



LIVESTOCK AND LIVELIHOODS: PRIORITIES AND CHALLENGES FOR PRO-POOR LIVESTOCK POLICY

Livestock have a variety of characteristics that make them important contributors to sustainable rural development. They directly enhance crop output through animal traction and improvement of soil fertility. They act as a store of wealth for future investment. Furthermore, livestock provide marketable products, which are generally of higher value and less vulnerable to critical harvest timing than many crops. Livestock products with relatively high income elasticities are particularly attractive as a means for rural households to participate in urban-based economic growth.

Despite the above advantages, livestock were widely seen as a poor investment for rural development. This view is gradually changing and a number of new initiatives, with a distinct focus on policies and institutions, are promoting livestock as a means to provide agricultural economies with the growth impetus required for broad-based rural poverty reduction.

Livestock policy can decisively influence microeconomic opportunities and decisions, and likewise other economic events and behaviour will influence household responses to livestock initiatives. However, in today's world, economic linkages are so complex that it is unlikely that policy makers relying on intuition alone will achieve anything approaching optimality. In fact, much evidence suggests that indirect effects of many policies outweigh direct effects and, if not adequately understood, can substantially offset or even reverse them.

In order to obtain deeper insights into the effectiveness of pro-poor livestock policies, data from Senegal, a West African economy with high levels of smallholder poverty and livestock dependence, was used to examine the linkages between livestock and livelihoods.

● Poverty and Livestock Dependency in Senegal

Senegal broadly represents West Africa, with high population shares in arid areas engaged in subsistence agriculture and significant levels of economic dependence on livestock.

Comparison of the standard extreme poverty headcount (population living on less than 1\$ a day) with its counterpart adjusted for livestock dependence of the population shows that poverty rates average nearly 20 percent higher among the livestock dependent. Moreover, the disparity is highest in areas where rural subsistence populations predominate, such as Kaolack and Kolda. This higher representation among the poor by livestock dependent people reinforces the importance of livestock as a target for poverty alleviation.

It is tempting to interpret this indicator adversely, yet it represents both disadvantages and advantages. Livestock dependent households are also more subsistence oriented, which makes them less dependent on consumption of marketed commodities. Advantages of the latter include lower consumption price risk, greater capacity for saving as a percent of income, and a host of social capital attributes. It is unlikely, however, that the market isolation advantages of subsistence outweigh the disadvantages of lower income.

Senegal's national poverty gap of about 35 percent shows the typical fiscal challenge developing countries face when contemplating poverty alleviation with transfer schemes. With this gap, Senegal is unlikely to find a publicly financed transfer scheme that can significantly alleviate the nation's poverty. Poverty alleviation must therefore rely on productive engagement of the poor in the overall economy.

● Participation of the Poor in Livestock Value Chains

Although lower income rural households receive smaller absolute gains from the livestock value chain than higher income groups, the relative benefits to them are greater. This further strengthens the case for livestock as a pro-poor policy instrument, as the marginal effect of improving livestock supply conditions will disproportionately benefit the country's rural poor majority.

Multiplier decomposition analysis reveals that the small absolute livestock-livelihood gain for the poorest comes almost entirely



from direct production income. Both rural quintiles 1 and 2 get more than three-quarters of their livestock related income directly from animal (product) sales, thus leaving the food value chain at the earliest stages.

Higher income rural households have very little direct participation in livestock production. Despite this, they receive the largest absolute multiplier benefit, almost entirely indirectly from food processing and retailing. These more complex downstream linkages to food value creation are the key to higher aggregate income gains for this group and have important implications for the net results of sub-sectoral policies. Given higher income groups generally have more indirect linkages to the livestock sector, they may capture a large percentage of gains, even from policies targeted elsewhere.

Lower income urban households display only limited participation in primary livestock production. Over two thirds of the benefits this group enjoys from livestock are indirect, coming from engagement and employment in food processing services. Although minor, these indirect benefits the urban poor derive from the livestock food economy are non-trivial.

• Livelihood Impacts of Policy Interventions

Two producer-oriented policies, namely doubling of livestock productivity over a ten year period and a 20 percent subsidy to capital that might facilitate innovation, efficiency and profitability were considered in *ex ante* assessments of likely impacts of policy interventions. A third scenario examined a generic case of trade liberalization for Senegal, with an assumption that the country unilaterally abolishes import protection.

The scenario of productivity increase is the most stimulatory, with the greatest gains for most income groups. However, an ironic but dramatic effect in this scenario is the value capture by higher income households. Although they have limited participation in production, and the original policy is production oriented, greater producer cost efficiency apparently translates into more intense competition among producers, transferring profitability downstream in the food supply chain.

By contrast, the predicted impacts of the capital subsidy are more modest, but more equal in their benefits. The poorest households, with little initial savings or capital, will not benefit, but middle

income, more entrepreneurial producers are anticipated to gain from increasing investment.

Finally, trade liberalization has modest but positive effects across all household types, even the lower rural quintiles. As expected, urban populations and higher income rural households, who are more likely to be linked to external markets, benefit most. If the rural poor are to be effectively targeted by trade related policies, it appears that market access improvements should focus on local and regional markets. Investments in infrastructure can improve the rural terms of trade from two directions, reducing the cost of urban agricultural supplies and making rural farm products more competitive in urban markets.

• Conclusions

Livestock can make a substantial contribution to poverty reduction, but pro-poor policies need careful targeting. Effective, market oriented livestock promotion has significant potential to:

- Increase output quantity, quality, and prices; and to
- Improve margins with more efficient production and distribution technology.

In Senegal, policies achieving the above would sharply improve the terms of market participation for smallholder producers of livestock and livestock products, who currently receive only a small fraction of the ultimate value of their output.

It is essential to emphasize, however, that this is not a zero-sum bargaining problem. In addition to re-distributing value along the supply chain, greater market integration for smallholders can increase valuations at all stages. By improving product quality, reducing perishability, and reducing inventory and distribution costs, rural incomes can rise along with profits at every step in the food value chain.

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