Out-migration in Rural Pakistan: Does Household Poverty Status Matter?

RIZWAN UL HAQ, AJMAL JAHANGEER, and AZKAR AHMAD

1. INTRODUCTION

Movement of the people within the geographical and administrative boundaries of a country is known as internal migration. Researchers regard the movement to urban areas from both rural and less-advanced urban areas as more important, yet studying the dimensions of movement between rural areas is worth investigating. Scholars assert economic incentives as the main motive behind the rural-urban movement; various unforeseeable factors, however, may also stimulate the human flows. In Pakistan, the phenomenon of internal migration is as old as the inception of the country as Helbock (1975a) maintained, while studying life-time migrants in 12 largest cities of the country in 1961, that almost every 7th person residing in these cities had come from a different district.

We may split studies on migration into two categories: macro level studies that focus on flows, magnitude, and future forecast on migration; and micro level studies that lay emphasis on households or individuals and how decisions are made to migrate and what is the impact of such decisions on the well-being of the migrants, and those who are left behind. In the presence of a dearth of research on migration, we find most of the studies at the macro level indicators with a very few at the micro level in Pakistan [e.g. Khan and Shahnaz (2000); Arif (2005)].

In Pakistan, majority of the macro level studies relied on the census data that provide a detailed picture of the movement and trends of migration at the country level. Using the last census conducted in 1998, five studies focused on the migratory movements in the country: at national level Karim and Nasar (2003) conducted a study on the inter-district and inter-provincial movements; four other studies provided a detailed description of inter-provincial movements' pattern to prepare a socio-economic and demographic profile of the provinces [Khatak (2003); Chaudhry (2003); Naeem (2003); Rukanuddin and Chaudhry (2003)].

Apart from the census-based studies, a number of studies have used survey data to understand various dimensions of internal migration: Akram et al (2003) undertook a study on the migratory flows using the 1998-1999 Pakistan Integrated Household Survey (PIHS) data

Rizwan ul Haq <r.ul.haq@pide.org.pk> is Research Demographer, Ajmal Jahangeer <ajmal@pide.org.pk> is Staff Economist and Azkar Ahmad <azkar@pide.org.pk> is Research Economist at the Pakistan Institute of Development Economics, Islamabad. The views expressed in this paper are solely those of the authors.

on the province of Punjab; Memon (2005) conducted a district-level study on migration using the Labor Force Survey (LFS) and (PIHS); Mahmud, *et al.* (2010) studied the impact of social sector development on internal migration using the LFS data; and Hamid (2010) used various LFS rounds for studying the gender dimension of internal migration.

Some studies focused on the migration pattern at the micro level using nationally representative data: Khan and Shahnaz (2000) analyzed the determinants of internal migration in the country using the 1996-1997 LFS data; Arif (2005) used the Paksitan Socio- economc Survey 2001-02, a nationally representative survey conducted by Pakistan Institute of Development Economics, to study the relationship between migration and well-being of a household. Others looked at the impact of migration at micro level using small surveys: Oda (2007) focused on Chakwal district; number of studies focused the determinants and impact of migration on migrants and those who were left behind in the district of Faisalabad [Farah, Zafar and Nawaz (2012); Farooq and Cheema (2005); Farooq and Javed (2009); Farooq, Mateen and Cheema (2005)].

2. HISTORICAL PERSPECTIVE REGARDING INTERNAL MIGRATION IN PAKISTAN

In Pakistan migration is an old phenomenon, and dates back to the inception of the country. Soon after the division of India, huge migration took place from and to India. Extensive research work lacks on the migration flows within the country, although several data sets exist providing ample data on directional flows, incidence, income differentials of migrants and non-migrants, and determinants of migration.

Census data provides us a detailed picture of the pattern of inter-district and inter-provincial migration within Pakistan, although it encounters some shortcomings. Based on 1961 and 1972 census data, Helbock (1975b), while studying urban population growth in Pakistan, maintained that population of the country living in larger cities increase to 50.1 percent in 1972 as compared to 33.4 percent in 1961, thereby pointing at a rural-urban movement in the country during the study period. Irfan (1981), while studying the migration trends provided by Population, Labor Force and Migration (PLM 1979) survey, made a similar argument that internal migration is becoming rural-urban and long distance in Pakistan.

The most recent census data (1998) revealed that the volume of overall migrants has increased whereas the proportion of migrants in total population has decreased [Karim and Nasar (2004)]. This finding may be due to the weakness in the criteria of defining migrants used by the 1998 census which did not capture intra-district movement.

Results from various surveys conducted in Pakistan have also come up with the finding that the prevalent migratory flows in Pakistan are from rural areas and towards urban areas. PIHS 1998 data suggest that almost 40 percent of the male migrants are rural to urban followed by rural to rural movement [Memon (2005)]. Pakistan Socioeconomic Survey (PSES) data also show the direction of migration from rural to urban and rural to rural [Arif (2005)]. The PLM 1979, which is indeed quite an old data, indicated that movement between rural areas was prevalent among internal migrants in Pakistan. On the other hand, the LFS reveals that main flow of migrants in Pakistan is between urban areas. This data set, however, exclude population below 10 years of age while studying migratory flows.

Table 1

Percentage Distribution of Internal Migrants by Direction of Move

Direction of Move	2000-01 PSES (all ages-both sexes)	1996-97 LFS (Age 10 + - both sexes	1998-99 PIHS (Male- Punjab both sexes)	1979 PLM* (all ages – both sexes)
Urban-urban	19.5	43.0	22.7	14.9
Urban-rural	5.9	6.9	6.8	13.9
Rural-urban	38.8	29.8	40.7	29.8
Rural-rural	36.2	20.3	29.7	41.3
All	100	100	100	100

Source: Arif (2005).

Among the provinces, urban areas of Sindh were found to be the main recipient of the internal life time migrants from rural areas of Punjab and Khyber Phakhtoonkhwa (KP), whereas their counterparts in the provinces of Balochistan and Sindh move quite less in numbers [Karim and Nasar (2004)]. The authors argued that from rural areas of Sindh there might be temporary migrants, which the census data was unable to capture. Khan and Shahnaz (2000) came up with the same finding using the multivariate analysis that residents of the province of Punjab are more likely to migrate.

Table 2

Number and Percent of Life Time Migrants in Pakistan and Their Place of Origin, 1951-1998

	Year				
	1951	1961	1973	1981	1998
Total Life-time Migrants	7,755,402	8,777,746	10,129,993	9,959,251	10,829,264
Total Internal Migrants	1,397,285	2,826,036	4,436,316	5,172,576	8,368,723
	(100)	(100)	(100)	(100)	(100)
Within Province	953,074	1,937,052	2,578,734	3,436,086	5,705,447
	(68.2)	(68.5)	(58.1)	(66.4)	(68.2)
Other Provinces	444,211	888,984	1,857,582	1,736,490	2,663,276
	(31.8)	(31.5)	(41.9)	(33.6)	(31.8)

Source: Karim and Nasar (2004); *Note:* Figures in parentheses are percentages.

Using the LFS data, Memon (2005) found that majority of the migrants are family migrants or those who migrate due to marriage, whereas only 20 percent of the migrants move due to some economic reason. Arif (2005) using the PSES data came up with the finding that 61 percent of migrants moved due to economic reason, whereas for female the prevalent reason is marriage or joining family. Mahreen and Mahmood (2010) using the latest LFS data suggested that it is mainly the improvement of economic status which lead people to move as compared to public utilities.

Surveys focusing on migration generally include a question regarding the reasons for migration. Compiling various sources of migration data, Table 3 presents the reported reason of migration. As may be observed from the table the main reason for migration has been marriages and family reunion in Pakistan. Combining all the economic reasons reveal that almost one-fifth of the migrants moved due to some economic (monetary) incentives.

Table 3

Reported Reasons for Migration

	Percentage of Migrants			
Reason for Migration	LFS 1996-97	PIHS 1998	LFS 1997-98	Census 1998
Job transfer	7.1	2.8	5.5	12.1
Finding a job	10.0	12.5	8.9	NA
Business	4.3	2.8	4.4	8.8
Education	0.9	1.1	0.5	1.2
Health	0.2	0.3	0.2	0.01
Marriage	26.1	41.2	26.1	17.0
With family	19.8	22.3	23.7	42.8
Return home	6.7	3.1	9.3	1.1
Independence	NA	8.4	NA	NA
Others	25.0	5.7	21.4	16.9
Proportion of economic migrants in migrants sub-sample	21.3	18.1	18.8	20.9
Proportion of economic migrants in full sample	2.3	4.7	1.7	1.7

Source: Khan and Shahnaz (2000); Memon (2005).

Considering the gender differentials among the migrants, 1998 census reveals that head of the household's spouses are the leading long-term migrants followed by the daughters. Among males migrants, one-third of the migrants are head of household's sons with one-fifth of the migrants are main bread-earner in the household [Karim and Nasar (2004)]. Regarding the gender dimension of migration, Hamid (2010) concluded using data from several rounds of the LFS that female migrants dominate all four types of moves; especially they outnumber their male counterparts in the urban-urban migration in the country. Almost half of the female migrants moved due to their marriages.

The majority of the male migrants moving towards urban areas have at least 6 years of schooling according to 1996-97 LFS survey [Khan and Shahnaz (2000)]. On the other hand majority of the people who move between rural areas have no formal education. Among female migrants, majority of those who move have no formal education. The pattern may be characterized as better educated people moving towards urban centers whereas illiterate people move to rural areas. Arif (2005) came up with the same pattern of migrants using the PSES data.

Regarding the age of the migrants, Arif (2005) found that young people mainly move towards urban areas whereas there is substantial percentage of older people – around 30 to 35 percent – who move to rural areas. These findings are in line with the earlier study by Irfan (1986) who noted that young and educated people move towards urban areas and illiterate people move towards rural areas.

Arif (2005) carried out occupational profile of migrants and non-migrants by using the PSES data. The author found that majority of the employed non-migrants was involved in agriculture, elementary occupations and service sector. In-migrants also participated in agriculture and elementary occupations along with crafts work.

Comparison of income profile revealed that in-migrants were slightly better off than non-migrants. Further, rural households received almost four times higher remittances as compared to their urban counterparts. The effect of internal remittances, however, was noted to be significantly marginal as compared to the remittances received by international migration. The socio-economic status of the rural-rural migrants remained unprivileged with higher percentage of stunted children as compared to non-migrants' children [Arif (2005)].

Using the PIHS 1998 data, Memon (2005) found land ownership among the important variable which reduces the probability of out-migration from rural areas of the country. The author argued that land ownership provide both economic and social capital, and hence increases both monetary and social costs of migration from rural areas for land owners.

3. THEORIES ON MIGRATION

While reviewing theories on migration, Massey, *et al.* (1993) divided theories on migration into three categories: micro theory provides the description at individual level; macro theory draws the picture at regional level; and miso theory presents the situation at household level.

Neoclassical economics provide the description of both micro and macro level theories. The micro level neoclassical migration theory regards migration an outcome of rational decision of a person based on cost-benefit analysis for positive return. Individuals include all sort of physical, emotional, and psychological costs and benefits while making their calculations. The macro level neoclassical economic theory states that wage differentials—an outcome of disproportionate labor and capital endowments — instigate migration between two regions. Due to migration the wage differentials tend to minimize and migration seizes up gradually as the wage differentials diminish. The new economics of migration provide miso theory of migration and argues that it is not the individual who takes decision based on personal cost and benefit rather all relevant people—families or household members—decide collectively about a migratory move.

Summing up, a number of studies have addressed the issue of migration in the country, yet some issued remained unexplored. First, all these studies used cross-sectional data which encounters some methodological shortcomings for studying the determinants of migration. The research on the determinants of migration in Pakistan lacks the use of the panel data despite the availability of sufficient information on this topic: two rounds of the PSES and three rounds of Pakistan Panel Household Survey (PPHS). Second, all studies addressed issues pertaining to the place of destination—in-migration—without any focusing on the place of origin—out-migration. Both above-mentioned data sets also provide a module on out-migration.

4. RESEARCH OBJECTIVES

The overall objective of this study is to investigate the determinants of out-migration in rural Pakistan. The study aims to address the following research questions:

(1) Is there any influence of household poverty status on out-migration?
(2) Do schooling, dependency ratio, household size, land ownership and place of residence have any significant association with out-migration?

(3) What is the role of household characteristics on external and internal migration?

We embed our conceptual model of the study by combining migration-inducing factors at all three levels proposed in micro, macro and miso level theories: individuals decide to move while considering all factors at personal, familial and regional levels.

5. DATA AND METHODOLOGY

The data for this study is used from the Pakistan Panel Household Survey (PPHS). The survey covers 16 districts from all four provinces. Thus far three rounds of this survey have been completed. These rounds provide information on individuals and households residing in rural areas of the selected districts. The last round in 2010, however, also included urban areas in the sample. The PPHS provides detailed information on all types of migrants: internal, external and returned. This analysis uses information from two rounds of PPHS conducted in 2001 and 2010. However, as this survey targets only 16 districts, results cannot be generalized for all the country.

PPHS defines a person as a migrant who leaves his place of residence for a period of three months or more. The paper investigates out-migration-both internal and external. External migrants are persons who migrated ovearseas whereas those individuals who moved within country are referred as internal migrants. The sample households are located in rural areas only. The descriptive statistics reveal out-migration from rural to both urban and rural areas. The external migration is referred to out-migration of individuals to abroad/overseas.

For this analysis, we applied a widely used standard logistic regression model to look at association of household poverty status and other household characteristics with out-migration, taking place between 2002 and 2010 in rural areas of Pakistan. We have investigated the association of pre-migration household characteristics and individual's age with out-migration. Out-migration has taken place between 2002 and 2010, whereas the household characteristics- land ownership, poverty status and others are collected from 2001 wave of PPHS.

To investigate this association, we have used standadrd logistic analysis with pooled data. The logistic regression is a nonlinear regression (binary response) model specifically designed for binary dependent variables. The logistic regression uses cumulative standard logistic distribution. The coefficients of the logistic regression model are estimated by maximum likelihood. The logistic fit maximum likelihood models with dichotomous dependent variables coded as 0 and 1.

A general form of the model can be described as

$$\text{Logit } [P(y = 1)] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots \beta_k X_k$$

where y is a limited dependent/binary variable, β_0 is constant, X_k is vector of independent variables, and β_k represents a parameter estimate for the kth independent variables. Dependent variable coded as 0 indicates the absence of the characteristic, whereas coded as 1 indicates presence of the characteristic. For instance, in this analysis, the dependent variable out-migration takes on two unique values, 0 and 1. The value 0 denotes a person is not a migrant, and 1 denotes a person is a migrant.

The multinomial logistic regression is applied to investigate the association of individual and household level characteristics with out-migration . The multinomial logistic regression applies to maximum likelihood models when dependent variable has more than two outcomes and the outcomes do not represent any natural ordering. In this study, the multinomial logistic regression is used to investigate the probability of migrating to external (overseas) or internal location (within the country) compared to no migration.

Let's assume that y is a dependent variable with three outcomes 1, 2 and 3. A set of coefficients, βs (β, (1) β, (2) and β, (3)) are estimated relating to each outcome. Then the mathematical form of the model for each outcome is as follows:

$$\Pr(y = 1) \frac{e^{X\beta^{(1)}}}{e^{X\beta^{(1)}} + e^{X\beta^{(2)}} + e^{X\beta^{(3)}}}$$

$$\Pr(y = 2) \frac{e^{X\beta^{(2)}}}{e^{X\beta^{(1)}} + e^{X\beta^{(2)}} + e^{X\beta^{(3)}}}$$

$$\Pr(y = 3) \frac{e^{X\beta^{(3)}}}{e^{X\beta^{(1)}} + e^{X\beta^{(2)}} + e^{X\beta^{(3)}}}$$

By setting any coefficient, say $\beta^{(1)} = 0$, the remaining coefficients $\beta^{(2)}$ and $\beta^{(3)}$ will measure the change relative to the $y = 1$ and so forth. The three coefficients $\beta^{(1)}, \beta^{(2)},$ and $\beta^{(3)},$ will vary because they have different interpretations.

6. RESULTS

6.1. Descriptive Statistics

Descriptive statistics on various characteristics of migrants and non-migrants are reported in the following tables. As seen in Table 4, overall only 2.6 percent of the household members (age 15+) migrated during the period between 2002 and 2010 which include only 11 females. The proportion of internal migrants is considerably more than the external migrants (1.7 percent vs. 0.9 percent). As reported in Table 5, majority of the migrants belong to younger age groups (under 30). The proportion of internal and external migrants is highest among 21-25 and 26-30 years old respectively.

Table 4

Distribution of Out-Migrants by Gender

	Non-migrants		External Migrants		Internal Migrants		Total Sample	
	No.	%	No.	%	No.	%	No.	%
Female	4572	99.8	1	0.0	10	0.2	4583	100.0
Male	4688	95.3	85	1.7	147	3.0	4920	100.0
Both Sexes	9260	97.4	86	0.9	157	1.7	9503	100.0

Table 5

Distribution of Out-migrants and Non-migrants by Age at Time of Out-migration

	Non-migrants		External Migrants		Internal Migrants		Total Sample	
	No.	%	No.	%	No.	%	No.	%
<20	4476	97.9	13	0.3	85	1.9	4574	100.0
21-25	893	93.9	23	2.4	35	3.7	951	100.0
26-30	692	94.9	24	3.3	13	1.8	729	100.0
31-40	1170	97.9	20	1.7	5	0.4	1195	100.0
41-50	894	98.7	4	0.4	8	0.9	906	100.0
51-60	598	99.5	2	0.3	1	0.2	601	100.0
61 & above	537	99.8	0	0.0	1	0.2	538	100.0
All ages	9260	97.5	86	0.9	148	1.6	9494	100.0

*Non-migrants' age is as of 2001, whereas age of migrants is at the time of first migration.

The decision to migrate is not necessarily an individual level. It could be a household level decision as it has important implications for household's resources, composition and economy. We have included household level characteristics to examine their influence on out-migration. These characteristics are average household size, average years of schooling and average dependency ratio. As reported in the Table 6, household size of external migrants' households is considerably higher compared to households whose members migrated to internal locations. It seems that larger households can afford to send its members overseas compared to smaller households. In case of households' stock of human capital (average years of schooling), the evidence suggests that households with more (less) years of schooling send their members abroad (internally).

The household dependency ratio could also encourage households to send members out of home mainly for work. On average, there are more dependents (children and elderly) than working age members in the household as average dependency ratio of total sample is 105.0. The households having more working age members (15-64) than dependents (under 15 and 64+) are sending its members to overseas and internal locations.

Table 6

Average Household Size, Years of Schooling and Dependency Ratio before Out-migration (in 2001)

	Non-migrants		External Migrants		Internal Migrants		Total Sample	
	No.	Avg.	No.	Avg.	No.	Avg.	No.	Avg.
Average household size	9260	10.5	86	12.6	157	8.9	9503	10.5
Average years of schooling	9260	2.2	86	3.3	157	2.3	9503	2.2
Average dependency ratio	9241	105.7	86	79.7	157	98.1	9484	105.0

Household's economic (poverty) status is very important factor in migration related decisions. On one hand, poor individuals/households are expected to consider out-migration to explore better economic opportunities and mitigate the effects of poverty. On the other hand, poverty could also hinder the decision to out-migrate due to higher costs associated with it. As seen in Table 7 below, prevalence of out-migration is lower

among poor (1.9 percent) compared to non-poor (2.8 percent). Moreover, higher proportion of poor and non-poor decided to move to internal locations compared to moving overseas. However, the gap between moving overseas and internally is slightly wider in case of poor migrants.

Table 7

Distribution of Out-migrants by Poverty Status in 2001

	Non-migrants		External Migrants		Internal Migrants		Total Sample	
	No.	%	No.	%	No.	%	No.	%
Non-poor	7072	97.2	79	1.1	124	1.7	7275	100.0
Poor	2308	98.0	12	0.5	34	1.4	2354	100.0
All	9380	97.4	91	0.9	158	1.6	9629	100.0

In the rural areas, land is one of the most valuable and most important assets households aspire to hold. The results indicate that lack of ownership of land is associated with out-migration (see Table 8). Those with no land have higher prevalence of out-migration particularly to internal locations compared to those who own land.

Table 8

Distribution of Out-migrants by Land Ownership Status before Out-migration in 2001

	Non-migrants		External Migrants		Internal Migrants		Total Sample	
	No.	%	No.	%	No.	%	No.	%
No land	3715	95.5	65	1.7	109	2.8	3889	100.0
Own land	5433	98.8	20	0.4	45	0.8	5498	100.0
All	9148	97.5	85	0.9	154	1.6	9387	100.0

Geography/location of household also plays a vital role in out-migration. The residents in poor, deprived and under developed regions/areas are expected to out-migrate. The proportion of external and internal migrants is highest in Khyber-Paktunkhawa and Punjab provinces respectively (see Table 9). Surprisingly, no one out-migrated in Balochistan province, although the law and order situation in the province has deteriorated over the period.

Table 9

Distribution of Out-migrants by Province of Origin

	Non-migrants		External Migrants		Internal Migrants		Total Sample	
	No.	%	No.	%	No.	%	No.	%
Punjab	3159	95.3	30	0.9	127	3.8	3316	100.0
Sindh	2787	98.8	9	0.3	26	0.9	2822	100.0
Khyber-Pakhtunkhawa	1975	97.4	51	2.5	1	0.0	2027	100.0
Balochistan	1330	100.0	0	0.0	0	0.0	1330	100.0
All	9251	97.4	90	0.9	154	1.6	9495	100.0

The comparison of out-migrants by land status of district of origin, contrary to our expectations, shows that more individuals out-migrated from agricultural districts compared to arid (3.1 percent vs. 1.4 percent) and particularly to internal locations (see Table 10). Amongst the districts, Bahawalpur has the highest proportion of out-migrants followed by Vehari and Attock (see Table 11). Both Bahawalpur and Vehari are agricultural districts unlike Attock. The comparison of migrants by place of destination illustrates that the proportion of external migrants is highest in Mardan followed by Dir and Attock, whereas proportion of internal migrants is highest in Bahawalpur followed by Vehari and Attock.

Table 10

Distribution of Out-migrants by Land Status of District of Origin

	Non-migrants		External Migrants		Internal Migrants		Total Sample	
	No.	%	No.	%	No.	%	No.	%
Arid	3103	98.5	32	1.0	14	0.4	3149	100.0
Agricultural	6173	96.9	58	0.9	140	2.2	6371	100.0
All	9276	97.4	90	0.9	154	1.6	9520	100.0

Table 11

Distribution of Out-migrants by District of Origin

	Non-migrants		External Migrants		Internal Migrants		Total Sample	
	No.	%	No.	%	No.	%	No.	%
Faisalabad	459	96.6	7	1.5	9	1.9	475	100.0
Attock	413	95.2	7	1.6	14	3.2	434	100.0
Badin	1030	99.1	1	0.1	8	0.8	1039	100.0
Dir	1108	97.8	25	2.2	0	0.0	1133	100.0
Hafizabad	635	96.2	5	0.8	20	3.0	660	100.0
Vehari	659	95.1	10	1.4	24	3.5	693	100.0
Muzaffar Garh	388	97.5	0	0.0	10	2.5	398	100.0
Bahawalpur	619	92.4	1	0.1	50	7.5	670	100.0
Nawab Shah	630	98.9	3	0.5	4	0.6	637	100.0
Mirpur Khas	409	97.8	2	0.5	7	1.7	418	100.0
Larkana	727	98.6	3	0.4	7	0.9	737	100.0
Mardan	617	95.8	26	4.0	1	0.2	644	100.0
Lakki Marwat	251	100.0	0	0.0	0	0.0	251	100.0
Loralai	468	100.0	0	0.0	0	0.0	468	100.0
Khuzdar	399	100.0	0	0.0	0	0.0	399	100.0
Gwadar	464	100.0	0	0.0	0	0.0	464	100.0
All	9276	97.4	90	0.9	154	1.6	9520	100.0

The analysis reveals that out-migrtion took place only for economic reason. Thus, reason for migration was not included in the analysis. Further, districts/regions like Swat and FATA which have observed internally displaced persons (IDPs) were not part of PPHS, hence no information is available on out-migration due to conflict.

6.2. Regression Results

We included various characteristics—socio-economic, demographic and geographic location of the household—to capture their influence on out-migration. These include household's average years of schooling, household size, average dependency ratio of the household, poverty status[2], land ownership, land status of the district of origin, and place of residence before migration.[3] As some of the individuals could not be matched across the two waves of the survey, some of the individual-level variable, such as marital status, education, employment status, were not included in the analysis. We employed the logistic regression technique to find out predictive variables of out-migration. The results indicate that average years of schooling and household size have a significant positive association with out-migration. Individuals living in more educated and large households are significantly more likely to move out. Further, of household's poverty and land ownership statuses- both reflect economic position of the household, only land ownership turns out to be a significant negative determinant of out-migration. A person from a household with some owned land is significantly less likely to migrate compared to a person from a household with no land ownership.

Table 12

Logistics Regression Estimates of Out-migration in Rural Pakistan

Out-migration	Coef.	Std. Err.
Age	0.284*	0.032
Age square	-0.005*	0.001
Average years of schooling	0.066**	0.031
Household size	0.025*	0.01
Dependency ratio	-0.001	0.001
Poverty status	-0.199	0.174
Household owns land	-1.376*	0.148
Sindh	-1.550*	0.192
Khyber-Pukhtunkhwa (KPK)	-0.842*	0.204
District status	0.645*	0.21
Constant	-6.238*	0.479

N= 9391; *significant at 0.01, ** significant at 0.05 and *** significant at 0.10.
Reference categories are: non-poor, no land ownership, residence in Punjab, and in arid districts.

Further household characteristics related to geographic location also appear significant determinants of out-migration. Individuals residing in Sindh and Khyber-Pakhtunkhwa (KP) provinces are significantly less likely, whereas those residing in agricultural districts are significantly more likely to migrate compared to individuals residing in Punjab province, and arid districts respectively.

Further, we divided the move by destination: external (abroad) and internal (within the country). We applied multinomial logistic regression to investigate determinants of moving to external and internal locations. Results indicate that compared to reference

[2]As calculated by Arif and Shujat (2012).

[3]Average years of schooling, household size, dependency ratio, poverty status, land ownership and residence related characteristics are of 2001.

group (no move), people are significantly more likely to move abroad and internally with increase in their age, but for older people it is less likely to move. Moreover, in comparison to those who did not move, average years of schooling of the household members, household size, and dependency ratio play a significant role in moving to overseas but not in case of internal move. Increase in education level of the household proved to be helpful in taking a decision for one of the household's member to migrate abroad. Further, increase in household size also improves the chance of migrating abroad by any member of the household, whereas increase in dependency ratio in the household significantly reduces the probability of moving abroad.

Table 13

Multinomial Logistic Regression Estimates of Out-migration in Rural Pakistan

Characteristics	Move Abroad		Move Internally	
	Coef.	Std.Eror	Coef.	Std.Eror
Age	0.465*	0.067	0.249*	0.043
Age square	-0.007*	0.001	-0.005*	0.001
Average years of schooling	0.153*	0.047	-0.012	0.045
Household size	0.037*	0.011	0.007	0.02
Dependency ratio	-0.004**	0.002	0.000	0.001
Poverty status	-0.377	0.328	-0.110	0.217
Household owns land	-1.804*	0.258	-1.263*	0.194
Sindh	-1.361*	0.409	-1.793*	0.243
Khyber- Pukhtunkhwa (KP)	0.849*	0.273	-4.763*	1.027
District status	0.753*	0.268	0.110	0.32
Constant	-11.083*	1.052	-4.980*	0.645

N= 9378; reference category is no move; *significant at 0.01, ** significant at 0.05 and *** significant at 0.10. Reference categories are: non-poor, no land ownership, residence in Punjab, and in arid districts.

People with owned land, and living in Sindh have a significant lower probability of moving abroad and within the country, whereas living in KP has a significant higher (lower) probability of moving abroad (within country) compared to reference groups. However, being a resident of an agricultural district compared to arid district significantly increases the probability of moving abroad.

7. CONCLUSION AND DISCUSSION

The objective of this research was to study the determinants of out-migration in rural Pakistan using the panel data. We embed our study in the new economic theories of migration which postulate that it is not an individual's decision in isolation to migrate rather it is a collective thought of family and household members. We therefore included variable at household level in the analysis.

People are more likely to migrate with increase in the age but for the older people it is less likely for them to move. This may imply that for people it is more convenient to move when they are young. Further, the analysis revealed that it is more likely for those households with higher average year of schooling to have an out-migrant to overseas. Similarly, greater household size also increases the probability of migration abroad of

any member of such households. Higher dependency ratio, on the other hand, reduces the chances of movement of any member of to overseas. Among the variables concerning the economic situation of the households, land ownership reduces the chances of migrating, whereas the poverty status of the household was found to have no role in migration decisions.

Among the variables at macro level, the results of the analysis revealed that those residing in other provinces are less likely to migrate as compared to those residing in Punjab. This trend might be due to the fact that Punjab is adjacent to all four provinces thereby movement from Punjab to other provinces becomes quite economical. People residing in the agricultural district were found to be more likely to migrate as compared to those residing in the arid areas. People migrating from the agriculture areas might be involved in agriculture labor. These results are in line with what was revealed by PIHS 1998 data that land ownership reduces the probability of migration as discussed by Memon (2005).

After reviewing recent research studies on internal migration in the country we have observed some research gaps. First of all push factors of internal migration have been ignored to some extent. Most of the research has been conducted from the place of destination with a very small focus on the previous or original place of migrants, thereby ignoring those factors which made people move from the place of origin.

Further, in most of the studies the study population, internal migrants in this case, has been studied from a distance—quantitatively—without finding out how did they adapt to the atmosphere in the place of destination; till now no qualitative study has been designed to study the effects of migration on the overall life conditions of the migrants. Further people who are left behind, the impact of migration on these people is still yet to be studied. Especially the effect of migration of male head of household on their spouses and children, who find no one to take care of them, is worth studying.

There are surveys which provide information on the place of origin, thereby making it possible to study return migration in detail. However, surveys like LFS which are conducted in succession should also include such modules as has been done in PSES, PLM and PPHS. For example, the inclusion of return migration, enables us to study those who return, especially those were unable to adapt to the destination environment. LFS provide information of migrants at their places of destination only tell us success story of those who successfully adjusted at their place of destination.

Various data sets came up with different results mainly due to inconsistencies in the definitions. For example, definition of urban and rural areas has been changed during various censuses, thereby causing difficulties in studying pattern of rural-urban movements [Arif (2003)].

Distance of migration has been the focus of some studies. Operationalisation of distance is, however, encountered by some limitations. For example inter-administrative unit—be it a district or province—is regarded as long distance movement without taking into account the actual distance covered by the migrants. Global Information System (GIS) along with other spatial econometrics techniques may be employed to get a valid measure of distance of movement.

Pakistan has faced natural disasters, for example earthquake in 2005, floods and the internally displaced movement due to military actions, quite frequently. In turn, the

shape and dimensions of internal movement in Pakistan might have disturbed a lot, and studying the determinants using the conventional lens may overlook some important features.

From the review it is somehow clear that migration has negative impact on the well-being of the rural-rural migrant households in the country, whereas there is hardly any evidence of economic benefit of migration for other internally migrated households. These findings point out that the decision to migrate was not based on a shrewd judgment, and people who move might have taken the decision haphazardly. The decision making process of migration that who decides to moves and how people decide regarding their destination is worth investigating.

Migration issue has not been taken up by the policy makers in the country. As the issue is closely related with poverty, Poverty Reduction Strategy paper (PRSP)—an official document regarding poverty reduction policy—does not address this issue substantially [Memon (2005)]. In the country the policy regarding internal migration and urbanization is a laissez-faire policy. The need of the hour requires a cogent proactive policy which not only gives incentives but also imposes restrictions. Policy makers should also intervene in the process of urbanization by giving incentives for the people so that the main streams of migration may be diverted from the main urban hubs. Establishing job opportunities and educational institutions in small and medium size cities may serve the purpose.

On the other hand there should be restriction on mobility of people. A lucid way of achieving this objective is to have a stringent registration system in contact. Everybody living in a locality should be registered at an address. Further jobs may be given to those people who belong to that particular area. As a matter of fact, provincial government jobs do have a restriction of domicile. Finally illegal squatter settlements should be discouraged. Above all, there is a need for strong political will for enhancing well-being the people and urban planning may simply be an offshoot of this policy framework.

REFERENCES

Arif, G. M.   (2005) Internal Migration and Household Wellbeing: Myth or Reality. Institute of Developing Economies. (IDE Discussion Papers 72).

Arif, G. M. (2003) Urbanization in Pakistan: Trends, Growth, and Evaluation of the 1998 Census. In A. R. Kemal, M. Irfan and Naushin Mahmood (eds.) *Population of Pakistan: An Analysis of 1998 Population and Housing Census.* Islamabad. Pakistan Institute of Development Economics.

Barkley, A.P. (1991) The Determinants of Inter-district Labour In-migration in Pakistan, 1971-1980. Pakistan Institute of Development Economics, Islamabad. *The Pakistan Development Review* 30:3, 275-296.

Chaudhry, M. J. (2003) Socio-economic and Demographic Profile of Balochistan: An Analysis of the 1998 Population and Household Census. Pakistan Institute of Development Economics. (Census Monograph Series No.4).

Farah, N., M. I. Zafar and N. Nawaz (2012) *Pakistan Journal of Life and Social Sciences* 10:1.

Farooq, M and M. A. Cheema (2005) Likelihood Impact of Internal Migration on Family Institution in Punjab, Pakistan.

Farooq, M and Z. H. Javed (2009) The Impact of International Migration on Migrants' Families Left Behind in the Rural Areas of Pakistan. *Pakistan Journal of Agriculture Science* 46:4.

Farooq, M. A. Mateen and M. A. Cheema (2005) Determinants of Migration in Punjab, Pakistan: A Case Study of Faisalabad Metropolitan. *Journal of Agriculture and Social Science* 1:2.

Gazdar, H. (2003) A Review of Migration Issues in Pakistan. Paper prepared for the Regional Conference on Migration, Development and Pro-Poor Policy Choices in Asia, Dhaka, 22-24 June.

Hamid, S. (2010) Rural to Urban Migration in Pakistan: The Gender Perspective. PIDE (Working Paper Series 2010:56).

Harris, J. R. and M. P. Todaro (1970) Migration, Unemployment and Development: A Two-sector Analysis. *American Economic Review* 60, 126-142.

Irfan, M. (1981) Pakistan's Labour Force, Its Size and Structure: A Review of Evidence. Pakistan Institute of Development Economics (Research Report No. 116).

Irfan, M., L. Demery, and G. M. Arif (1983) Migration Patterns in Pakistan: Preliminary Results from the PLM Survey, 1979. Studies in Population, Labour Force and Migration Project. Pakistan Institute of Development Economics, Islamabad. (Report No. 6).

Karim, M. S. and Abu Nasar (2004) Migration Patterns and Differentials in Pakistan: Based on the Analysis of 1998 Census Data. In A.R. Kemal, M. Irfan and Naushin Mahmood (eds.) *Population of Pakistan: An Analysis of 1998 Population and Housing Census.* Islamabad. Pakistan Institute of Development Economics.

Khan, A. H. and L. Shenaz (2000) Determination of Internal Migration : Evidence from the LFS 1996-7. *The Pakistan Development Review* 39:4, 695-712.

Khattak, N. (2003) Socio-economic and Demographic Profile of NWFP: An Analysis of the 1998 Population and Household Census. Pakistan Institute of Development Economics. (Census Monograph Series No.2).

Mahmud, M., T. Musaddiq and F. Said (2011) Determinants of Internal Migration in Pakistan –Lessons from Existing Patterns. Presented at 26th AGM and Conference of Pakistan Society of Development Economists, held at Islamabad.

Mehta, G. S. (1991) Socio Economic Aspects of Migration. Deep and Deep Publications: New Delhi, India.

Memon, R. (2005) Determinants and Trends of Internal Migration in Pakistan. Institue of Developing Economies. (IDE Discussion Papers 72).

Naeem, J. (2003) Socio-economic and Demographic Profile of Punjab: An Analysis of the 1998 Population and Household Census. Pakistan Institute of Development Economics. (Census Monograph Series No.1).

Oda, H. (2007) Dynamics of Internal and International Migration in Rural Pakistan. *Asian Population Studies* 3:2, 169 -179.

Rukanuddin, A. R. and M. A. Chaudhry (2003) Socio-economic and Demographic Profile of Sindh: An Analysis of the 1998 Population and Household Census. Pakistan Institute of Development Economics. (Census Monograph Series No.3).

Comments

The study provides a panel analysis of the out migration by using the Pakistan Panel Household Survey (PPHS). Also, the study proclaims that since the decision to migrate is done by a family; therefore it incorporates the household's level characteristics in the analysis. In particular, the focus is on the role of the ownership of land and the level of poverty in the decisions to migration. The paper studies an important issue in the sense that migration has become an important phenomenon in the Pakistani society, in particular after the recent surge of the Internally Displaced Persons (IDPs). However, one should be very careful in generalising the results of the study as it still lacks on several technical grounds.

The paper lacks consistency and congruence. For instance, the aim of the paper is to investigate the out migration; but at the same time, it introduces the concepts like internal and external migration without differentiating between these concepts. Besides, the paper reports three objectives; however, neither of them is sufficiently discussed or conformed in the results. The study also claims that the migration might affect the individual's or household's wellbeing; however, again, there is no indication of this claim in the results section. Also, the paper claims that it uses two rounds of PPHS (2002 and 2010); but one does not see any panel regression elsewhere in the paper. It would really make things easy if the authors could explain about the reported method, i.e. it should be clear whether the regressions are fixed effect logistics, random effect logistics or just pooled? To me, it is just simple logistic analysis with pooled data; however the authors should explicitly explain it. Additionally, the PPHS only reports migration data for a small fraction of the households; so it should be explained how they handled the problem of missing data.

As stated earlier, the purpose of the study is to analyse the impact of poverty, land values, and the other social and economic characteristics on out-migration in rural Pakistan. However, the study fails to highlight all of the important controls in this regard. For instance, a detailed discussion of the chosen and the possible omitted controls, in particular in the light of existing literature would be highly appreciated. In particular, the authors must elaborate on the level of the study, i.e. whether it is individual level or households' level? For instance, I see age as one of the variables in the regressions, so it seems to me to be the individual level. However, the authors should explicitly highlight this fact. If the study is individual level, then some of the households' level characteristics such as poverty status would be repeated for members of the each household. In such a case the cluster standard errors are appropriated, i.e. the authors should report it. In the study, the authors used logistic regression while, at the same time, it also introduces the multinomial logistic regression. They should eliminate such redundancy from the study.

Rural-urban Migration is the function of economic incentives. Most of the migration is done in the context from rural to urban areas and not from the perspective of rural to rural areas. Major reasons are economic, marriage and family. However, in the results, the status of poverty is not significant which is a very strong statement and contrary to the incentives theory of migration. At the same time, the ownership of land is significant. The author should look at the fact that it might be the case that the ownership of land is highly correlated with the status of poverty. Similarly, the dependency ratio is insignificant while the households' size is significant. Again, it may be the case that the households' size and the dependency ratio are highly correlated almost in every society.

The ownership of land may be endogenous as higher remittances might affect the purchase or values of land and remittances are normally the function of migration. Besides, there is no control for civil conflicts in the study. However, it is very important given the recent impact of IDPs on migration. Similarly, the decision to migrate and other important decisions such as the schooling decisions or job-market decisions might be simultaneously determined. This type of simultaneity bias should be taken care of. The paper should be revised in the light of these comments.

Karim Khan

Pakistan Institute of Development Economics,
Islamabad.