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Livestock services: Agricultural technology & service delivery in rural Tanzania

Privatised animal health and production services have left the majority of small-holder and subsistence farmers out in the cold. Without access to agricultural technology, productivity is constrained. To address this market failure, the Tanzanian government established a network of livestock officers to provide basic livestock services. Yet, public service delivery is unable to reach farmers. What are the constraints to service delivery provision and how can they be addressed?

Access to animal health and production services are instrumental in supporting productive smallholder livestock farmers, and securing rural livelihoods. In Tanzania, an estimated 50% of the population depends on livestock for their livelihoods. The majority of livestock owners are subsistence farmers, with a negligible fraction engaging in commercial livestock activities.

Access to animal health and production services are essential for livelihoods and welfare of households that engage in livestock rearing and farming. However, animal health services in Tanzania have been largely privatised and are almost exclusively targeted at commercial farmers, who have the purchasing power necessary to cover the costs of operating in rural Tanzania. The exclusion of small-holding and subsistence farmers has meant that the majority of farmers are unaware or unable to access vital agricultural technologies.





A Maasai village in the Ngorongoro Crater

Image credit: [Harvey Barrison](#)

This shortcoming is reflected in low productivity from livestock rearing. Data from the Tanzanian National Panel Survey shows that the large majority of livestock farmers utilise rudimentary husbandry and production practices. 75% of livestock keepers don't adopt breeding or mating strategies, 60% don't vaccinate their animals and 65% don't treat their animals against parasites. This suggests that extending animal health services to smallholder livestock owners could produce significant productivity gains.

Recognising the importance of animal health and production services and the failure of private market provision, the Tanzanian government has established a system of public village and ward level livestock providers to deliver basic animal health and husbandry services. However, while most rural wards have been assigned a public service provider, 80% of livestock rearing households report not having access to them. What are the constraints?

Key constraints to livestock service delivery

A combination of logistical, communication, and regulatory barriers raise a number of potential challenges to effective implementation and provision of livestock services, particularly in rural Tanzania where operational costs are higher.

Transport provision: Travel represents a significant drain on officers' time. In a recent survey conducted by the Tanzanian Ministry of Agriculture, Livestock and Fisheries, only 56% of officers reported having access to motorised transport, with essentially no support from the government. Given this constraint, remote areas are less likely to be served.

Policy communication: In the same survey, only 57% of officers reported being aware of any livestock sector policies and acts, while only 13% are familiar with the National Livestock Development Strategy, the backbone of the Tanzanian national livestock sector development strategy that defines the objectives of local public service provision. This suggests that constraints to communication are a barrier to policy implementation and institutional reforms on the ground. Furthermore that synchronicity and understanding of policies set by central government priorities and frontline service providers has not been achieved.

“ The exclusion of small-holding and subsistence farmers has meant that the majority of farmers are unaware or unable to access vital agricultural technologies. ”

Chain of command: Service providers are subject to two supervisory chains, one responsible for monitoring and the other for technical guidance. Recent evidence suggests that logistical constraints only allow officers to communicate

Logistical constraints only allow officers to communicate sporadically with their technical supervisor, leaving them short of technical support and inputs for their work. In addition, staff shortages result in almost 25% of officers being appointed as their own monitoring supervisor, making effective monitoring and coordination impossible.

Service charges: Pricing to cover the transport costs associated with livestock service delivery has been decentralised to service providers. This practice provides an incentive for officers to perform their task and gives them the ability to offset the costs associated with travelling to remote areas. However, as officers don't compete directly with the private sector, they have local market power, giving rise to concerns about monopoly distortions – higher prices and lowered quantities.

Implications for policy

These findings illustrate the two types of constraints that policy makers concerned with public service provision face: On the one hand, resource constraints limit the number of public service providers and their outreach through inadequate transport provision. More importantly, however, public service delivery faces significant organisational constraints. For example, while the existence of service charges in Tanzania addresses effort related moral hazard and has the potential to optimally employ local information about the costs of service provision, it is unclear to what extent it can lead to satisfactory levels of service provision in the absence of competition.

To address organisational constraints in public service delivery, the IGC is funding an experimental trial in Tanzania that compares livestock service provision levels and prices under centralised and decentralised pricing regimes. The study will generate insights on service providers' pricing behaviour and the welfare implications of both regimes. It will therefore pave the way towards an advanced understanding of the optimal level of delegation in public sector organisations and hence contribute to our knowledge of how public programmes should be organised to maximise their outreach.