Determinants of Poverty in Mountain Region of Gilgit-Baltistan, Pakistan

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Abstract: Using data collected from 159 households in a mountainous village of Ghizer District in Gilgit-Baltistan, this paper examines the prevalence, penetration and severity of poverty in the mountain region of Pakistan. The paper analyses household-specific variables to determine their contribution in increasing (or otherwise) the per – capita income of residents. The results suggest that, although women actively participate in livelihood activities, the high female to male ratio does not contribute to enhancing incomes. The authors argue that investing in productive assets, in addition to the land, will help people to escape from poverty.
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Key Words: Dependency Ratio, Participation rate, Poverty gap ratio, Severity of poverty.

Introduction

The locus of this research is the remote mountain region of Gilgit-Baltistan in northern Pakistan. This region forms Pakistan's northernmost frontiers with Afghanistan, China, and the Indian and Pakistani controlled parts of Kashmir (see Map 1). It is one of the most rugged regions in the world where four of the world's greatest mountain ranges – the Himalayas, Karakoram, Hindu Kush and Pamir- meet. The region is also one of the most under-developed, politically marginalised and ecologically fragile areas of Pakistan. The Gilgit-Baltistan (GB) region has a geographical area of 72,496 sq. km, with an estimated population of 1.2 m[1]. About one per cent of the land is cultivated, a roughly equal area is cultivable waste and about 22 per cent is rangelands, four per cent natural forest and the rest is mountains, glaciers, riverbeds, scree and rock (IUCN, 2003).

A recent study of eight countries of the Hindu-Kush Himalayas reveals that, with the exception of India, poverty is higher in the mountains and has different causes than those in other geographic areas within the same country (Gerlitz, Hunzai and Hoermann 2012). Mountain areas are characterised by so-called mountain specificities which pertain to: inaccessibility; fragility, marginality, biological niches, and human adaptation mechanisms (Jodha1995). A significant proportion of mountain people live in difficult terrain, far from the centres of commerce and power, and exert little influence over the policies and decisions that influence and shape their lives and livelihoods (Khalid and Kaushik 2008).The mountain regions of developing countries often lag far behind the economic developments of the lowlands, foothills and urban areas (Tanner 2003).

Remoteness and inaccessibility add to the problem of poverty, as isolated areas have the least access to new information, technology and services. The result is a vicious cycle of poverty where over use of natural resources leads to more poverty, vulnerability and insecurity. Additionally, increased pressure on natural resources in the upper catchment of the Indus Basin has serious and long-term consequences for life-supporting irrigated agriculture, water supplies, energy generation and ecological services, downstream.

As Prennushi (1999) has stated, the expression or experience of well-being is context-specific, indicating local factors such as cultural norms, physical location and local environments. Aggregate estimations of poverty at the national level do not provide an in-depth account of the distribution of the pooracross geographical areas, or of the determinants of poverty for these areas. In Pakistan, due to the political sensitivity of the Gilgit-Baltistan region, the Government does not reveal the poverty data. Hence, the poverty measurement need to be disaggregated from the national level to the regional or local level to show specific differences as compared to the national poverty estimates as well as the current status of poverty in Gilgit-Baltistan.

This research thus aims to look at the household specific variables and their contribution in increasing (or otherwise) the per capita income of the mountain populace. The specific objective of this paper is to explore the following questions:

1. What is the current status of poverty in the northern mountainous region of Pakistan?
2. What are the determinants of poverty specific to the mountain regions?

[1] Projected on the 1998 Census for 2011 with a growth rate of 2.47per cent

3. Are there disparities in poverty among members of the same mountain community? If yes what are the main triggers of those disparities?

Map 1: Map of Gilgit-Baltistan
Source: Aga Khan Rural Support Programmes (AKRSP)

With these specific questions in mind we have conducted a quantitative study of a sample village in District Ghizer of the Gilgit-Baltistan region. (A brief profile of the village is given in Annex I).With primary data collected from 159 households (100% of the total households in the village) we studied a large number of household-specific socio economic variables in order to: a) determine their role in increasing income levels and b) analyse the poverty and inequality rates in mountain areas of northern Pakistan. The paper is organised in a way that literature review is presented in the following section. The main variables and hypothesis are explained in section III. The details on the methodology and sources of data are given in section IV. Section V presents the results and the conclusion is given in section VI.

Literature Review

There is considerable debate about the conceptualisation, definition and measurement of poverty in the academic community and development practitioners. The World Bank (2000) defines poverty as a prominent deficiency in the income or consumption of households or individual to meet the minimum requirements of basic needs. Based on this definition different countries have calculated the poverty line income that is necessary to meet the basic needs bundle. However this approach has some inherent disadvantages for quantifying the social aspects of poverty for which we do not have any markets and also for quantifying the value of public goods that cannot be purchased (Thorbecke 2005). Sen (1999) on the other hand has advocated the theoretical framework of "capabilities and functioning". According to this framework the freedom of a person to choose her/his functioning is the ultimate goal of getting out of poverty. Based on this theoretical framework, UNDP introduced the Human Poverty Index (HPI) in 1996 and the Multi-dimensional Poverty Index (MPI) in 2010 that is grounded in Sen's capabilities and functioning approach. According to the Oxford Human Poverty Initiative, the HPI attempts to measure the basic capabilities needed for human functioning by measuring key aspects of human deprivation-for example, the lack of education and health. The key limitation of HPI is that it aggregates average levels of deprivations for each dimension and it cannot identify

the individual or group poverty levels. The MPI is an improved version of the HPI and identifies deprivations in health, education and living standards, and identifies the individual and households that are multi-dimensionally poor. However, like other approaches and methods these have their limitations and have been criticised.

In this paper, we do not revisit the definition debate any further but instead focus on the determinants of economic poverty in the context of the mountain regions of Gilgit-Baltistan. Our understanding is that economic poverty is the core of any definition of poverty and other poverty dimensions, for example lack of education, have been included as predictor of economic poverty. Poverty can be described in terms of relative poverty, that is having fewer goods than others within a society, and absolute poverty, that is, being unable to afford basic human needs like nutrition (Morduch 2006). The concept of absolute poverty was chosen for this analysis as a significant proportion of people in the mountain regions are unable to afford basic human necessities (Gerlitz, Hunzai and Hoermann, 2012).

The main justification for this study comes from the need for more context-specific research to understand the poverty in the mountain region of Gilgit-Baltistan and its social and economic determinants. This is particularly important as no international or national studies have covered this subject. We take economic poverty to be fundamental to an understanding of poverty because the lack of ability to meet the primary needs, other facets of poverty, the deficiency of fundamental basic facilities and education, are prognosticators of economic poverty.

The Regression Model And Choice Of Explanatory Variables

The explanatory variables used here are mostly adapted from a similar study conducted in one village of Punjab province by Malik (1996). We have refined the indicators according to the objective of this study and used the following general formulation of multivariate log-linear relationship:

$Y = BX + U$ where 'Y' stands for vector of 'n' observations on dependent variable which is measured as income per capita (log); 'B' is the coefficient vector, 'X' stands for matrix of observations on explanatory variables like FLO, OPA, HSZ, EDU, DR, PAR, MFR, and AGE (defined below) and 'U' represents the error vector.

Farm Land Ownership (FLO): The ownership of farm land is considered to be the main factor capable of pulling a household/individual out of poverty (Malik 1996). The ownership of farm land plays a key role in a mountain society given its limited availability due to high fragmentation and difficult mountain topography. Thus the hypothesis is that farm landownership in terms of increased area has an income-enhancing (poverty-mitigating) role.

Other Productive Assets (OPA): Apart from landholdings, other productive assets such as livestock, machinery (tractors and so forth), businesses (e.g. post-harvest production for sale) and trees, also contribute to raising the earnings of the households. We hypothesise that other productive assets have an income-enhancing role: these are measured in term of their current monetary value.

Household Size (HSZ): The evidence shows that the proportion of poor households in the total number of households of a given size rises with an increase in household (Anand1977). Here we hypothesise that higher household size increases household poverty.

Education (EDU): It is generally believed that the best investment of all is the one made in people. In mountain communities, where livelihood sources are limited and highly dependent on climatic conditions, education seems to be the key factor indiversifying household livelihoods in terms of gaining employment in the off-farm sector. Education can also help mountain people to benefit from migration which is common due to lack of socio-economic opportunities in the mountain area and sometimes forced migration due to harsh climatic conditions. Thus here the hypothesis is that the higher the educational attainment of the household head, the higher the per capita income of the household.

Dependency Ratio (DR): The higher dependency ratio, defined as the ratio of number of members (up to10 years and >55 years) to productive members is usually taken to increase poverty. Thus the higher dependency ratio, lower the per capita income.

Participation Rate (PAR): Prior research in rural Pakistan suggests that the poor have limited opportunities to participate in economic activities due to cultural constraints and systematic exclusion. This limitation is one of the contributing factors in lower per capita income (Malik1996). Based on this we hypothesise that the lower the participation rate (the ratio of number of workers to number of adults in a household) the lower the per capita income.

Male Female Ratio (MFR): The study argues that culture norms and religious misperception regarding female participation beyond household chores is one of the key contributing factors in lower per capita income in rural Pakistan. This suggests that a high female to male ratio, as it pertains in the study area, may contribute in lower per capita income.

Age of Household Head (AGE): The head of the household has a key role in household decisions. The study findings suggest that the younger (*i.e.* in the age bracket of 25-45 years) heads of households tend to make better decisions about the welfare of the household members. One of the reasons may be his/her

exposure to contemporary issues, better learning opportunities and better household management practices. Income per capita and age of household head can be assumed to have a positive relationship inthe age bracket of 25 to 45 years, and a negative relationship beyond this bracket. We assume a positive relationship between these two variables.

Data Sources and Methodology

In this study our main purpose is to understand the household specific variables in an attempt to determine their contribution to poverty in the mountain region of Gilgit-Baltistan. This methodology shifts the focus from the indices of rural specific variables at an aggregative level to various household specific variables at a disaggregated level as used by Malik (1996). For this purpose we selected a typical revenue village in amountainous region of Gilgit-Baltistan and did a complete socio-economic census of all the households in the village. The selected research site, to a great extent, reflects the socio-economic diversity found in the surrounding mountain communities. We do not claim that the selected village will be representative of all the mountain regions of Pakistan but our research questions do have relevance for other similar contexts. Moreover, our approach of doing a census of one revenue village has the following advantages over conducting a representative sample:

- The approach has allowed us to study the disparities among poor and non-poor households within the same community. This is one of our research key questions about understanding the intensity of poverty among poor households. In sample surveys usually this aspect is over-looked due to the lack of sufficient data. We assume that in a census of all household we will be able to capture this important aspect sufficiently.

- A single-village census is cost effective and time efficient as compared to a sample survey with multiple villages and regions. Also, our focus is to understand the household-specific determinants of poverty and the data on households in one village gives sufficient and comprehensive data to do a rigorous statistical analysis.

To calculate the incidence of poverty we used the commonly used measure of absolute poverty in developing countries, namely the Head Count Ratio (HCR): *i.e*. the percentage of the population/households with incomes per capita below the national poverty line defined by the Government of Pakistan. The poverty line income is the income level needed to buy a "bundle" of food items to maintain the minimum necessary caloric intake and/or with other goods that are required for humane existence (Khan 2004). The poverty line income for the year 2005-06 given in the PSLM (2005-06) is Rs. 944.5 per capita per month. The Pakistan Institute of Development Economics (PIDE) has recently calculated and used the poverty line income at Rs.1,671.89 (PIDE 2012) for 2010. In this paper it has been further inflated to Rs. 1,904.64, used for the year 2011-12.

To measure the depth and severity of (income) poverty we used the following calculations given in Khan (2004):

*a.Poverty gap ratio (*PGR) tells us how much additional income is required to eradicate poverty rather than just measuring poverty itself. The formula used is:

$PGR= (1/n) \sum [(P-Yi)/P]$

Where "n" denotes the total number of individuals/households, "P" is the poverty line income and "Yi" is the income ($Yi < P$) of i^{th} poor.

b.Severity of poverty measures the income inequality among the poor and is simply the squared proportionate poverty gap ratio:

$SP = 1/n \sum[(P - Y_1/P)^2 + (P - Y_2/P)^2 + \ldots. + (P - Y_q/P)^2]$, where P is the poverty line income level, Y_1 to Y_q is the income level of the poor and n is the population of the poor.

This is useful in responding to one of our research questions in which we are interested to know the disparities in poverty among households in the same mountain community. This may also help to understand the severity of the poverty: that is, whether people are transitory poor (around the poverty line) or chronically poor (far below the poverty line income).

To identify the determinants of poverty we used the multiple regression analysis technique outlined in section III. Per capita rural income is considered to be an important measure of economic poverty and hence is used as the key/dependent variable. The variables outlined in section III were used as explanatory variables. The regression was performed in SPSS 14 (Statistical Package for the Social Sciences).

Research Instruments

The important survey instruments used for primary data collection were the household and village level questionnaires. The household questionnaire includes information on almost all aspects of household socio-economic indicators, including the household roster, demography, education status of household members, health status of household members, income level and sources of income, expenditures and purposes of expenditures, the quantity and value of household assets and so forth.

The main focus of this study is the village survey; however, in order to document the status of poverty at the regional and national levels, relevant studies have also been reviewed and a comparative analysis of primary micro-level data and secondary data at the macro regional and national levels is also included and is an integral part of this study.

Results

This section presents the key findings of the study in two sub sections; that is, descriptive statistics about the village followed by the regression analysis results about the determinants of poverty.

A. Descriptive Statistics

The data presented in this section high-light the differences between poor and non-poor households and can help us to understand the key determinants of household poverty in the selected research site. We have also tried to high light the differences between the mountain regions as compared to the national averages for Pakistan wherever possible.

1) Poverty Rate, Depth and Severity in the mountain region of Gilgit-Baltistan

In Table 1, we present the poverty status of households in the research site at three levels: a) the headcount ratio, b) the poverty gap ratio and c) the severity of poverty. The study village has a total of 159 households with a population of 1,215. According to the head count ratio 37 per cent of the households and 35 per cent of the population are poor. The important point is the extent of poverty in the sample village is significantly higher than the level reported for the national as well as for the mountain regions (other than Gilgit-Baltistan) of Pakistan. According to a recent study the overall poverty for Pakistan is reported as 25 per cent and for mountain regions other than Gilgit-Baltistan as 32 percent (Gerlitz, Hunzai and Hoermann, 2012).

The value of PGR – the income shortfall of the poor households - is 36 per cent of the poverty line income which is significantly higher than that of national and rural averages for Pakistan. According to a study based on the PSLM 2004-5 data the PGR is 6.1 per cent at the national level and 7.3 per cent for rural areas of Pakistan (Jan et al. 2009). The higher value of PGR is also evident from the significant per capita monthly income difference between the poor and non-poor households. According to the PGR, to overcome poverty each poor household would need an income transfer of Rs.60, 065 or Rs. 8,161 per capita per year.

Similarly, the severity of poverty - a distributionally sensitive measure (that is a squared poverty gap index)- is also higher (16 %) compared with national averages 1.96 (Jan et al. 2009).

Table 1: Incidence, Depth And Severity Of Poverty Of Households

Indicators	Poor	Non-poor	Total
Total Households	59	100	159
Per cent of Households	37.1	62.9	100.0
Total population	434	781	1,215
Per cent of population	35.7	64.3	100.0
Monthly Per Capita Income (Rs.)	1,224.9	4,135.5	3,055.5
Poverty Gap Ratio (PGR)			36%
Severity of Poverty			16%

2) Demographic Composition of Households

The demographic characteristics of the surveyed households are presented in Table 2. Among the total population 49 per cent are children (up to 18) and a slightly higher proportion (51 per cent) are female. The number of adults per household is higher among the non-poor households as compared to the poor households but there is no significant difference between the poor and non-poor households in term of average size of household. The male-female ratio is unexpectedly low (96:100) among the poor households as compared to the non-poor households and interestingly the overall male-female ratio is significantly low as compared to the national ratio of (107:100) reported by Government of Pakistan (2012). The average age of the household head is 42.5 years in poor households as compared to non-poor households (47.5 years) but a significantly higher proportion of the poor household heads (around one half) are not literate. Another interesting feature of the household composition is that both the dependency ratio and the participation rate are higher in poor households. One of the reasons for the higher dependency ratio is that it is calculated as children plus old age as a ratio of working age (18-65) whereas the participation rate is calculated on the basis of the actual working population as a ratio of total adults. In this particular research site it seems that even the children and the elderly people are also working as most of the poor households depend on farming activities: that is, both children and old people are actively engaged in farming activities either full time or part time.

Table 2: Demographic Composition Of Sample Household Members

Indicators	Poor	Non-Poor	Total
Total Households	59	100	159
Total Population	434	781	1,215
Household Size	7.36	7.81	7.64
Male:Femaleratio	0.89	1.01	0.96
Average age of household head	42.52	47.52	45.66
% of household head not literate	49.15	29.0	36.47
Dependency Ratio	0.78	0.49	0.60
Adults/Household	3.10	4.36	3.89
Participation Rate	0.98	0.92	0.94

3) Household Assets: Land and other Productive Assets

In Table 3 we have presented the extent of land ownership and other productive assets. Land ownership is considered to be the most valuable asset in rural areas given the economic value, political power and social status attached to it (Khan 2004). Poverty among landless households is high and two thirds of households in Pakistan do not own land: this includes landless *hares* (labourers) and non-agriculture based households (Anwar et al. 2004). Contrary to the other rural areas of Pakistan, in Gilgit-Baltistan most of the households do own land. In case of our research site all of the households own land. Here the issue is not land ownership but its size due to high fragmentation and the lack of arable land resulting from the challenges of a fragile environment and lack of irrigation. These constraints are coupled with a lack of mechanisation, lack of access to markets and falling commodity prices (Ediger and Huafang 2006), since they limit the agricultural assets available to the households and ultimately result in a negative impact on their wellbeing.

The survey data show that the distribution of assets and land holding among the surveyed households has a concentration ratio of 0.51 for overall assets and 0.61 for landownership. The survey data show that in fact all of the poor do own land. However a larger proportion of the poor households (75%) have small land holdings (up to one acre) and the remaining one fourth own only two *kanals* (one quarter of an acre) or less. Two-thirds of the non-poor own more than one acre. None of the poor households own more than five acres but 16 per cent of the non-poor household own more than five acres of land.

Apart from land the non-poor households also have higher value-additional productive assets (livestock, machinery, businesses and trees) as compared to the poor households: the value of other productive assets of poor households is just 40 per cent of the value of the other productive assets of non-poor households.

Table 3: Household Assets: Land And Other Productive Assets

Land ownership / Other Productive Assets	Poor	Non-Poor	Total
Total Households	59	100	159
% of Household owning land:	100.0	100.0	100.0
up to 2 *Kanals*	25.4	6.0	13.2
>2-8	50.8	27.0	35.8
>8-40	23.7	51.0	40.9
>40	0.0	16.0	10.1
Average Farmed Land/Household (*Kanals*)	5.4	25.2	17.8
Total Value of other Productive Assets /Household (Rs.)	143,140	355,455	276,871
Net worth/Household (Rs.)	1,017,934	3,698,961	2,704,114

4) Household Income Levels and Sources of Income

The average annual income of the surveyed households is Rs. 272,214 with an average annual per capita income of Rs. 36,665 (~ to Rs. 3,055 per capita per month) as given in Table 4. However, the average annual per capita income of the poor households is less than one third of the non-poor households' per capita income. The poor households are highly dependent on farm source as compared to the non-poor households. It is pertinent to mention that the farm income is less reliable and subject to vulnerability at times, given the harsh and fragile climatic conditions commonly experienced in the mountain region. The survey data shows that the income inequality among the surveyed households is significantly higher than reported for the rural areas of the country. The Gini-coefficient was 0.40 in the sample households as compared to 0.25 for the

rural areas of Pakistan in the same year that is 2007-8 (Economic Survey of Pakistan 2010-11).

Table 4: Household Income Levels And Sources Of Income

Household Income	Poor	Non-Poor	Total
Total Number of Households	59	100	159
Average Annual Household Income (Rs.)	107,813	369,211	272,214
Annual Per capita Income (Rs.)	14,698	49,626	36,665
% Share in Household Income:			
Farm Income	46.1	29.7	32.1
Off Farm Income	53.9	70.3	67.9

B. Regression Analysis and Hypothesis testing

For testing our hypothesis given in section III, a multivariate log linear relationship the regression model was run using SPSS 14 and the results are presented in Table 5. The R^2 is significantly high at 0.487 and the joint test of significance, *F*-test, is accepted at 1 per cent level.

The results suggest that the coefficients of FLO, EDU, DR, HHZ, and Age are significant at 1 per cent level and the coefficients on OPA is significant at 5 per cent level and have signs according to our hypotheses. The coefficients of MFR and PAR have the correct signs whereas the results are insignificant.

Table 5: The Determinants Of Rural Income/Capita – Log Linear Regression Results

Explanatory Variables	Un-standardised Coefficients		Standardised Coefficients	T	Sig.
	B	Std. Error	Beta		
Intercept	8.179	.515		15.867	.000
FLO	.005	.001	.262	3.922	.000
OPA	.117	.044	.203	2.668	.009
HSZ	-.044	.013	-.227	-3.308	.001
EDU	.072	.011	.469	6.773	.000
DR	-.303	.083	-.237	-3.636	.000
PAR	.123	.156	.049	.787	.433
MFR	.051	.039	.080	1.315	.191
AGE	.013	.004	.252	3.455	.001

R^2 : 0.487 F-test: 17.08 (Sig. 000).
Note: The dependent variable is rural income/capita (log).
FLO = Farm Landownership (area in *kanals*). HSZ = Household size. OPA = Other Productive Assets (log).
EDU = Household head's education level (year of education). DR = Dependency ratio. PAR = Participation rate.
MFR = Male Female Ratio. AGE = Age of the household head.

Conclusion

1. This study shows the poverty and inequality levels in this mountain area are significantly higher than the national averages. The national level poverty estimates do not give a true picture of the mountain regions. There is a need to analyse poverty and inequalities at lower (that is regional) levels in order to improve local level economic policies.

2. Although land ownership and productivity are considered to be the most important assets to bring the poor out of poverty, our findings suggest that land is not the only policy instrument to bring people out of poverty.

3. The education level of the household head is the most important factor contributing to the income of the households as compared to all other variables included in the model.

4. The male: female ratio and participation rate based on age and sex do not have a significant influence in per capita income. This is because in the survey areas the children, female and old actively participate in farm activities.

Appendix:

Short History and Profile of the village

Location and Physical Characteristics

Barjungle is a village in District Ghizer of Gilgit-Baltistan located 35 Km north of the District Headquarter Gahkuch. The village is connected to Gilgit city at a distance of 100 Km by single mettalled road. The current population of the village comprises of

five linguistic groups, with one third speaking Wakhi, one fifth each Gujari and Kohwar followed by 18 per cent Burushaski and 6 per cent Shina.

The area has been generally under-researched and no indigenous narrative accounts of local history seem to have been written about the settlement prior to the colonial period. Village Barjungle has experienced a different pattern of population dynamics from those of surrounding villages given its multi-ethnic and linguistic composition which is principally due to the migration of different linguistic groups from different parts of Gilgit and outside the region.

In this paper we have tried to reconstruct the settlement process in Barjungle over the last 106 years. For reason of convenience this epochal immigration pattern and growth of settlement process can be divided into four different phases:

Map of Village Barjungle
Source: Google Maps

Earlier Wakhi Immigrants from Wakhan (1886-1925)

The Wakhi speakers are considered to be the earliest immigrants to Barjungle. The Wakhi speakers in Gilgit-Baltistan came from Wakhan in the Afghan-Tajik border area in the late eighteenth and early nineteenth centuries and sporadically also in the twentieth century (Kreutzmann 1989). Wakhi is also spoken further north in the upper Ishkoman Valley, Gojal and upper Chitral (Yarkhun and Broghil). The people themselves refer to themselves as *Wakhic*, *xik,* and their language as *xikwar*.

To this day the remnants of the old nuclei suggest a close relationship between site selection around the water supply and agricultural land. All these Wakhi households settled in the centre of the village and seemed to develop the land for substance farming coupled with livestock rearing. Only one family still derive a significant portion of their livelihood from livestock while the rest of them have livestock only for their domestic dairy needs. All of these families belong to the Ismaili sect of Islam.

Later Local and Regional Immigrants of varied Languages (1925-1960)

During the first quarter of the twentieth century Barjungle saw no other migration except the growth of the filial settlements of the Wakhi households. In 1925, some families migrated from upper Ishkoman and some from *Koh-e-Ghazir* (now Gupis) in 1935. The former are Shina speakers and the latter are Kohwar speakers. In 1950s some more families from Chitral, Punyal and a number of Gujar tribe also migrated to this village. Thus by 1960 Barjungle was home to at least a total of 20-25 households with different linguistic background including, Wakhi, Shina, Kohwar and Gujuri.

Immigration of *Huzukuts* from Hunza and Yasin (1960 to present)

The extension of 'jeepable' roads to Hunza in 1957 and Ishkoman Barjungle in 1959 extended the migration of Hunzukuts (that ispeople from Hunza) to at least four villages in Ishkoman, including Barjungle. The Burushaski–speakers of Barjungle represent the earliest layer of immigrants from Hunza. The people still refer to themselves as Hunzukuts. The first Hunzukuts settlers in the village came in 1962. By 1970 the number of Hunzukuts emigrants increased to 15 households and still continues. The current number of Hunzukuts households is 32 and the most recentmigrants came only two years ago(that is in 2010). In addition to this one Burushaski speaking family also emigrated from Yasin in the early 1990s and settled in lower Gishgish of Barjungle. The Burushaski speakers although bought residential and farm land from the local people and also occupied a significant

area of common seasonal barren pasture and forest lands and turned itinto irrigated fodder cropping. Nowadays irrigated lands are to be found down the river belt and up the mountain terraces.

Reverse Migration – A New Development

A comparatively new development is reverse migration of some families to Gilgit city and 'down country' (that is, to other parts of Pakistan) as a pull effect of employment opportunities for the non-farming, business or job oriented families. At least 15 families have returned from Barjungle to Gilgit city or 'down country'. Except for three families the rest of them have either land or a house in the village and visit the village once or twice every year. The lands have been given to local residents for share cropping.

Linguistic Diversity

Interestingly most of the villagers, if not all, speak or can understand all of the languages spoken in the village except Gujuri, which is spoken only by the Gujars. One possible reason is that the Gujars are Sunni Muslims and the other groups are Ismailis. The Gujars are somewhat socially excluded and marginalised. The rest of the inhabitants have common events and even some cross-language marriages. There are a number of households where multiple languages are spoken, but the most prominent 'contact language' among different speakers is Kohwar, although their number in the village is just one fifth.

Physical Infrastructure and Facilities

The village, consisting of 159 households, was connected to the nearest town (called' Chatorkhand-Tehsil Headquarter', some 10 Km away) by a single metalled road only three years ago. It was 'electrified' in 1996 and has schools up to the secondary level for both girls and boys. The first primary school was opened in 1966 under the Aga Khan Diamond Jubilee School (commonly known as DJ school) programme with the help of the local community in a community room of the local Jamat Khana (locally called a Lunger). It had no furniture or stationery except an Attendance Register. After a decade, in 1976, the Government established another primary school for boys in the village. With the establishment of the Government school the DJ school was dedicated for girls only. Currently, with the help of the local community, in the Government school classes are taught up to secondary level. However its official status is still that of middle school.

A First Aid Dispensary was established in the village by the Government in 1990. According to the local community the dispensary is ill equipped and always short of medicines. The primary healthcare facility (a Basic Health Unit) and a private health centre are located 10 Km away. Comprehensive and secondary level health care facilities are available at a distance of 50 Km in Singal and 100 Km in Gilgit city.

In 1995-1996, with the financial support of the Department of Local Government and Rural Development (LGRD), a drinking water supply scheme was implemented. Prior to this scheme, access to drinking water was one of the major problems of the villages especially in winters when people (mostly women and children) have to fetch water from long distances. This was the first time tap water had been provided to most of the households in the village. However, due to poor design, implementation and maintenance, the drinking water does not seem to meet safety standards. This scheme serves three of the five mohallas of Barjungle: the residents of Gishgish, Balla and Paeen still use open sources of water.

The village received electricity for the first time in 1996 from the Government through a 'micro-hydel' project some 10 Km north of the village in upper Ishkoman. The reliability of electricity was good as of 2009 but load shedding is now a common phenomenon, as in other parts of the country.

The village's agricultural land is terraced and is mostly cultivable. The land tenure system consists of both owner cropping as well as a small proportion of share-cropping. The main crops of the area are wheat, maize, and potato. Traditionally this village is a single cropping zone but with increased water availability and increased population some households have also started transitional cropping. The village is situated on the bank of the river Ishkoman but the settlement and agriculture land are far above the river water. For irrigation purposes the village was heavily dependent upon two snow and glacial melt water streams. The glacial water is only available from April to August. This provides water for the wheat crop that is harvested in July and August but does not provide water for the maize crop which is harvested in October. To address the water shortage issue the local people themselves started digging a 3-4 Km long water channel from the river Ishkoman in 1964. This was further widened and improved with the financial and technical support of the Aga Khan Rural Support Programme in 1984. It has addressed the need for irrigation water below the channel catchment area. A significant part of the village is still above the channel and experiences periodic water shortages. In 1978 the Government tried to build an irrigation channel to meet the water needs of some of the land that had not been covered by the AKRSP channel. However, due to the lack of proper design and poor implementation this channel, despite the heavy investment, has still not been completed.

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