

## Original Article

# Socio-Economic Challenges of Border Communities in the Western Sector of Ladakh

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### Abstract

The Western Sector of Ladakh has border communities which have serious socio-economic difficulties in terms of geographic isolation, inhospitable climate and inadequate infrastructure. This study applies the primary data in the study on livelihoods, income, education, and access to health based on surveys and in-depth interviews carried out on 150 households. Results indicate that the majority of households have less than 20000 per month in income and depend primarily on agriculture and animals. The low rate of employment, seasonal earnings, and the expensive cost of transportation make people vulnerable. There is a low level of education and high dropout rates due to the distance, poor winters and family duties. There is a shortage of health services and services, most of the villages do not have permanent facilities, which means the delay in treatment and increased prevalence of cold related and respiratory diseases. It is indicated that the research paper identifies that geographic remoteness and poor infrastructure inhibits social economic development. The policy actions to be taken to improve livelihoods and well-being include having better road network, enhancement of health and education, promoting employment in the local area, and subsidizing basic commodities. The combination of these challenges and strategic and security concerns is critical to sustainable development and resilience of communities in the border of Ladakh.

**Keywords:** - Border Communities, Social Economic challenges, Western Sector, Ladakh, Livelihoods, Income, Education, Health Access, Primary Data, Rural Development.

### Introduction

One of the most important but geographically remote regions of India strategically speaking is the Western Sector of Ladakh which is along the Line of Actual Control (LAC). Several border villages make up this area and communities residing in these villages have long been dependent on subsistence farming, animal rearing and modest trading as a means of earning a living. The region has severe climatic conditions such as prolonged and severe winters, low rainfall and short farm seasons, thus, a major influence on agricultural production. The geography is mountainous and isolated and has a low level of road accessibility, and so markets, medical facilities, and education are not easily accessible. Such physical and environmental constraints have a direct shape on the socio economic conditions of the border communities and present them with difficulties that are not completely similar to those of populations in more accessible areas.

Geographic isolation, lack of proper infrastructure and employment opportunities also limit socio economic development of the border communities. Majority of households rely on the conventional life forms like crop farming and rearing of livestock production, which are so vulnerable to seasonal and climatic changes. The lack of local industries, limited the participation of the private sector, and minimal government actions contribute to the increase of economic vulnerability. The market linkages and high costs of transport make the agricultural products less

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profitable limiting the savings and income of the household. Therefore, livelihood insecurity and lack of diversification of income are the problems that plague families in these regions.

Geographic remoteness and poor infrastructures also influence education and health outcomes. There are several primary schools in many villages and secondary and higher educational institutions are situated at long distances, meaning a child has to cover long distances to access education or end up dropping out. There are also economic and climatic limitations as well as cultural issues that influence educational achievements by focusing more on household labor and less on education. Health facilities are also poorly maintained; permanent health facilities are not available in most villages; the residents tend to cover long distances in search of health services. The cold weather and poor housing facilities fuel an increased rate of cold related and respiratory diseases and this contributes to household susceptibility. Although the region is strategic, there is little research carried out on the factual data through primary research to examine the socio economic status of these border communities. It is not only necessary to understand the difficulties of these populations so as to enhance their livelihood and quality of life but also to help advance the overall development and security of the region. The research will address this gap by conducting household survey and in depth interviews to analyze the income patterns, livelihood patterns, educational levels, access to health and a basic analysis of the living standards of the border communities in the Western Sector of Ladakh.

#### Objectives of the Study

- To assess the socio economic conditions of border communities in the Western Sector of Ladakh using primary data.

#### Results and Discussion

**Table. No. 1 Socio-Demographic Profile of Respondents (n = 150)**

Variable	Category	Number	Percentage (%)
<b>Gender of Household Head</b>	Male	112	74.7
	Female	38	25.3
<b>Educational Level of Household Head</b>	Illiterate	32	21.3
	Primary	48	32.0
	Middle	38	25.3
	Secondary and above	32	21.3
<b>Community Category</b>	Buddhist	72	48.0
	Balti	48	32.0
	Shia Muslim	30	20.0
<b>Years of Residence</b>	Less than 20 years	18	12.0
	20–30 years	34	22.7
	31–40 years	46	30.7
	More than 40 years	52	34.6
<i>Source: Field Survey</i>			

- To identify key livelihood challenges, income patterns, education levels, and access to health services among households in the region.
- To provide policy recommendations aimed at improving the living conditions and resilience of these border communities.

#### Methodology

The study is founded on primary data taken in eight border villages in the Western Sector of Ladakh to test socio economic situation, such as income, livelihoods, education and health access. The stratified random sampling has been used to select 150 households, which represents different communities, different household sizes, and different socio economic backgrounds, although the villages are not uniform through sample selection, because the samples used in representing the populations are different. Data collected was in form of structured household surveys which included demographic parameters, income, occupation, education, health accessibility, infrastructure and living conditions. Furthermore, 20 in depth interviews were done with village elders, local leaders and service providers in order to gather the qualitative information about seasonal migration, traditional livelihoods and community challenges. The quantitative data were discussed within the framework of descriptive statistics, such as percentages, averages, and cross-tabulations, qualitative responses were explored using thematic analysis to discover common issues and perceptions. This mixed method gives a holistic approach to understanding the socio economic issues in the border towns, both quantifiable parameters and inherent factors that influence livelihoods, education and health situation in this remote and tactically significant area.

The socio demographic profile of the respondent indicates some significant structural features of the border communities in the Western sector of Ladakh. In male headed households, a larger percentage of 74.7 is male headed whereas the female headed households are a minority at 25.3 percent. This trend is indicative of the existing patriarchal societal hierarchy, with conventionally men becoming the house-head and the main bread-winner. Female headed households are mostly due to out migration of men, widowhood, employment related absence which increase further economic as well as social burden on women.

The educational level of the household heads is still low. The number of respondents who are illiterate is great (21.3 percent) and the number of respondents who are only educated to primary level is also high (32.0 percent). Middle level education covers it at 25.3 percent and only 21.3 percent have gone ahead to acquire secondary or higher education. This may be due to the remoteness of the villages, long distances to the secondary schools, climatic conditions and economic constraints that force the children to engage in household and livelihoods production. The educational infrastructure is also limited and the region does not have higher educational

institutions, and this limits human capital development.

Community composition indicates that the greatest number is made up of Buddhist households which was 48.0 percent, next are Balti at 32.0 percent and Shia Muslim at 20.0 percent. This distribution can be attributed to past settlement history and cultural diversity of the Western Sector. Community affiliation has an effect on living practices, social organization as well as access to local networks which subsequently translate to socio economic conditions and coping strategies.

The years of residence analysis showed that there is a great population stability with 65.3 percent of the households living in the area over 30 years. Long term residence implies strong attachment to land and the continuation of the traditional livelihood. But it also implies low mobility and the lack of exposure to other job options. The short period residence with only 12.0 percent is largely related to service-related migration and resettlement. On the whole, the table reveals that gender structure, low educational attainment, community structure and long term residence are all determinants of the social economic realities of border community within the Western Sector of Ladakh.

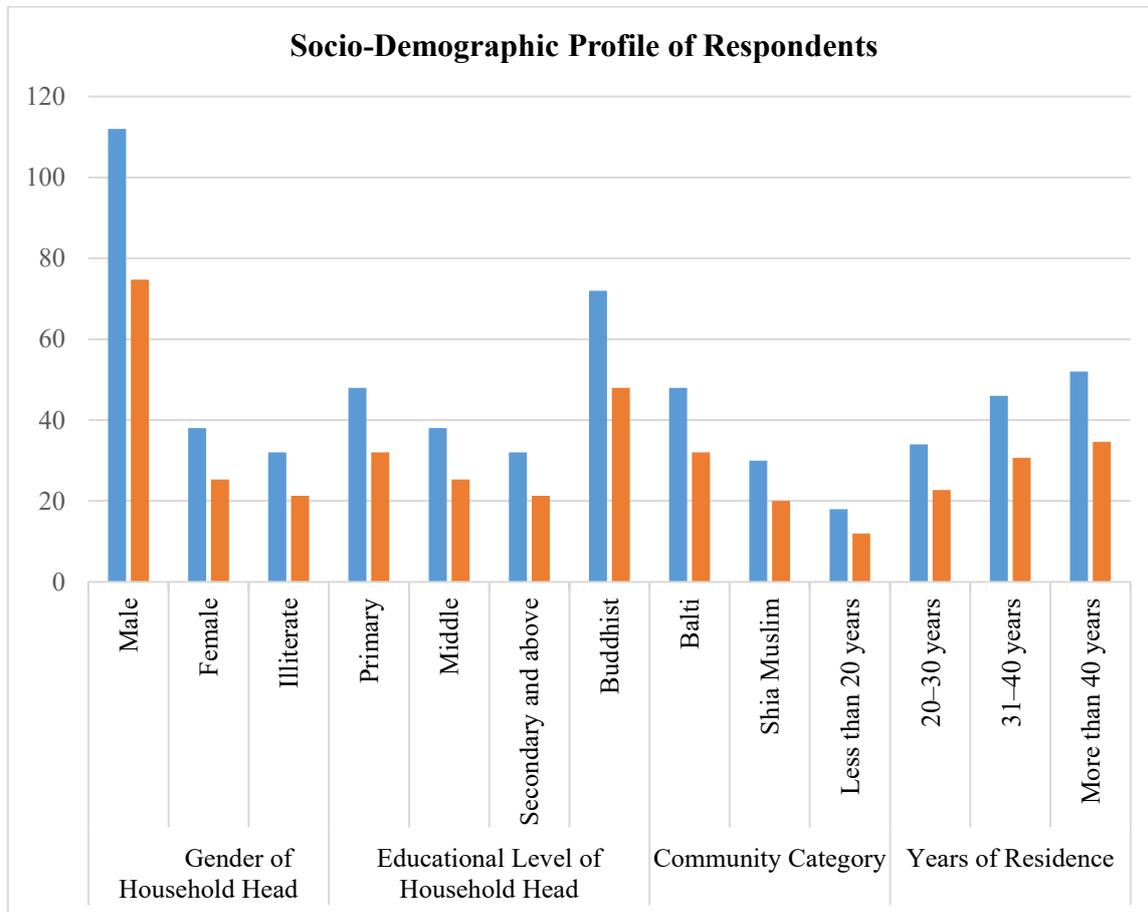


Fig. No. 1

This is reflected in the graph which depicts a huge proportion of male household heads against female household heads, which shows gender imbalance in household leadership. Its representation is higher at primary education as well as in the middle education and illiterate and secondary above groups are lower. The largest

number of respondents is the Buddhist community, with the second place going to Balti and a relatively low number of Shia Muslims. The majority of the respondents indicate that they have been living long with most of them more than 20 years, which indicates a stable population and settled population.

**Table. No. 2 Socio-Economic Variables of Respondents (n = 150)**

Variable	Category	Number	Percentage (%)
<b>Household Income</b>	Less than Rs 10,000	42	28.0
	Rs 10,001–20,000	48	32.0
	Rs 20,001–30,000	36	24.0
	Above Rs 30,000	24	16.0
<b>Occupation of Household Head</b>	Agriculture & Livestock	68	45.3
	Wage Labour	32	21.3
	Government Service	18	12.0
	Private Service	12	8.0
	Business & Trade	10	6.7
	Seasonal Migration Work	10	6.7
	<b>Education Level of Household Head</b>	Illiterate	32
Primary		48	32.0
Middle		38	25.3
Secondary & Above		32	21.3
<b>Access to Health Facility</b>	Available in Village	46	30.7
	Not Available	104	69.3
<b>Distance to Nearest Hospital</b>	Less than 10 km	28	18.7
	10–30 km	54	36.0
	More than 30 km	68	45.3
<b>Frequency of Health Service Use</b>	Regular	34	22.7
	Occasional	72	48.0
	Rare	44	29.3
<b>Common Health Problems</b>	Cold-related Illness	58	38.7
	Respiratory Problems	42	28.0
	Joint & Body Pain	30	20.0
	Other Ailments	20	13.3
<i>Source: Field Survey</i>			

The table shows a clear image of socio economic and health status of border households in the Western Sector of Ladakh and establishes several layers of vulnerability. The distribution of income of households indicates that 60 percent of households have incomes that fall below 20, 000 per month with only 16 percent having incomes above 30, 000. The major cause of low income levels is that of relying on traditional livelihoods, agriculture, and livestock which are seasonal and very sensitive to climate changes. Short growing seasons, cold winters and low irrigation make productivity low. The net household income is further reduced by high costs of transportation and poor access to the market. Lack of local industries and low investment in the private sector does not allow diversification of the income which causes general economic insecurity.

This pattern of income is supported by occupational structure. The use of agriculture and livestock absorbs 45.3 percent of the households, which indicates that there are few alternatives in the villages located at the borders. A combination of wage labour and seasonal migration explains 28 percent, which implies the strategies of coping during lean farming times. The rate of government and private service employment is low because the educational levels are low, there are few institutional bodies, and there are low job opportunities in the border regions. Business and trade activities are low due to lack of connectivity, small local markets and due to security related limitations. These workforce system subject's families to earnings insecurity and food insecurity.

The educational attainments of household heads are still low with over a half of them being illiterate and only attained the primary level. The

trend is caused by the distance to schools, a poor weather and economic stress that compel people to join the labor market at an early age. This is because access to secondary and higher education is limited thereby limiting skill development and access to stable jobs which strengthens reliance on low return jobs.

It shows severe access limitations in health infrastructure indicators. Distribution of households is almost 70 percent lacking a health facility in their village, and 45.3 percent whose residence is beyond 30 km to a hospital. Unavailability, lack of road accessibility, and absence of health personnel are some of the factors that lead to delayed treatment. Due to this, the use of health services is primarily both infrequent and

intermittent in nature due to physical inaccessibility as well as high cost of travel.

The presented health issues are directly connected with the environmental factors. Extreme climate, poor insulation, and indoor burning prevail with cold related illnesses and respiratory problems. Physical demanding livelihood and ageing population structures are manifested through joint and body pain. Generally, the table indicates that the challenges affecting the socio economic state of border communities in the Western Sector of Ladakh are interrelated in the sense that they include low income, lack of livelihood, poor education, and inadequate health access.

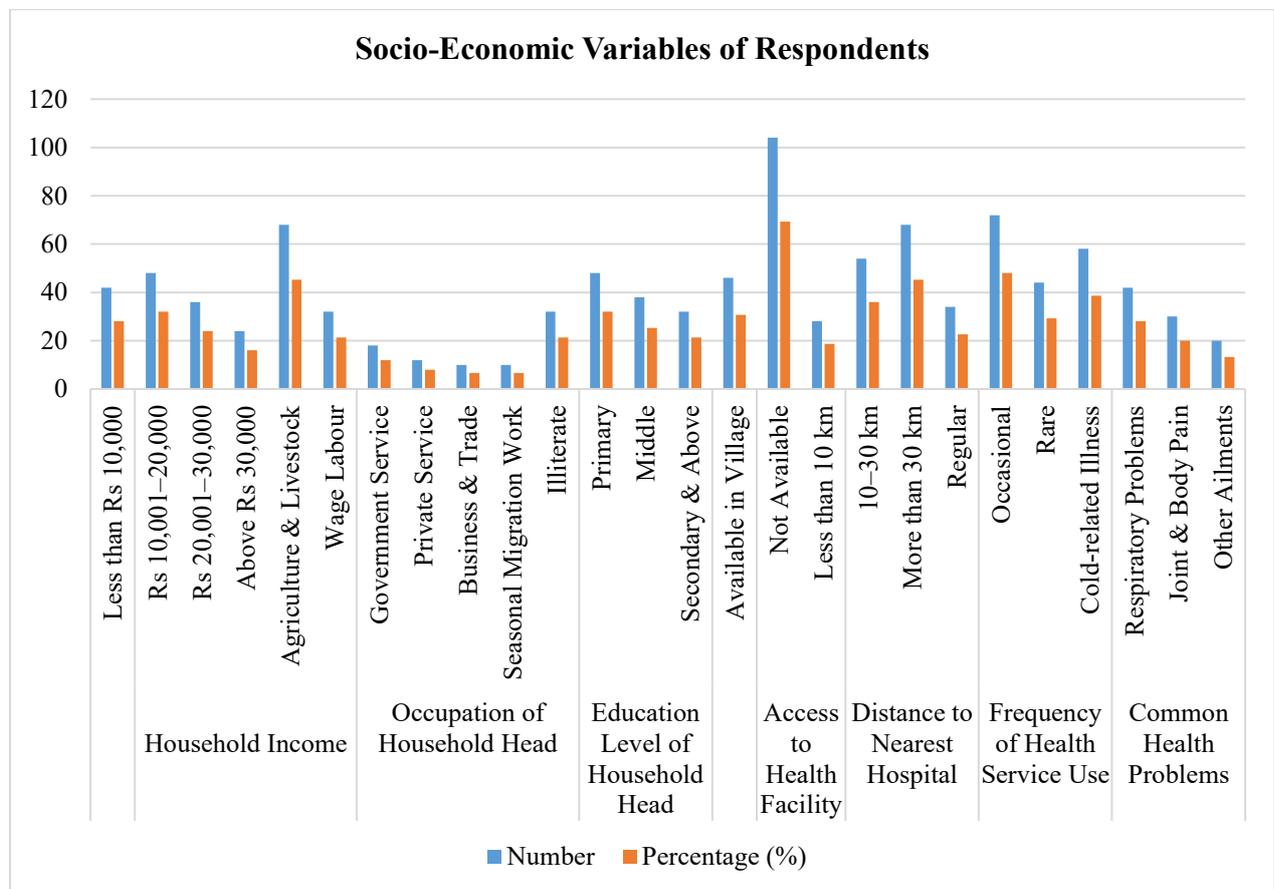


Fig. No. 2

The graph reveals that the majority of households are between the lower and middle income groups with agriculture and livestock as the leading occupation of the household heads. There is a higher representation of the primary and middle levels of education, and the secondary and above education is also relatively low. There is disparity in access to the health

facilities with a sizeable percentage of the respondents indicating non-availability or excessive distance exceeding 10 km.

The utilization of health service is generally routine or casual with the cold related illness and respiratory problems becoming the most prevalent health problems.

**Table. No. 3 Complete results from 20 in depth interviews.**

Respondent ID	Category	Main Issue	Livelihood Outcome	Migration Type	Key Community Impact
R1	Village elder	Seasonal job scarcity	Low farm income	Winter seasonal	Local unemployment
R2	Village elder	Agricultural decline	Reduced productivity	Seasonal male	Farm labor shortage
R3	Village elder	Household insecurity	Reliance on remittances	Short term	Increased burden on women
R4	Local leader	Limited rural jobs	Shift to wage labor	Youth seasonal	Infrastructure stress
R5	Local leader	Youth unemployment	Skill erosion	Long term	Social disengagement
R6	Local leader	Women livelihood loss	Informal seasonal work	Family migration	Gender income gap
R7	Service provider	Climate variability	Crop failure risk	Distress migration	Farming vulnerability
R8	Service provider	Health access gaps	Interrupted services	Mobile households	Maternal health risk
R9	Village elder	Cultural erosion	Loss of traditions	Permanent	Knowledge decline
R10	Local leader	Market instability	Income fluctuation	Cyclical	Financial insecurity
R11	Service provider	Education disruption	School absenteeism	Child migration	Learning gaps
R12	Village elder	Social fragmentation	Reduced cooperation	Partial	Weak cohesion
R13	Local leader	Changing aspirations	Urban job preference	Youth out migration	Rural depopulation
R14	Service provider	Child welfare stress	Nutrition gaps	Seasonal household	Child development risk
R15	Village elder	Labor shortage	Decline in farming	Male selective	Aging workforce
R16	Local leader	Income diversification	Multiple activities	Circular	Skill constraints
R17	Service provider	Livestock stress	Reduced animal output	Seasonal pastoral	Animal health issues
R18	Village elder	Elder vulnerability	Dependency increase	Permanent youth exit	Elder care gaps
R19	Local leader	Institutional change	Decline in authority	Mixed	Social tension
R20	Service provider	Policy gaps	Limited scheme reach	Distress	Weak service delivery

**Policy Recommendations**

1. To curb income insecurity among border households, support to agriculture and livestock, encouragement of allied activities that are locally suitable and development of non-farm jobs should be promoted to ensure that the livelihoods of border households have been diversified.
2. The education infrastructure should be enhanced by providing accessible secondary schools, residential facilities and incentive

based placement of teachers to deal with low level of education.

3. Due to the long distance to hospitals, health care should be provided with permanent primary health centers, mobile health care units, and stable emergency transportation.
4. There should be basic infrastructure development with provision of all-weather roads, electricity, drinking water and climate resistant housing to reduce alienation and enhance the quality of life.

5. The social protection should be enhanced to include long term residents, low income households and female headed families to protect the social security and the community resilience.

### Conclusion

The study concludes that border communities in the Western Sector of Ladakh have endured long standing and interdependent socio economic issues that are mainly dictated by geographic remoteness, adverse climatic conditions and inadequate infrastructures. Primary data 150 household shows that income insecurity is widespread because of the strong reliance on agriculture, livestock as well as seasonal wage labour, and there is very little diversification of livelihood. Low education among the heads of households portrays limited accessibility to schools, extensive travel, and livelihood, limiting access to secure employment, and enforcing economic vulnerability. Lack of proper health infrastructure, far distances to health institutions, and inconsistent utilization of health services are some of the factors that result in poor health outcomes, especially cold related diseases and respiratory diseases that are related to the high altitude environment. The preeminence of long term residents is a good sign of a high level of attachment to place, but it is also a sign of low mobility and exposure to other economic opportunities. In household chores, there would be gender inequalities particularly in the female headed families which only increases the vulnerability. All in all, the findings show that it is not by coincidence that these border areas have been characterized by socio economic deprivation but rather that it is a structural phenomenon. To meet these challenges, a region specific approach to development that is based on livelihood support, education and health infrastructure, and basic services along with strategic considerations are needed. A sustainable increase in the local living standards is necessary not only to the welfare of the populations at the borders, but also to the stability and sustainability in the long term in this strategically significant area.

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### Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper

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