migration from these villages is 11.1%. Out of 137 migrants, 78 villagers are internal migrants and 59 are external migrants. The proportion of internal migrants to total migrants (56.9%) is higher than that of external migrants (43.1%).

Migrants who belong to farm households constitute 76.6 % of total labor migrants. This finding is consistent with Eckert and Ali (1977) and Nabi *et al.* (1986). The table also shows that the propensity of labor migration among farm household members (11.7%) is higher than that among non-farm household members (9.3%). Migrants from non-farm households tend to migrate more internally than migrants from farm households; the ratio of internal migrants to total migrants among sample non-farm individuals is 68.8%, whereas it is 53.3% among farm samples.

Each village displays distinct patterns of migration. For example, in Village A, external migration is more likely; especially so among farm household members. On the other hand, incidence of internal migration is high in Village C. No external migrants among non-farm household members are found in Village B (see Appendix table 1).

Table 2  
Incidence of Labor Migration

	Total Sample Individuals	Farm Household Members	Non-Farm Household Members
No. of Individuals (1)	1,243	898	343
Labor Migrants (2)	137	105	32
Internal Migrants	78	56	22
External Migrants	59	49	10
(2)/(1)	11.0%	11.7%	9.3%
% of Labor Migrants	100.0%	76.6%	23.4%
Male 16-60yrs (3)	375	280	95
(2)/(3)	36.5%	37.5%	33.7%

Source: Author's calculation.

It is easily imagined that labor migrants from rural areas are dominated by male villagers. This is no exception in these villages. Except that one female migrated to Hong Kong<sup>14</sup>, all the migrants are males. There are variations from village to village,

<sup>14</sup> Her father had migrated to Hong Kong and started a business. Later she was called in to help with

but on average around one-third of male village members aged 16 to 60 are either internal or external migrants. High incidence of migration from these villages confirms active labor migration from the *barani* areas (Table 2).

### 3.1.2. Age and Migrants

Age is one of the key determinants of labor migration. Existing studies point out that the probability to migrate is higher among the young than the old because the young are more mobile and can expect higher returns over a long period of time.

The average age of internal and external migrants of our sample is 31.7 years and 34.3 years respectively (see table 3). The minimum age is 17 years with 60 years as the maximum age. Part of the difference in the current age of migrants between internal and external migrants may be explained by the duration of migration. The average duration of migration for internal migrants is 7.5 years while it is 8.2 years for external migrants (see Table 4).

The distribution of age of migrants shows that migrants aged 21 to 30 years account for more than 40 % of total migrants. Thereafter the number of migrants decreases as age increases. However, external migrants aged more than 40 years and above still constitute more than 25% of total external migrants in contrast to 12% for internal migrants.

More useful information is the age of migrants at the time of migration. Table 5 presents the distribution of age at the time of migration. It shows that more than 60 % of migrants left the village at the age of 25 or less, and internal migrants tend to leave at younger age than external migrants.

Table 3  
Age Distributions of Migrants and Non-Migrants

Age	Internal Migrants		External Migrants		Non-Migrants Male Age 16-60	
	No.	Share	No.	Share	No.	Share
16-20	7	9.0%	4	6.8%	59	24.8%
21-30	36	46.2%	25	42.4%	56	23.5%
31-40	25	32.1%	14	23.7%	41	17.2%
41-50	7	9.0%	11	18.6%	34	14.3%
51 and above	3	3.8%	5	8.5%	48	20.2%
Total	78	100.0%	59	100.0%	238	100.0%
Mean	31.7		34.3		34.5	
Std.	9.0		11.3		14.5	
Min.	17		18		16	
Max.	55		60		60	

Source: Author's calculation.

---

her father's business.



Table 4  
Duration of Migration

Years of Migration	Internal Migrants		External Migrants	
	No.	Share	No.	Share
Less than 1	8	10.3%	9	15.3%
1-4	27	34.6%	20	33.9%
5-9	16	20.5%	8	13.6%
10-14	9	11.5%	8	13.6%
15-19	14	17.9%	6	10.2%
20 and above	4	5.1%	8	13.6%
Total	78		59	
Average	7.5		8.2	
Std.	6.9		9.0	
Max.	25		36	

Source: Author's calculation.

Table 5  
Age Distribution of Internal and External Migrants at the time of Migration

Age	Internal Migrants		External Migrants		Total	
	No.	Share	No.	Share	No.	Share
up to 20	34	43.6%	12	20.3%	46	33.6%
21-25	19	24.4%	24	40.7%	43	31.4%
26-30	13	16.7%	9	15.3%	22	16.1%
31-35	5	6.4%	8	13.6%	13	9.5%
36-40	4	5.1%	5	8.5%	9	6.6%
41-50	3	3.8%	0	0.0%	3	2.2%
51 and above	0	0.0%	1	1.7%	1	0.7%
Total	78	100.0%	59	100.0%	137	100.0%

Source: Author's calculation.

### 3.1.3. Relationship between Migrants' Status within a Household and Decision of Migration

Migrants' relation to the head of the household is shown in Table 6. For both internal and external migrants, the majority of them are sons. Particularly the share of sons being a migrant is higher among internal migrants. The share of heads being a migrant is higher among external migrants. About 90% of migrants are either heads or sons.

Table 6  
Status of Migrant within Household

Relation to Head	Internal Migrants		External Migrants	
	No.	% share	No.	% share
Head	9	11.5%	13	22.0
Son	64	82.1%	38	64.4
Grandchild	1	1.3%	3	5.1
Brother	3	3.8%	5	8.5
Son in Law	1	1.3%	0	0.0
Total	78	100.0%	59	100.0%

Source: Author's calculation.

The central assumption of the NELM is that migration decisions are not individual acts but they are framed within larger units of related people such as households. Table 7 and Table 8 show how this assumption holds in our case.

In Table 7, more than 70 % of internal migrants and more than 50 % of external migrants report that migration was self-decided. A sizeable portion of migrants, however, report that migration decisions were made by their parents. We consider migration decisions by parents as decisions taken within households.

To see this more in detail, information on how migration decisions of heads and sons were made is presented in Table 8. In both internal and external migration, migration of heads was decided by themselves in most of the episodes. In case of external migration of sons, around 58% of migration decisions were made by their parents. For internal migration of sons, one-third of migration decisions were taken by their parents. Given that heads' migration decisions are households' decisions, 41.1% of internal migration of heads and sons were decided within households and in case of the external migration, the ratio is 66.7%<sup>15</sup>.

Data presented here are sufficient to show that migration decisions are not isolated acts of individuals but they are integrated acts within households or larger units.

Table 7  
Decision Making

Decision Maker	Internal Migrants		External Migrants	
	No.	% share	No.	% share
Self	55	70.5%	32	54.2%
Parents	22	28.2%	25	42.4%
Other	1	1.3%	2	3.4%
Total	78	100.0%	59	100.0%

Source: Author's calculation.

<sup>15</sup> From table 8, the number of internal migration of heads and sons that were decided within households is 30 (=21+9). Dividing this by 73 (=64+9: total number of internal migrants of heads and sons) gives 0.411. By the same way, the rate of external migration decisions, 66.7%, was derived.

Table 8  
Decision Making by Heads of Households and Sons

Decision Maker	Internal Migrants				External Migrants			
	Head		Son		Head		Son	
	No.	%	No.	%	No.	%	No.	%
Self	9	100.0%	42	65.6%	12	92.3%	16	42.1%
Parents	0	0.0%	21	32.8%	0	0.0%	22	57.9%
Other	0	0.0%	1	1.6%	1	7.7%	0	0.0%
Total	9	100.0%	64	100.0%	13	100.0%	38	100.0%

Source: Author's calculation.

### 3.1.4. Educational Attainment and Migrants

Human capital models of migration say that individuals with higher levels of education attained or of job skills can expect higher wages and increase the likelihood of finding a job once they migrate; therefore human capital characteristics of individuals influence migration selectivity. Several empirical studies support this and often find that migrants are better educated than non-migrants<sup>16</sup>.

Proxy indicators of human capital derived from our survey: literacy rates, average years of completed schooling, completed level of education, are reported in Table 9. The figures on non-migrants are those of male aged between 16 to 60 years who are not enrolled in school at the time of interview to be comparable with migrants' figures. Migrants attain higher rates of literacy and have longer schooling years on average. The conspicuous difference is seen in the category of "No Education." Thirty three out of 204 non-migrants, 16.2% of them, have never received formal education while the ratio is just 1.3% for internal migrants and 3.4% for external migrants. Overall, migrants are richer in human capital than non-migrants.

Table 9  
Literacy Rates and Schooling of Migrants

	Non-Migrant Males 16 to 60yrs*		Internal Migrants		External Migrants	
Literacy Rate	83.8%		100.0%		96.3%	
Average Schooling Years	6.90		8.72		8.52	
Completed Education	No.	% share	No.	% share	No.	% share
No Education	33	16.2%	1	1.3%	2	3.4%
Below Primary	8	3.9%	2	2.6%	0	0.0%
Below Middle	45	22.1%	14	17.9%	12	20.3%
Below Matric	54	26.5%	26	33.3%	22	37.3%
Below Higher Secondary	49	24.5%	25	32.1%	13	22.0%
Above Higher Secondary	15	7.4%	10	12.8%	10	16.9%
Total	204	100.0%	78	100.0%	59	100.0%

Source: Author's calculation. \*Males aged 16-60 who are not enrolled in school.

<sup>16</sup> For example, see Ahmed and Sirageldin (1993), and Khan and Shehnaz (2000).

### 3.1.5. Destination of Migrants

Table 10 shows the destinations of internal migrants. Traditionally the *barani* areas has been a major source for military recruitment in Pakistan. The tradition still remains. Around 40 % of total internal migrants left villages to join the military or the police. We have observed that this tradition is strong in Village C as 22 out of 32 migrants who joined the military are from Village C. Joining the military or any other type of public service is an attractive option for villagers because, in addition to stable salary, lump sum retirement payment and pension are expected.

The next favorite destination is Rawalpindi. This is easily understandable because of its geographical proximity to Chakwal district. The direct distance between Rawalpindi and the villages is less than 100km. Two big cities, Lahore and Karachi, are also major destinations. Apart from joining the military, the commercial center nearby and big cities tend to attract migrants.

Table 11 shows the destinations of external migrants. UAE is the number one destination, followed by the Kingdom of Saudi Arabia. Migrants to oil-rich countries in the Middle East account for 70 % of total migrants from three villages. Hong Kong is also a popular destination. In fact, this is the most favorite destination of migrants from Village A. 9 out of 10 Hong Kong migrants are from this village. More than 30 years ago, one person from this village left for Hong Kong to seek employment. He settled in Hong Kong and developed a network. This kind of network within a village or within a broader kinship is very much influential when it comes to choosing the migration destination. There is ample anecdotal evidence in this regard. Such examples include migratory flows from Mirpur in Azad Jammu Kashmir to the United Kingdom and from Gujrat, Punjab to Norway.

Table 10  
Destinations of Internal Migrants

Destination	Farm Household Member	Non-Farm Household Member	Total	
			No.	Share
Army/PAF*/Police	25	7	32	41.0%
Rawalpindi	14	6	20	25.6%
Lahore	5	7	12	15.4%
Karachi	8	0	8	10.3%
Others	4	2	6	7.7%
Total	56	22	78	100.0%

Source: Author's calculation. \*PAF stands for Pakistan Air Force.

**Table 11**  
**Destinations of External Migrants**

Destination	Farm Household Member	Non-Farm Household Member	Total	
			No.	Share
UAE	19	5	24	40.7%
Abu Dhabi	(16)	(3)	(19)	(32.2%)
Dubai	(3)	(2)	(5)	(8.5%)
Saudi Arabia	11	1	12	20.3%
Oman	5	0	5	8.5%
Kuwait	1	0	1	1.7%
Hong Kong	8	2	10	16.9%
Korea	2	0	2	3.4%
UK	3	2	5	8.5%
Total	49	10	59	100.0%

Source: Author's calculation.

### 3.2. Profile of Migrant Households

We now turn to explain the profile of migrant households.

#### 3.2.1. Overview

The current migration status of the sample households is summarized in Table 12. Out of total 171 households, 89 households have at least one migrant member; 67 of them are farm households and 22 are non-farm households. 35 migrant households have multiple migrants and 13 of them have both internal and external migrants.

Table 12 shows that the incidence of migration is higher among farm households than that among non-farm households. This applies to all three villages (see Appendix table 2). It is also evident from the table that the proportion of internal migrant households among non-farm households is higher than that among farm households. It should be noted that there are variations in the pattern of migration at household levels from village to village. These patterns are similar to migration patterns at individual levels that are examined in Section 3.1.

**Table 12**  
**Incidence of Migration at the household level**

Migration Status	Farm Household	Non-Farm Household	Total
Non-Migrant HH	55 (45.1)	27 (55.1)	82 (48.0)
Internal Migrant HH	30 (24.6)	14 (28.6)	44 (25.7)
External Migrant HH	26 (21.3)	6 (12.2)	32 (18.7)
Mixed Migrant HH	11 (9.0)	2 (4.1)	13 (7.6)
Total	122 (100)	49 (100)	171 (100)

Source: Author's calculation. Percentage figures in parentheses.

### 3.2.2. Household Size

Chances of having migrant members are higher for larger households because migration of household members does not result in the reduction of domestic production (Connell *et al.* (1976), Hampshire (2002)). This is particularly the case for the households which have more adult male members. The work that would have been done by migrants can be shared easily by the remaining male members. Figures reported in Table 13 are consistent with this; migrant households tend to be larger in size than non-migrant households

Table 14 shows the number of households with no active male members aged 16 and above in farm and non-farm households. An interesting observation from this table is that among farm households, only three out of 67 migrant households do not have any active male adults. This presents a sharp contrast to non-farm migrant households; eleven out of 22 non-farm migrant households are with no adult male members. This clearly indicates that the number of active adult male members is a crucial factor for farm households when making a migration decision. Female farm household members are often responsible for tending livestock not only in the *barani* areas but also in other rural areas in Pakistan; however, it seems that farming activities that require physical strength need males' contribution.

Table 13  
Household Size and Migrants

Migration Status	Total Household Members	Active Males Aged 16 and above*	Male Adult Equivalent**	Average No. of Migrants per Household
Non-Migrant Households	6.3	1.7	3.0	n/a
Internal Migrant HH	8.1	3.1	4.4	1.45
External Migrant HH	7.7	2.6	4.0	1.28
Mixed Migrants HH	9.5	4.1	5.5	2.46

Source: Author's calculation. \*This excludes those who are not able to work due to old age, sickness and disability. \*\*For the definition of male adult equivalent, please see the footnote of Table 1.

Table 14  
Households with No Active Adult Male

Migration Status	No. of HH with No Active Males Aged 16 and above	
	Farm Households	Non-Farm Households
Internal Migrant HH	0/30	4/14
External Migrant HH	3/26	5/6
Mixed Migrant HH	0/11	2/2

Source: Author's calculation.

### 3.2.3. Educational Attainment by Household Migration Status

Table 15 reports average years of completed schooling by migration status of the household. Migrant households have higher educational attainment in comparison with non-migrant households. Among migrant households, external migrant households have longer school years on average. External migrant households have an average of 6.37 years of schooling while internal migrant households have 5.15 years. The data indicates that human capital characteristics of households may influence households' decision to migrate.

Table 15  
Average Years of Schooling per Household by Migration Status

	Non-Migrant Households	Internal Migrant HH	External Migrant HH	Mixed Migrant HH
Average Years of Schooling	4.52 (2.83)	5.15 (1.98)	6.37 (2.80)	5.92 (2.21)

Source: Author's calculation. \*Standard deviations appear in parentheses.

### 3.2.4. Land Access and Livestock

Land is the dominant asset in the village economy. Being in possession of land or not decides not only the economic status but also the social status of the households. Even when a household does not own land but operate land under a tenancy contract, it is considered superior to the landless. There is a clear social division between the landholder and the landless.

As for possible effects of land ownership on migration decisions, we must take into account several factors attached to land.

First, land is an asset that generates income. For small landholders, income from farming is not sufficient to support their families or households. Therefore they have a greater incentive to have migrant members than large landholders. For large landholders, migration may not be so attractive as income generation from land might well exceed returns from engaging in migration.

However, the landless and small landholders may not have the funds to finance migration and thus be less likely to migrate. Migration is a costly process. It involves direct and indirect costs. Direct costs include traveling expenses and living costs until the migrant starts making some money. The cost necessary to obtain job information is also included in this category. In case of external migration, commission charges to brokers would be added. Indirect costs are the costs that are paid for potential migrants such as schooling expenses (fees, school materials, etc.). The opportunity cost of sending children to school is also considered as one of indirect costs. As discussed already, higher levels of human capital increase the probability of finding a job in the urban market or overseas. Thus, not everyone can afford to migrate. Poor villagers' migration is financially discouraged. In particular, overseas migration is prohibitively expensive for them.

Land also carries social and psychological value. Large land owners are influential figures and usually play a key role in the village. This may prevent them

from leaving the village as they lose the social status that they enjoy.

Overall, the degree of influence from each factor above varies from household to household, thereby leading often to an ambiguous relationship between land and migration<sup>17</sup>.

Table 16 presents the migration status of households according to land ownership. The relative propensity of migration is defined as a migration rate of each category relative to the average migration rate of total sample. The difference between the landless and the land owners is quite significant. The proportion of migrant households among landless households is 38.6%, while it is 56.7% among landowning households. Note that only four landless households out of 17 non-farm migrant households have external migrants. The corresponding figure among landowning migrant households is 41 out of 72 households. These observations suggest that land ownership represents owners' ability to finance costly migration.

Table 16  
Land ownership and Migration

Land ownership	Internal Migrant HH	External Migrant HH	Mixed Migrant HH	Migrant HH total (1)	No. of HH per category (2)	(1)/(2)= (3)	Relative Propensity
Landless	13	2	2	17	44	38.6%	74.2
Land owner	31	30	11	72	127	56.7%	101.2
Total	44	32	13	89	171	52.0%	100

Source: Author's calculation.

Table 17 presents the incidence of migration according to the size of farm land under ownership. From the figures presented, we do not see a clear association between land size and incidence of migration. Since a considerable portion of land in this region is not arable due to a unique geographical formation, the size of land owned may represent the social status of the land owner, but it may not be a precise indicator of land as an asset. For a more accurate measure, we use the size of cultivated land<sup>18</sup>. The sample data stratified by the size of cultivated land is presented in Table 18. We can see that the propensity to migration increases as the size of cultivated land increases for the first four categories, but then it starts decreasing as the size increases further, exhibiting an inversed U shape relationship. We come back to this point in the following section when we analyze the determinants of labor migration.

<sup>17</sup> One argues that land is an illiquid asset and therefore ownership of land keeps land owners less mobile since it is not easy to sell land like apples and it requires quite a long process for liquidation. However, this possibility does not apply to our case: migrant members keep their land in the village and the remaining household members take care of the land. It is often observed that migrants, mostly internal migrants, from farm households come back to their village to help with farming such as harvesting.

<sup>18</sup> Land owners who are not engaged in cultivation are excluded, but farm households which do not own but operate land under tenancy contracts are included.



Table 17  
Size of Farm Land Owned by Migration Status

Size of Land Owned (acres)	Internal Migrant HH	External Migrant HH	Mixed Migrant HH	Migrant HH total (1)	No. of HH per category (2)	(1)/(2)= (3)	Relative Propensity
0<L≤2.5	6	9	3	18	36	50.0%	88.2
2.5<L≤5.0	9	5	3	17	25	68.0%	119.9
5.0<L≤7.5	6	2	2	10	18	55.6%	98.0
7.5<L≤10.0	2	6	0	8	17	47.1%	83.0
10.0<L≤12.5	4	0	0	4	6	66.7%	117.6
12.5<L≤25.0	3	6	0	9	14	64.3%	113.4
25.0 <L	1	2	3	6	11	54.5%	96.2
Total	31	30	11	72	127	56.7%	100

Source: Author's calculation.

Table 18  
Size of Cultivated Land by Migration Status

Size of Land Cultivated (acres)	Internal Migrant HH	External Migrant HH	Mixed Migrant HH	Migrant HH total (1)	No. of HH per category (2)	(1)/(2)= (3)	Relative Propensity
0<L≤2.5	6	6	2	14	29	48.3%	87.9
2.5<L≤5.0	13	4	4	21	39	53.8%	98.0
5.0<L≤7.5	6	5	2	13	24	54.2%	98.6
7.5<L≤10	5	7	1	13	17	76.5%	139.2
10<L≤12.5	0	3	1	4	7	57.1%	104.1
12.5 <L	0	1	1	2	6	33.3%	60.7
Total	30	26	11	67	122	54.9%	100

Source: Author's calculation.

The second most important form of asset in the village economy is livestock. The role played by livestock is manifold: draught animals for cultivation, transportation, possibly renting out to other households; milk animals for milk production, which can be processed and sold. In addition, keeping livestock provides a safety net against possible shocks such as crop failure; owners of livestock can sell animals for subsistence<sup>19</sup>. Livestock is particularly important in the *barani* areas as income from farming is limited and the area tends to suffer from more shocks than irrigated areas.

The number of livestock animals measured in adult equivalent units by the migration status of households is reported in Table 19. Our sample shows that non-migrant households possess a smaller size of livestock than migrant households, and external migrant households possess a larger size of livestock than internal migrant

<sup>19</sup> Kurosaki (1995) examined the role played by livestock in risk control, based on data from the Punjab province of Pakistan.

households. The data here may precisely represent a relationship between migration decisions and livestock holding; however, a necessary caution needs to be exercised in the interpretation of livestock data. Since purchasing animals is more affordable compared to purchasing land, migrant households can do so by using remittances, leading to a larger size of livestock among migrant households. This possible two way causality creates difficulties in isolating the genuine impact of livestock asset on migration decisions and thereby in identifying the relationship between livestock and migration.

Table 19  
Livestock Holding and Migration Status

Migration Status	Units of Livestock Animal*		Units of Milch Animal*	
	Mean	Std.	Mean	Std.
Non-Migrant HH	2.85	2.25	2.44	2.07
Internal Migrant HH	3.19	2.72	2.72	2.28
External Migrant HH	3.84	3.12	3.35	2.63
Mixed Migrant HH	3.09	2.13	2.78	2.02
Average	3.17	2.51	2.74	2.25

Source: Author's calculation.

\*See the footnote of table 1 for the definition of adult equivalent units.

### 3.2.5. Access to Off-farm Income Opportunities

Nabi (1981, 1984) finds that households with off-farm income opportunities have lower probabilities of migration because such income opportunities can serve as an alternative to migration. He claims that if off-farm opportunities are easily available, the decision to migrate depends on the relative rates of return between off-farm opportunities and migration.

The relationship between access to off-farm income and migration is reported in Table 20. It shows that among farm households, non-migrant households tend to have more diversified sources of income than migrant households. Twenty out of 55 non-migrant households have off-farm income sources, whereas eleven out of 67 migrant households have access to off-farm income opportunities. This seems consistent with Nabi's finding.

Table 20  
Access to Off-farm Income and Migration

Migration Status	No. of HH	No. of HH with off-farm income	% HH with off-farm income
Non-Migrant HH	55	20	36.4%
Internal Migrant HH	30	3	10.0%
External Migrant HH	26	7	26.9%
Mixed Migrant HH	11	1	9.1%
Total	122	31	25.4%

Source: Author's calculation.

## 4. DETERMINANTS OF LABOR MIGRATION

The profiles of migrants and migrants' households and factors that might affect migration decision were described in the previous section. We now turn to formally analyze the determinants of labor migration at household levels by employing a probit estimation. Data from our field survey are used for this analysis.

### 4.1. Probit Estimation

The dependent variable, *MIG*, is a household migration decision and takes  $MIG=1$  if a household has at least one migrant and  $MIG=0$  otherwise. Since the dependent variable is a binary variable, we use a probit estimation.

We, first, estimate the determinants by using pooled farm and non-farm household data. The set of explanatory variables that reflect household characteristics include the size of household (*TTHG*), ownership of farm land (*LAND*), and average years of completed schooling per household (*AVSY*). Village dummies (*VLA* for Village A, *VLC* for Village C) are also added to account for a village-specific effect.

We then repeat the exercise by using farm household data. The size of household (*TTHG*), average years of completed schooling per household (*AVSY*), the size of cultivated land (*TCA*) and its square (*TCA2*), access to off-farm income sources (*NFI*), the value of gross farm output per male adult equivalent (*LFVM*) are selected as explanatory variables.

New variables introduced here for estimation are the square of cultivated land size (*TCA2*) and the value of gross farm output per male adult equivalent (*LFVM*)<sup>20</sup>. The square of the size of cultivated land (*TCA2*) is included to capture a possible nonlinear relationship between land and migration decisions. The value of gross farm output per male adult equivalent (*LFVM*) is included as an explanatory variable to reflect the opportunity cost of migration (Nabi (1981)): the income that a person measured in a unit of labor gives up when the person migrates. Higher the opportunity cost, lower the incidence of migration. Higher values of farm output per MAE discourage out-migration because returns from migration are expected to be smaller than the income forgone. By the same token, lower values of farm output per MAE encourage out-migration as expected returns from migration are likely higher than the income forgone. We expect that the estimated coefficient on this would be negative. The explanatory variables are summarized in Table 21.

---

<sup>20</sup> For the definition of the MAE, please see the footnote of Table 1 of this chapter. By using MAE scale, the value of farm output can be measured by per unit of labor, not by per head.

Table 21  
Definition, Mean and Standard Deviation of Explanatory Variables \*

Variables	Description	Non-Migrant HH		Migrant HH	
		Full Sample	Farm Sample	Full Sample	Farm Sample
<i>TTHG</i>	Total number of household members including migrant members	6.32 (2.42)	6.18 (2.39)	8.17 (2.87)	8.39 (3.04)
<i>LAND</i>	<i>LAND</i> =1 if a household owns any land and <i>LAND</i> =0 otherwise.	0.67 (0.47)		0.81 (0.40)	
<i>AVSY</i>	Average years of completed schooling of household members in work.	4.52 (2.83)	4.19 (2.92)	5.75 (2.35)	5.70 (2.14)
<i>TCA</i>	Size of cultivated area (in acres)		5.57 (4.57)		6.10 (5.24)
<i>TCA2</i>	Square of <i>TCA</i>		51.54 (101.15)		64.26 (187.35)
<i>LFVM</i>	Log of gross value of farm output per adult male equivalent per household		9.12 (1.11)		8.53 (0.92)
<i>NFI</i>	<i>NFI</i> =1 if a farm household has off-farm income and <i>NFI</i> =0 otherwise		0.35 (0.48)		0.15 (0.36)
<i>VLA</i>	<i>VLA</i> =1 if a household belongs to Village A and 0 otherwise.	0.35 (0.48)	0.35 (0.48)	0.42 (0.5)	0.38 (0.49)
<i>VLC</i>	<i>VLC</i> =1 if a household belongs to Village C and 0 otherwise.	0.30 (0.46)	0.35 (0.48)	0.38 (0.49)	0.44 (0.50)

\*Standard deviations appear in parentheses.

## 4.2. Empirical Results

The estimated coefficients are reported in Table 22. Standard errors appear in parentheses below each estimated coefficient. The results for the pooled data are presented in Column (1) and the results for the sample farm households are presented in Column (2).

Both results show that the estimated coefficients on the household size, average years of schooling are significant and positive. These confirm our findings presented in Section 3. The estimate coefficient on land ownership is positive and statistically significant at the 5% level. The explanation for this positive sign is that households which own land are more able to finance migration than households which do not possess land and thus land ownership increases the probability of migration. The result, however, provides a sharp contrast with the findings of Memon (2005; chapter 1 of this report) and others<sup>21</sup>, in which the negative and robust effect of land ownership on mobility at *individual* levels has been found. In these studies, the negative effect is attributed to the difficulty of both liquidating land holdings and giving up the social status that land owners enjoy.

This contrast can be explained by the difference between the data our study employs and theirs. It is understandable that the negative influence of land ownership appears when an individual or the entire members of a landowning household decide to migrate. However, the profile presented in Section 3 as well as observations in

<sup>21</sup> For example, Khan and Shehnaz (2000).

Pakistani villages show that in many cases, one or two members of a household migrate to work, leaving the remaining members in the village. By doing so, the migrant and his/her household can keep their land and thereby their status in the village. This aspect is not incorporated in their studies because of the nature of data they employ. The negative influence of land ownership may appear as the size of land owned increases (as we discuss it shortly), but for most of the landholders in the village where income from farming is limited, land ownership *per se* should be viewed as an ability to finance migration, not as a constraint.

Table 22  
Probit Results

Variables	(1)	(2)
<i>CONSTANT</i>	-2.607*** (0.489)	2.908 (1.946)
<i>TTHG</i>	0.188*** (0.043)	0.172*** (0.582)
<i>AVSY</i>	0.114*** (0.042)	0.178*** (0.583)
<i>LAND</i>	0.415* (0.237)	
<i>TCA</i>		0.166* (0.088)
<i>TCA2</i>		-0.003 (0.023)
<i>LFVM</i>		-0.607*** (0.222)
<i>NFI</i>		-1.418*** (0.356)
<i>VLA</i>	0.580** (0.272)	
<i>VLC</i>	0.545* (0.271)	
No. of observations	170	121
Log-likelihood	-98.54	-57.7

Source: Author's estimates.

\* indicates significance at 10% level; \*\* indicates significance at 5% level;  
\*\*\* indicates significance at 1% level; standard errors appears in parentheses.

Note : One non-farm migrant household purchased land by using remittances and became a farm household. We discarded this household from our sample.

The estimated coefficient on the size of cultivated land is positive and significant, while the estimated coefficient on its square is negative and insignificant. Although the coefficient on the square term is not significant, both coefficients show expected signs. This says that the probability of migration increases up to certain acreage but then, it may decrease as the size increases further. Since the relative cost of migration is high for small land cultivators, chances that their household members can migrate are limited. As the size of land increases, the relative cost of migration becomes less and the household starts having migrant members. As the size of land increases further, however, migration becomes unattractive as income from farming is sufficient enough to make a living and for large landholders, their social status may prevent them from

seeking jobs outside the village.

The estimated coefficient on access to off-farm income sources is negative and significant. This result indicates that for farm households, having a source of income other than farming can serve as an alternative to migration, thereby reducing the likelihood of having migrant members in the household. The estimated coefficient on the gross farm value per male adult equivalent, a proxy variable for the opportunity cost of migration, is negative as expected and significant. These results are consistent with Nabi (1981, 1984).

## 5. REMITTANCES

The issue of migration and remittances is an important area of study in economic development. Particularly the economic impact of remittance has been studied to a great extent and there is no dearth of literature<sup>22</sup>. The studies that analyze the role of remittances, external remittances in particular, from a macroeconomic perspective tend to find the positive effect of remittances on economic growth while the studies focusing on the impact of remittances at the individual and household levels tend to find otherwise. The latter case points to the use of remittances on unproductive investment and current consumption. A new breed of research on the role of remittance that has received attention recently is on the issue of poverty and income inequality. Studies on remittances pertaining to Pakistan include Amjad (1986), Adams (1992, 1998), Nishat and Bilgrami (1999), Batzlen (1999), Arif (2004), Jamal (2004).

In this section, we present a summary of remittance data collected from our household survey and discuss the use and importance of remittances in a descriptive way. Unless stated, remittances in this section include remittances from both internal and external migrants.

Table 23 shows the percentage of migrants who remitted money back home and the average amount per migrant during the past twelve months preceding the interview. Those who left the village within one year from the time of interview were not included in these figures<sup>23</sup>. More than 90% of migrants sent portion of their earning back home. Remittance per external migrant is about three times as much as that of internal migrant. Higher pay abroad undoubtedly is attractive to most of the Pakistani workers. 85 out of 89 migrant households received remittance during the past 12 months and the average was Rs. 75,116 per household<sup>24</sup>. Judging from these figures, it is no doubt that remittances significantly boost recipient households' income levels.

The size of remittances varies according to the duration of migration. Table 24 shows that remittances from both internal and external migrants increase as the

---

<sup>22</sup> See Taylor (1999) for the review of literature on this topic.

<sup>23</sup> Seventeen males left the villages during the past 12 months preceding the interview. Two of them (both external migrants) received financial assistance from their households to finance their stay in the beginning. Their households remitted out to those overseas for financial returns in the future. This is another indication that migration is a family strategy and there exists an implicit contract between migrant and households as NELM argues.

<sup>24</sup> Two households received remittances from the persons who are not members of their households. The figures pertaining to such cases are not included to calculate the average amount of remittances at the household level here.

duration of their stay increases. This is one of the reasons why migration at younger age is desirable as the young can work for a longer period of time and stand to reap benefits from it.

Table 23  
Summary of Remittance Data

	Internal Migrant	External Migrant
% of Migrants who remitted home	94.3% (66/70)	92.0% (46/50)
Average Amount per Migrant (Rs.)	29, 803	86, 120

Source: Author's calculation.

Table 24  
Amount of Remittances and Duration of Migration

Years of Labor Migration	Remittances from Internal Migrants (Rs.)		Remittances from External Migrants (Rs.)	
	No.	Remittance per Migrant	No.	Remittance per Migrant
1-4	27	22, 815	20	57, 550
5-9	16	25, 375	8	78, 500
10-14	9	35, 556	8	114, 375
15 and above	18	42, 000	14	114, 643
Average	70	29, 803	50	86, 120

Source: Author's calculation.

Table 25 shows how remittances were spent by recipient households. In the column titled "multiple", households were asked if remittances were spent on each item in the list or not. The number in the column indicates the number of "yes" answers. In the column titled "primary", households were asked on which item remittances were spent most.

How remittances were spent by recipients has been a focus of attention in many studies because of interests in the impact of remittances on economic development. Unfortunately many of them report that remittances are used on unproductive items: mostly on daily consumption and housing/real estate investment. For example, Gilani et al (1981) reports that in their analysis of remittances in Pakistan, 62 percent of remittance were spent on current consumption, 22 percent on real estate, 13 percent on direct investment, and 3 percent on financial investment. Our case is no exception. Our survey shows that remittances were mostly spent on daily consumption, the purchase of consumer durables, housing construction, etc. But Table 25 also indicates that remittances were used to finance schooling of household members, which is considered productive investment in the long run<sup>25</sup>. It should not be generalized from the evidence of three villages, but relatively high literacy rates and high levels of

<sup>25</sup> The minimum educational requirement for joining the military has been raised to matriculation level. This also motivates villagers to invest in schooling at least until their pupils complete matriculation.

educational attainment in Chakwal district might be explained by remittance-financed spending on education<sup>26</sup>

Table 25  
Use of Remittances by Recipient Households

Use of Remittances	Farm Households		Non Farm Households	
	Multiple	Primary	Multiple	Primary
1. Purchase land	5	2	n/a	n/a
2. Rent more land	2	0	n/a	n/a
3. Purchase farm inputs (ex. pesticides, seeds)	18	1	n/a	n/a
4. Improved land	5	0	n/a	n/a
5. Buy farm equipment (ex. tractor, thresher)	6	1	n/a	n/a
6. Pay for schooling/training of the household member	23	1	13	2
7. Buy non-farm productive equipments	0	0	2	0
8. Purchase/paying for house/dwelling	22	8	6	1
9. Help consumption (food, clothes, etc)	59	36	21	17
10. Purchase consumer durables (TV, fridge, car etc.)	14	1	5	0
11. Finance Marriage/Ceremony	9	6	1	0
12. Pay off debt	5	3	1	1
13. Other	6	3	0	0
Total	174	62	49	21

Source: Author's calculation.

Note that there are five yes answers in the category titled "Purchase land". Four of them had been land owners and purchased additional plots. Only one household newly acquired land and became a land owner. The head of the household works as a barber (*nai*) and cultivates the acquired land for home consumption. This seems to be the only way that landless non-farm households can upgrade their economic and probably social status in the villages in Pakistan<sup>27</sup>.

<sup>26</sup> For example, the share of population with no education in the Punjab province is 11% while it is only 4 % in Chakwal district. The share of population with the completion of matriculation level is 29 % in the Punjab province while it is 43% in Chakwal district. The figures are from the *Punjab Agricultural census 2000*.

<sup>27</sup> In fact, there is hardly any social mobility in the villages of Pakistan. Lefevbre (1999) reports that even if a *kamnee* acquires land, there is no change in his social status and he is still considered *kamnee*.



Another interesting feature found in Table 25 is the role of ceremonial events in the villages in Pakistan. Six households report that remittances were spent primarily on ceremonial purposes. As honor and shame dictate social life in the villages, the events, especially marriage ceremonies, need to be as lavish as possible.

## 6. NON-MIGRANT HOUSEHOLDS AND THEIR LIVELIHOODS

We have so far described the characteristics of migrants and their households in comparison with non-migrant counterparts. Based on what has emerged from the comparative study and econometric exercises in Section 4, we now turn to detailed examination of non-migrant households and their livelihoods. To examine this topic quantitatively, we introduce a concept of poverty set by the Centre for Research on Poverty Reduction and Income Distribution (CRPRID). Based on its official poverty line of Rs.749 per adult equivalent per month at the prices of 2000-01, the poverty line at the price of 2004 is set at Rs. 849 per adult equivalent, which roughly corresponds to Rs. 10,200 per annum. The per adult equivalent is a scale that takes 0.8 for all those household members younger than 18, and 1 for all the other household members. Those who are living on the budget below Rs.10, 200 per annum are considered being in poverty.

Following the centre's classifications and taking inflationary changes into account, non-poor (above Rs. 20,500), transitory non-poor (above Rs. 12,750 and below Rs. 20,500), and transitory vulnerable (above Rs. 10,200 and below Rs. 12,750) are defined (all figures are per adult equivalent per annum). Please see *Pakistan Economic Survey* 2003-04 for details. For the analysis sake, we compare these figures with household incomes per capita obtained from our field survey. We define that a household with the income of Rs.10,200 per adult equivalent per annum or below is in poverty. Income here is defined as gross revenue and income from all sources minus gross cost. Gross revenue and income include agricultural income, off-farm income, revenue from business, and remittance and transfer income. A money value was imputed to receipts in kind. Gross cost includes input costs and expenditures but excludes imputed land rent, imputed family labor wages, imputed rent to owned agricultural machinery, and imputed rent to off-farm machinery and equipments.

Three different figures of average income per capita by households' migration status are presented in Table 26: income per head; income per adult equivalent; and income per male adult equivalent. Income per adult equivalent is compared with the poverty line and other definitions set out above.

All income indicators show that the average income per capita of migrant households is larger than that of non-migrant households. The difference between income figures of non-migrant households and those of internal migrant households, however, is relatively small. The income figures of external migrant households far surpass those of non-migrants and of internal migrant households. The income figures of mixed households lies in between those of internal migrant households and external migrant households.

As for the poverty line, all figures in the column of income per adult equivalent exceed Rs. 10,200. Even non-migrant households' income per adult equivalent crosses

the line of the transitory vulnerable and is in the category of transitory non-poor.

Table 26  
Household Income by Migrant Status

Migration Status	Income per head (Rs.)	Income per adult equivalent (Rs.)	Income per MAE (Rs.)
Non Migrant HH	12, 967	13,821	25, 495
Internal Migrant HH	15, 042	16,154	36, 082
External Migrant HH	32, 630	34,973	79, 947
Mixed Migrants HH	24, 370	25,843	61, 813
Migrant Household Mean	18, 047	19,293	41, 175

Source: Author's calculation.

Data reported in Table 27 and Table 28, however, reveals that the average figures in Table 26 do not tell much of the story. Table 27 and Table 28 present income per adult equivalent by migration status of households stratified by the poverty definitions (farm households' figures in Table 27 and non-farm households' in Table 28).

It is quite clear that the highest concentration of poverty is found among non-migrant households, irrespective of farm/non-farm classification. Close to 50% of farm non-migrant households are below the poverty line. This poverty class constitutes around 70 % of farm households in poverty. For more than 70% of them, landholding sizes are less than 5 acres.

Incidence of poverty is more acute among non-farm, non-migrant households<sup>28</sup>. 63 % of non-farm, non-migrant households are living in poverty. They account for more than 80% of non-farm households in poverty.

More stories can be told from this table. Note that there are eleven households among non-migrant farm households which are classified non-poor. Four out of the 11 households possess cultivated areas greater than 12.5 acres. In fact, two of them are in the highest range of Rs. 40,001+. Remember that there are only six households in the possession of cultivated areas greater than 12.5 acres in the sample households. These non-migrant households are land-rich (also livestock-rich as well) and are the source of negative sign on the square term that was obtained in the exercise of the determinants of migration. For them, migration is not an attractive option.

Another important finding from these tables is the non-negligible number of internal migrant households below the poverty line. They constitute about 20% of households in poverty. This evidence suggests that internal migration is not necessarily a panacea for villagers to escape from poor living conditions. In general, external migrant households are most well-off in the villages. Thanks to greater remittances, the majority of them belong to the non-poor class.

<sup>28</sup> Hirashima (2001) describes these rural non-farm households as *the neglected poor*.

Table 27  
Income per adult equivalent by Migration Status (Farm Households)

Income (Rs.)	No Migrant Households		Internal Migrant HH		External Migrant HH		Mixed Migrants HH		Total Households	
	No.	%	No	%	No.	%	No.	%	No.	%
0-10,200	27	49.1	8	26.7	4	15.4	1	9.1	40	32.8
10,201-12,750	6	10.9	5	16.7	0	0.0	1	9.1	12	9.8
12,751-20,500	11	20.0	10	33.3	3	11.5	3	27.3	27	22.1
20,501-40,000	8	14.5	7	23.3	10	38.5	5	45.5	30	24.6
40,001-	3	5.5	0	0.0	9	34.6	1	9.1	13	10.7
Total	55	100.0	30	100.0	26	100.0	11	100.0	122	100.0

Source: Author's calculation.

Table 28  
Income per adult equivalent by Migration Status (Non-Farm Households)

Income (Rs.)	No Migrant Households		Internal Migrant HH		External Migrant HH		Mixed Migrants HH		Total Households	
	No.	%	No	%	No.	%	No.	%	No.	%
0-10,200	17	63.0	3	21.4	0	0.0	1	50.0	21	42.9
10,201-12,750	3	11.1	3	21.4	0	0.0	0	0.0	6	12.2
12,751-20,500	5	18.5	4	28.6	2	33.3	0	0.0	11	22.4
20,501-40,000	1	3.7	3	21.4	3	50.0	1	50.0	8	16.3
40,001-	1	3.7	1	7.1	1	16.7	0	0.0	3	6.1
Total	27	100.0	14	100.0	6	100.0	2	100.0	49	100.0

Source: Author's calculation.

## 7. CONCLUSION

We have analyzed labor migration from a household perspective, based on our field survey carried out in Chakwal district. Our study has revealed the poor economic condition of non-migrant households and widely spread poverty among them. The highest incidence of poverty was found in the category of non-farm, non-migrant households. More than 60% of them are living under the subsistence level.

The only way out of poverty in the region, where employment opportunities are scarce and income from farming is constrained by the unpredicted and scanty rainfall, is to engage in migration; that is, to send someone from the household to work outside and have the person remit part of his/her earning back. However, our survey has shown a relatively high incidence of poverty among internal migrant households. This has indicated that internal migration does not necessarily improve the economic condition of migrant households. External migration seems to be the best option to upgrade the living standard of the households in these villages. Unfortunately this option is available only to handful as it involves high initial costs such as travel expenses and commissions to brokers. The poor simply can not afford to buy that.

So, who are not migrating in general? One of them is a small class of large landholders, but as the econometric exercises and discussions in the previous section indicate, a significant portion of non-migrant households is constituted by the landless and small landholders. While poverty is acute among them, migration remains a very

expensive option. Even if they migrated, chances that getting a job are limited due to their low levels of human capital. They are not only land-poor but also human capital poor. It seems there is no way out for them as access to opportunities is not evenly distributed.

The paper has shed lights on the important and neglected issues in migration studies in Pakistan such as reasons for non-occurrence of migration and the influence of household characteristics on migration decisions. Though the findings in this paper should not be generalized, they may serve to understand the dynamics of labor out-migration from rural villages in the *barani* areas.

## REFERENCES

- Adams, Richard H. Jr. (1992). "The Effect of Migration and Remittances on Inequality in Rural Pakistan." *The Pakistan Development Review*, 31; 4, 1189-1206.
- Adams, Richard H. Jr. (1998). "Remittances, Investment, and Rural Asset Accumulation in Pakistan." *Economic Development and Cultural Change*, October.
- Ahmed, A. Maqsood. and Ismail Sirageldin. (1993). "Socio-economic Determinants of Labour Mobility in Pakistan," *The Pakistan Development Review*, 32: 2 (Summer), pp. 139-157.
- Akram, M., Surayya and Lubna Shahnaz. (2002). "Factors Affecting Male Internal Migration in Punjab-Pakistan," *The Lahore Journal of Economics*, Vol. 7 (2), pp. 93-107.
- Amjad, Rashid. (1986). "Impact of Workers' Remittances from the Middle East on Pakistan's Economy: Some Selected Issues." *The Pakistan Development Review*, Vol. 25.
- Arif, G.M.. (2004). 'Effects of Overseas Migration on Household Consumption, Education, Health and Labour Supply in Pakistan' in *International Labour Migration From South Asia*, Hisaya Oda (ed.), Institute of Developing Economies and Japan External Trade Organization, Chiba, Japan.
- Batzlen, Christof. (1999). *Migration and Development, Remittances and Investments in South Asia: A Case Study of Pakistan*, Peter Lang, Frankfurt am Main.
- Bilsborrow, R.E., A.S. Oberai, and Guy Standy. (1984). *Migration Surveys in Low Income Countries: Guidelines for Survey and Questionnaire Design*.
- Byerlee, D., A.D. Sheikh, and Muhammed Azeem. (1992), "Food, Fodder, and Follow: Analytics of the Barani Farming Systems of Northern Punjab," in *Farming Systems of Pakistan*, D. Byerlee and T. Hussain (eds.), Pakistan, Vanguard Books.
- Connell, J., B. Dasugupta, R. Laishley and M. Lipton. (1976). *Migration from Rural*

- Areas: The Evidence from Village Studies*, Delhi, Oxford University Press.
- Eckert, J. B. and D.A. Khan (1977). *Rural-Urban Labor Migration: Evidence from Pakistan*, Occasional Paper, Punjab Economic Research Institute, Lahore, Pakistan.
- Gilani, I, F.M. Khan and M. Iqbal. (1981). "Labour Migration from Pakistan to the Middle East and its Impact on the Domestic Economy." Pakistan Institute of Development Economic, Islamabad. Research Report Series No. 126.
- Hampshire, Kate (2002). "Fulani on the Move: Seasonal Economic Migration in the Sahel as a Social Process," in *Labor Mobility and Rural Society*, Arjan De Hann and Ben Rogaly (eds.) Frank Cass, London, UK.
- Hirashima, S. (1978). *The Structure of Disparity in Developing Agriculture: A Case Study of the Pakistan Punjab*, Institute of Developing Economies, Tokyo, Japan.
- Hirashima, S. (2001). *Rural Poverty and the Landed Elite: South Asian Experience Revisited*. Working Paper, Department of Applied Economics and Management, Cornell University.
- Ilahi, Nadeem and Saqib Jafarey (1999). "Guestworker Migration, Remittances and the Extended Family: Evidence from Pakistan," *Journal of Development Economics*, Vol.58 (2), Pages 485-512.
- Jamal, Haroon. (2004). "Remittances Inflows, Growth and Poverty: The Case of Pakistan," in *International Labour Migration From South Asia*, Hisaya Oda (ed.), Institute of Developing Economies and Japan External Trade Organization, Chiba, Japan.
- Khan, Aliya H. and Lubna Shehnaz. (2000). "Determinants of Internal Migration in Pakistan: Evidence from the Labour Force Survey, 1996-97," *The Pakistan Development Review*, 39:4 Part II (Winter) pp.695-712.
- Kurosaki, T. (1995). "Risk and Insurance in a Household Economy: Role of Livestock in Mixed Farming in Pakistan," *The Developing Economies*, Vol. 33 (4), pp. 464-485.
- Lefebvre, A. (1999). *Kinship, Honour and Money in Rural Pakistan: Subsistence Economy and the Effects of Internal Migration*. Richmond, Curzon Press.
- Memon, Rashid (2005). "Trends and Determinants of Internal Migration in Pakistan," *Internal Labor Migration in Pakistan*, Hisaya Oda (ed.), Institute of Developing Economies and Japan External Trade Organization, Chiba, Japan.
- Nabi, Ijaz. (1981). "An Empirical Analysis of Rural-Urban Migration in Less Developed Economies," *Economic Letters*, Vol. 8, pp.193-199.
- Nabi, Ijaz. (1984). "Village-End Considerations in Rural-Urban Migration," *Journal of Development Economics*, Vol. 14, pp. 129-145.
- Nabi, I, N. Hamid and Z. Shahid. (1986). *The Agrarian Economy of Pakistan: Issues and Policies*, Karachi, Oxford University Press.
- Nishat, Mohammed and Bilgrami, N. (1991). "The Impact of Workers' Remittances on

Pakistan Economy." *Pakistan Economic and Social Review*, Vol. 29.

Saleem, M.A. and A. R. Jami. (2000). *Farm Accounts, Family Budgets of Rural Families and Cost of Production of Major Crops in Punjab: 1999-2000*, Punjab Economic Research Institute, Lahore, Pakistan.

Stark, Oded. (1991). *The Migration of Labour*. Oxford and Cambridge, MA, Basil Blackwell.

Stark, Oded. and David E. Bloom. (1985). "The New Economics of Labor Migration," *The American Economic Review*, Vol. 75 (2), pp. 173-178.

Taylor, J. Edward. (1999). "The New Economics of Labour Migration and the Role of Remittances in the Migration Process," *International Migration*, Vol. 37. pp. 63-88.

## APPENDIX

Appendix-Table 1  
Current Migration Status of Sample Individuals

	Total Sample	Village A	Village B	Village C
Total Sample Individuals (1)	1,243	449	353	441
Labor Migrants (2) ((2)/(1)%)	137 (11.0%)	51 (11.4%)	33 (9.3%)	53 (12.0%)
Internal Migrants (3) ((3)/(2)%)	78 (56.9%)	19 (37.3%)	19 (57.6%)	40 (75.5%)
External Migrants (4) ((4)/(2)%)	59 (43.1%)	32 (62.7%)	14 (42.4%)	13 (24.5%)
Farm Sample (5)	900	313	217	370
Labor Migrants (6) ((6)/(5)%)	105 (11.7%)	34 (10.9%)	22 (10.1%)	49 (13.2%)
Internal Migrants (7) ((7)/(6)%)	56 (53.3%)	10 (29.4%)	8 (36.4%)	38 (77.6%)
External Migrants (8) ((8)/(6)%)	49 (46.7%)	24 (70.6%)	14 (63.6%)	11 (22.4%)
Non Farm Sample (9)	343	136	136	71
Labor Migrants (10) ((10)/(9)%)	32 (9.3%)	17 (12.5%)	11 (8.1%)	4 (5.6%)
Internal Migrants (11) ((11)/(10)%)	22 (68.8%)	9 (52.9%)	11 (100.0%)	2 (50.0%)
External Migrants (12) ((12)/(10)%)	10 (31.3%)	8 (47.1%)	0 (0.0%)	2 (50.0%)

Source: Author's calculation.

Appendix-Table 2  
Current Migration Status of Sample Households

Farm/ Non- Farm	Household by Migration Status	Village A		Village B		Village C		Total	
		No.	%	No.	%	No.	%	No.	%
Farm HH	Non-Migrant HH	19	42.2	17	58.6	19	39.6	55	45.1
	Internal Migrant HH	8	17.8	2	6.9	20	41.7	30	24.6
	External Migrant HH	16	35.6	5	17.2	5	8.3	26	21.3
	Mixed Migrants HH	2	4.4	5	17.2	4	8.3	11	9.0
	Farm HH per Village	45	100.0	29	100.0	48	100.0	122	100.0
Non- Farm HH	Non-Migrant HH	10	45.5	11	64.7	6	60.0	27	55.1
	Internal Migrant HH	6	27.3	6	35.3	2	20.0	14	28.6
	External Migrant HH	4	18.2	0	0.0	2	20.0	6	12.2
	Mixed Migrants HH	2	9.1	0	0.0	0	0.0	2	4.1
	Non-Farm HH per Village	22	100.0	17	100.0	10	100.0	49	100.0
Total HH	Non-Migrant HH	29	43.3	28	60.9	25	43.1	82	48.0
	Internal Migrant HH	14	20.9	8	17.4	22	37.9	44	25.7
	External Migrant HH	20	29.9	5	10.9	7	12.1	32	18.7
	Mixed Migrants HH	4	6.0	5	10.9	4	6.9	13	7.6
	Household per Village	67	100.0	46	100.0	58	100.0	171	100.0

Source: Author's calculation.