

Synthesis report on critical challenges and necessary strategic shifts in livestock market development in Ethiopia



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1 Introduction

Ethiopia's agrarian economy is marred with deep-rooted structural problems. Despite being considered to be the fastest growing economy in East Africa – at least based on official statistics, majority of its people live in poverty. In 2015, the World Bank estimated poverty headcount ratio at \$1.90/day (2011 PPP) to be 30.8%. Oxford Poverty and Human Development Initiative (OPHI) has been estimating multidimensional poverty globally since 2010. The latest report by OPHI, in collaboration with United Nations Development Program (UNDP), shows that about 85% of Ethiopia's population lives in rural areas and 92% of this population is multi-dimensionally poor (OPHI and UNDP, 2021).

The mainstay of the Ethiopian economy is agriculture. As agriculture goes, so goes the rest of the economy. Agriculture currently generates 66.7% of the total employment. Despite its importance, the performance of the agricultural sector remained dismal because of various artificial and natural reasons. Taking the livestock sector as case in point, despite its enormous wealth, the country is yet to exploit its potential. Ethiopia has the largest livestock population in Africa. The livestock sector contributes about 13% of all formal export earnings. However, when informal cross border trade is considered the contribution goes up to 24% (Roy Behnke and David Muthami, 2011). Live animal exports are high, as an estimated 1.6 million livestock are exported from the country annually— although the vast majority of these (approximately 1.4 million) pass through informal channels (Tesfaye & Amaha, 2018). The considerable size of the informal market is an indicator of the distrust livestock keepers have in the formal marketing system in the country. Another important aspect of this is that farmers are not earning as much as they should because of many reasons including market failures due to, among others, distortionary interventions. These interventions are meant however to address the challenges the livestock value chain is facing. This disconnect is happening essentially because there is no empirical evidence accessible to the policy makers to inform their decision making process.

This report synthesizes the strategic issues identified in livestock marketing based on nearly a decade of research in Ethiopia. The studies were mainly funded by the Policies, Institutions, and Markets (PIM) CGIAR

Research Program [CRP], Livestock CRP, and Africa RISING. The report intends to concisely describe the challenges of livestock marketing in the country and the strategic interventions that need to be made to improve the livestock marketing system. This report is not going to present the details of the scientific evidence that gave rise to the discussions in here. It however indicates which studies and which published reports gave rise to an issue or a strategy. It is important to note that although all challenges and strategic interventions are relevant to all livestock markets, this report builds on researches done on sheep and goat production and marketing. Hence, there is a clear bias towards these species.

The report is structured as follows. Section 2 briefly summarizes the importance of livestock focusing only on selected variables of interest. Section 3 briefly characterizes livestock marketing in Ethiopia. Section 4 presents the key challenges of livestock marketing in the country. Section 5 justifies the investment in developing livestock markets. Section 6 very briefly presents the little effort exerted to develop livestock marketing systems in Ethiopia. Section 7 presents the strategic interventions prioritized based on our empirical undertakings. Finally, Section 8 presents the framework we suggested to implement the strategic interventions.

2 Importance of livestock

Ethiopia is endowed with the largest livestock population in Africa. The livestock population includes 63.3 million Cattle, 64.5 million chicken, 34 million goats, 32 million sheep, and 12.6 million equines (FAO, 2021). A study in 2017 showed that livestock were source for around 1,128 metric tons of meat, 174 million eggs, and some 5.2 billion liters of milk annually. The excreta of these animals made up approximately 68 million tons of organic fertilizer. In addition, nearly 617 million oxen days of draft labor were supplied as input to crop agriculture (Shapiro et al., 2017). Estimates put the value of livestock and livestock products' contribution at around 24% of agricultural output, 11% of Gross Domestic Production, and 13% of foreign exchange earnings during the period 1995/96 to 2007/08. The actual foreign exchange earnings are likely to be higher than these as a considerable share of the cross-border livestock trade is not accounted for in official statistics (Berhanu, 2016; Negassa et al., 2011). Studies also show that the contribution of livestock to GDP is likely to be higher, albeit the seasonal variability, as important value additions such as the contribution of draft oxen labor in agricultural production and breeding stock are not considered in the calculations (Gelan et al., 2012; ICPALD, 2009).

The livestock sector has potential micro and macro level impacts. It is considered to be the key economic driver as part of the agriculture – the most important sector in the economy. Over 45% of households in Ethiopia own farm animals (Emana et al., 2015). At the micro level, livestock serves as an important source of cash income. Livestock also serve as a very reliable liquid asset for the rural poor (Abay & Jensen, 2020). The development of a healthy livestock sector can be a source of new well-paying jobs in various processing installations, in intermediation and brokerage, and in exporting. Overall, the sector promises immense potential; however, realizing the sub-sector's potential for foreign exchange earnings and import substitution is far from adequate.

3 Brief note on livestock marketing in Ethiopia

In Ethiopia, livestock markets constitute multiple actors that are engaged in a complex web of interactions. A chunk of the commercial activity in the livestock sub-sector emanates from cash-need based selling of live animals. At the base of the value chain, livestock producers do most of the production and consumption of livestock. The biggest volume of market exchange also occurs at this level. Producers sell their livestock at the farm gate or in primary markets in their locality that take place in rural areas. These animals are sold either to other households within the same communities or to local traders and intermediaries that resale in markets outside the communities. A step up the livestock market value chain we find wholesalers who buy from the local traders (Girma & Abebaw, 2012). Only a small portion of these live animals procured by wholesalers eventually reach the international markets (Berhanu, 2016; Girma & Abebaw, 2012).

Livestock sales are also seasonally clustered between the months of September and December and the month of April where most of the religious and cultural holidays are observed. Livestock supply peaks between the months of February and June which make up the dry season when food shortage is a problem (Gebremedhin et al., 2007). As a result, livestock marketing usually works in favor of local traders or brokers and against livestock producers. In the same manner, these local traders and intermediaries are at a disadvantage when they transact with wholesalers. Wholesalers that export live animals to international markets are, in turn, at a disadvantage relative to their international buyers (Gebremedhin et al., 2007). These disadvantages emanate from information asymmetries and differences in bargaining power between the trading parties. Traders found higher up on the market chain are better informed about availability of buyers, prices, and are better networked with market actors. They also have better access to formal market information systems and have higher market information processing capabilities.

Exporting live animals and processed livestock products presents a tradeoff to the livestock sector in Ethiopia.

For example, unofficial statistics show that Ethiopia exported a total of 77,779 metric tons of live animals generating foreign exchange earnings of USD 147.8 million. Similarly, meat products generated USD 96.4 million from the export of 18,965 metric tons of meat; this is equivalent to earnings of USD 1,904 per ton of exported live animals and USD 4,934 per ton of meat products¹. The need to export live animals is, thus, a balancing act between getting foreign exchange earnings on one hand and keeping the animals in the domestic market for farther processing thereby creating new jobs and adding value in the process (USAID, 2013).

4 Challenges of livestock marketing in Ethiopia

Livestock production in Ethiopia is generally characterized as quantity or, in some cases, sales oriented implying that it has little or no connection to consumer demand. This disconnect between production and marketing systems is a result of various constraints at different levels. We list the key challenges of livestock marketing below:

i. Erratic supply

Almost all livestock in Ethiopia are under the auspices of the smallholder farmers who keep livestock for several purposes that rarely include maximization of profit. The production system is oriented towards increasing production and, to a limited extent, productivity. Farmers are not well informed about market signals and hence their supply decisions are not necessarily based on market pulling forces. Whenever essential payments are due and cash is needed, farmers bring in their animals to the market regardless of the current market signals. This disconnect between the production and marketing sub-systems results in erratic supply which in turn makes farmers price takers and buyers, exporters in particular, struggling with lack of reliable supply. The lack of market orientation is therefore undermining the performance of smallholder livestock keepers in the markets while the exporters are functioning below full capacity.

ii. Limited access to road

The importance of rural roads in improving livelihoods is empirically proven to be enormous and significant in Ethiopia (Nakamura et al., 2019). Access to roads means access to key institutions and resources. Markets are one of the key institutions that directly affect the livelihoods of rural communities. However, rural road development efforts barely take into consideration improvement of livestock marketing or agricultural marketing in general. Farmers have to trek their animals for hours to get to the primary markets where there are very few but powerful traders and intermediaries because of limited

¹ Information on these figures is obtained from Asoko Insight (Asoko Insight, 2021).

accessibility. In other words, transporting live animals to and from markets is an expensive undertaking and producers could settle for a below-competitive price to avoid making the return trip back home with their unsold livestock. The poor road network limits farmers' access to the bigger and more rewarding markets while exposing their animals and themselves to arduous trekking every week.

In addition to the physical distance between livestock markets and producers, poor road infrastructure limits the interaction among primary markets and between primary and secondary markets (Mulford, 2013). This results in persistent price differences among markets. A more recent study showed that over 40% difference between domestic prices and competitive prices at point of export in 2015 (Allen et al., 2021; Kassie et al., 2019).

iii. Poorly equipped markets and marketing system

Very little effort has been exerted so far to develop livestock markets and marketing system. Virtually in all parts of Ethiopia, livestock markets are marginal plots of land at the peripheries of the villages or towns. There are no fences, water troughs, feedlots, veterinary clinics, or sheds for animals and marketers in almost all of the livestock markets. For the farmers and their animals who trek for hours with no fee/food and water along the way, the markets are an inconvenient destination. Not only when it is raining or the sun is scorching, but also under normal weather, farmers and animals struggle to withstand the hustle, thirst, and hunger. These tribulations finally lead farmers to unwillingly rushed transactions where they end up taking the prices offered to them by the traders and/or intermediaries.

iv. Lack of market information system

Access to market information is a challenge to all actors in the livestock value chain. The problem is more serious for farmers whose livelihood is directly affected by their participation and performance in these markets. Farmers always try to be informed about the market through discussions with fellow farmers and when they are able to do so they visit the markets to gauge what is happening in the markets. However, farmers can only have information on the current prices in the market closest to them. There are no sources of information on trends of prices, quantity demanded, quantity supplied, and potential

market shocks. Farmers are, therefore, forced to make decisions under considerable uncertainty that emanates from the limited knowledge they have about the dynamics in the marketing systems. They end up submitting to the demands of the traders/brokers who are much more informed about the marketing systems. There are efforts being exerted by different national/international NGOs in collaboration with the Ethiopian government to establish market information systems. Although there is a need to critically analyze the strengths and weaknesses of the efforts so far, it is very clear that livestock keepers and marketers are not getting any information on the different aspects of livestock marketing. There is, therefore, so much that needs to be done if we are to have a reliable market information system that would enhance market linkage and market integration.

v. Lack of collective action

Traders and brokers collude to ensure that they are making the best out of the verbal negotiations – the only price discovering mechanisms in these markets. Standing in the market with only one or two animals, the farmer can hardly be able to bargain with the few and more powerful traders and brokers. The traders know that the farmer brings his livestock mainly because of dire cash needs instead of profit maximization. Therefore, postponing his/her selling decision might not be possible for the farmer undermining his/her bargaining power once again. The lack of collective action is also increasing the transaction cost per animal for the farmers especially those who come from very remote areas as information on prices and other features of the market become available only when they arrive at the market.

vi. Erratic taxation of livestock

In some parts of the country, farmers are charged fees, in many cases repeatedly, for each of the animals they bring to the market. There are no services whatsoever provided in the markets for the farmers or the animals. However, each head of animal is taxed for being in the market whether it was brought for selling or to accompany the ones to be sold. There is little economic logic in this erratic taxation of the animals, and beyond the economic logic, it is operationally inconvenient for the farmers. Farmers are being forced to sell animals to avoid this exploitative tax on their animals. Transacting outside the physical perimeters of the market is also observed in an attempt to avoid this taxation.

vii. Lack of financial services

Rural financing is supposed to serve a set of purposes that enable rural communities allocate their financial resources efficiently over time. Loans, savings, transfers, and insurance are key services that are needed in rural settings where livelihoods are dependent on risky agriculture. Such services are virtually unavailable in rural Ethiopia and if available, they are not serving the purpose. The main barriers inhibiting access to rural financing in Ethiopia include high and rigid collateral requirements, which the poor are unable to afford, high transaction cost associated with small size loans, non-inclusiveness of formal financial institutions to these people, and complicated and lengthy loan processing procedures (Legese et al., 2014; Mulatu, 2020).

Concomittantly, farmers use livestock as store of value, and liquid assets. This leads to increasing the number of animals when wealth increases, and selling happens whenever the need for cash arises regardless of the market signals. Given the purposes they are kept for and the lack of financial options, farmers tend to receive the prices the market offers as they can hardly postpone the cash-need-driven sales. Ethiopia has an interesting experience in rural financing, at least until the last few decades, through the Ethiopian Development Bank of Ethiopia². The early experiences of this Bank could help design an effective financing system for the rural community once again.

viii. Limited supply for the export market

Building on the erratic supply discussed above, Ethiopia's livestock export market is struggling to remain competitive. Currently, there are only 12 export abattoirs in the country with the capacity of producing 200,000 metric tons of meat. Currently, they are exporting only 20,000 tons or 10% of their capacity. The abattoirs indicated that limited supply of the animals required for the export market and price distortions in the domestic markets are increasingly undermining their operations. The national legislative that disallowed selling of female

sheep and goat for the export market also contributed towards limiting the supply. It was also indicated that price gaps between the domestic and the export markets are forcing the abattoirs to operate in deficit. In September 2021, for instance, the export price [FOB] of mutton was 253 birr/kg while abattoirs were paying 260 birr/kg in the domestic market. There is no any economic reason why farmers shall be selling for export abattoirs while the market price is much higher in rural market standards. The export abattoirs will not be able to operate in this scenario. The legislation need to be revised to allow non-productive does and ewes to be marketed, and careful measures need to be taken to address the distortionary effect of inflation and foreign exchange rate determination.

Even though the volume of live animal export is barely a scratch on the surface, live animals are exported to Djibouti and countries in the Arabian Peninsula including Saudi Arabia, the United Arab Emirates, and Yemen. In particular, exports are heavily dependent on just two countries, Saudi Arabia and the UAE. The primary sources of these exports are pastoral areas of Afar, Somali and Borena. What little is exported is at risk of facing a ban because of livestock diseases that are endemic to the east African region. Moreover, the diversity of the livestock sector that includes pastoralists, smallholder farmers, and large wholesalers makes livestock disease monitoring difficult. Therefore, failing to meet the sanitary and phytosanitary requirements of these traditional export destinations is not uncommon (Girmay & Yeserah, 2019).

In addition to sanitary and phytosanitary requirements forming non-tariff deterrents to accessing traditional export markets, live animal import restrictions are also prevalent in the form of import tariffs and other fees at the destination country. Saudi Arabia, a major live animal export market for Ethiopia, had ad valorem import tariff of 7%. Exporters are also required to establish an export-import contract before physically transporting the animal offered up for exchange. They are required to put the live animals in a quarantine facility before entering the

2 Development Bank of Ethiopia was established in 1909 under the name "The Society for the promotion of Agriculture and Trade." Its primary thrust was development-financing focusing on agricultural commercialization. Despite a series of renaming, the bank focused on agriculture until 1991. In 1994, the EPRDF led government changed the name of the Bank from Agricultural and Industrial Development Bank to its current name. Although still the closest to agriculture, the recent official accounts show that the Bank is struggling to play a meaningful role in development financing (Giorgis, 2019; F. Tadesse, 2019).

country of destination as animals are processed for entry. Various reports and documents show that exporters are required to make hefty payments to process and for keep up of livestock at these facilities until release (Desta, 2008). Free on Board (FoB) and destination country customs clearing expenses also add to the transaction costs involved in exporting live animals.

5 Justifying investment in livestock marketing

A well-developed market system will promote competitive prices, improved value addition, better bargaining position of livestock producers, reduced risk and transaction costs, and increased market participation. Improving marketing of livestock and livestock products improves the livelihoods of rural producers and present opportunities to meet domestic demand and export for international markets (Bachewe et al., 2018; Delgado, 1999; D. Tadesse et al., 2014). Reducing livestock market frictions by improving the marketing system has the potential to increase livestock restocking alternatives, particularly for poor rural households as these depend more on purchasing livestock for restocking (Barrett et al., 2006). Improving marketing of livestock is also beneficial to urban dwellers as the supply of livestock to urban centers will considerably improve and this supply will experience less variability (Delgado, 1999). On the other hand, with economic growth, the accompanying urbanization and increased earnings of households, consumption of livestock and livestock products is bound to increase. Hence, supply of livestock and livestock products should meet the increased need that comes from this shift in household consumption patterns (Bachewe & Tadesse, 2019).

The development of livestock markets will be beneficial to all actors in the value chain, i.e., smallholder producers, local brokers and intermediaries, retailers, feedlot operators, wholesalers, and exporters. Smallholder producers, who raise livestock mainly as a store of value and as an insurance against negative shocks, face low prices for their livestock both at the farm gate and at primary markets. Development of livestock markets, such as improvement in physical market facilities, and better access to price, quantity, quality and type of livestock, will help make prices more competitive incentivizing market participation of smallholder producers. This will increase their income. Part of the increased income can, for example, be reinvested into animal feeds and veterinary services which will in turn improve the quality of livestock sold in the markets.

The knock-on effect of more disposable income to the smallholder livestock producer is increase in both the

6 Efforts exerted to improve livestock marketing in Ethiopia

The Government of Ethiopia (GoE), its development partners, and other non-governmental actors have identified livestock as a key intervention area for economic growth and development. The GoE has considered development of the livestock sub-sector as part of the Ten Years Perspective Development Plan which identified it as a focus area under the productive sectors⁴. A National Livestock Market Information System (NLMIS) has also been launched in 2019 aggregating timely price, type of animal, and volume data from 47 markets. GoE has also pursued research and development by establishing various research institutes dedicated to livestock breeds, feeds development, and enhance processing capabilities. Development partners have also made considerable investments in the sub-sector to improve its contribution to Gross Domestic Product. A case in point is the Livestock Master Plan (Shapiro et al., 2015).

Other programmatic interventions include the Sanitary and Phyto-Sanitary Standards and Livestock & Meat Marketing Program (SPS-LMM) designed to improve the sanitary and phytosanitary conditions of live animal and meat exports. The Standard Methods and Procedures in Animal Health project (SMP-AH) was also focused on sanitary and phytosanitary conditions (Bett, 2016). Specific to the livestock marketing systems development, the Livestock Market Development Project (LMD) and Graduation with Resilience to Achieve Sustainable Development (GRAD) program are interventions funded by the USAID. These two interventions have made promising inroads in the development of inclusive market development systems that are scalable (Garloch, 2015). We strongly believe that the foundation laid by these initiatives and plans is enormously important. It is however not enough. Therefore, we recommend the following specific and empirical strategic interventions.

quality and the quantity of livestock. This improves the overall quantity and quality supplied to the market. Hence, actors found at the next level of the livestock value chain will have increased supply of live animals but also of better quality. Even though the profit margin of local brokers and intermediaries would likely fall because of the reduced information asymmetries, they will have more producers to broker and intermediate with. Moreover, because of better livestock quality, fewer animals will be returned for failing various local, regional, and international health and other requirements. Development of the markets would also mean better horizontal and vertical market integration (Delgado, 1999); and transportation and other transaction costs would be considerably reduced as a result. These benefits will accrue to retailers, wholesalers and exporters as well.

Exporters can better coordinate the quarantine time³ with retailers and wholesalers found at the lower levels of the livestock value chain. As a result, the quantity of live animals that meet international requirements will increase, while the cost of delivering these to the international markets will also be considerably reduced. Overall, because of these market developments, prices will be more competitive, and income that will accrue to smallholder producers, brokers, retailers, wholesalers and exporters will improve. This would boost GDP and increase foreign exchange earnings.

Therefore, investing in livestock marketing needs to be the starting point for the transformation of the livestock sector. The development of the sector has multiplier effect in the form of improved nutrition of households, better health outcomes (Randolph et al., 2007), increased resilience to shocks (Kumar et al., 2020), increased aggregate demand at the national level, reduced slack and disguised unemployment, and competitive and stable prices for livestock and livestock products (Delgado, 1999).

3 This is usually a period of 21 days of observation to make sure that the animals are free of diseases such as the Rift Valley Fever and Foot and Mouth Disease.

4 Ethiopia 2030: The Pathway to Prosperity, Ten Years Perspective Development Plan (2021-2030). Accessed from <https://europa.eu/capacity4dev/file/109230/download?token=rxippQKh>.

7 Strategic interventions to improve livestock marketing in Ethiopia

i. Having the right mindset about the importance of marketing in the agricultural growth plan of the country

Marketing is the engine of every business and economic organization. Without investing in markets and marketing, there is no way that we would be able to achieve agricultural transformation. Investing in markets and marketing starts from understanding the nature and role of markets. No economic sector has ever been transformed or maintained its consumer relevance by simply increasing production and productivity while ignoring the market and the marketing system. Therefore, a shift in mindset and hence in prioritization of components in agricultural policy formulation is required at national level.

ii. Reorienting our livestock production system

Improving the livestock production system and enhancing market-orientation of the sector will make a fundamental difference in increasing the contributions of the system. Therefore, it is imperative to develop and disseminate improved livestock husbandry practices that can increase production and productivity as well as competitiveness. For instance, the community based breeding programs (CBBP) that have been developed and tested in Ethiopia by ICARDA for over a decade and are complemented by a full integrated package of technical innovations is an important approach to consider. CBBP - along with the complementary husbandry, feeding and health interventions - has enabled raising quality sheep and goats (up to 15-25 kg in 3 months) at affordable prices under community settings. If improved and tested approaches like CBBP are given the necessary attention and are implemented at the national level, significant changes can be made in the livestock sector. Along with the improved husbandry practices, investment needs to be made in creating market awareness (understanding consumer preferences and targeting their products) among farmers and other actors in the livestock markets.

Particularly, farmers have little awareness of what is happening outside the weekly primary market. Keeping farmers aware of what is happening in the markets relevant to them along with the explanation of why the markets behave in a certain way will be of great help for them.

Re-orienting the livestock production is the preferred path for a couple of reasons. The current livestock production system is dominated by livestock headcounts and this has shown significant growth in the last decade. This production comes from indigenous breeds with limited or no use of improved feed or breeding methods. Moreover, this production is not market oriented as much of the livestock and livestock products are used for household consumption and do not meet export quality standards (Bachewe & Tadesse, 2019). Livestock productivity is also one of the lowest in the World in terms of meat, chicken, eggs and milk (Negassa et al., 2011).

iii. Creating institutional capacity in agricultural marketing extension

The agricultural extension system should pay due attention to the marketing agenda. The capacity of development agents at Kebele level needs to be strengthened around the structure and functioning of the agricultural marketing system. In addition to helping livestock keepers manage their animals better, the market extension workers need to work to ensure that the animals are sold at the right time and place.

iv. Market facilities

The poor state of livestock market facilities is one of the key precursors for the low level of livestock commercialization among smallholder rural producers. Even though empirical evidence is scant in this regard, recent studies revealed that equipping livestock markets with facilities such as sheds, water troughs, feeding lots, vet clinics, and toilets could increase off take and income from sales. An experimental study has recently shown that construction of sheds in a typical rural market setting per se can increase market participation and earnings of smallholder producers (Zelege et al., 2021). Smallholder producers are also willing to pay for the provision of facilities such as holding pens, toilets, animal clinics, drinking troughs for water, and shops for animal feed within the livestock markets (Zelege et al., 2020).

v. Rural roads for rural market development

Road is a vital enabling infrastructure for livestock market development. Increased road networks connecting rural areas to urban centers and other rural areas improves access to markets, cuts on the cost of transporting animals to markets, reduces transaction costs, and information asymmetries (Cuevas, 2017). Hence, availability of road networks and better road conditions encourage market participation and improve off take (Kyeyamwa et al., 2008). In addition to the traditional transaction costs such as transportation, animal loading and unloading fees, better road networks and road conditions also reduce search costs for prices, contracting parties, and reduce bargaining costs (Abay & Jensen, 2020; Cuevas, 2017). Combined, these benefits of increased road networks and better road conditions will increase the supply of live animals to the market, and reduce transaction costs thereby giving smallholder producers better prices for their livestock.

vi. Market information system

Development of market information systems is another key intervention that will help improve the live animals market participation and market performance. The theoretical arguments and the empirical evidence are clear on the role of market information systems. Market information systems aggregate information on various aspects of the market and make it available for users at the fraction of the cost had the information not been aggregated. The market information system will also produce additional information products by further processing and analyzing the aggregated data to inform users about anticipated behaviors of the markets (Galtier et al., 2014). Improvement in the market information system should address two aspects. On the one hand, the system should address the access disparities to price, supply, demand, consumer preference, and market shock information, particularly to smallholder producers. On the other hand, information systems should not be relegated to price information only but expand to include other important aspects of the livestock market such as supply and demand, quality and quantity, livestock type and breed, preferences, and market shock

information (MacOpiyo et al., 2008). Moreover, as the market information systems will usually imply use of information communication technologies, the interventions should allow for familiarizing this to end users such as rural smallholder livestock producers⁵. In this respect, encouraging progresses are being made such as the NLMS and a renewed resolve on the part of the government. These positive developments should be bolstered to realize the fruits of investments in market information systems in the form of increased incomes to smallholder producers and higher off takes.

vii. Harmonized and carefully designed taxation

The evidence is building up that one of the main reasons why farmers are not benefitting from their livestock production and marketing is an erratic taxation (Zelege et al., 2020). This is also a fuel to the high level of smuggling in border areas.

Therefore, taxes collected per head of animal in the livestock markets should take into account the marketing behavior of the country's farmers. It should also enable them to create a culture in which they can harmonize their livestock raising according to the needs of the market. The taxation should be designed with attention to nuances such as the type and number of livestock a producer brought to the market, the specific type of facility utilized, and whether a transaction has occurred or not.

viii. Collective action

Encouraging and strengthening collective action among the different actors in the live animal market is the other recommended intervention for developing livestock marketing systems that will contribute towards increased livestock market participation and market performance. The evidence is clear in this respect (Jagwe & Machethe, 2011; Markelova & Mwangi, 2010; Shiferaw, B., Obare, G., Muricho, G. and Silim, 2009) and empirical studies from Ethiopia and other similar developing countries support the positive role collective action has to better prices, off take, and incomes (Fischer & Qaim, 2012; Lapar et al., 2006; Tarekegn et al., 2021). However, collectivization

5 Studies (Kebebe, 2019) show that lack of familiarity to using these technologies have limited the use of NLMIS by rural smallholder producers.

is very limited among smallholder livestock producers both in the highlands and in the pastoral lowlands. It is relatively more prevalent among live animal exporters⁶. There is also weak linkage between smallholder producers and other actors in the livestock market (Baltenweck, 2014; Mamo, 2019; Yilma et al., 2011). This has increased production and marketing risks. With collectivization of producers and other actors in the livestock markets, however, these risks can be reduced. Producers and market actors will improve their bargaining position; they will be able to better network with domestic and international markets and exploit advantages due to economies of scale. Reduction in transaction costs, that come as a result, will translate into higher pocketable income for smallholders. The reduced risk, will translate into increased market participation thereby increasing the supply of live animals in the markets. Off takes will also increase since the cooperative unions can aggregate information on availability and buyers.

ix. Improving access to rural financing

We have discussed above how spontaneous the selling decisions of smallholder farmers are and how disconnected from the market demand. The lack of access to rural financing services limits the market performance of the smallholder farmers. Therefore, livestock marketing must be integrated with the rural financing services in order to be as efficient and fast as any major production and marketing system. In order for livestock keepers and other actors in livestock markets to be able to keep pace with the needs and trends of the market, they need to be able to access credit services that enhance their financial capacity and market participation.

x. Formulating and implementing genuine policies and legislatives to encourage the private sector

The role of the private sector is indispensable in modern economic society. Accordingly, and like any other economic activity, the transformation of our agriculture or livestock sub-sector cannot happen without the significant contribution of the private sector. Therefore, the ongoing efforts to revise and adjust the legal framework in our country should encourage the private sector to be actively

involved in livestock marketing. The policy makers in this country need to believe that the private sector plays a positive role in transforming economies. Generally, it is a matter of urgency that the long-established culture of assuming the government institutions as the sole owner and driver of the economy in our country be replaced with a modern and meaningful participatory system. Given the ultimate objective of marketing, the public sector has limited and less sustainable role as a business entity compared to the private sector. Therefore, and focusing on livestock marketing, market oriented and larger livestock farms need to be expanded as soon as possible. To do this in a short period, it is imperative that we create a modern livestock development strategy and create favorable conditions to attract local and foreign investors to the sector.

xi. Livestock markets need to be under the auspices of MoA

Animal markets are often located in places that are not suitable for humans or animals. Land is owned by the government and, hence, there is no meaningful effort to develop the markets, as there is limited sense of responsibility and ownership. Given the current land tenure, a system has to be put in place to enable the country's livestock markets to be developed and to provide the aforementioned necessary services. The Ministry of Agriculture, which is overseeing the development of our livestock resources, should also have a system in place to take over and manage the livestock markets from the town municipalities or offices of trade. Otherwise, the empirical evidence so far shows that that livestock markets will be neglected in any urban development plan.

xii. Incentive mechanism for the livestock export sector

The Ministry of Agriculture, in collaboration with the relevant bodies, should put in place a careful and comprehensive incentive system to strengthen the formal livestock export trade. If the status quo is to prevail, it is almost certain that the formal/legal livestock exporters would go bankrupt. Otherwise, they may be involved in illegal activities to stay in business. This entails designing and implementing broad-based

6 For example, meat exporting abattoirs have formed the Ethiopian Meat Producer-Exporters Association (EMPEA).

marketing systems with well-established markets. Strategies need to be carefully considered, especially to assess the impact of the foreign exchange market and inflation on the livestock sector. For example, it is possible to support legitimate trade by subsidizing the exporters to enable them deal with the gap in the official and parallel exchange rates. This amendment should allow illegal traders to come to the legal stage and encourage legitimate traders to continue to do so in the formal market. With such strategies, the wealth of the country, which is illicitly draining to neighboring countries, could be garnered.

xiii. Ensure that policies and strategies related to other sectors are in harmony with that of the ministry of agriculture

A recent national level study has shown that the current livestock marketing system is far less lucrative for farmers and traders (Kassie et al., 2019). Taken together, this indicates that our country is not getting what it deserves from its livestock resources. The distortions and hence the disincentives in the livestock value chain mainly emanates from poorly formulated and implemented policies and strategies (Kassie et al., 2019).

It is clear that the agricultural sector is a key determinant of the destiny of this country. Therefore, all the legislatives and policies formulated need to take the importance of agriculture into consideration and their specific effect on the development of the sector has to be carefully analyzed. We suggest a high-level expert team to be formed and work on harmonization of the different policies and strategies in the country vis-à-vis the expected contribution of the agricultural sector.

xiv. The country needs to decide to act. By not “acting”, we are taxing the rural community.

It is obvious that we have a broken livestock marketing system in Ethiopia and it needs fixing. It is also clear that what is costlier to the people and the country than any direct tax and other taxes collected in any economic system is the failure to build the necessary infrastructure at the right time and place. It is, therefore, worth noting that the lack of institutions and infrastructure that need to be developed and given priority to develop the agricultural system, especially the livestock market,

is a big obstacle for the animals. This same obstacle undermines the performance of agriculture and ultimately the development of the country. Hence we urge the Ethiopian government to prioritize and act upon the livestock marketing system.

8 Framework for the implementation of strategic interventions

The government of Ethiopia has rolled out a new set of economic reforms dubbed “Homegrown Economic Reform Agenda”⁷ and aspires to transform Ethiopia from a predominantly agrarian low-income to that of an industrialized lower middle-income country by 2030⁸. This is a significant departure from the previous policies and strategies the country implemented including Agriculture Development Led Industrialization (ADLI) and the Industrial Development Strategy that have helped register economic progress, albeit from a low base. The government should ensure that this progress in economic growth be sustained and that this growth is inclusive. The homegrown economic reform agenda takes stock of the potential of the Ethiopian economy and a more active participation of the private sector. As such, the livestock sub-sector promises huge untapped potential.

We believe this could be an interesting framework if it truly depended on the homegrown wisdom, needs, and opportunities at all levels. We suggest as a complement to the national policy and specifically for livestock market development an approach commonly known as Push-Pull marketing (Brocato, 2010).

The Push-Pull approach marries traditional market systems development with the inclusiveness and sustainability of these market systems at scale. This approach ensures that livestock markets offer competitive prices both to consumers and producers allowing for the participation of the extremely poor.

The push-pull approach, as the name suggests, utilizes push and pull strategies to achieve inclusive and sustainable market systems. Push strategies will help poor livestock producers build assets so that their capacity to engage with other market actors is increased. These include helping the producers build

assets (human, financial, social, and cultural), improve their linkages to social protection, build their livelihood and market readiness skills, improve their soft⁹ skills, address their consumption deficiencies, and strengthen their capacity to weather risks. The pull strategies, on the other hand, play more of a facilitation role for the development of livestock market systems that widen opportunities available to the poor livestock producers to engage in the economy. These strategies particularly ensure that inclusion and capacity constraints of these poor producers are addressed. These include lowering barriers to market entry, encouraging proliferation of brokers, intermediaries, and traders, creating new job opportunities along the livestock value chain, encouraging demand for market functions that offer comparative advantage to the poor, and facilitating multiplier effects of these interventions.

To be successful, a push-pull approach should address the following key considerations. It should be grounded in a robust theory of change and pay attention to the relationships and aspirations of producers and other livestock market actors that are critical to realizing the theory of change. The execution of the approach should follow a systems approach recognizing that multiple systems are at work influencing the development of a livestock markets system. The approach should enhance various capacities of the poor livestock producers and other actors in the livestock market. Push and pull strategies should be phased or layered to achieve incremental linkages between the two. In this respect, the how, when, where, and why of the design and implementation of these strategies should be emphasized. The approach should be sensitive to the varied sources of income of poor livestock producers. Learning and guiding of the implementation of the push/pull approaches should be informed through a knowledge management system.

In relation to institutional engagements, we suggest livestock and livestock market development to be under the patronage of the Ministry of Agriculture. The Ministry needs to have legislative powers over other public actors to ensure that policies and strategies developed are harmonized and complementary. We

7 https://www.pmo.gov.et/media/documents/Ethiopia-0509_Economic_Reform_Agenda.pptx

8 Information on the Homegrown Economic Reform Agenda is obtained from The Office of the Prime Minister's (OPM, 2019) official website.

9 These include self-confidence, negotiating, relationship building.

understand that developmental planning is not a trivial exercise. Developing the livestock marketing system per se requires all kinds of actors including telecommunication service providers, microfinance service providers, farmer organizers, data generation and curating service providers, urban planners, etc. Given the ever-changing institutional landscape and mandates of institutions in Ethiopia, it is almost impossible to peg a given task to one or more institutions. Hence, we leave the burden of designing the details of the implementation plan with the Ministry of Agriculture. Finally, it is important to note the strategic shift and its implementation framework proposed here entails considerable human and financial resources.

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