



STUDY THE LIVESTOCK INDUSTRY AND THEIR PROMOTION IN DROUGHT STRICKEN AREAS OF BALOCHISTAN

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Abstract

This study was carried out in drought stricken areas of Balochistan province (namely, Kharan, Chagai and Washuk). Descriptive type of research study was utilized. 300 hundred respondents were selected by using the McCall (1980) table. Multistage sampling technique was used. Data was examined by using SPSS. Bonferroni as a Post Hoc Test was used. Result revealed that most 41% of livestock farmers drop into 26 to 35 years' age categories. More than half (51%) of the livestock farmers have no educational status. Majority 67% of the respondents were male. Vast majority (91%) of the respondents preferred the joint family system. Highly statistically differences were found in all dependent variables about livestock industry promotion for food security as district-wise in drought stricken areas. Highly statistically significant were observed based on 0.01 level, 4 out of 6 statements. Based on achieved results following recommendations developed for future implications. Provincial



government should promote the livestock industry so as to achieve the food security goals in drought stricken areas. Loaning and credit facilities should be given by the government for livestock farmers so as to improve the food security dynamics in drought stricken districts of Balochistan.

Keywords: livestock industry, livestock promotion, drought, Balochistan stricken areas

1.1 Introduction

Population pressure is the biggest and most extreme challenge for humankind in the following decades, therefore it is rare to preserve or conserve their natural assets as frequently. It was reported that during the period of 1995, six billion inhabitants lived globally, consequently it was also believed that the demographic population of the world could also rise up-to eight billion during the period of 2020. Therefore, their daily diet requirement is increasing, especially red meat, so the red meat production is sustained. During the period of 1980-2002, the consumption pattern of red meat around the world increased as triple and recorded as 47 to 139 million tons annually. As a result, the livestock industry and animal husbandry production had been moved into additional extraordinary input structures (FAO, 2008).

Currently, around the world, 640 million livestock farmers were reared livestock so as to modify their livelihood options and ecological conditions. On the other hand, hazards like prolonged drought spell, inundations, and climate change also damaged human lives and properties. The livestock sector provides the food for the huge growing rural and urban population (FAO, 2008).

Livestock or animal husbandry sector is still faced with service delivery problems world-wide. The livestock farmer has limited technology access in rural areas. Thus, the current services in the livestock sector are not tailored toward their existing needs or requirements (CIRAD, 2009). The livestock sector, in this context, is still a major contributor for food and dietary items around the world (CIRAD, 2009).

Livestock sectors are life-line as well as effective tools for Pakistan's economy which constitutes the eighty point nine% labor force and eleven point eleven% in GDP, respectively. Area-wise Balochistan is the largest province of the county. Agriculture and livestock sectors are still major contributors and a vivid revenue-based energizer of the provincial economy. Balochistan province is facing many challenges like extreme poverty, unemployment, food insecurity and continuous natural disasters. In terms of food security, the situation presents a bleaker picture (GOP, 2015-16).



Balochistan consists of 44 percent of the total country land mass, in this regard the province is area-wise largest region of the country. Due to its vast rangeland resources the Balochistan region fulfills the feeding requirements of small ruminants at 90 percent. Therefore, relatively rangeland in the northern part of Balochistan is a better grazing field for small ruminants (Dostain, et al., 2018).

In the rural areas of Balochistan, the migratory livestock population trends are found especially for sheep and goats that constitute (90 percent of the livestock population). These livestock migrated upland areas from winter and back in summer. Therefore, most of the population is dependent on livestock production (Balochistan Development Statistics, 2008-09).

Balochistan region is prone to various manifold threats frequently like seismic activity, inundations in upland areas of Balochistan, and frequent drought spell and the like. Though torrential rain, drought spell affects the various districts of Balochistan as a result the livelihood options and food security trends of rural people have been damaged since 2016. Predominantly, the drought spell was a natural phenomenon and it damaged the central and western portion and districts of Balochistan (Dostain, et al., 2018).

The general objective of this research document is to promote the animal industry especially of small ruminants i.e., the sheep and goats farming which was adversely affected erstwhile drought spell so that to increase the socio-economic conditions of livestock farmers.

1.2 Justification of Study

Baluchistan province consists of twenty million livestock or animals. Due to the drought spell the livestock sector is damaged. In this regard a various issues are emerging like infestation of animal disease (like Congo), ill animal, lack of livestock marketing, in arid areas the overgrazing, mismanagement in livestock sector, irresponsibility by public and private sector, lack of coordination with sister departments in order to manage and resonate the province pastures areas, overlapping jurisdiction, disputed control of tribes, decrease in rainfall, depletion of natural resources (water) are the grave terrorizations for livestock industry promotion. Numerous methodological recommendations and valid information were used and implemented so as to improve the range management for livestock but fruitful of these outcomes did not reflect a positive image thereof. Consequently, vivid attention is deemed required towards establishment of animal's industry for ruminant's promotion to solve the food security issues that may contain the



need-oriented motives, cost-effective aspects and responsiveness to fulfill the specific needs of the livestock farmers. Therefore, the present research efforts were envisaged to tackle and handle the beneficial aspects of farmers' right of income by enhancing their livelihood options through effective establishment of animal's industry for ruminant's production and promotion for drought stricken areas. Keeping in view the above mentioned facts following objectives were undertaken.

1.3 Specific Objectives

- To find out the perceived bio-graphic evidence of the livestock farmers in the study area.
- To explore the role of the livestock industry and their promotion for food security in drought affected areas.
- To explain the result-oriented recommendations for future strategy implications.

1.4 Methodology

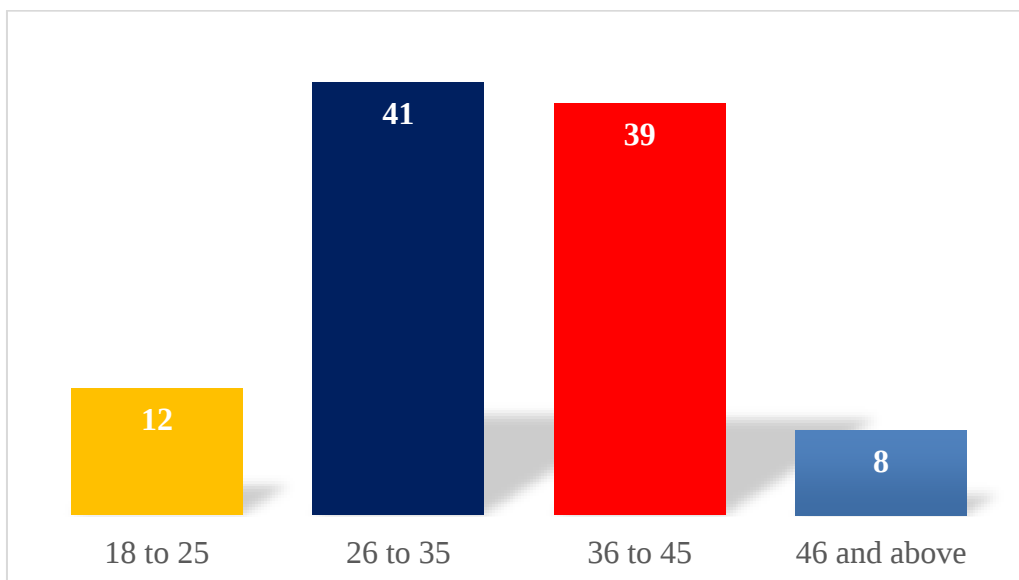
For promoting livestock industry and improving farmers socio-economic condition, respondents were inquired about various questions like capacity building programs for livestock farmers, need based training for livestock farmers, socio-economic reflection and their effectiveness and so forth (Campbell and Fiske, 1959). In this regard, an approach was determined in the drought affected areas of Balochistan. A cross-sectional research design was used (Campbell and Stanley, 1963; and Mady, 1982). Descriptive type of research study was utilized in the present research (Carmines & Zeller, 1979; Shaddish et al., 1991). Because the descriptive type of research study was easily obtaining the required information about the actualities of respondents regarding their socio-economic facts and issues (Trochim, 1989; and Krefting, 1991). Therefore, three out of 34 districts of Balochistan were selected as randomly (i.e. Kharan, Chagai and Washuk). Because these selected districts were badly victimized because of drought spells and vulnerabilities. However, 300 hundred respondents from three districts were selected. Table of McCall (1980) about "determining sample size of the given population" was applied. A comprehensive survey form was developed (Wolcott, 1990; Merriam, 1988; and Patten & Mildred, 2002) in order to denote the livestock farmer's perceptions based on a 5 point Likert Scale through a multistage sampling technique (Adcock & Collier, 2001). Data was obtained and recorded at field level (Pyrzczak, 2002) and analyzed by using the SPSS statistical software (Duffy, 1887). ANOVA (Post Hoc Bonferroni) test was run so as to examine the multiple comparisons among variables as group-wise.



1.5 Results

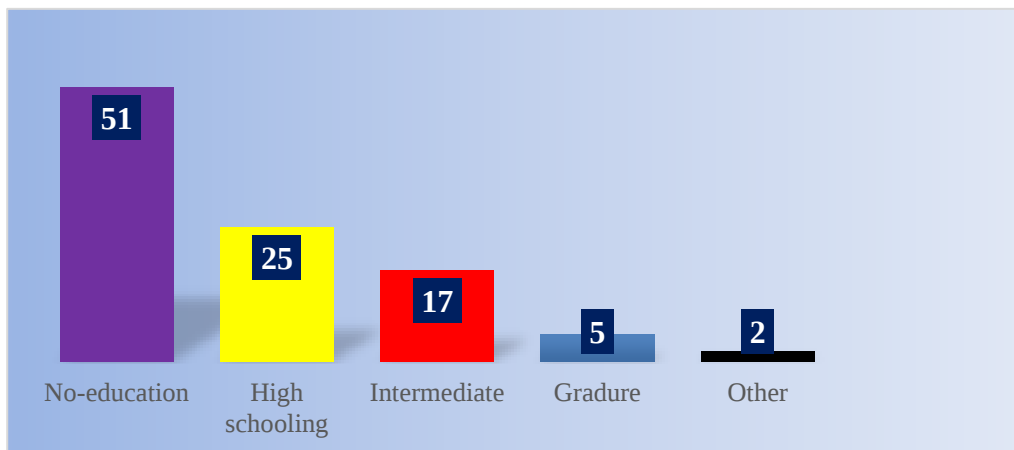
In this section prominent results were depicted based on perceived perception as captured at field level of the livestock farmers.

Figure-1 Age of Livestock Farmers



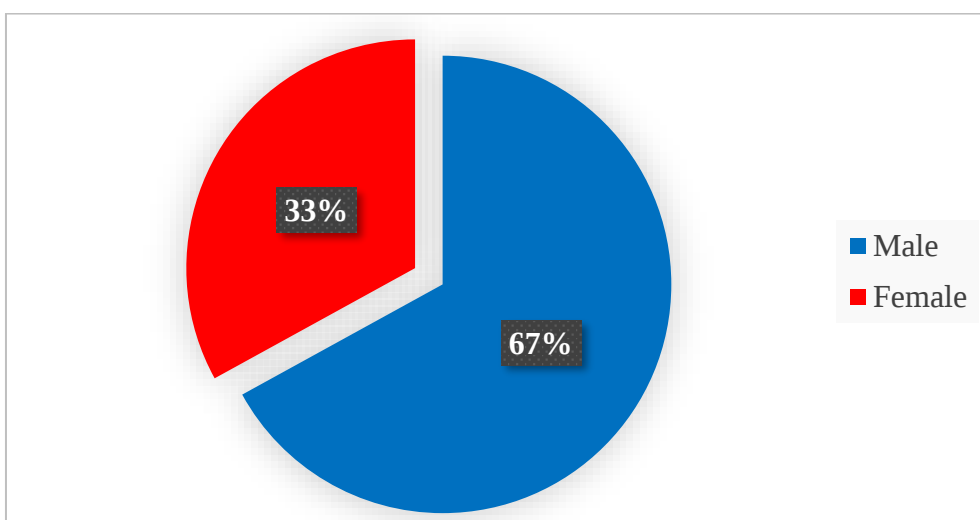
Age of livestock farmers was imperative biographic information. In this regard the data was gathered at field level. Figure-1, results shows that most 41% of livestock farmers drop into 26 to 35 years' age categories. While most 39% of the livestock farmers have dropped into 36 to 45 years' age categories. Only 8% of the livestock farmers fall into 46 and above years' age categories.

Figure-2 Educational Level of Livestock Farmers



Educational level of livestock farmers was another important demographic information as shown in figure-2. More than half (51%) of the livestock farmers had no educational status and were considered as illiterate. While (25-17%) of the livestock farmers got the matriculation and intermediate level of education respectively.

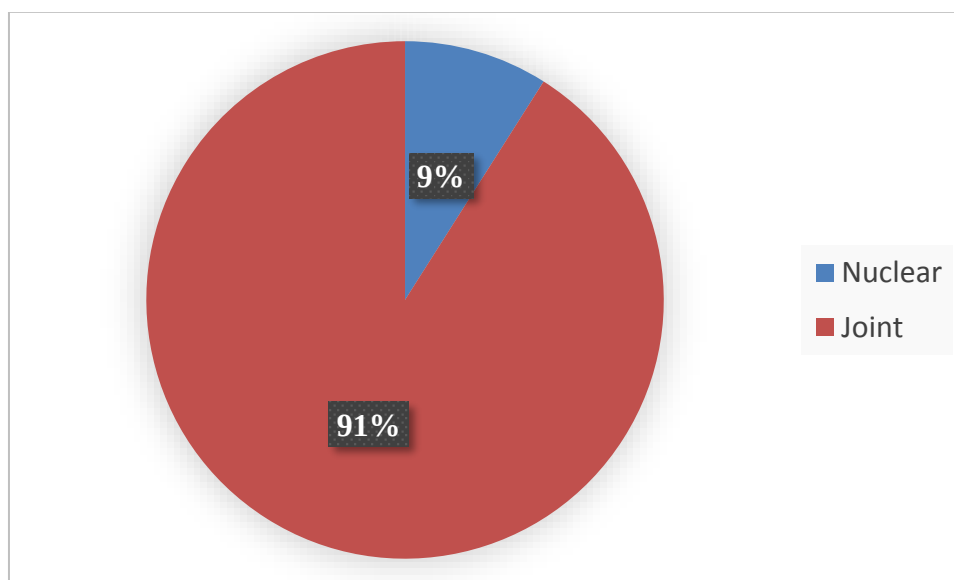
Figure-3 Gender of Livestock Farmers





Gender of livestock farmers was a vital demographic profile and reflects positive impact in decision-making level as shown in figure-3. Because both male and female have dominated figures of society. Majority 67% of the respondents were male followed by 33% of the respondents were female.

Figure-4 Types of family of livestock farmers



Types of family of livestock farmers were measured. In this regard the raw data was captured at field level. Results revealed that the vast majority (91%) of the respondents preferred the joint family system, while the remaining 9% of the respondents lived in a single or nuclear family system (figure-4).



Table-1: Role of Livestock Industry for Food Security as District-wise (Drought Stricken Areas)

Variables	Kharan,		Chagai and		and Washuk		Mean Square	f-value	Sig*
	MS	SD	MS	SD	MS	SD			
Optimizing livestock efficiency	3.020	1.1368	2.650	1.0384	3.140	.9430	1.087	6.003	.003*
Structural changes in livestock industry	2.870	1.1947	1.890	.3144	3.300	1.2268	1.010	51.684	.000**
Animal productivity paradigm changing	3.900	1.2018	3.390	1.2940	3.390	1.2300	1.544	5.615	.004*
Endogenous livestock development	3.690	.8841	4.000	.0000	4.040	.1969	.274	13.419	.000**
Rights-based approaches use	3.810	.9067	4.000	.0000	3.480	1.0681	.654	10.580	.000**
Any other please specify	2.150	.9885	3.180	1.2743	2.930	1.3651	1.488	19.394	.000**

SD = Standard deviation * The mean difference is significant at the 0.01 level.

Outcome of table-1 depicts that the highly statistically differences were found in all dependent variables about livestock industry promotion for food security as district-wise in drought stricken areas. Concepts were highly statistically variances were:

- Structural changes in livestock industry (*f-value* -6.003; MS. 1.087);
- Endogenous livestock development (*f-value* 13.419; MS. .274);
- Rights-based approaches use (*f-value* 10.580; MS. .654); and,
- Any other please specify (*f-value* 19.394; MS. 1.488).

On the other hand, a statements that found significant based on assumption received form the livestock farmers were:



- Optimizing livestock efficiency (*f-value* 6.003; MS. .087); and,
- Animal productivity paradigm changing (*f-value* 5.615; MS. 1.544).

Nevertheless, the items regarding livestock industry promotion for food security as district-wise in drought stricken areas were observed as highly statistically significant based on 0.01 level, 4 out of 6 statements.

1.6 Conclusions and Recommendations

This research was assessing the livestock industry potential and their promotion in drought stricken areas of Balochistan. In this regard, drought stricken districts were selected in this study. Based on achieved results following recommendations developed for future implications. Provincial government should promote the livestock industry so as to achieve the food security goals in drought stricken areas. Capacity building programs should be launched in target districts so as to develop the livestock industry and livestock productivity. Loaning and credit facilities should be given by the government for livestock farmers so as to improve the food security dynamics in drought stricken districts of Balochistan.



References

- Adcock, R. & Collier, D. (2001). Measurement validity: A shared standard for qualitative and quantitative research. *American Political Science Review* 95: 529-546.
- Balochistan Development Statistics, (2008-09). Planning and development department, Government of Balochistan.
- Campbell, D. T. and. Stanley, J. C (1963): Experimental and quasi-experimental designs for research on teaching, Chicago: Rand McNally, 1963: 171-246. The seminal article on types of validity.
- Campbell, D.T. & Fiske, D.W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.
- Carmines, E. G. & Zeller, R. A. (1979): Reliability and validity assessment. *Quantitative Applications in the Social Sciences* series 07-017, Newbury Park, CA: Sage Publications.
- CIRAD, (2009). Livestock keeping in urban areas: A review of traditional technologies based on literature and field experience. http://pigtrop.cirad.fr/resources/library/referenced_books/production_and_geneti.
- Dostain, A. Mengal, A., A. Alizai. S. H. (2018). A time-series analysis regarding livestock management for future planning: a case study of Balochistan province, Pakistan. *Int. J. Adv. Res. Biol. Sci.* 5(5): 176-184. DOI: <http://dx.doi.org/10.22192/ijarbs.2018.05.05.018>
- Duffy, M., E. (1887). Methodological Triangulation: A Vehicle for Merging Quantitative and Qualitative Research Methods. *IMAGE: Journal of Nursing Scholarship*, 19(3), 130-133. <http://www.georgetown.edu/departments/psychology/researchmethods/writing/webresearch.htm>.
- FAO, (2008). Livestock in a changing landscape. UNESCO/Scope/UNEP policy brief no. 6, April. FAO, Rome.
- GOP, (2015-16). Pakistan Economic Survey 2015-16. Economic Advisor's Wing, Finance Division, Government of Pakistan, Islamabad.
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- Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *The American Journal of Occupational Therapy*, 45(3), 214-222.
- livestock management for future planning: a case study of Balochistan province, Pakistan. *Int. J. Adv. Res. Biol. Sci.* 5(5): 176-184.
- Mady, D. (1982). Benefits of Qualitative and Quantitative methods in program evaluation, with illustrations. *Educational Evaluation and Policy Analysis*, 4, 223-236.
- McCall, C. (1980). *Sampling and statistics Handbook for research in Education*: National Education Association: USA.
- Merriam, S.B. (1988). *Case study research in education: A qualitative approach*. San Francisco: JosseyBass, p. 18.
- Patten, Mildred L. (2002). *Understanding research methods: An Overview of the essentials* (3rd ed.). Los Angeles: Pyczak Publishing.
- Pyczak, F. (2002). *Success at statistics: A Worktext with humor* (2nd ed.). Los Angeles: Pyczak Publishing.
- Shaddish, W, Cook, T. Leviton, L. (1991). *Foundations of Program Evaluation: Theories of Practice*. SAGE Publishing Company. Newbury Park.
- Trochim, W. (1989). *An Introduction to Concept Mapping for Planning and Evaluation*. *Evaluation and Program Planning*, 12, 1-16.
- Wolcott, H.R. (1990). *Qualitative inquiry in education: The continuing debate*.