

# Relevance of livestock for poverty graduation in rural areas of Balochistan-evidence from longitudinal study under EU funded BRACE program

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## Abstract

Poverty is a very serious global issue especially with reference to the underdeveloped countries. Different initiatives re being taken by the governments and NGOs to deal with this issue. This research article examines the results of the longitudinal study - the Participatory Action Research on Dynamics of Household Poverty and Inclusive Development in Balochistan with a Focus on Women's Empowerment – in three districts of Balochistan to highlight how interventions helped ultra-poor households to break out of the severe poverty circle. Apart from other interventions, availability of livestock can help the ultra-poor landless rural people, especially women, in graduating out of severe poverty, even in the face of conservative familial structures and limited economic activity. Lack of assets, especially for the female population of the province, have been identified as the main barriers for ultra-poor households in graduating to the next level of poverty.

**Keywords:** *Poverty, Rural Area, Sustainable Development, Women Empowerment*

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## Introduction

Since 2000 Pakistan has made gains against poverty. The headcount poverty (HCR) has declined from 64.3% in 2001 to 24.3% in 2017. Pakistan targets to reduce HCR to 9% under the SDG 1 – No poverty. The Pakistan SDGs Status Report 2021 maintains “poverty has been on decline between the period of 2014-15 and 2018-19 with 9.3 million people lifted out of poverty from national poverty line.” However, Pakistan’s progress on reducing Multidimensional Poverty (MPI) has been slow. The share of employed population less than 1.90 dollars purchasing power parity per day (age 15+) in 2019 was 3.7% - 4% for females and 3.3% for males (ADB, 2022).

Overall, 21.9% proportion of population was living under the national poverty line in 2018. The poverty rate came down to 24.3% in 2015 from 50.4% in 2006 (ADB, 2022). Pakistan’s multidimensional poverty has been estimated at 39% (ADB, 2022). Over the last two decades, Pakistan has initiated multiple programmes to alleviate poverty. Pakistan Poverty Alleviation Fund (PPAF) distributed 224 billion rupees in 144 districts from 2001 to 2020 while under Ehsaas Programme a relief package of 179.8 billion rupees was provided to 14.8 million families (PIPS, 2022). Additionally, the number of beneficiaries of Benazir Income Support Programme (BISP) has reached 4.5 million (PIPS, 2022).

In 1986 Michael Lipton coined the term “ultra-poor”, defining them as “a group of people who eat below 80% of their energy requirements despite spending at least 80% of income on food”. Most of the ultra-poor are landless rural women (Scott, 2015).

Though poverty has decreased in the four provinces over the last 20 years, it is still highest in Balochistan in 2018-19 at 40.7%, compared to 16.3% in Punjab, 24.6% in Sindh and 27% in Khyber Pakhtunkhwa.<sup>1</sup> Additionally poverty in rural Balochistan is highest among provinces at 47%.<sup>2</sup>

Spread over 347,190 sq. km, Balochistan is the largest but least populated province. Though the province makes up more than 43% of the country’s total area, its population is 12.34 million (male 52.52%: female 47.47%), according to the 2017 census. Predominantly the population (72%) of the province lives in rural areas.

Out of the total population of Balochistan - 7,970,472 – one-fifth or 1,656,604 (21%) have been classified as economically active, including the unpaid family workers. This economically active population is predominantly male - 1,502,284 or 90.68%. On the other hand, out of the total female population of the province 3,785,254, only 154,231 women (4.07%) are economically active (PBS, 2018). Unless these numbers change and the female population becomes part of the workforce, Balochistan would continue to have high dependency ratio.

According to the 2016 Pakistan Multidimensional Poverty Index Report, 71% of Balochistan’s population is multidimensionally poor.<sup>3</sup> Women and children suffer the consequences of poverty. According to the Integrated Food Security Phase Classification in December 2021, Kech and

<sup>1</sup> Ul Haque, Naeem et al. (2021). The State of Poverty in Pakistan PIDE Report 2021. Islamabad. Pakistan Institute of Development Economics.

<sup>2</sup> Ibid

<sup>3</sup> Saleem, Dr. Muhammad & Kakar, Rafiullah. (2021, Nov 14). Development: Balochistan’s missing poor. Dawn. <https://www.dawn.com/news/1657959>

Loralai were among the districts facing high prevalence of food insecurity.<sup>4</sup> In Kech and Loralai, 20% and 30% population is in a crisis mode with regards to food security.<sup>5</sup>

## Literature Review

Around 637 million globally live in severe poverty on less than 1.90 dollars a day (IFAD, 2021). The rate of extreme poverty is expected to come down to 7% of the world's population by 2030, with moderate poverty remaining high in Asia and sub-Saharan Africa (IFAD, 2021).

Over the last two decades, extremely poor households have been brought out of severe poverty through graduation programmes by engaging them in productive and resilient livelihood activities. The graduation programmes focus on increasing the capacities of the ultra-poor households and prepare pathways to involve them in local economy and community (World Vision, 2019). The overall focus of poverty graduation initiatives is holistic. In other words, combining social assistance, livelihoods, and financial services to address the various forms of extreme poverty. BRAC terms ultra-poor landless rural women as most vulnerable, mainly because of lacking skills, confidence and future orientation to exit from the economic ladder's bottom rung (BRAC, 2013). BRAC determined a household's graduation from ultra-poverty on the basis of 10 indicators. These included more one source of earning, two meals a day, a garden adjacent to kitchen, income generating assets, latrine, roof and childing going to school (Das, Farzana and Misha, 2010)."

The poverty graduation initiatives implemented with the technical support of the BRAC Development Institute in seven countries - India, Pakistan, Honduras, Peru, Ethiopia, Yemen, and Ghana – focused on consumption support, asset transfer, livelihood training, savings, health, and services such as veterinary consultation with livestock, and business development trainings (IPA, 2014). In Pakistan, the National Poverty Graduation Programme assists "the ultra-poor and very poor in graduating out of poverty on a sustainable basis" by "improving their overall food security, nutritional status and resilience to climate change. The proposed approach combines three elements: social mobilization, livelihood development, and financial inclusion (IFAD, 2021). As a subsector, livestock is estimated to contribute "56% of value addition in agriculture and nearly 11% to the gross domestic product" of Pakistan (Rehman et al, 2017). Livestock production is a major source of employment, especially for women, for poor and landless people (Rehman et al, 2017).

Studies have established linkages between the availability of livestock and the physical well-being of the poor and offering graduation out of poverty. It helps the ultra-poor households in stabilizing food supplies, and generate income, along with providing manure, producing power and serving as financial instruments (Randolph et al, 2007). It also serves as the indicator of the social standing in community (Randolph et al, 2007). In a study in Lasbela, Balochistan, in 2015, 58% farmers identified livestock as their main source of income while for 29% it was the secondary source of income (Khan, et al, 2015). The participation of household members in

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<sup>4</sup> Integrated Food Security Phase Classification. (2021, Dec). *IPC Acute Food Insecurity Analysis*.

[https://www.ipcinfo.org/fileadmin/user\\_upload/ipcinfo/docs/IPC\\_Pakistan\\_Acute\\_Food\\_Insecurity\\_2021Oct2022Jun\\_Report\\_Balochistan.pdf](https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Pakistan_Acute_Food_Insecurity_2021Oct2022Jun_Report_Balochistan.pdf)

<sup>5</sup> Ibid

various activities related to livestock leads to income generation and contributes to poverty reduction (Khan, et al, 2015).

BRACE programme was launched to help communities in improving resilience, in order to improve their access to basic services, along with livelihoods, and economic growth. For the delivery of smooth services, it worked with the local authorities to improve their capacity. Implemented in nine districts, Dukki, Jhal Magsi, Kech, Killa Abdullah, Khuzdar, Loralai, Pishin, Washuk, and Zhob, BRACE was built on lessons from EU-funded initiatives in Pakistan.

## Materials and Methods

This study covers the three waves of the longitudinal study carried out using the Participatory Action Research (PRA) for the BRACE programme.

The longitudinal study was conducted in selected villages of Khuzdar, Loralai, and Kech districts. The aggregated district-wise comparative analysis of waves 1, 2, and 3 was around the following variables of SEC household data.

- Average HH size (2020,2021 & 2022)
- Female-headed HHs (%)
- Mean age of head (years)
- Educational attainment for the HH head (%) and other household members
- Land ownership (%) by category (landless HHs, small landholder (up to 3 acres), medium landholder (>3 to 10 acres), large landholder (>10 acres))
- Housing Unit ownership (%)
- Livestock Ownership (%) disaggregated by large animal ownership (%) and small animal ownership (%)
- House Structure (%) by Category (kaccha, mix, pacca)
- Number of persons per room (total number of members in household / total number of rooms)
- Household income with sources of income
- Household expenditure on different needs
- Loans' value taken from informal and formal sources and their use
- Debt of the households

Households' graduation from or plunge into poverty has been mapped using the data of the three waves. The graduation or plunge into poverty was gauged through household movement on PSC, events that may help a household to graduate or plunge, and the factor analysis.

### **Sampling Universe and Frame:**

The programme is being implemented in nine districts of which significantly differ in terms of ecology, culture and ethnicity. However, for the longitudinal study, three districts were selected through multiple sampling. A three-step selection procedure was adopted using a systematic and rationalized approach.

First, the programme districts were divided into the following three zones:

- (i) **North**  
(Killa Abdullah, Pishin, Zhob & Loralai);
- (ii) **East**  
(Jhal Magsi, & Khuzdar); and

(iii) **South**  
(Washuk & Kech)

Each of the above zones covers diversity in terms of ecology, culture and ethnicity. Loralai, Khuzdar and Kech were selected through multiple sampling from each zone. In each district, two UCs were randomly selected where programme interventions were being carried out. Similarly, two villages from each UC were randomly selected from a list of programme villages. Thus, four villages from each district were selected. For data collection, a total of 12 villages were selected.

**Data Collection Method and Tools:**

The data was collected using multiple tools i.e. Life History Interviews (LHIs), Focus Group Discussions (FGDs), Participatory Rural Appraisals (PRA) and consultative meetings. A team of senior qualitative researchers was engaged to collect data.

**Sample Size:**

For drawing the sample, a list of households for each village was used for the wave 3. Eighteen households were selected from the list covered during waves 1 and 2. PSC and SES data were collected from the 18 households in the selected villages. LHIs were administered with the sample HHs during the wave 3.

**Data Collation and Analysis:**

The information collected was passed through the following steps for drawing results.

1. *Transcription to text:* Qualitative information was recorded in a local language which was first translated into English and then turned into transcripts keeping in view the study questions and objectives. The objective was to verify that the translation properly captured the respondents' views.
2. *Themes creation:* Qualitative transcribed text and data was then divided into themes and sub-themes as per the study objectives and exploration areas of this study.
3. *Categorization of Data:* The themes and sub-themes were further categorized/classified/ranked/clustered as per the study objective.

The categorized/classified/ranked/clustered statements were broken down into conceptual components and indicators to make sense of information. The analysis used inductive, deductive, and adductive reasoning techniques to draw findings. Moreover, relationships and causal links were also established between categories to obtain results.

Since, the qualitative data analysis is a cognitive process of research, the researchers gave a devoted maximum time to reflect upon the information collected and analyze and re-analyze it until they reached to a theoretical explanation against a particular research question, issue or a problem statement.

## Results and Discussion

### Push Factors

Over the three waves, a higher dependency ratio or large family size, unemployment /underemployment, household loans, and health expenses were the key factors that pushed a household into poverty across all three districts. Additionally, high inflation emerged as a key

determinant of poverty push across the three districts. To make matters worse, natural disasters such as drought and floods have contributed to rise in poverty across three waves. One of the main factors pushing the households into poverty is the dependency ratio in the selected villages of the three districts. The households' members, male and female, were convinced that without skill development, the dependency ratio would remain the same and the graduation out of the poverty would remain a distant dream. With an average household size of 6.87 and an annual population growth rate of 3.37 (PBS, 2018), the dependency ration in rural Balochistan remain a barrier in poverty alleviation.

### **Pull Factors**

Education and skills, which can lead to entrepreneurship or employment, is the main factor helping the household to pull out of poverty. Ownership of land and assets such a livestock is the crucial factor in keeping the households out of the trap of extreme poverty. Women empowerment in terms of gaining skills and employing those skills for earning and contributing to the wellbeing of family is another key poverty pull factor.

### **Ultra-Poor Households**

Though the overall profile of poverty in the selected villages did not change much, within the PSC categories, ultra-poor households have made gains. In the first wave, the ultra-poor were 27% in Kech, 12% in Loralai, and 25% in Khuzdar. In the second wave, the number of ultra-poor households in Kech registered a significant drop to 10%. Similarly, in Loralai, such households were down to 4%. In Khuzdar also, there was significant decrease to 8%. In Kech an Khuzdar, income from livestock was termed as critical for contributing to reduction in poverty, especially for the ultra-poor households. Another important factor was social mobilization helping women of the ultra-poor households to learn skills and employ them at local level to contribute to the overall income of the household. If on the one hand, it gave women a new confidence in themselves, it also assisted the household in improving its economic outlook and graduate it to the next PSC category. In the third wave, however, the ultra-poor household registered increase in Kech to 20%, and 8% in Loralai. However, in Khuzdar there was no change in the ultra-poor households between the second and the third wave. This may be attributed to the Covid-19, which brought the country to a standstill in March 2020. According to a Pakistan Bureau of Statistics survey, 27.31 million working population in Pakistan was affected by the pandemic. It estimated that in the first wave of pandemic, 20.6 million were unable to work (GOP, 2022).

### **Livestock**

The comparison of waves 1 and 2 suggests the number of poor households reduced by 8% during the wave 2. Similarly, there was a 12% reduction in ultra-poor households during the wave 2. This was mainly because of the support under the BRACE programme in the form of livestock and micro enterprise-based income generation activities. A key factor of inclusive development was the provision of livestock, especially for the ultra-poor households.

The livestock holding pattern of households demonstrates the inter-category movement of ultra-poor households. The livestock holding pattern increased from wave 1 to waves 2 and 3 across ultra-poor, 12-18, 19-23, and transitory poor categories. An increase in livestock is one of the reasons for the inter-category movement of ultra-poor households to other PSC categories within the panel and across the waves.

**Table 1: District-wise and PSC category-wise change in availability of livestock from Wave 1 to Wave 3 (Absolute number of HH)**

PSC	Kech			Loralai			Khuzdar		
	Wave 1	Wave 2	Wave 3	Wave 1	Wave 2	Wave 3	Wave 1	Wave 2	Wave 3
0-11	5%	43%	36%	11%	33%	0%	6%	0%	20%
	1/19	3/7	5/14	1/9	1/3	0/6	1/16	0/5	1/5
12 to 18	31%	44%	47%	14%	46%	11%	11%	8%	0%
	5/16	4/9	9/19	2/14	6/13	2/18	1/9	2/24	0/15
19 to 23	20%	42%	38%	31%	33%	22%	50%	0%	8%
	2/10	5/12	3/8	4/13	4/12	4/18	5/10	0/11	1/13
24 -34	29%	39%	67%	26%	56%	25%	15%	44%	12%
	4/14	7/18	8/12	5/19	10/18	7/28	2/13	4/9	2/17
35-50	100%	58%	100%	73%	59%	50%	30%	33%	20%
	6/6	11/19	15/15	8/11	10/17	1/2	3/10	2/6	2/10
51-100	100%	60%	0%	70%	77%	25%	67%	33%	50%
	5/5	3/5	0/2	7/10	10/13	1/4	4/6	3/9	2/4

Livestock ownership increased in ultra-poor categories across the three districts during the three waves in small and large animal categories. Small animals increased visibly across the districts during the three waves, providing a substantive logic for improving the status of poverty from severe to mild. A decrease in the dependency ratio, water availability for farming, and income from livestock have been identified as the key factors for pulling ultra-poor households out of poverty.

**Table 2: District wise & PSC wise change in livestock ownership from Wave 1 to Wave 3 (out of total HH included in panel)**

PSC	Kech			Loralai			Khuzdar		
	Wave 1	Wave 2	Wave 3	Wave 1	Wave 2	Wave 3	Wave 1	Wave 2	Wave 3
0-11	4%	9%	13%	4%	2%	0%	6%	0%	13%
12 to 18	22%	12%	23%	7%	15%	13%	6%	18%	0%
19 to 23	9%	15%	8%	15%	10%	27%	31%	0%	13%
24 -34	17%	21%	20%	19%	24%	47%	13%	36%	25%
35-50	26%	33%	38%	30%	24%	7%	19%	18%	25%
51-100	22%	9%	0%	26%	24%	7%	25%	27%	25%

The respondents in the selected districts highlighted that income from livestock contributes to reducing poverty. Support provided by the BRACE programme in the form of livestock and micro enterprise-based income generation activities was termed as a key factor contributing to poverty reduction among the selected households, especially the ultra-poor. The livestock holding pattern increased from wave 1 to wave 2 and 3 across ultra-poor, 12-18, 19-23, and transitory poor categories. There has been a palpable increase in the livestock ownership by ultra-poor households in Kech and Khuzdar across the three waves.

**Table 3: District wise change in livestock ownership by animal type from Wave 1 to Wave 3 (out of total HH included in panel)**

Livestock Ownership (%)	Wave 1			Wave 2			Wave 3		
	Kech	Loralai	Khuzdar	Kech	Loralai	Khuzdar	Kech	Loralai	Khuzdar
Large animal ownership (%)	1.4%	2.6%	4.7%	1.4%	25.0%	1.6%	0.0%	10.5%	3.1%
Small animal ownership (%)	8.6%	2.6%	18.8%	8.6%	28.9%	4.7%	15.7%	21.1%	1.6%

### Conclusions and Recommendations

Livestock is the lifeline of households in rural Pakistan. As an integral part of farming sector, livestock is crucial for rural households. It not only meets the dietary needs of the rural population; it contributes to farming output. Apart from the availability of livestock, the knowledge of effectively rearing small and big animals assists the rural households to look forward to a permanent source of income.

However, there is a need for reforming the Department of Livestock and Dairy Development (DLDD) in Balochistan to strengthen the livestock sector. Currently, the department is underfunded and under resourced. There is also a need for involving the private sector in strengthening the livestock in the province. Apart from the investment, the private sector can assist in imparting locally the required skills.

Improving market access is critical for the development of a sustainable livestock sector. The initial focus should be on improving the access to national markets. Afterwards, it can be expanded to regional and international markets. Involvement of communities in livestock strengthening initiatives is critical. Development partners, particularly NGOs, can work with livestock farmers to develop community-run saving and loan schemes. The improved access to credit would help smallholder livestock producers expand operations.

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