

The Relationship Between Livestock Income and Food Security: A Case Study of Jhal Magsi, Balochistan, Pakistan

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Abstract

The study gives an overview of the possible contribution of livestock to food security in Jhal Magsi, Balochistan. Since livestock is a key factor in boosting rural households' income, livelihood and improving their living conditions. Therefore, the study used primary data collected via well-organized questionnaire from 200 households from various areas of Jhal Magsi. The result of the study shows that small farmers extensively depend on livestock as key source of income generation. In addition, livestock plays an important role in satisfying the basic needs of food requirements of many families in Jhal Magsi like other rural areas. Henceforth, livestock provides fundamental protection against food insecurity. Furthermore, livestock cultivation also provides income opportunities to households to invest on family: education, health and housing ultimately improve the living standard of family. However, orthodox and dogmatic methods, lack of knowledge and lack of veterinary clinic facilities lead to affect the productivity of the animals. Therefore, the government is called on to provide farmers with the necessary facilities of financing and veterinary services to improve their income, lives and food availability. In addition, livestock may be one of the potential solutions to poverty and malnutrition in backward areas such as Jhal Magsi.

Keywords: Livestock, Food Security, Livelihoods, Jhal Magsi and Balochistan

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Introduction

Agriculture is the foundation of Pakistan economy. Since Pakistan is one of the most vulnerable country to climate change, so it will definitely upsurge production costs and diminish net profits, henceforth this will affect people's livelihoods. Therefore farmers should not "put all eggs in one basket" and besides agriculture or horticultural activities should also invest in livestock farming to support uncertain financial losses or generate alternative food and income security in case of calamity or weather shocks. Though, under certain circumstances, livestock is a major source of support to farmers' basic necessities, food and income. At present majority of the people living in developing countries are depending on livestock one way or another for their survival (Rigg et al., 2009). It is well known from the literature of livestock that animal breeding has played an important role in reducing poverty, food insecurity, inadequate nutrition, malnutrition and source of income generation in rural households. In the same way, Khalid (2018) also investigated that livestock accomplish the household demand for increased incomes, wealth, fertilizers, energy and other basic necessities. According to Freeman et al. (2008), in South Africa livestock return is a significant component of family income. His research shows that more than half of the respondents have switched to commercial farming from domestic animals due to its high returns. Ali (2007) quantifies that livestock provides income to 675 million farmers globally as they rely exclusively on livestock breeding. Furthermore, livestock breeding helps low-income rural households in expending their income and living resources. Khalil (2007) mentioned that cattle farming cater the demand for milk and meat of households. Nevertheless, milk and meat are equally important and indispensable nutritious source for humans.

In the modern world, food security is one of the biggest challenges for emerging countries like Pakistan. Nonetheless, livestock products play a key role in sustenance and protein requirements. However, on average the daily animal protein requirement is 27 grams for a healthy human being, whereas Pakistan has only 14.25 grams of capacity per head, which shows that the protein deficiency is 48.7%, nevertheless, this deficiency can be

bridged through boosting livestock sector. (Miller, 2001) pointed out that demand for livestock products in developing countries will be doubled over the next 20 years, as a result of this it will further lead to accelerate agricultural activities. Therefore, farmers must make decisions about cutting-edge technology and innovation to increase livestock and thus can combat food shortages. In this context, the current research attempts to investigate the contribution of livestock to household's food security and that how it can uplift the standard of living of rural families in Jahal Magsi, Balochistan via livestock. Rest of the study has been categorized as follows: the upcoming three section provided details about: methodology, results and discussion and conclusion respectively.

Methodology

The study was carried out in the Jahal Magsi region of Balochistan. Jahal Magsi is of the finest area for livestock population in Balochistan, and well known for animals breeding. Hereafter, sample of total of two hundred farmers were randomly selected from the district. Henceforward, the data has been tested for statistical significance by using various statistical tools like: simple frequency distribution, percentage, mean and standard deviation. The results in Table 01 show that 60% of breeders are between 35 and 60 years old. However, 30% of respondents are under the age of 35, indicating a high percentage of youth in Jal Magsi are associated to livestock. Moreover, about 58% of farmers out of selected sample were uneducated, whereas 25%, 15% and 02% of the farmers have primary, intermediate and metric level education.

Table 01. DEMOGRAPHICS CHARACTERS OF THE HOUSEHOLDS

LITERACY RATE		LAND HOLDING (ACRES)		TENANCY	
Up to Primary	47%	Up to 6	55%	Tenancy Status Owner	45%
Middle	38%	06-10	25%	Owner-cum-tenant	50%
Metric and above	15%	Above 10 acres of land	20%	Tenant	05%
TOTAL	100%	TOTAL	100%	TOTAL	100%
MARITAL STATUS		AGE			
Unmarried	41%	Age (years) up to 35	40%		
Married	59%	36-50	35%		
		Above 50	25%		
TOTAL	100%	TOTAL	100%	TOTAL	100%

Note: Authors own estimations from Primary data.

The majority of farmers have small landholding, as a large number of farmers i.e. (75%) have less than 8 hectares of farms. Moreover, the vast majority (65%) of cattle owners used their land to cultivate for different crops according to their desires.

Table 2. LIVESTOCK FARMERS INCOME SOURCES

LIVESTOCK WITH OTHER OCCUPATIONS					
Livestock Husbandry	Livestock with Minor Crops/Orchard farming	Livestock with Minor Crops/Orchard farming	Livestock with services	Livestock with Minor Crops/orchard and services	Total
40%	20%	18%	12%	10%	100%
PURPOSE OF LIVESTOCK					
Livestock for Domestic Purpose	Livestock for Commercial Purpose		Livestock for both Domestic & commercial purpose		Total
45%	30%		25%		100%

Note: Authors personal estimation from Primary data.

Similarly, Table 02 shows that approximately 40% of the farmers have comprehended that livestock is their only means of living, even though 60% of farmers say that they have livestock adjunct to other activities like orchards, governments' job and other commercial activities. The main objectives of livestock farming in rural areas are to generate income and means of subsistence. Likewise, our findings go in the same direction as pointed by (Khushk and Hisbani, 2004) since they found that parallel farming with livestock is the most realistic source of income for a rural family.

Table 03 shows the outcome of monthly household income, indicating that the average current income of small farmers is almost below than Rs. 10,000, on the other hand comparatively advanced farmers earn from Rs 10,000 to 17,000 per month. A good number of the revenue comes from the sale of milk and animals for various purposes. For example, the data shows that (52%) the farmers earn a monthly income of 10,000 to 17,000 rupees (Table 3), though 28% of farmers receive below Rs 10,000, whereas 20% of turnover exceeds Rs. 17,000 because they have advanced agriculture and farming technologies.

Table 3. Livestock Farmers Monthly Income

INCOME	Percentages
Upto 10,000	28%
10,000 to 15,000	52%
15,000 to 20,000	12%
20,000 and above	08%
Total	100%
Livestock as a Foundation for food security	
DEPENDENCY OF LSI	Percentages
Below 20%	05%
Below 40%	10%
Below 60%	20%
Below 80%	50%
Below 100%	20%
Total	100%

Note: Authors own calculation, percentage are in parentheses.

The average value 3.12 clearly shows that the role of livestock in income generation is vital and more important. Though, 03% of households consider that livestock does not play a vital role in satisfying households wants. In contrast, 80% of farmers identify the livestock is the principal contributor to meet the needs of their family. The data also showed that breeding animals has been a source of family empowerment, especially in rural areas.

The results in Tables 05 and 06 shows that animal production is appropriate source of households food, income, skills, education, family health and livestock. In addition, it should be noted that livestock breeding is not only important for the strengthening rural socio-economic setup, but also plays a key role in the provision of rural livelihood. We know that women in rural areas are less empowered and livestock helps them in empowerment. In addition, livestock ropes households' health and education as livestock usually make up the largest share of household income in rural areas. However, the market facilities are insufficient and the lack of information and poor infrastructure hinders livestock production to some extent.

Table 04. Effect of Livestock Income on Education, Livestock Health and Livelihoods

SEA	SD	Disagree	Neutral	Agree	SA
Education of the children	06%	08%	10%	56%	40%
Livestock health or Standard	17%	10%	11%	37%	25%
Food safety	01%	03%	10%	46%	40%
EFFECT OF LIVESTOCK INCOME EMPOWERMENT, FAMILY INCOME AND HEALTH					
Empowerment	11%	08%	08%	45%	49%
Family income	07%	06%	10%	40%	37%
Family Health	06%	07%	11%	40%	38%
Contribution of Livestock Income to Socio-economic Indicators Rank Wise					
	Mean + SD			Ranks	
Food safety	3.11 + 0.036			1	
Households income	3.20 + 0.050			2	
Women Empowerment	3.082 + 0.032			3	
Education of the children	3.02 + 0.021			4	
Health of the households	3.01 + 0.061			5	

Whereas: Socio-economic aspects (SEA), Strongly disagree (SD), Strongly Agree (SA). Moreover, percentages are in the parenthesis.

In this case, the table 06 contains the information related: food safety, family current income, health and education, the households raked them as first, second third and fourth respectively. Moreover, to improve the lives of people and provide them food security it is inevitable that the government should endorse livestock in the area.

Conclusion and Recommendations

The study tinted that the livestock contributes in food security of JelMagsi. There is no doubt that livestock do provide opportunities to society for economic development. Hence as majority of the population; and the socio-economic status of farmers continue to be well expressed owing to livestock involvement. Furthermore, for the mainstream farmers livestock is one of the chief sources of current and permanent income to support livelihood

and other provisions of life in countryside of Balochistan. Henceforth, majority of livestock income is castoff for education, health and for further food necessities, etc. Nevertheless that livestock delivers food security to a large chunk of population in Jal Magsi. Notwithstanding the strong contribution of livestock, the socio-economic situations of the farmers in Jal Magsiare still deprived and living under extreme poverty as they can't afford advanced technologies and other prerequisites of cultivation. Accordingly, it is need of the hours to enlarge the flexibility, convenience and organization services of the agriculturalists such as artificial insemination and additional indispensable, advance technologies.

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