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Determinants of Increased Real Prices of Livestock in Balochistan

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Abstract

The real prices of livestock in Balochistan have been increasing dramatically over the last decade and still there is no sign for them to recede. There is no study that accounts for determinants of this rise in the real prices of livestock in Balochistan. The purpose of this research was to find out the determinants for the increasing real prices of livestock. The research was mainly conducted in Balochistan including rural and urban areas of Quetta, Mastung and Kuchlaq. Twenty-nine farmers, livestock experts, government agencies and vets were selected as the respondents to gather data using questioning technique. In addition, some of the data was also obtained from the report of SMEDA. Judgemental sampling was used as the method for data collection from the respondents. The data thus collected was descriptively analysed. The study found that the determinants for the rise in the real prices of livestock included shortage of production/supply, high risk of raising animals, smuggling of livestock across the borders, lack of government support and low level of technological use.

Keywords: real prices, livestock, Balochistan

1. Introduction

Balochistan, the future economic front of Pakistan, is the largest province of the country bordering Iran and Afghanistan. The area is full of mountainous regions and a long coastal line. Though the terrain is full of natural resources, the lifestyle had remained nomadic in the past and the major source of earning for the people has been the production of livestock especially in the rural areas (Shafiq 2008; SMEDA 2008). Economically even today the province depends on livestock production as a source of income for the people and also as staple food of the inhabitants. Over years the real prices of livestock in Balochistan have risen owing to several reasons (Shafiq and Kakar 2007; SMEDA 2008).

There is a rising trend in the real prices of livestock in the province. The rise in the prices of livestock affects the consumers as well as the economy of the province. The increase in the real prices has taken place over years through the combined action of several factors. This

paper, thus, aims at looking into the determinants of increasing real prices of livestock in Balochistan.

2. Review of Literature

There can be several factors that determine the increase in the real prices of livestock. Some factors that we found more relevant to the area of Balochistan are discussed in the following sections.

2.1. Tastes and Preferences

Tastes and preferences of the consumers affect the market prices for livestock. For example Babcock (2004) has found that in the United States of America consumers developed a taste for higher level of fats and fibre in the hog and poultry. Subsequently, there developed a tendency for the prices of these animals to rise. Therefore, in order to meet the preferences of the customers, the farmers have to use advanced feed in order to improve the quality of fats in their animals (Babcock 2004). Balochistan is different in a way that mostly people do not have any knowledge about fibrous food as the area is a very underdeveloped place (SMEDA 2008). Nonetheless, there is a general preference for high level of fats in many areas of the province. Such tastes and preferences need to be fulfilled through advanced and more nutritious feed. In order to do so, farmers around the world use improved crops for improved quality of meat which comes at higher cost of production to the farmers and ultimately higher prices to the consumers (Lawrence, 2006).

2.2. Risk and Uncertainty

The farmers of livestock face risk of losing their animals either due to catastrophic circumstances or diseases (Babcock, 2004). This situation is not uncommon to the farmers of Balochistan. In the last decade of the 20th century there was a severe loss of animals in the province due to the outbreak of viral diseases like bird-flu and others. Among others reasons for animal death, draught is one the most important which has not only resulted in reduced supply of cattle in the province but also the loss of employment and income for the families (Shafiq and Kakar, 2007; SMEDA, 2008). During the times of diseases not only did the cattle die, the prices of the livestock had fallen immensely and the farmers suffered great losses. The situation has been even worse in the poultry farming sector of Balochistan. Babcock (2004) claims for USA that the implementation of livestock insurance policy in USA will reduce the level of uncertainty and risk that will encourage cattle growers and consequently the prices reduce.

2.3. Increasing Population

The rising population increasing in most African countries fuels high demand for livestock which in turn results into increased real prices of livestock. Whereas slow growth of the manufacturing sector the dependence of people on livestock and agriculture sector increases. In addition to the economic conditions, cultural and social norms also play their part in increased prices of livestock (Farzad, et al., 2010). The case of Balochistan is similar to that of the African countries in many respects: the main source of income in Balochistan comes from its livestock, the growth of manufacturing sector is slow- resultantly almost no technology is used in farming- and the peculiar cultural and social traditions result in increased real prices of livestock.

As the population is increasing in most African countries the demand for livestock is increasing which in turn increases the prices of livestock. Another reason of increases density of livestock is that unemployment has increased due to slow growth of manufacturing products which shifted the influence of people towards livestock. The traditional system of countries also encourages the production of livestock. In addition, the availability of pasture and overgrazing also define the prices of livestock in Africa. Resultantly, the farmers tend to limit the population of their livestock as a result the prices of livestock increases since as more and more animals are added, the animals start competing for food (Jarvis, 1991). Situations similar to those discussed above prevail in Balochistan too.

2.4. Government Policies

Governments can play an active role in the development of livestock. For example, USA, Turkey and several other countries subsidize the production of livestock (Smiaraks, Subhadhira and Srila, 2003). Moreover, the government of Turkey has also brought out several improvements in the livestock market resulting into better feed for livestock, improved breeds and resultantly overall improved satisfaction of the customers. The government also owns many feed mills, an act that further improves the market and help control livestock prices (Yurdakul et al., 1999). Similarly in the USA, policies of the government have resulted in improved market conditions for the livestock market. Botkin, et al., n.d; Bester and Musick (1995) and Liefert, Liefert and Serova (2009), thus, have discovered that the policy of a government regarding livestock has impact on the real prices. There is a need to look into the role government plays in the development of livestock in Balochistan. If the government reduces the market barriers and enhances efficiency, the prices should not be let unaffected. In fact, the intervention by the government in livestock markets results in efficiency gains and lower risk and uncertainty (Seitzinger et al., 2010; Tokgoz et al., 2007; Farzad et al., 2010).

2.5. Geographical Impacts

As economic theory suggests, market conditions are the major forces that determine the prices of a product; the case must also be true for the livestock in Balochistan. For example, ward (1988) concluded that the prices of livestock have positive correlation with the number of buyers in the market. Similarly, the changes in the number of cattle should also have bearing on the real prices; thus, it can also be concluded that livestock movement across regions also affects the real prices. As a matter of fact, there does exist a relationship of livestock movement and its trade as well as prices (USAID, 2008). From Balochistan thousands of cattle are smuggled to Iran and Afghanistan in trucks. Recently the provincial assembly of Balochistan has passed an anti-smuggling resolution to curb the movement of livestock across the borders of Balochistan; however, there is no reasonable success reported in a forceful implementation of this policy (Baloch, 2010; Ahmad, 2009).

Notwithstanding the movement of livestock across regions, the changes in the prices of cattle in different areas also affect the real prices of the other region provided there is some good deal of mobility present in the regions. Miljkovick, Marsh and Brester (2000) has studied that when the demand for the US beef rises in Japan and its price soars, the real price of beef rise in USA too. Moreover, the real price of feed across regions must also affect the prices of livestock. Holder (2007) has found out the same in Europe in their research. Balochistan is an arid land and most of its livestock feed comes from other regions for captive breeding. Furthermore, the tenancy system is also a reason for rise in livestock prices (Kantor, n.d).

3. Methodology

This study is an exploratory research with a descriptive research design. The data was qualitative in form of opinions and was gathered from the experts and stakeholders of the field using judgemental sampling techniques. The sample included 27 different respondents including vets, general public, farmers and experts from governmental agencies for agencies from areas in Quetta and the suburban villages. The samples collected from these areas were generalized to account for the whole Balochistan as these areas serve as good strata for the whole province. A questionnaire was used to collect the data using an importance scale ranging from very important to very unimportant. In addition to the questionnaire, relevant data from SMEDA is also taken into consideration. Data thus collected was analysed by percentages answers either towards agreement or disagreement of the importance of the question. The results are discussed descriptively.

4. Results and Discussion

4.1. Shortage of Supply

One of the most important reasons for the rise in the real prices of livestock is the shortage of supply. Kakar et al. (2008) had also come up with the same results that the supply of livestock was short in Balochistan. Our study also found out, as most of the respondents claimed, that the animal health is poor in Balochistan attributing to the lack of attention and care to the animals consequently the supply of livestock falls short of market demand. In addition, most of the respondents also claimed that excessive supply of poultry products is also in a way the reason for the rising real prices of the cattle. Though poultry serves as a substitute to cattle and we should have expected a fall in the prices of, the prices of cattle rise in the face of excessive supply of poultry. This takes place as more and more resources are put to use in the poultry production, fewer are, resultantly, available for cattle and ultimately the production of cattle falls considerably feeding to rise in their real prices. Nonetheless, the respondents claimed that the production of fish has little bearing on the livestock market.

Notwithstanding the shortage of production itself, the climatic conditions of the area also pose a severe impediment in the production of livestock. As the land is arid, there is no feed grown in home and the feed needs to be exported at comparatively high cost from outside the province, mostly from Punjab. Thus, most of the respondents blame lack of low-cost feed for the shortage of livestock which results in higher real prices of livestock. In addition to this, the dry conditions of the province are also expected to be less health for the animals as per the respondents. What is worse, most respondents also claimed lack of government support to the farmer. Concluding this, there are overall discouraging circumstances for better production of livestock in Balochistan and the supply consequently falls short of demand.

Another hurdle pointed out by the respondents was the high costs of transporting animals and feed. Transportation costs are rated as another reason why it becomes difficult for the farmers of livestock to meet the ends. They rare their cattle at high costs and they thus demand high prices for their kind. Concerning this, it was also established by the questionnaires that if we expect the prices of livestock to fall, we can also expect the number of farms to reduce *ceteris paribus*. In order for the number of farmers to increase, the government need to provide better road and transportation facilities.

4.2. Uncertainty and Risk of Animal Deaths

Lack of security to the farmers of livestock was marked strongly important by the respondents indicating that there is very low level of security from loss of animals due to theft etc. offered to the farmers and the risk of livestock rearing is high. In addition to the lack security to the livestock farmers, the respondents also claimed that the loss of animals due to high death rate in Balochistan is also a common factor causing sense of uncertainty and risk. Notwithstanding these, in general the health of the animals is also weak owing to factors like lack of care and medicine etc. All these factors are attributed to result in increased real prices of livestock (Jarvis 1991; Farzad 2010).

Babcock (2004) establishes that one of the cures of such rising of real prices of livestock due to uncertainty and risk is the implementation of an insurance policy that reduces these risks at the government level. Such insurance is expected to have an effect of lowering the prices of livestock. It can also be expected that such a policy will improve the market shortage of livestock as well. However, there is no concept of insurance of livestock applied in Balochistan. The respondents rated highly for a need for an insurance policy to improve the current level of uncertainty and reduce the inherent risk of rearing livestock. The provision of insurance facility to farmers is expected to raise farmers' confidence and improve the current situation in Balochistan.

4.3. Low level of Competition among the Farmers

The data gathered from the respondents indicates that there is a very low level of competition among the farmers of livestock in Balochistan. The respondents thus also claimed that increased breeding farms of livestock in Balochistan will result in improved competition among the farmers and the real prices will fall. Notwithstanding the low level of competition among farmers, the customers as well as the government also lack their stake in the livestock markets that allows even greater monopolistic powers to the framers of livestock.

People are sold non-graded low quality food and there is lack of general understanding for hygienic considerations (SMEDA 2008). This situation indicates that there is no concern relating to the quality of the food. Customers, in general, are merely interested in the availability of the meat. This results in low level of competition among the farmers on the basis of better quality and resultantly, we expect high level of prices as indicated by the economic theory. The government has little control over this market which is rather neglected. Resultantly, the farmers have a tendency to increase their prices.

4.4. Geographical Impacts

72% of the respondents blamed smuggling of livestock across the borders of Balochistan as one of the most important reasons for the rise in the real prices of the livestock in the province. The finding is similar to those was made earlier by Baloch (2010) and Ahmad (2009). The movement of livestock across borders results in shortage within in the country. As there are more buyers in the market for the livestock and the availability of livestock is short, the real prices face an upwards pressure (Miljkovick, Marsh and Brester, 2000 ; Ward 1998; Fafchamps and Gavian, 1996). It is worthwhile to note that the prices in Afghanistan and Iran for the livestock are comparatively higher than in Balochistan. The farmers resultantly can earn more profit in the neighbouring countries and consequently the prices in Balochistan tend to rise as well due to market imperfections.

As a matter of fact, there should be a tendency towards smuggling for the farmers. The feed they import from other areas of the country is costly- precisely stating, the whole cost of production is high. On the other hand, the government subsidizes the production of agricultural goods in one way or other; for example in the form of low rates for the use of electricity and the livestock sector is ignored. Besides these, the risk of raising livestock itself is high and there is no availability of insurance for the livestock; in fact no knowledge of it in the province. All these factors contribute towards low level of encouragement for the production of livestock. Thus, the farmers who do venture the production of livestock undoubtedly look for high returns and hence they opt to smuggle, which in fact is very easy in the tribal background of the province. This, in fact, seems to be one of the reasons why government policies to curtail smuggling of livestock have so far failed miserably. Consequently, the market of livestock in Balochistan falls short of cattle and the real prices tend to soar.

4.5. Technology

Mostly the production of meat is concentrated in the rural area of the province which not only leads to low level of technological use in the production of meat but also in increased costs of transportation, feeding costs etc. (SMEDA 2008). Our study indicates that there is no use of technology in the livestock rearing in Balochistan. Most of the farmers were observed and reported to use traditional methods of farming. Even the concept of farm in its true technological essence does not exist in actual practices. Farmers let their animals graze in the vast openness of the province. Besides, there are no organized slaughterhouses for animals in Balochistan. The animals are slaughtered by butchers who lack modern facilities like equipment and refrigeration and tend to sell meat mostly at site on open places. These circumstances result into low hygienic food at increased cost (SMEDA 2008). This results in a low-tech and unorganized production of livestock and the resultant low production creates a tendency for the real prices to rise.

Can technology be one of the answers to this peculiar situation? Over the last two decades the real prices of livestock have fallen in the USA. Several reasons are studied to account for this reduction in the falling prices of livestock including packaging concentration, declined demand and increased supply of alternative products (Bester and Marsh 1999; Purcell 1985; Wohlgenant 1985). However, Bester and Marsh (2001) have highlighted that the use of technology in the livestock industry of USA has reduced the costs of packaging and slaughter. There are suggestions for the government to help people adopt technology for raising livestock in Balochistan (SMEDA 2008), the use of technology itself comes at an increased cost to the farmers and this increase is carried forward to the consumers (Bester and Marsh 2001). On the contrary, Lawrence (2006) claims that the use of technology will help improve the prices as well the quality of meat. Therefore we conclude that the use of technology may be a solution to the problem in Balochistan but we cannot claim that the real prices will fall in the short-run. Nonetheless, in the long-run we can expect the real prices to stabilize with the use of high-tech production methods.

5. Conclusion and Recommendations

The smuggling of livestock and the lack of government policies are the main reasons for the increase in the real prices of the livestock in Balochistan. These two factor together result in the shortage of supply. In addition the regional factors like high-cost feed, death and diseases,

and lack of competition among the farmers are other determinants for the rise in the real prices of livestock in Balochistan.

At the outset it is of utmost importance that the farmers are encouraged to produce more animals. This can be done at first by the support of the government in the form of better information, subsidies, assurance of the availability of low cost feed and transportation means. Secondly, the policy to curtail smuggling across the borders must be strictly enforced and export taxes and duties may be levied on the farmers so that their cost rises and thus they are discouraged to export their cattle to other countries for high prices. Thirdly, the risk of animal mortalities can be reduced by providing knowledge to the farmers, making insurance policies available, providing farmlands etc. Finally, the farmers may be encouraged to use high-tech means of production so that in the long run the prices may fall.

There is still room for research in areas like determinants of rise in the real prices of livestock production in specific areas like the Pashtoon belt and the Baloch belt of the province. Moreover, a complete research is required to see if the use of technology can reduce real prices of livestock in Balochistan. Moreover, a study is needed to determine the factors that will make the anti-smuggling policy of the government successful in the area.

References

- Babcock, B., A. 2004. Implication of extending crop insurance to livestock: use of insurance to livestock. In: (United States Department of Agriculture), Agricultural Outlook Forum 2004. 19th February 2004.
- Fafchamps, M. and Gavian, S. 1996. The determinants of livestock prices in Nigor. *Journal of African Economics*, 6(2), pp. 255-295
- Holder, H., 2007. The rise in animal feed prices and potential impacts in EU causes and links to GMO policy. In: Friends of the Earth Europe, December, 2007
- Jarvis, L. S. 1991. Overgrazing and range degradation in Africa: the need and the scope for government control of livestock numbers. *East Africa Economic Review*, 7(1).
- Kakar, M . A., Raziq, A., Huq, M. U. and Faqir, M. 2008. Trends and potential in dairy production of Balochistan province. *Pakistan Journal of Agricultural Sciences*, 45(2), pp.259-262
- Kantor, S., E. (n.d). The causes and consequences of livestock enclosure in Postbellum South. Discussion Paper 92-27. 4.
- Lawrence, J. D., 2006. Expansion in the ethanol industry and its effects on the livestock industry. IOWA State University, University Extension [online] available at <<http://www.extension.iastate.edu/ag/LawrencePresent.indd.pdf>> [accessed 18 July 2011].
- Liefert, W. M., Liefert, O. and Serova, E., 2009. The Russian transition to world major player in world agriculture market. *Agricultural and Applied Economic Association*. 2nd Quarter 2009, 47-49.
- Miljkovick, D., Marsh, J. M. and Brester, G. W. 2000. Japanese import demand for US beef and for effects on US red meat export and livestock prices. In: The Annual Meeting of the Agriculture Trase Research Consortium (IATRC), Aukland, Neazealand, January 18-10, 2001
- Purcell, W., D. 1989. The case of beef demand: a failure by the discipline." *Choices*, 4, 16-19.
- Seitzinger, H. A., Paarlberg, P. L. and Mathews K. H. 2010., National impact of changes in livestock disease surveillance. Dept. of Agricultural Economics, Purdue University
- Shafiq, M., 2008. Analysis of the role of women in livestock of Balochistan, Pakistan. *Journal of Agriculture and Social Sciences*, 4: 18–22
- Shafiq, M. and Kakar, M. A., 2007. Effects of drought on livestock sector in Balochistan province of Pakistan. *International Journal of Agriculture and Biology*, 9(4), pp.657-665
- SMEDA (2008). *Balochistan Livestock Sector Analysis and Strategic Recommendations*. Small and Medium Enterprise Development Authority Government of Pakistan, Quetta

Smiaraks, S., S. Subhadhira and S. Srila. 2003. The Shifting Role of Large Livestock in Northeast Thailand. *Southeast Asian Studies* 41(3):316-329.

Tokgoz, S., Elobeid, A., Fabiosa, J., Hayes, D. J., Babcock, B. A., Yu, T. H., Dong, F., Hart, C. E., and Beghin, J. C., 2007. Long-Term and Global Tradeoffs between Bio-Energy, Feed, and Food: Projections of U.S. In: American Agricultural Economics Association Annual Meeting, Portland, OR, July 29–August 1, 2007.

USAID, 2008. *Livestock movement and trade study*. USAID, Yemen.

Ward, C.E.1988. Meatpacking competition and pricing. Blacksburg VA: Research Institute on Livestock Pricing.

Wohlgenant, M. K. 1985. Estimating cross-elasticities of demand for Beef. *Western Journal of Agriculture Economics*,10(2), 322-329.

Yurdakul, O., Smith, D., Koç, A., Fuller, F., Sengül, H., Akdemir, S., Ören, N., Aksoy, . Ş., Yavuz, F.A., Saner, G., Akbay, A. Ö., Yalçın, I., 1999. Livestock supply and feed demand in Turkey: an evaluation of the current situation and alternatives policy scenario. [Online].. Available at: <<http://libweb.anglia.ac.uk/referencing/harvard.htm>> [accessed 03, Aug, 2011].

Farzad, T., Hertel, T. W. and Tyner, W. E. 2010. Implications of the Biofuels Boom for the Global Livestock Industry: A Computable General Equilibrium Analysis. *GTAP Working Paper No. 58*