manufacturing value added (UBOS unpublished) and meat preparation and dairy processing accounted for 3% of all food processing. In 2009 animal feed production constituted 0.9% and leather and footwear production made up 0.6% of total industrial production.

In sum, livestock make a modest contribution to the non-agricultural sectors of Uganda's economy. In comparison to the other IGAD countries reviewed in this report series, livestock and their products make up a small part of Uganda's exports, the per capita production of meat and milk for domestic consumption is low, as is the role of animal production in manufacturing, and Ugandans spend a moderate proportion of their household food budget on livestock-derived foods.

While livestock are essential to the livelihoods of people in certain parts of the country, Uganda's overall economy does not depend on livestock production to the same extent as that of Sudan, Ethiopia and Kenya.

Recommendations

Official statistics are more than usually important in Uganda because there are few alternative sources of quantified information on livestock production. The following recommendations focus on areas of concern regarding gaps in the current, official system for the collection of data and the analysis of livestock production.

- Livestock offtake rates: The calculation of offtake rates in Uganda is complicated by the retrieval and consumption of dead animals by some livestock owners. By transforming a certain percentage of dead animals from an economic loss into an economic benefit, the consumption of fallen animals potentially has a significant impact on offtake rates, especially when livestock mortality rates are high, as they are for almost all types of livestock in Uganda. As well as asking about sales, slaughter and gifting of animals, future versions of the UNPS should enquire about the retrieval and consumption of dead livestock.
- Animal power: UBoS should consider introducing a region-wide programme of work on the prevalence and economic value of animal power usage in Uganda, a subject that is chronically neglected by both academic research and government agricultural monitoring systems. We also recommend that future versions of the UNPS include questions on the cost of ploughing services, the area ploughed by animal power on a rental basis, and the area ploughed by oxen owners for themselves.
- Karamoja Sub-Region: In Karamoja, 2.4% of the nation's population produces a fifth of the nation's livestock wealth. Attempts to estimate national livestock output are therefore highly sensitive to any defects in the data on Karamoja. Aside from insecurity in the region, two other issues complicate the estimation of Karamoja livestock production. UNPS is a household not a livestock survey and uses households rather than livestock numbers as a basis for selecting its sample. Under these circumstances, caution must be taken to ensure that Karamoja households are adequately represented since these households – though few in number - hold a disproportionate percentage of the nation's livestock. Lost or stolen livestock present another challenge. There is increasing evidence of the commercialization of livestock raiding in Karamoja, with animals being stolen in order to be marketed and transported outside the region for domestic consumption or unofficial export. Although difficult to document, these animals are part of regional livestock offtake for national accounting purposes.
- We recommend a specialized study of livestock production in Karamoja designed to quantify the region's contribution to national livestock output. It has been shown that returns per hectare of land in pastoral systems were 6.8 times higher than returns to ranching systems in south-western Uganda. In light of these findings, both Karamoja regional development and national livestock policy would benefit from an authoritative, evidence-based re-assessment of the value of that region's pastoral production.
- In estimating the livestock contribution to agricultural sector GDP we recommend that UBOS consider adopting a production-based approach to calculating the gross value of individual animal products. As demonstrated in this report, the methods used in such calculations are transparent and can be readily adjusted to accommodate fluctuations in UNPS survey data.

Note: Data sources that substantiate the calculations in this briefing paper are given in the original report: The Contribution of Livestock to the Ugandan Economy (IGAD LPI Working Paper No. 02 – 12) 2012, by Roy Behnke and Margaret Nakirya.

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POLICY BRIEF SERIES

IGAD Center for Pastoral Areas & Livestock Development (ICPALD)

ICPALD

Policy Brief No: ICPALD 7/CLE/8/2013

The Contribution of Livestock to the Ugandan Economy

This briefing paper assesses the contribution of livestock to Uganda's national economy. Conventional GDP accounting may ignore some of the benefits that people derive from livestock in subsistence-oriented economies, when households directly provision themselves, when economic exchanges are not calculated in monetary terms or when these exchanges go unrecorded. The present study assigns monetary values to the non-marketed goods and services provided by livestock, and estimates the contribution of livestock to the wider national economy – as exports, as inputs into manufacturing industries, and as a component of household consumption.

Aside from work done since the 1990s on dairying, little recent field research has been conducted on the performance of Ugandan livestock production systems, probably as a result of decades of insecurity and civil war. The analysis of the national economic importance of livestock summarized in this briefing paper is, therefore, heavily dependent on data produced by government monitoring and statistical services. The results of this reassessment nonetheless conflict with official figures, estimating an increase of 87% above official estimates of the contribution of livestock to agricultural GDP in 2009, the year selected to make this comparison.

According to previous official estimates, livestock contributed 1.7% to total national GDP in 2009; our revised estimates would now place this contribution at about 3.2% of the national total. To put the revised livestock contribution into perspective, it is larger than the GDP derived from either cash crops or fishing, marginally smaller than the contribution from forestry, but still only about a quarter of the value of food crop production. While livestock are vitally important to household welfare and in certain regions of the country, Uganda is not a pastoral nation on the scale of IGAD member states such as Sudan, Ethiopia or Kenya.

The informal financial services provided by livestock – as a source of credit and insurance protection, and as a means of spreading risk – are unusually valuable in Uganda because formal sector financial services are unavailable or expensive in rural areas. At nearly half of total livestock output, the imputed value of the financial services provided by livestock in Uganda is a larger component of overall livestock output than in any of the other countries reviewed in this series of briefing papers. According to international conventions, the value of this self-servicing is not separately itemized in national accounts and therefore cannot be identified as part of the economic benefits that livestock provide, which compromises the usefulness of these accounts for understanding the actual contribution of livestock to the economy. In Uganda in particular, conventional definitions of value added exclude from national accounts a large proportion of the economic benefits that motivate many rural people to own livestock.

Because they provide a source of affordable credit and insurance, rural Ugandans may choose to hold animals that are durable and likely to retain their value, but are relatively unproductive in other, more conventional ways. By overlooking the financial motives for keeping livestock, conventional GDP accounting may promote a misinterpretation of the factors that motivate rural people to retain certain kinds of animals and obscure the circumstances that will induce them to engage in new kinds of livestock production.

The estimation of agricultural GDP in Uganda

The study summarized in this briefing paper employed a production approach to estimating the livestock contribution to GDP. This approach involved four stages. First, national livestock populations were estimated. Second, production coefficients were applied to the livestock population estimates to generate estimates of the total output of goods such as meat, milk, butter, dung for fuel etc. Third, based on market surveys, a monetary value expressed in Uganda shillings – the gross value of output – was ascribed to the total output of each kind of livestock product. Finally, input costs (intermediate costs) were deducted from the gross value of output to derive value added, the measure of GDP.

Using this approach, no distinction needs to be made between production destined for commercial sale, for immediate consumption by producers, or for export. This