

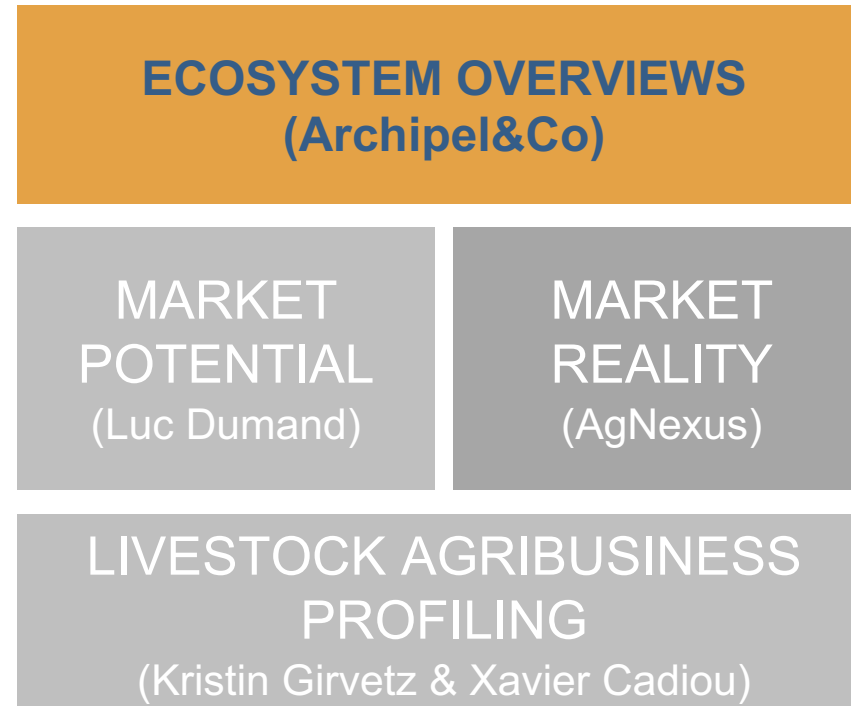
Animal Health Ecosystem study Ethiopia

February 2021



Context: This report is an actionable overview of the AH Ecosystem to accelerate entrance and innovation

- This Animal Health (AH) Ecosystem Studies is part of the Bill & Melinda Gates Foundation's African AH systems and data investments.
- The objective of this constellation of investments is to foster more and better data to inspire, inform and improve investment in the AH sector across Africa.



- This report is intended to give new entrants and market actors an actionable overview of the AH Ecosystem to accelerate entrance and innovation.
- Other studies are quantifying AH market potential, quantifying market reality/size and profiling livestock agribusiness

Objective & Methodology

- The primary objective of this ecosystem study is to help potential new entrants and innovators quickly understand the animal health market opportunities in Ethiopia.
- The study outlines:
 - the flow of three main product categories: biologicals, pharmaceuticals, vitamins & supplements
 - the role of key actors
 - the challenges and opportunities
- This report has been informed by hundreds who generously contributed their time and knowledge, thank you!



72 reports and articles reviewed



23 virtual interviews



2 weeks of field visits and **20+** in-person interviews in Kenya and Ethiopia



9 COVID-19 PCR tests

1. Executive Summary
2. Context
 - a. Country profile and role of agriculture
 - b. The livestock sector
3. Animal health overview
4. Enabling environment for animal health sector
 - a. Doing Business in Ethiopia
 - b. AH regulation and national strategies
5. Animal health market structure
 - a. Ecosystem map
 - b. Ecosystem actor analysis
 - c. Product flow
 - d. Innovation landscape
6. Appendix



Acronyms

AH	Animal Health	EVA	Ethiopian Veterinary Association	LTR	Local Technical Representative
AMR	Antimicrobial Resistance	FAO	Food and Agricultural Organization of the United Nations	MoA	Ministry of Agriculture
BMGF	Bill and Melinda Gates Foundation	FMD	Foot and Mouth Disease	NDC	Nationally Determined Contributions
BVSc	Bachelor of Veterinary Sciences	Forex	Foreign Exchange	NDPs	National Development Plans
CAHW	Community Animal Health Worker	GALVmed	The Global Alliance for Livestock Veterinary Medicines	NGO	Non-Governmental Organization
CBO	Community Based Organization	GoE	Government of Ethiopia	NVI	National Vaccine Institute
CBPP	Contagious Bovine Pleuropneumonia	GTP	Growth and Transformation Plan	RVF	Rift Valley Fever
CCPP	Contagious caprine pleuropneumonia	HH	Household	SEBI	Supporting Evidence Based Interventions
CGIAR	Consultative Group on International Agricultural Research	IGAD	Intergovernmental Authority on Development	SSP	Small Scale Producer
CVA	Community Veterinary Agent	ILRI	International Livestock Research Institute	TADs	Transboundary diseases
DVS	Directorate of Veterinary Services	LMP	Livestock Master Plan	VDFACA	Veterinary Drug and Feed Administration and Control Authority
EAC	East African Community	LSA	Livestock Sector Analysis		
ECF	East Coast Fever	LSIPT	Livestock Sector Investor and Policy Toolkit		

1. Executive Summary
2. Context
3. Animal health overview
4. Enabling environment for animal health sector
5. Animal health market structure
6. Appendix



Executive summary (1/3)

- There is huge unmet demand for quality AH products and services from commercial and SSPs
- Navigating local AH regulation and forex challenges are critical to operations

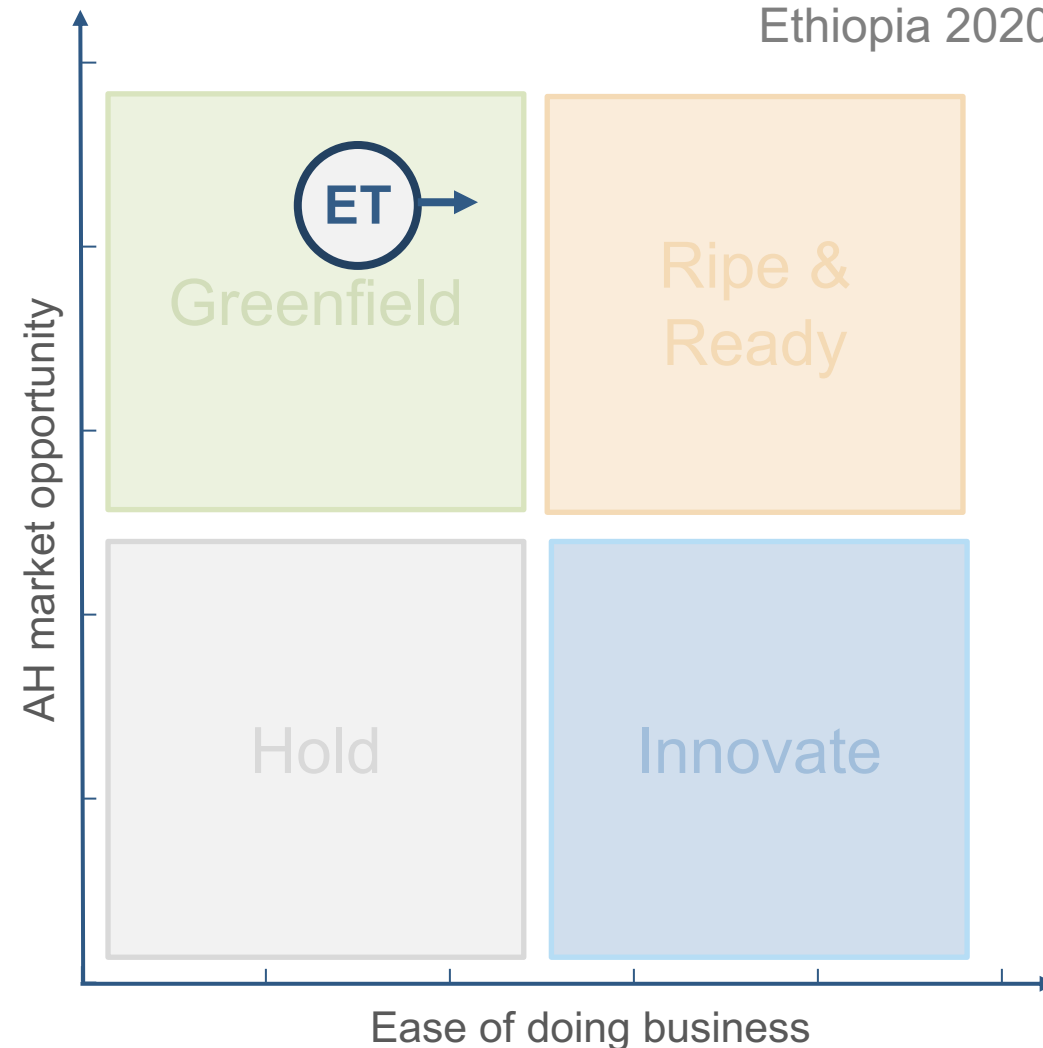
Challenges

- Access to forex
- Infrastructure and distances hinder access to remote underserved areas
- Most AH products are subsidised generic products provided through public tenders and government channels
- Major buyers and consumers of animal products are not yet demanding better AH management

Opportunities

- Significant economic, agricultural and cultural importance of livestock
- Unmet and growing demand (driven by population growth and urbanization trends)
- Recent rise in number of actors across categories
- Limited competition (due to unique challenges)
- Institutional framework getting stronger with clear direction of travel towards open markets

AH Market Evaluation Matrix
Ethiopia 2020



Note: refer to [Appendix](#) for methodology and indicators

Executive summary (2/3)

- **Ethiopia's massive population and growth make it an important market for the Animal Health sector**
 - Population of 109M makes Ethiopia one of Africa's most populous countries, population grew by 2.69% 2014-2019
 - Its combined livestock population, estimated over 200M, is the largest in Africa; cattle population grew by 49.4% 2004-2015 and poultry population growth of 95.8% 2004-2015
 - One of the fastest growing economies at the beginning of this century: annual GDP growth averaged 9.12% between 2014-2019
- **Doing business in Ethiopia remains challenging though public policies are increasingly supportive of the private sector**
 - Access to foreign exchange is the main impediment to foreign investment and primary challenge for importers
 - The 2015 Livestock Master Plan describes the investment and policy interventions required to improve livestock productivity and total production

- **Livestock are critical to Ethiopia's economy and culture**
 - 70% of households keep livestock
 - Livestock represents 49% of the agricultural GDP and 21% of total GDP
 - Livestock accounts for 10.6% of exports
 - Domestic consumption of animal products is high and increasing sharply by 2050, e.g. milk and poultry meet consumption expected to grow by 783% and 179%, respectively

Executive summary (3/3)

- **Infectious & parasitic diseases are primary drivers of low livestock productivity, an AH value-creation opportunity**
 - Only 30% of livestock reached by AH products & services
 - Development of the AH sector is key for Ethiopian producers to access international markets, essential to rural development and transformation
- **The government is still the primary provider of AH products & services while supporting the growth of the private AH sector**
 - An estimated 75% of AH products on the market are supplied via public tenders
 - Provision is shifting to the private AH sector with the easing of drug imports
 - The regulatory framework ensures strict market structure, e.g. a wholesaler cannot import products & AH retailers shouldn't provide services
- **The private AH sector is growing fast and still not meeting market demand**
 - In the last 5 years (2014-2019): x3 number of importers, x42 number of wholesalers, x5 number of AH retailers
 - Reports of triple digit margins on some products show demand vacuum
 - Growing presence of international AH manufacturers (majority Indian and Chinese) entering the market through importers
 - Generic products represent around 60% of the market, mainly targeted to SSPs, leading to some quality and effectiveness concerns
- **The National Veterinary Institute (NVI), a quasi-monopoly on biologicals, is not meeting demand for quality vaccines**
 - For vaccines covered by NVI, registration can be challenging

1. Executive Summary
2. Context
 - a. Country profile and role of agriculture
 - b. The livestock sector
3. Animal health overview
4. Enabling environment for animal health sector
5. Animal health market structure
6. Appendix



The third fastest growing economy in the 21st century

After communist rule ended in '91, civil war ensued before a democratic system was established in '95 and, despite recent political tension, Ethiopia is currently one of the world's top performers in terms of economic growth. However, the 12th most populous country in the world, still faces high poverty rates.



DEMOGRAPHY

- Population of 73.9M (last official census from 2007). Est. **over 109M inhabitants**^{1,2} in 2019.
- Estimated **79% rural population in 2019**, versus 94% in 1960³
- 20th highest population growth rate with median age of **19.8 years** (30th youngest in the world)⁴



GEOGRAPHY

- Second largest country in Africa** and most populous **landlocked** country in the World
- Administratively** subdivided into **four levels**: 10 regional states and 2 Administrative City Councils (Addis Ababa and Dire Dawa), 68 zones, 670 rural & ~100 urban woredas and 15 000 kebeles⁶



POLITICS

- From 1974 to 1991, Ethiopia was ruled by a communist regime, led by Mengistu Haile Mariam, which has profoundly marked the country
- Since 1995, Ethiopia is a **Federal parliamentary republic**, whereby the Prime Minister is the head of government.



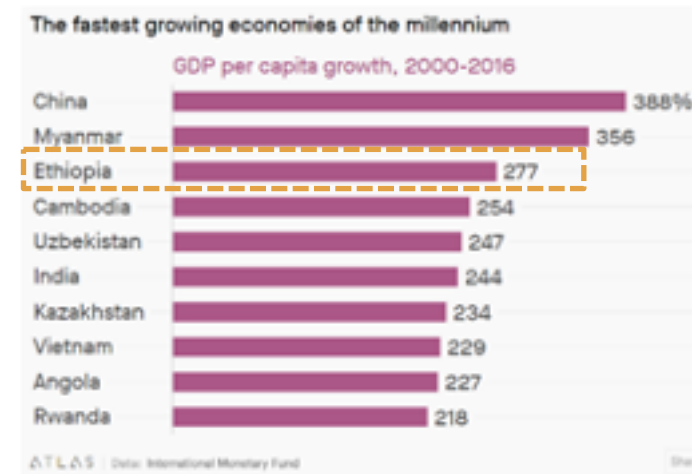
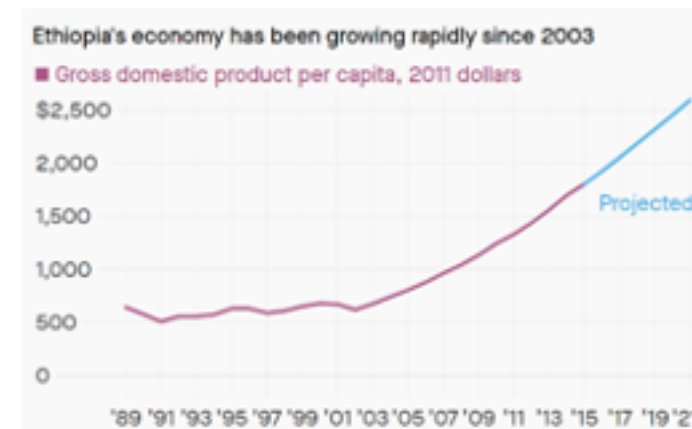
ECONOMY

- GDP per capita: **USD 767** (2019), annual **GDP growth** averaged **9.12%** between 2014-2019
- 26.2%** of population live under poverty line (2019)



CULTURE

- Multilingual nation, with around **80 ethnolinguistic groups** and no official national language
- The 10 regional states were divided based on the principal ethno-linguistic territoriality



Ethiopian economic development challenged by foreign exchange scarcity



Ethiopia is not a member of the WTO and Foreign Exchange (FX) reserves maintained by the government remain at low levels, a longstanding challenge for those seeking to source from abroad. FX scarcity is the main impediment to boosting foreign investment in non-agricultural sectors such as construction, manufacturing, and tourism.^{1,2}

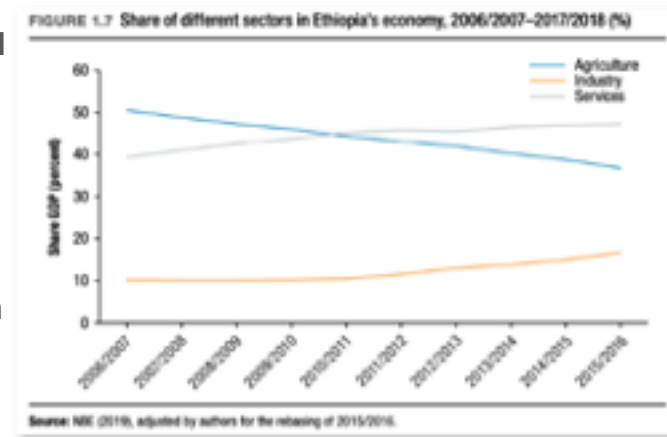
Foreign exchange challenges

- Imports of goods and services represent **22.80% of GDP**. Huge challenge given the **difficulty to obtain forex**, which is mainly obtained through the export of agricultural exports.
- Ethiopia follows a **managed floating exchange rate system**, with a policy of gradual depreciation of the birr (national currency) against the US dollar at a constant rate. However, as shown in the graph below, the **birr has appreciated in real terms**, partly driven by the appreciation of the dollar, making Ethiopia's competitiveness and industrialization drive more difficult.
- All **payments abroad require permits** and all FX transactions must be carried out through authorized agents supervised by the National Bank of Ethiopia (NBE). A letter of credit can be demanded by the importer to a bank to help mitigate risks.⁷ In addition, **exporters can retain indefinitely 30% of their FX proceeds, but must sell the remaining 70% to commercial banks within four weeks.**



Agriculture as the foundation of the country's economy and the principal source of foreign currency

- Agriculture accounts for **35% of the nation's GDP** (2019) and **68.2% of employment** (2019) and **90% of export value** (2019).
- Contribution of agriculture to GDP is decreasing in real terms due to instability, though it remains the primary means of subsistence.
- Productivity and contribution challenges are rising as **farmlands become degraded and unproductive**.
- Principal crops include **coffee (26% of exports in 2015/2016)**, pulses, cereals and oilseeds.
- Largest **livestock population** in Africa (exports of meat, live animals, and animal products at **13% in 2015/2016**)



1. Executive Summary

2. Context

a. Country profile and role of agriculture

b. The livestock sector

3. Animal health overview

4. Enabling environment for animal health sector

5. Animal health market structure

6. Appendix



Ethiopia has one of the largest livestock sectors in Africa but is not yet able to fully capitalize on it

SUMMARY

- Largest livestock holder in Africa; de facto one of the dominant players of the sector on the continent.¹
- Since the beginning of the century, the country has experienced a slow but steady opening to private enterprise, which has created significant business opportunities
- Sector accounts for 49% of agricultural GDP, 21% of the total GDP² and 10% of national export earnings in 2017³
- Still working to establish market-making institutions and a business-oriented livestock sector to benefit from the full potential of the sector*
- Most of livestock production is destined for export markets, primarily in the Middle East.
- The GTP I 2010-2015 projected reaching 1BN USD from the export of live animals and livestock products, which was not achieved. There is a pressing need to address the prevailing challenges to meet the ever-increasing export standards.
- The publication of the LMP in 2015, as a contribution to the GTP II, gave a new impetus to the sector and should be very beneficial to it in the years to come.



Image source: Archipel&Co

* BMGF is sponsoring other studies and development of tools aiming to estimate the AH market potential

Source: 1. [World Bank](#) 2 [ILRI](#), 3. [FAO](#)

Facts & Figures of the Livestock sector (1/2)



The direct contribution of the livestock sector to Ethiopia's GDP (estimation 2018)*...

Estimated at 4.7BN USD per year

49% of agricultural GDP

21% of the total national GDP

These percentages are **likely to increase** in the coming decades^{3,6}



The direct contributions livestock herds and farms make to Ethiopia's GDP are from...

milk - 34%

meat - 32%

with the rest generated by other livestock services or products³



It is estimated that as Ethiopia's population and urbanization increases, **consumption of milk, beef, chicken meat, and eggs** will increase by **783%, 53%, 179%** and **88%** respectively between 2010 and 2050.¹



Much of Ethiopia's livestock production is destined for export markets, primarily in the Middle East.² It is estimated that Ethiopian livestock contribute about **10% to national export earnings, 69% of which accounted for live animal exports.**¹

Even though they are continent's top exporter⁵, Ethiopia's livestock and livestock products export is minimal compared to the national potential.⁴



Image source: Archipel&Co

*Taking into account livestock processing and marketing

Sources: 1. [FAO](#), 2. [Malabo Montpellier](#), 3. [ILRI](#), 4. LMP 2013, 5. [liste](#) 6. [World Bank](#)

Facts & Figures of the Livestock sector (2/2)

PRIMARY SPECIES (FAO 2019)¹

SSPs mainly keep cattle, small ruminants and equine while commercial farms, still rare, are being developed mainly around poultry and cattle.



Cattle:
57M



Poultry:
57M



Sheep:
30M



Goats:
23M



Equine:
9M



Camels:
5M



Pigs :
28K



Pets:
unknown

Africa's largest holder of livestock

**Livestock
keeping
households
by species²**

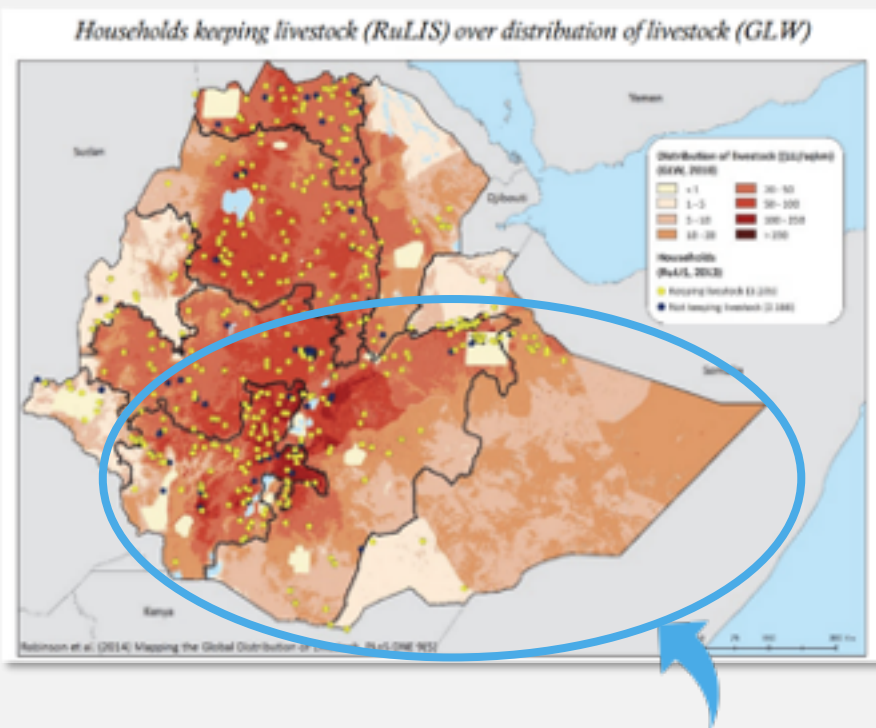


Total number of households: 20.01 million	Number of HHs keeping animal	% of total number of households	% of livestock keeping households
Livestock keeping households	14 085 895	70%	
<i>Cattle</i>	12 187 846	61%	87%
<i>Goats</i>	4 341 219	22%	31%
<i>Sheep</i>	5 572 568	28%	40%
<i>Chicken</i>	8 435 986	42%	60%
<i>Camels</i>	408 931	2%	3%

Mixed farming and pastoralism: 2 primary livelihood strategies pursued by livestock-keeping Ethiopians (1/3)

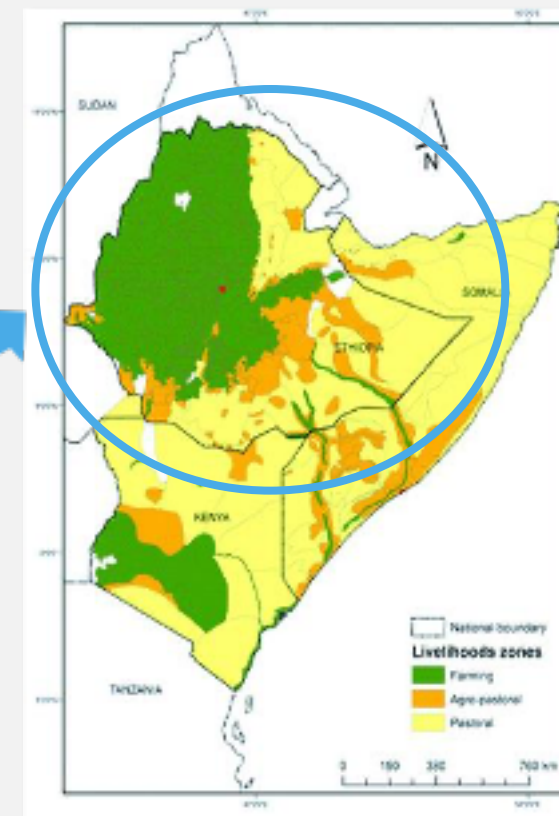


Despite a growing economy, food security and poverty alleviation are still top development priorities for the GOE. Within the agriculture sector, low levels of agricultural technology and access to financial services are key focus areas. Lack of diversified livelihoods, population growth and fragmentation of farmlands are also critical



70% of the population keep livestock, equivalent to **14M** households, who are poorer than the average²:

- The country is mainly divided in **two areas** according to the **physiography**, which correspond to two **different farming strategies**:
 - the plateau regions or **highlands**, where the weather is temperate, the population density is higher, and mixed crop and livestock **farming prevails**
 - the **lowlands regions**, where the weather is hot, the population density is lower, and **pastoralism** prevails. Represent 60% of the national land surface³
- Commercial** or specialized farming remains **rare**
- Plateau regions around the middle of the country have highest density of livestock. Consequently, **these regions have more market access as well as increased access to AH products and services.**



- However, **most holdings per person are present in the Somali and Eastern part of the country**. They are also more arid regions, where **livestock has higher financial value than crops**.

Mixed farming and pastoralism: 2 primary livelihood strategies pursued by livestock-keeping Ethiopians (2/3)

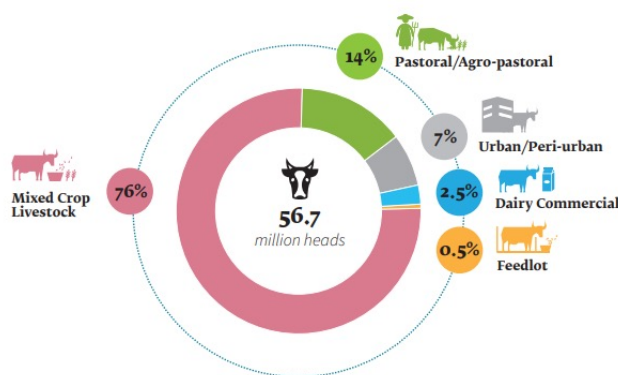
Pastoralists: livelihoods predominantly depend on livestock production

- **Subsistence-oriented**
- Although considered a minority population, pastoralists remain the **major supplier** for both formal and informal live animal and meat **exports** and one of the main suppliers for the domestic market*.
- They are a **central pillar** for success in Ethiopia's livestock sector. With improved roads and communications, their relevance seems likely to increase.¹



Mixed crop and livestock farming: priority given to crops and small herd sizes

- **Subsistence-oriented**
- Are divided in **two zones**: the ones that are **rainfall deficient** (43% of land) and the others that are **rainfall sufficient** (57% of land)⁴
- The typical **herd is small**, and is made of **3 cattle**, **3 goats/sheep** and **few chickens**.
- **10%** of feeds come from **crop residues**



Sources: [FAO](#)

The prominence of cattle in Ethiopian livelihoods: Out of the **14MN households** keeping livestock, more than **12MN** own at least **one cattle**, contributing from **31 to 48%** to total household income. Cattle contributes to about **80%** of the livestock **value added** and cattle products to **80%** of all **meat and milk** domestic consumption^{1 4}

Cattle as an illustration of Ethiopian farming systems

Mixed crop: cattle are primarily kept to supply **draft power** and for **milk production**. The average herd size is around 3 heads, typically of indigenous breeds.

Pastoral: Production and consumption of milk is a key rural livelihood strategy but its economic value is limited. They also sell excess young bulls to highlanders and feedlot operators. Typical herd comprises 10–20 indigenous cattle, though herds of over 200 heads are common.

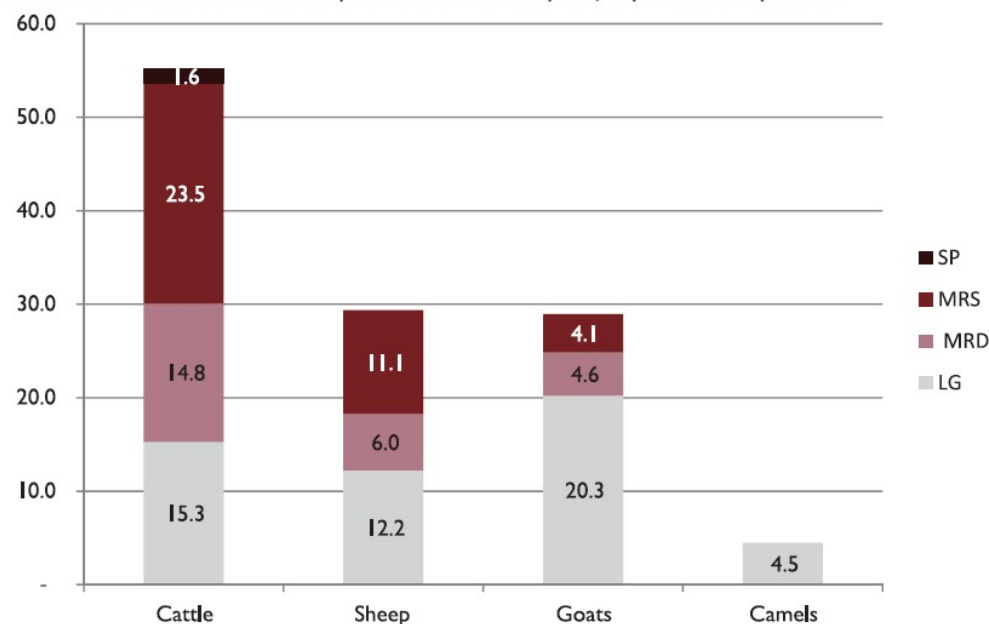
Commercial: centralized in the highland plateau, **dairy farms** herds vary between 30 and to above 100 heads, mainly consisting of exotic and high-grade animals. Regarding **feedlots**, there are more than 300 operating in Ethiopia, predominantly in East Shoa (Oromia). The average number of animals kept per batch varies between 100 and 1 500 heads, mainly consisting of the Borana native breed.

*Numbers vary importantly according to sources: Malabo considers pastoralists own 69% of Ethiopia's cattle³ and Future Agricultures assumes 40-50% of the cattle supplied to domestic markets originates from pastoralists²

Mixed farming and pastoralism: 2 primary livelihood strategies pursued by livestock-keeping Ethiopians (3/3)

Specialized farming is still an emergent sector

Figure 3: The distribution of the Ethiopian livestock herd by major production systems.



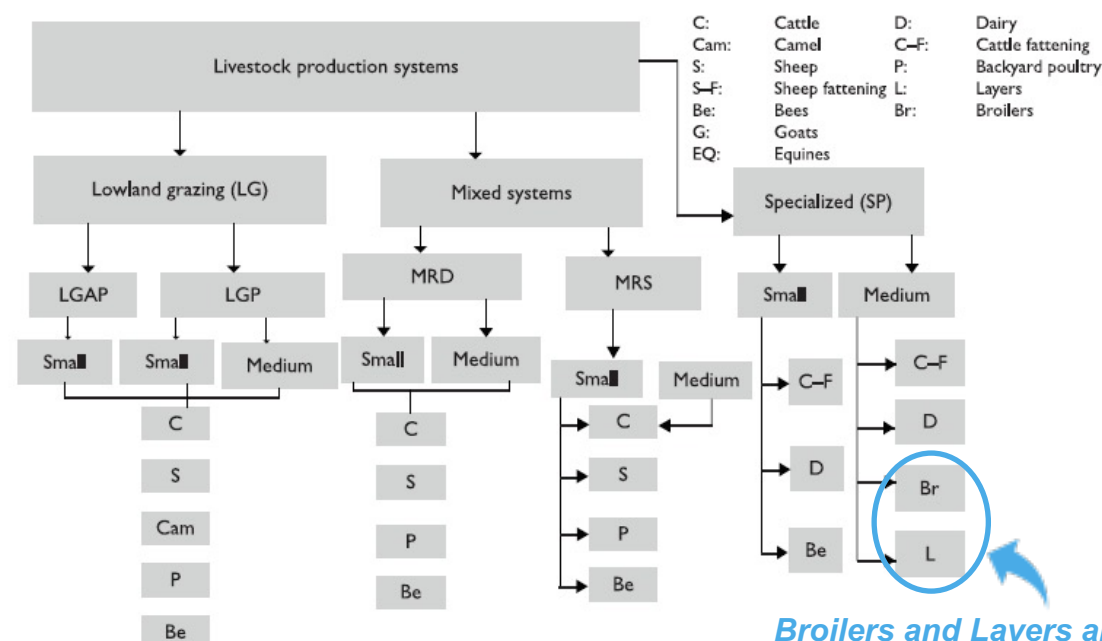
Source: Adapted from CSA surveys and experts' opinion.

Legend:

- **LG:** Lowland Grazing, is principally practiced by pastoralists
- **MRD:** Mixed Rainfall Deficient
- **MRS:** Mixed Rainfall Sufficient
- **SP:** Specialized Production (commercial or intensive farming)

Specialized farming is concentrated on poultry and cattle

Figure 2: Typology of production systems and subsystems in Ethiopia.



Broilers and Layers are increasing exponentially:

- 406k heads in 2017
- One actor with 20M heads in 2020 (EthioChicken)

Sources: LMP 2015

Livestock in Ethiopian culture (1/2)



With 70% of households involved, livestock has a large cultural influence across the more than 80 ethnic and religious groups. Ethiopia is unique in the region: never having been colonized, without a common national language, and transitioning from communism, and this uniqueness extends to the livestock ecosystem.



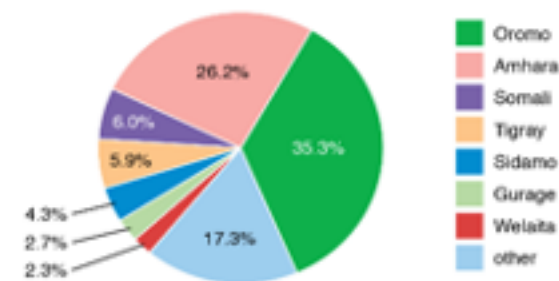
Eating habits¹

- Ethiopian Orthodox Christians and Tewahedo Christian, who represent 50-60% of the population **abstain from meat and dairy products consumption on Wednesdays and Fridays and during 40 days during Easter**
- **Chicken is reserved for celebrations.** Thus, it is very little consumed, which explains the low broiler production. A poultry association has been created and is trying to change Ethiopian eating habits, presenting chicken consumption as a solution to demographic growth.

“ I consulted the Ethiopian Poultry Association to see how we could change the eating habits of Ethiopians and get them to eat more chicken. We also need to learn how to cook it quickly. ”

- Importer of poultry-related AH products

Ethnic composition (2012)



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The country has **more than 80 ethnic groups**, and as many languages. However, in recent years, ethnic confrontations have taken place and could slow down economic development of the the country.

- Amharic, Oromo, Somali and Tigrinya are the **four mostly spoken languages** in Ethiopia and make up about three-quarters of Ethiopia's population.
- Regarding livestock, **traditional medicinal practices are no longer widely practised.**

Livestock in Ethiopian culture (2/2)



Gender dynamics

- A typical **small family farm** in Ethiopia consists of 5 persons and is **predominantly male-headed**, **only 21% of the farms are feminized**³
- Women are usually responsible for **feeding** animals, **cleaning** barns, **milking** dairy cattle and **marketing** livestock products (children usually assist by managing poultry and small ruminants)
- **Women livestock keepers usually own more poultry and small ruminants**, and the poverty incidence is greater for small livestock.



Companion animals²

- **Companion pets are rare** and mostly present in urban areas.
- There are 300,000 dogs of which 200,000 are stray. Most dogs are culled with poisoned meat to reduce the impact of the zoonotic disease whilst vaccination and spaying are rare.



- Ethiopia has **its own solar calendar** (currently 2013). There is a gap of 7-8 years between Ethiopian and Gregorian calendars.
- Traditionally in Ethiopia, **hours are counted from 6 a.m. onwards** (ie: 3 p.m. in solar time is 9 a.m.)

1. Executive Summary
2. Context
- 3. Animal health overview**
4. Enabling environment for animal health sector
5. Animal health market structure
6. Appendix



Significant unmet demand is fuelling the emergence of the private AH sector despite a challenging operating environment

SUMMARY

“ *The contribution of the livestock sector to the national economy is currently small compared to its potential. One of the main causes of the mismatch between herd population size and production output from livestock in Ethiopia is undoubtedly the **widespread occurrence of a multitude of infectious and parasitic diseases, causing morbidity, mortality and market restrictions**, which drastically reduce animal production.* Livestock Master Plan¹ 2015 ”

- There is significant unmet demand for AH products and services
 - Some products see triple digit margins at times when sold by retailers
- Growth of the AH sector is constrained by the enabling environment with importation and FX as primary challenges for AH (and all) businesses
- AH services are still almost entirely provided by the government
 - But this provision does not meet demand
- There is growing awareness, policy change and some action to open up the sector to private players
 - Veterinary drug importation has been liberalized
 - Investment law now allows private veterinary practices and AH retail



Image source: Archipel&Co

“ ***A month from now, this [AH product] will sell like cocaine*** ”

- Rural vet & AH retailer

Overview of the Animal Health situation



The lack of investment in the sector is leading to important rates of livestock mortality and morbidity, contributing to economic losses, poverty and food insecurity.

Annual animal losses due to mortality¹



8-10%



56.9%



12-14%



11-13%

Young stock mortalities constitute the larger share of constraints to herd expansion and genetic improvement

60% of human diseases are of animal origin²

Main zoonotic diseases are: rabies, echinococcosis, anthrax, brucellosis, and leptospirosis³

Disease surveillance and reporting is poor and irregular

Only 30-35% of woredas submit disease outbreak reports each month; below 5% for pastoral and agropastoral areas²

Priority diseases by species established according to three factors

- The Ethiopian Livestock Sector Investment and Policy Toolkit elaborated a **priority list of animal diseases** to inform decision-makers on the most appropriate allocation of resources to combat the priority diseases across species.
- They are ranked based on their impact on: **(1) on households and livelihoods**, **(2) on the market and value chain**, and **(3) on intensification pathways** in the production system.
- Across species, the priority diseases identified are FMD, PPR, tsetse-borne trypanosomosis, SGP, CBPP and external parasites (Ekek).¹



FMD, CBPP and brucellosis



PPR, SGP and CCPP

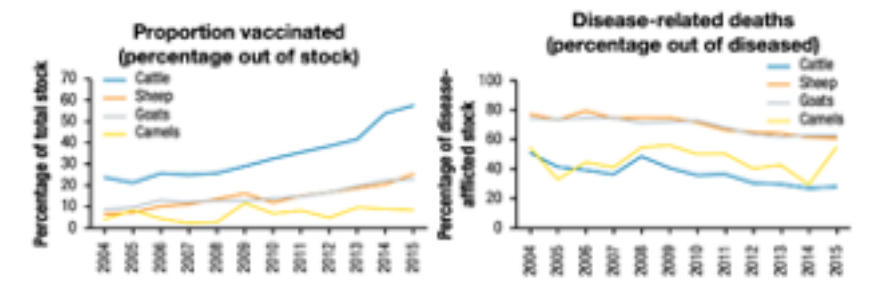


Newcastle



Surra

FIGURE 5.8 Proportion of livestock vaccinated and disease-related deaths, 2004/2005–2015/2016 (%)



Source: Authors' computation using CSA data (Ethiopia, CSA 2005–2016).

[More data on animal diseases](#)

Source: 1. LMP 2013, 2. LMP 2015, 3. FAO/USAID, Figure: [IFPRI 2020](#)

Current animal health market represents both **barriers and opportunities to the development** of the livestock sector

Challenges

30% of the animal population and 45% of the territory is served AH services (public and private)

- Field services are constrained by lack of **input supply**, high **operational costs** and **transport** limitations.¹

AH products are primarily accessed through the public sector, not sufficient to meet demand

- NVI** produces most vaccines, but some essential vaccines are not produced or are not produced in sufficient quantity and quality.¹
- "We had to prove the need [via private labs] and get exceptional permission to import an FMD vaccine for our herd"* – Commercial Dairy Farm Vet

Impact on export revenues

- Despite substantial demand for Ethiopian meat and livestock from other countries, exports often face impediments as a result of **stringent AH requirements** and trade bans.
- Example: loss of **132M USD in added value** and **36% fall of GDP** was estimated in the **Somali region** due to a trade ban imposed as a result of the outbreak of RVF in 2000.²

Opportunities

Significant productivity gains are possible with improved AH products & services

Kenya/Ethiopia comparison for cattle¹:



Country	Cattle population (million)	Beef prod./ head (kg)	Milk prod./ head (kg)
Ethiopia	55,2	14,6	13,7
Kenya	19	21,6	194,7

Large savings possible with preventive approach to animal health

Example: **4.65BN USD** is the total cattle and human health cost of brucellosis, bovine tuberculosis, salmonellosis and anthrax amounts to **24.2% of the livestock value added**

Maturing veterinary profession with opportunity for stronger regulation

- Lack of autonomous statutory body** to regulate the veterinary profession.
- Growing number of vet schools (from 1 to 15 in ten years) could indicate unmet demand but comes with the risk of deteriorating the profession standards¹.

Livestock production is heavily dependent on **climate change**



Ethiopia is among the countries most vulnerable to climate risks in Africa and is often (and more and more regularly) impacted by extreme climate events. Climate challenges also translate into metabolic changes such as reduced feed intake as well as increased requirements for maintenance energy that in turn increase GHG emissions.

Approx. 75% of livestock deaths in the Horn of Africa are caused by severe drought¹

- “The main causes of livestock deaths in Ethiopia are shortages of water and food during drought”⁴ –IFAD

The **southern lowlands of Ethiopia** are among the country’s vulnerable regions due to the impacts of climate change. **Pastoral communities** are the major victims of these disaster risks²

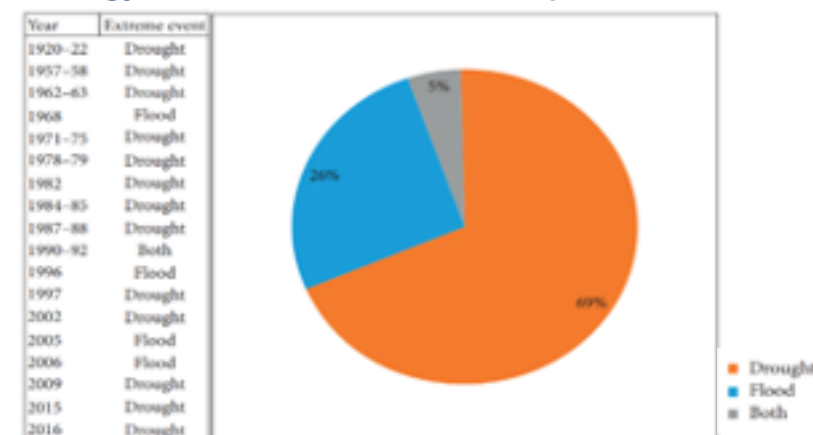
- Introduction of early-warning systems has made pastoralist communities more resilient to a changing climate³

Changes in rainfall and warmer temperatures may also **increase the geographical distribution and survival of vectors** like flies and mosquitoes that transmit infectious diseases to livestock⁴

Better access to AH products is expected to lead to **improved livestock productivity**, reducing livestock GHG emissions and making more efficient use of resources (e.g., water)

- In 2013, **31%** of the agriculture sector’s emissions resulted from livestock, which is approximately equivalent to **57 Mt CO₂e**. The share of livestock emissions is **projected to rise to 45% by 2030**.

Chronology of extreme events of Ethiopia 1920-2016



Main livestock-related actions identified by national strategies to reduce emissions⁵:

- Increasing the **share of chicken** in Ethiopia’s protein mix
- **Efficiency increases of the cattle value chain** (productivity of cattle for both meat and milk, improving the market infrastructure, health facilities)

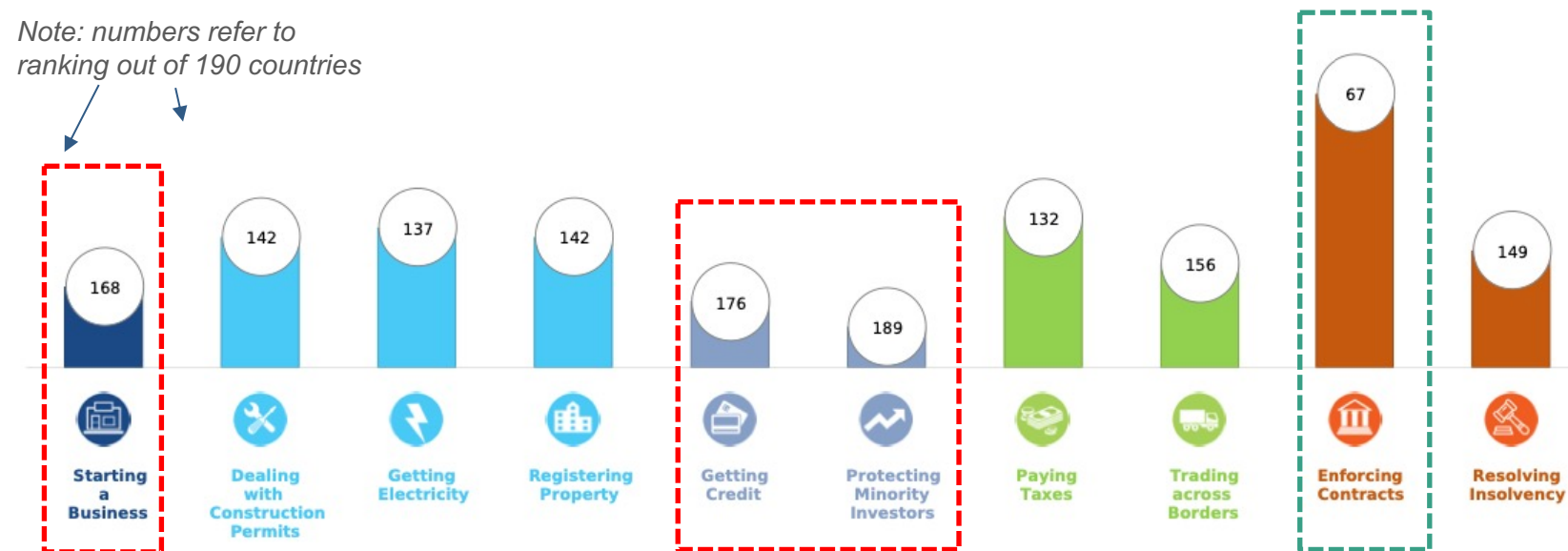
1. Executive Summary
2. Context
3. Animal health overview
4. Enabling environment for animal health sector
 - a. Doing Business in Ethiopia
 - b. AH regulation and national strategies
5. Animal health market structure
6. Appendix



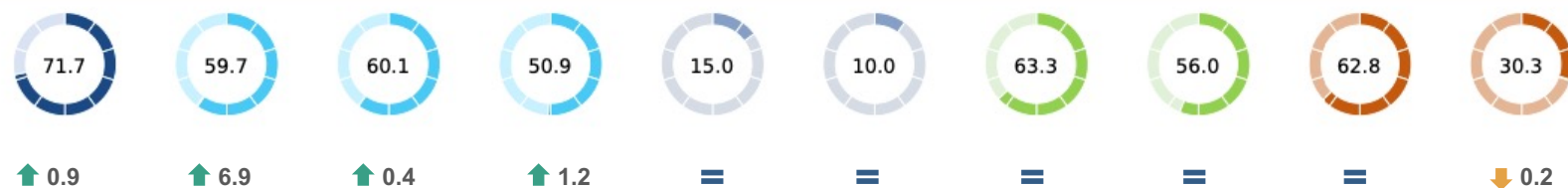
Ethiopia ranks 29th in SSA in the **Doing Business index** & 42nd in terms of ease of getting credit (1 of 2)

- The **World Bank Doing Business (DB) index** measures the regulations applying to small and medium-size companies in the country
- In 2020, Ethiopia ranks **159th worldwide** in the DB ranking (out of 190). No improvement in ranking since 2015.
- Country ranks **29th in SSA** (out of 48 countries), below Guinea (156th globally) and above Comoros (160th globally)
- Score has marginally improved from 43.8 in 2016 to **48 in 2020** (+0.9 from 2019). It has averaged **46.6** between 2010-2020.
- See Appendix for more details.

Note: numbers refer to ranking out of 190 countries



Topic Scores



Change
from
2019

Ethiopia ranks 29th in SSA in the **Doing Business index** and 42nd in terms of ease of getting credit (2 of 2)

	Enabling the Business of Agriculture	SCORE (0-100)	46.12
	Sustaining livestock	SCORE (0-100)	46.67
	Quality of manufactured feed index (0-5)		3
	Quality of veterinary medicinal products index (0-6)		2

- The **World Bank Enabling the Business of Agriculture (EBA)** assesses whether governments make it easier or harder for farmers to operate their businesses.
- Among its 8 indicators, the **Sustaining livestock indicator** measures **regulations** affecting domestic farmers' access to safe, high-quality and affordable livestock farming inputs for animal nutrition and health.
- Ethiopia ranks **eight across Sub-Saharan African** countries in terms of the Sustaining Livestock score (46.67), below Ghana (55), same as Zimbabwe (46.67), and above Cameroon, Senegal and Tanzania (all three scoring 45).
- See [Appendix](#) for more details.

Access to financial services – Access to credit is a key barrier for SSPs & access to forex is critical for input suppliers



AH actors in the private sector are extremely focused on and creative with a variety of solutions to the core challenge of foreign exchange, securing letters of credit and ensuring profits can be exported.



ACCESS TO FINANCE

- Ethiopia is critically **under-banked**: only 1% of rural HHs have bank accounts⁴
- Business is constrained by **poor access to finance**.
- **Difficulty in obtaining foreign exchange** is a major obstacle for businesses operating in any sector that relies on imports.
- **Coffee** is the primary export and source of foreign exchange.
- **MFIs, cooperatives and NGO** credit schemes are the most common sources of finance among SSPs.
- **Cooperatives** often provide agricultural inputs and create market linkage for SSPs.
- For SSPs, financial institutions have focused on **peer lending** but this has yet to unlock the necessary capital for investment.
- Market-based input suppliers suffer from **lack of capital for investment in efficiency and quality** but...
- ...Benefit from **limited competition and unmet demand**.



LIVESTOCK INSURANCE

- There is **no significant livestock insurance system** in Ethiopia.
- Outside livestock, HHs have **various risk-mitigating strategies**, including schemes from informal financial market. E.g. *Iddirs* are associations that payout in cash and in kind at the time of the funeral of a deceased relative of a group member.
- ILRI spearheaded the deployment of an **Index Based Livestock Insurance (IBLI) pilot** in 2012. Uptake has accelerated since 2017 and the model has shown a positive effect on the loan uptake behaviour of the herding households
- As we see in all markets, **lack of knowledge** on insurance products is one of the greatest barriers to insurance sales.
- SSP confidence in the insurance actually paying out as promised driven by **personal experience and testimonials from other SSPs** proved critical for uptake in the IBLI pilot.

Market access & extension – Focus is shifting from crop-only to include livestock, but access is still insufficient and reliant on NGOs



Both livestock market access and extension services in Ethiopia are very limited and have historically focused on crops. NGOs and development agencies play an important role in the provision of these services for livestock, although animal health coverage is still nascent.



ACCESS TO LIVESTOCK MARKET DATA

- Market and **pricing information** is **difficult and often impossible** to find, leaving the producer at a distinct disadvantage when negotiating a price at the local market.
- **Ethiopia Livestock market information system (ELMIS)** was developed in 2005 to collect data from 47 markets but only **sporadic data collection** occurs in some markets and widescale communication of market prices is not happening.
- For AH data, **establishing a robust animal health information system** is one of seven objectives for livestock health strategy outlined in GTP II by the LMP.
- The development of market information systems is tightly linked to the advancement of **ICT infrastructure**.



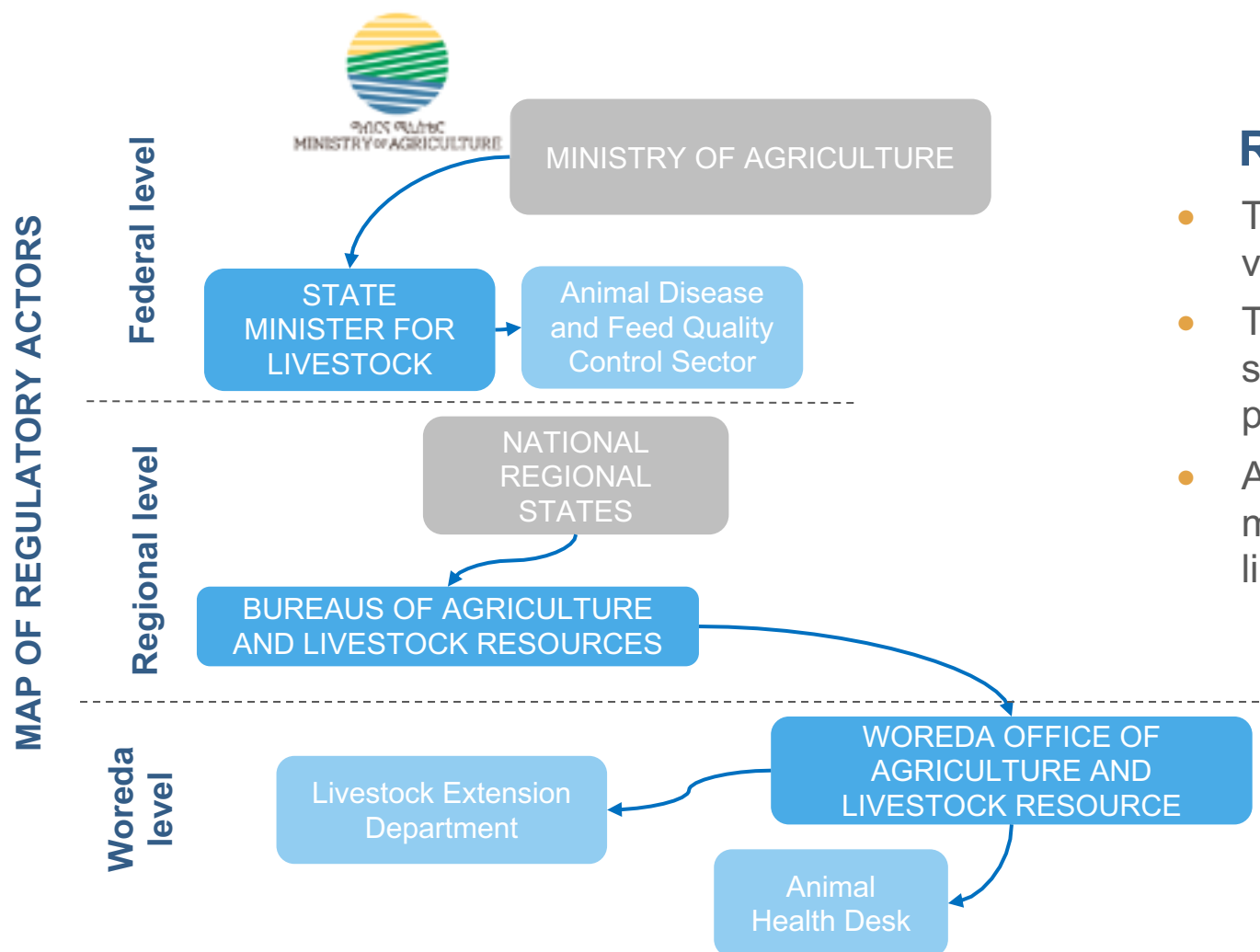
TRAINING & EXTENSION SERVICES

- Widespread recognition that the livestock sector needs **better and more extension support** though provision lags.
- According to the MoA, there are **21 development agents (DAs)** for every 10,000 farmers, with more located in the high-growth areas. Most DAs are **focused on crop extension**.
- In some areas **CAHWs** support the veterinary service.
- **International donors, NGOs and CBOs** support or implement development programs that include livestock extension activities (eg: SNV GRAD 2012-2016 and GRAD II 2016-2021 projects⁴)
- **Neither processors nor input supply companies** provide technical education services in dairy production (e.g. feeding, genetics and animal health).
- Although **veterinary service** is provided by the **government extension**, majority of urban and peri-urban farms get the service privately on a regular basis.
- **Vaccination** is largely delivered by government extension.

1. Executive Summary
2. Context
3. Animal health overview
- 4. Enabling environment for animal health sector**
 - a. Doing Business in Ethiopia
 - b. AH regulation and national strategies
5. Animal health market structure
6. Appendix



Regulation overview – Regulatory actors organized by administrative levels and currently under restructure (1/2)



REGULATORY KEY TAKEAWAYS

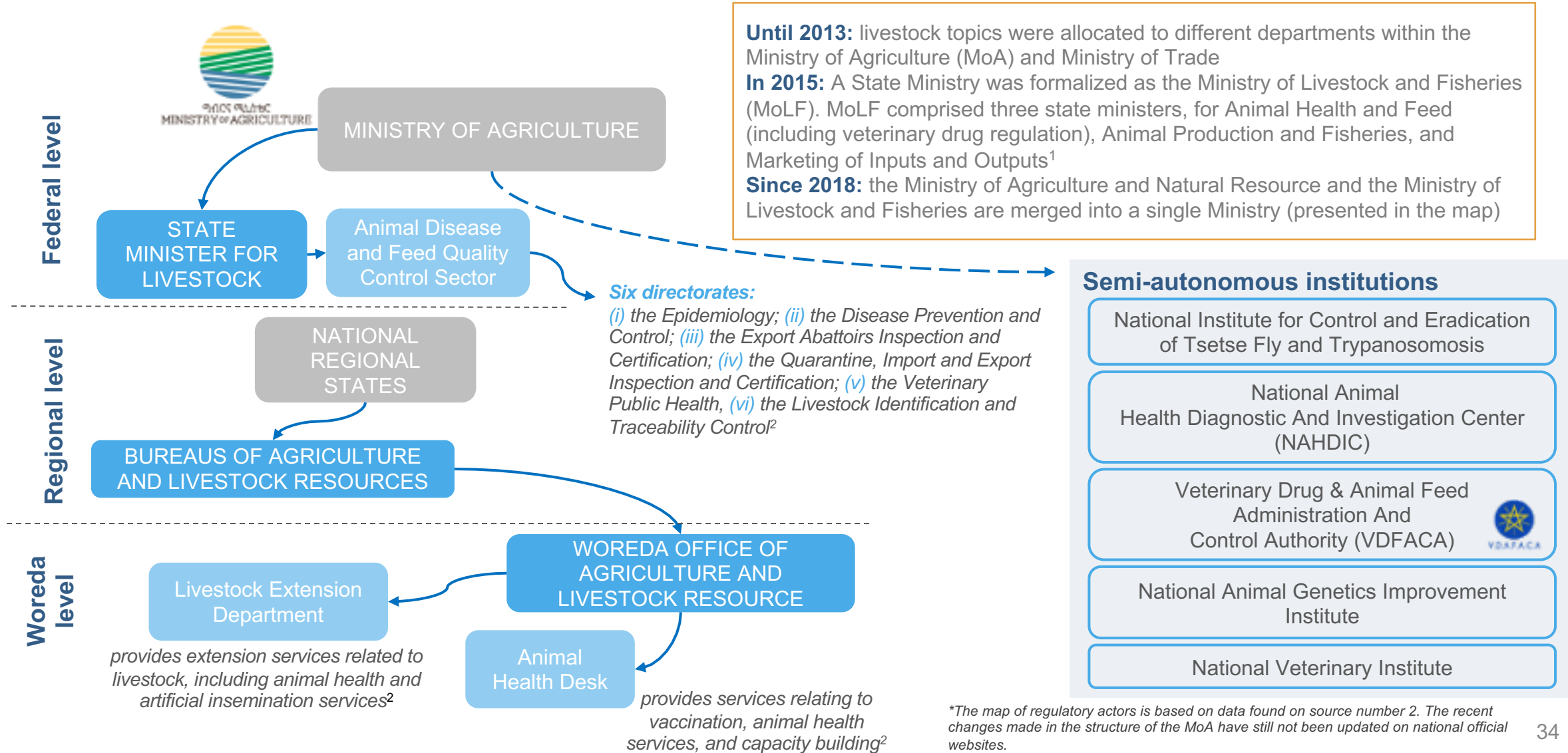
- The government and regulatory bodies remain very powerful in the Ethiopian AH sector
- There is a clear trend towards supporting private sector provision and “opening up” the market as a policy direction clear
- Action and demonstrable change is slower than many private sector AH actors in Ethiopia would like; a clear policy/action gap

**The map of regulatory actors is based on data found on source number 2. The recent changes made in the structure of the MoA have still not been updated on national official websites.*

Source: 1. [Malabo Montpellier](#) 2. [Journal of Veterinary Medicine and Animal Health](#)

Regulation overview – Regulatory actors organized by administrative levels and currently under restructure (2/2)

MAP OF REGULATORY ACTORS



The Livestock Masterplan (LMP) – The main strategy pursued by the government for the development of the sector



The Ethiopian Livestock Master Plan was released in 2015 as a contribution to the national Growth and Transformation Plan II. It is a comprehensive outline of the current situation of the livestock sector and investment, strategy and policy interventions that can improve livestock health and production by 2028.

Objective: The LMP sets out investment interventions—better genetics, feed and health services, which, together with complementary policy support—could help meet the GTP II targets by improving productivity and total production in the key livestock value chains for poultry, red meat-milk, and crossbred dairy cows

Targets: Reduce Poverty, Climate mitigation, Food security, National Income Growth, Forex earnings.

Period of implementation: 15 years

LMP value chain intervention for three key sector analysis areas²

Dairy cows

- Improved family dairy in moisture sufficient areas

- Specialized dairy production

Red meat (and milk) from cattle, sheep, goats and camels

- Improved traditional red meat-

milk in all production zones

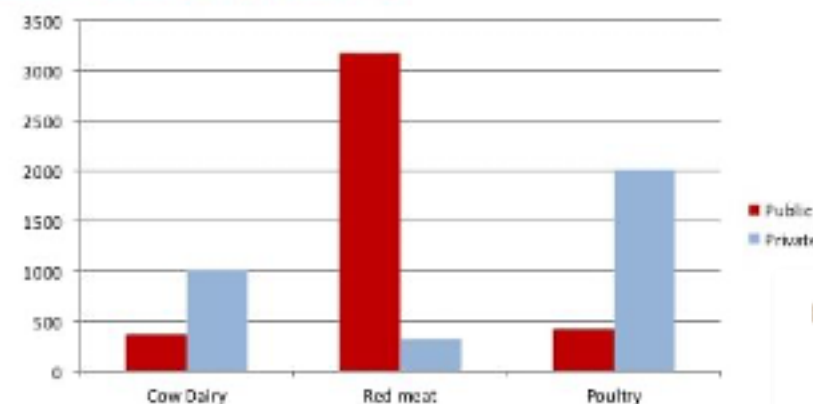
- Specialized beef cattle feedlots

Poultry

- Improved family poultry in all production zones

- Specialized poultry – broilers and layers

Public and private investment needed in major value chains to achieve the livestock master plan (ETB Millions)



“ Weak enforcement of regulations on the ground is one of the main challenges of the sector. ”

- Edmealem Shitaye, EVA President



Livestock and AH are addressed in national strategies in view of their economic importance



NDPs in the 2000s —the Plan for Accelerated and Sustained Development to End Poverty 2005–2010 (PASDEP), Growth and Transformation Plan I 2010–2015 (GTP I) and II 2015–2020 (GTP II) — **all promoted the provision of veterinary services, access to water resources (water points), enhancing extension services, and improving access to markets for live animals and livestock products, and placed agriculture and livestock at the centre of these national strategies**¹

- To meet the long-term economic goals of poverty eradication and transitioning into a middle-income country by 2025, national development plans (NDPs) have **emphasized export-led growth to drive rural development and transformation**.
- Ethiopia's NDPs have steered progress in the livestock sector through **improved extension and financial support, liberalization of markets, and a more supportive macroeconomic framework**.



- There are also **various sectorial strategies and policies** within the livestock sector, such as “Live Animals Marketing” policy, “Regulation for Registrating Veterinary Drugs, Biological Products and Animal Feed”, “Agriculture Sector Policy and Investment Framework (ASPIF 2010–2020)” and others available [on this link](#)³

« Ethiopia: An African Beacon of Prosperity »

The GoE has unveiled **its new, 10 year development plan** in June 2020. it is based on five pillars, one of which aims to ensure private sector-led growth.²

1. Executive Summary
2. Context
3. Animal health overview
4. Enabling environment for animal health sector
- 5. Animal health market structure**
 - a. Ecosystem map
 - b. Ecosystem actor analysis
 - c. Product flow by product type
 - d. Innovation landscape
6. Appendix



Ecosystem map

Objective:

- Represent the interactions between the different categories of actors in the Ethiopian AH ecosystem
- Provide a list of organisations for each category, with a link to their webpage (if available)

Methodology:

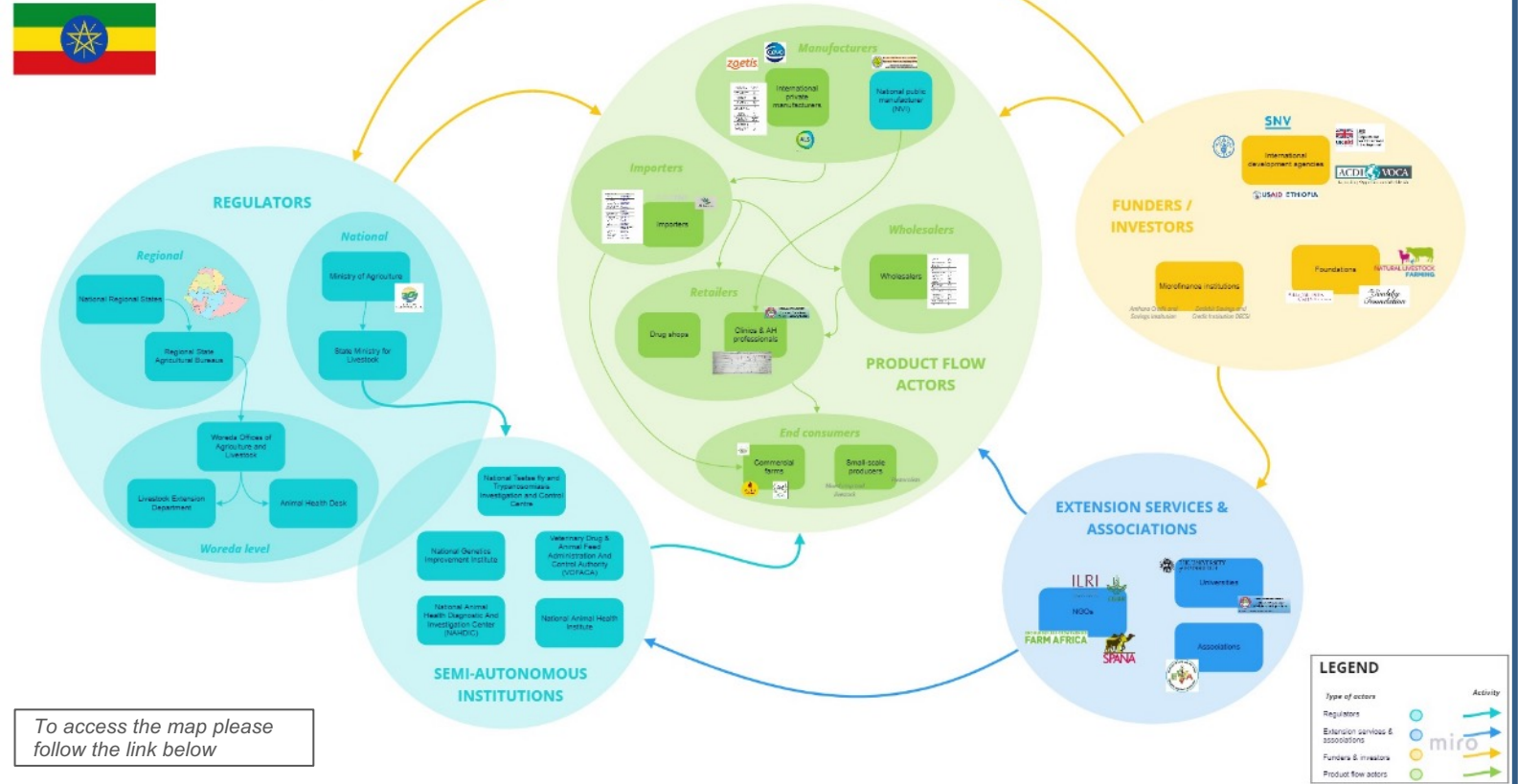
- The map has been constructed following a series of interviews with representatives from the different categories in the ecosystem and parallel desk-based research
- While the map of organisations aims to be as comprehensive as possible, the list is not exhaustive

How to access the mind map?

Visualization available on this link: [AH Ecosystem – Ethiopia](#)

*There is no need to download a program or app and websites or documents are available by clicking on them

Ethiopian Animal Health Ecosystem Map



Legend

- Regulators and regulating activities
- Product chain actors and product flow
- Extension services and association
- Funders and financial flows

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Manufacturers – An emerging market with high potential, hindered by entry barriers due to regulatory framework*



While NVI still plays an important role, the recent opening of the country to the private sector, the absence of local manufacturers and the difficulty for public authorities to meet the demand requirements are attracting increasing numbers of Western and Asian manufacturers (*mainly generics*) to the national market. However, these companies are confronted to the structural difficulties of making business in the country.

Opportunities

1. Ethiopia is the country with more livestock in the continent and the AH products **demand is far from being met**. These numbers and demand will keep growing, in accordance with the national demographic growth
2. **High demand** allows to sell with attractive margins
3. The **institutional framework** is **getting stronger** and giving opportunities for the private sector
4. The growing number of registered **importers** (from 25 in 2014 to 80 in 2019)¹
5. The low but growing number of **commercial farms**, notably in the **poultry** sector

Challenges

1. Importers have serious difficulties to rapidly obtaining **foreign currency** to import products, due to national imports and exports regulations
2. Despite improvements, **administrative processes** are still a barrier to entry
3. The **lack of AH awareness** by farmers and large presence of cheap, inconsistent quality AH products
4. **Deficient infrastructure** conditions (electricity, roads,...) make it difficult to access certain regions, particularly for vaccines.

* BMGF is sponsoring other studies and development of tools aiming to estimate the AH market potential

Sources: 1. VDFACA

Manufacturers – Overview

GEOGRAPHIC COVERAGE CENTRALISED AROUND ADDIS



- There are **no private local manufacturers** in Ethiopia.
- The National Veterinary Institute (NVI) is based in Bishoftu, near Addis Ababa.
- The **economic centralization** of the country reinforces the importance of distributors and wholesalers in order to reach all regions of the country.

ONE MAIN REGULATORY BODY



- The **Veterinary Drug and Feed Administration and Control Authority (VDFACA)** is the main institutional actor,
- Established in 2011, VDFACA grants **licenses for AH manufacturers, importers and wholesalers**, providing each actor a clear, specific role in the market.

A LONG BUT IMPROVING PRODUCT REGISTRATION PROCESS



- VDFACA oversees the product registration process, which can take up to **2 to 3 years** and can require Good Manufacturing Practice (**GMP**) **inspections**
- Most manufacturers rely on **importers as applicants** for registrations. See [slide 88 in Appendix](#) for detailed process map on product registration and market authorization.
- It can be challenging to register products already produced by NVI and GoE must acknowledge presence of a disease in the country before registration.

AROUND 75% OF THE AH PRODUCTS ON THE MARKET ARE PROCURED THROUGH REGIONAL PUBLIC TENDERS



- The supply of animal health products has been historically managed by the public sector through **tenders** and NVI production.
- Asian manufacturers have been most successful at meeting the low prices of most tenders.
- Tenders **rarely include vaccines** and are still not enough to meet the demand.

REMAINING 25% PRODUCTS IN THE MARKET ARE PROCURED DIRECTLY BY NVI AND FROM INTERNATIONAL MANUFACTURERS



- The market share of International Manufacturers is **expected to grow** with demand.
- International Manufacturers sell their products through importers and, for vaccines, often market directly to commercial farms.

Manufacturers – Market share is largely controlled by international manufacturers selling generic drugs



Note:

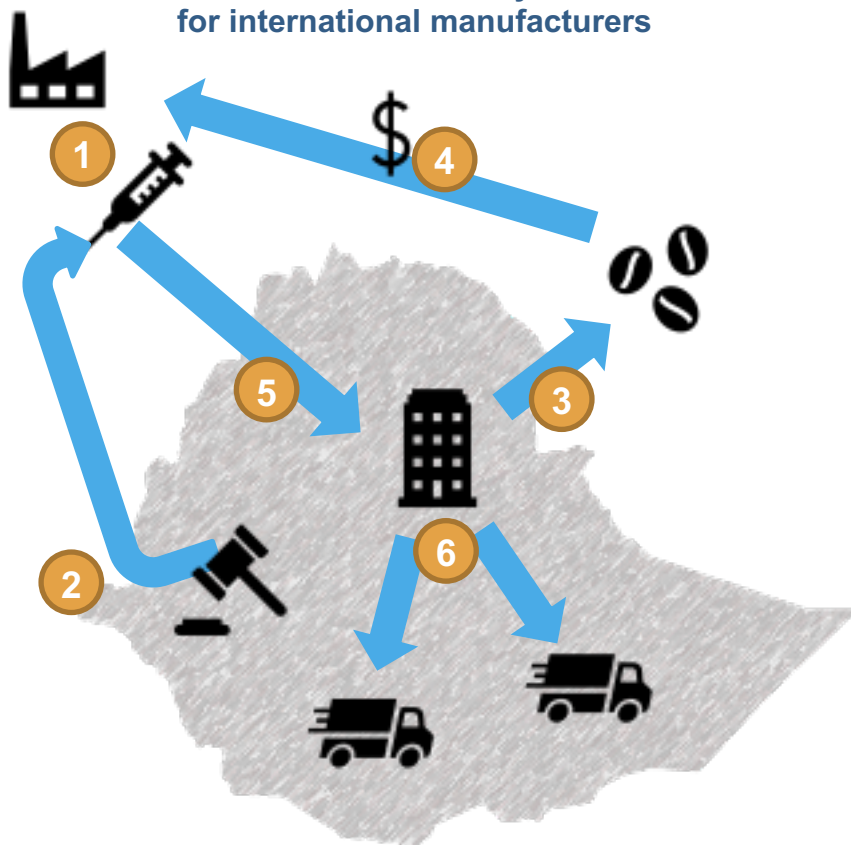
- The size of circles is an estimation of the market share of each actor
- The arrows indicate the trends of future revenues for each actor regarding the growing market

Manufacturers – Using importers is the single and more direct gateway to the market for the private sector



Given current regulations it is difficult to envisage private sector companies setting up their own manufacturing facilities or making an investment / acquisition to directly sell their products in Ethiopia. As a private manufacturer, the only way (other than through tenders) to enter the market is to export products through a registered importer who can access enough forex.

Common market entry model for international manufacturers



1

An international manufacturer produces an AH product and wants to sell it in the Ethiopian market.

2

The AH product gets registered by VDAFACA and is authorized to enter the Ethiopian market

- Product registration can take 2-3 years and most of the times it is done by the importers (see [slide 88 in Appendix](#) for details)
- Diagnostic kits also must be registered by VDFACA

3

If the national importer does not have enough forex available to pay for the AH product, it will need to export (any) product to obtain forex

- This can sometimes delay transactions with manufacturers

4

The importer purchases the AH product from the international manufacturer with foreign currency

- While in other markets international manufacturers often have one importer per category of product or animal, in Ethiopia *most of them only deal with one importer*

5

The AH product enters the market and arrives in Addis

- No other ecosystem actor (distributors, wholesalers, farms) will have a license to import

6

The AH product must be distributed to the rest of the country by a different company, as the importer cannot hold both licenses (importing + distribution)

- Generally wholesalers or large commercial farms, who have the appropriate license, will buy the products to the importers



- Asian manufacturers have been in the Ethiopian market the longest and, even if they follow a similar entry model, they often succeed when going through public tenders based on price
- NVI sells mainly to clinics or regional states agricultural bureaus

Manufacturers – Focus: National Veterinary Institute (NVI), a powerful parastatal vaccine manufacturer



Veterinary services in Ethiopia were first invested in through the establishment of the National Veterinary Institute (NVI) by the GoE in 1964. By 2020, NVI was producing 20 different vaccines for primarily domestic use and, in some categories, neither quality nor quantity have met market demand.



NVI represents a figure of the country's political and economic past for the AH sector. For many years, it was fully owned by the government and responsible for vaccine production to meet the national demand. Despite maintaining privileged access to the market, their role has evolved over the years:

- ▶ Established under the MoA, **NVI became a public enterprise** in the 90s, still under a strong influence of the GoE.
- ▶ To complement NVI's work, the Department of Veterinary Services at the MoA authorized the **construction of a second national laboratory (NAHDIC)** in 1995 focused on disease investigation.
- ▶ The **opening to the private sector removed NVI's monopoly**.
- ▶ They are regulated by VDFACA with **priority for registrations**.
- ▶ Generally, international manufacturers will not be able to register vaccines already produced by NVI.



Coverage and distribution

NVI has a **40-hectare site in Bishoftu**, Debre Zeit, 30min from Addis. From there, they **distribute their products directly** to the Regional State Agricultural Bureaus, livestock shops or public clinics. Customers can buy products directly at NVI's premises.

Current challenges for NVI

- **Demand is growing faster than NVI production.**
- NVI products are not always available, a major challenge for livestock keepers, especially when outbreaks occur
- NVI tests vaccines at -20C° in the lab before distribution. Challenges in cold chain transportation can generate **trust issues on product effectiveness among farmers**.
- Vaccines imported from **international manufacturers** are considered significantly **cheaper** than NVI's vaccines.

List of diseases covered by vaccines produced and commercialized by NVI

Camel:

- Camel pox

Pets:

- Rabies

Poultry:

- Fowl cholera
- Fowl pox

- Fowl typhoid
- IBD/gumboro
- Inactivated Newcastle
- Live Newcastle
- Newcastle thermostable

Ruminant & equine:

- AHS
- Anthrax
- Black Leg
- Bovine pasteurellosis
- CBPP
- CCPP
- FMD
- LSD
- Ovine pasteurellosis
- PPR
- SGP



Manufacturers – Examples

Ashish Life Science (ALS)



HQ in India



[Link to website](#)

One of the most present manufacturers in Ethiopia

- Penetrates the market through importers (principally DAT International) and answering to public tenders
- When VDFACA has punctual needs, they allocate temporary authorizations to some of their ALS' products



Image source: Archipel&Co.

Zoetis



HQ in Belgium



Operating locally through 3 employees



[Link to website](#)

Zoetis has **20 DX kits** and **20 products** registered in Ethiopia and has around **10 others** to come soon. It is one of the countries where they have more products registered.

“ We don't discuss pricing of products, we discuss quality of products. If we can get [product] into the country, the whole value chain knows the demand for quality AH products is there and that it'll sell. ”

- Andrew Terwin, Zoetis, Operations Lead Ethiopia



Have identified Ethiopia as a key and emerging market



Works with only one local importer and a local Zoetis team, who takes charge of product registration



Part of A.L.P.H.A program: sustainable livestock farming in Ethiopia



80% of their products on the Ethiopian market are poultry vaccines



Are exploring the dairy market

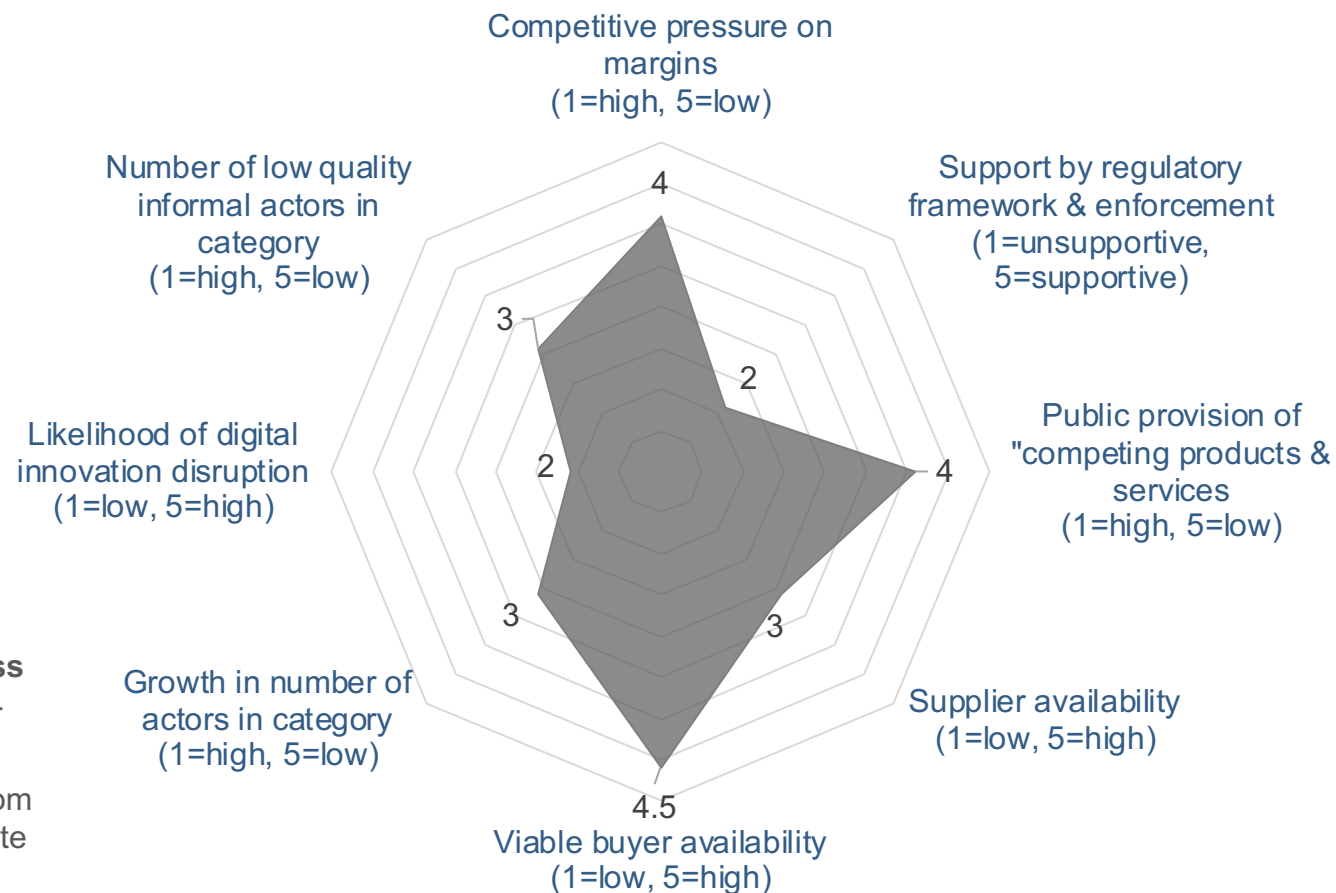
Manufacturers – Overall, Ethiopia represents a strategic market for AH product manufacturers, as the country continues to open up



Image source: A&Co

The graph shows an **overview of the AH market** from the **perspective of new entrants or innovators** considering to enter the market as manufacturers. It includes **ratings across 8 factors** and ratings have been determined from both desk-based and interviews carried out as part of this study.

How to interpret the graph? Each factor has been rated from 1 to 5. Higher ratings (i.e., the larger the colored area) indicate a more attractive market for new entrants. For example, a rating of 5 on “Competitive pressure on margin” should be read as a low competitive pressure. On the other hand, a rating of 5 in “Buyer availability” should be read as high buyer availability.



Importers – A critical actor for international manufacturers, has experiencing rapid growth despite trading difficulties due to forex



Importers are critical in the product chain for international products to enter the country. Due to restrictions in access to forex, Ethiopian importers generally work across several sectors beyond AH. The Ethiopian legislation does not allow importers to have their own distribution channels, thus they mainly rely on wholesalers to distribute their products*. The rising number of Ethiopian importers registered by VDFACA bodes well for the sector.

25 importers
registered by VDFACA in
2014



80 importers
registered by VDFACA in
2019



Even though no official confirmation was found within the framework of this study, mark-ups applied by importers seemed to be controlled by the GoE

Opportunities

1. The **rising number** of international **manufacturers**
2. An unsatisfied and **growing demand** for AH products makes it very easy to sell products and to apply attractive margins
3. The **presence of wholesalers** in the market since 2014, which allows importers to sell products more easily and in larger quantities

Challenges

1. Having **access to forex** to import larger volumes of products
2. Achieving new **products registrations** is administratively difficult
3. There is **no association** of importers that can lobby government authorities

Importers – Overview

GEOGRAPHIC COVERAGE CENTRALISED AROUND ADDIS



- Around **90% of importers have their headquarters in Addis**, even though some can be found in Tigray or Oromia regions. Products imported arrive directly by plane to the Addis Ababa Bole Airport Cargo.

ONE MAIN REGULATORY BODY



- For AH products, **VDFACA** regulates importers both for their license to operate and for the products they import. Importers must renew their license to operate yearly and obtain licenses or market authorizations for each product they wish to import.
- Importers require a **Trade License via the Ministry of Trade (MoT)** to operate.

MAJOR PLAYER IN THE REGISTRATION OF AH PRODUCTS



- Importers play a **key role in the registration** of AH products in Ethiopia, as they are responsible for the initial submission, provision of all required documentation to VDFACA. See [slide 88 in Appendix](#) for detailed process map on product registration and market authorization.

THE CHALLENGE OF ACCESSING FOREX



- Often highlighted as the **biggest challenge encountered by importers**, pushing them to follow a multisector approach to be able to import a variety of products (sometimes at unattractive prices) to be able to generate forex. (see slide [40](#) for details on importing process)

NON-EXCLUSIVE CONTRACTS WITH INTERNATIONAL MANUFACTURERS



- Importers deal with multiple manufacturers. Market fluctuations push them to increase the number of partnerships in order to ensure that they have a constant offer. Depending on the products they import they might focus on one type of customers (e.g.: AL Impex only deals with commercial farms) or species (e.g.: Puremix only imports poultry drugs).

TAXES APPLIED TO IMPORTS



- **A tax around 5% is applied to AH pharmaceuticals and biologicals.** This tax is relatively low but is higher than in other countries in the region (e.g.: Kenya has a 0% tax). AH equipment has no taxes applied when imported.

Importers – Market share is largely controlled by the government through public tenders

Market share of importers based on the totality of AH products present in the country

Government imports

- Around **75%** of AH products arriving in Ethiopia are through public tender purchase. These imports are managed directly by the States, without the need for intervention by private importers.
- However, it is estimated that the governmental offer **only covers 30% of the overall national demand** for AH products.

Legend :

- The size of circles is an estimation of the market share of each type of imports
- The arrows indicate the trends of future revenues for each actor regarding the growing market

Declining activity as the GoE opens to private sector

Private importers

Volume of business increasing

Local supply (NVI) without need of importers

Stable supply

- As market penetration of international manufacturers rises (through other channels other than public tenders), the market share of private importers is growing proportionally.
- This trend is confirmed by the growing number of players on the importer segment.

Main actors buying products from private importers

Wholesalers

Drug shops*

Farms

Even though it is financially more beneficial for end consumers to buy directly from importers, they need a specific license to buy their products

- Some commercial farms have the required license to buy directly to importers, but they still represent an emerging segment
- Some drug shops buy directly from importers if no distribution operations are handled by the importer. Yet, they often lack the financial ability to purchase in bulk.

Legend :

- The size of circles is an estimation of the purchasing amounts of each actor

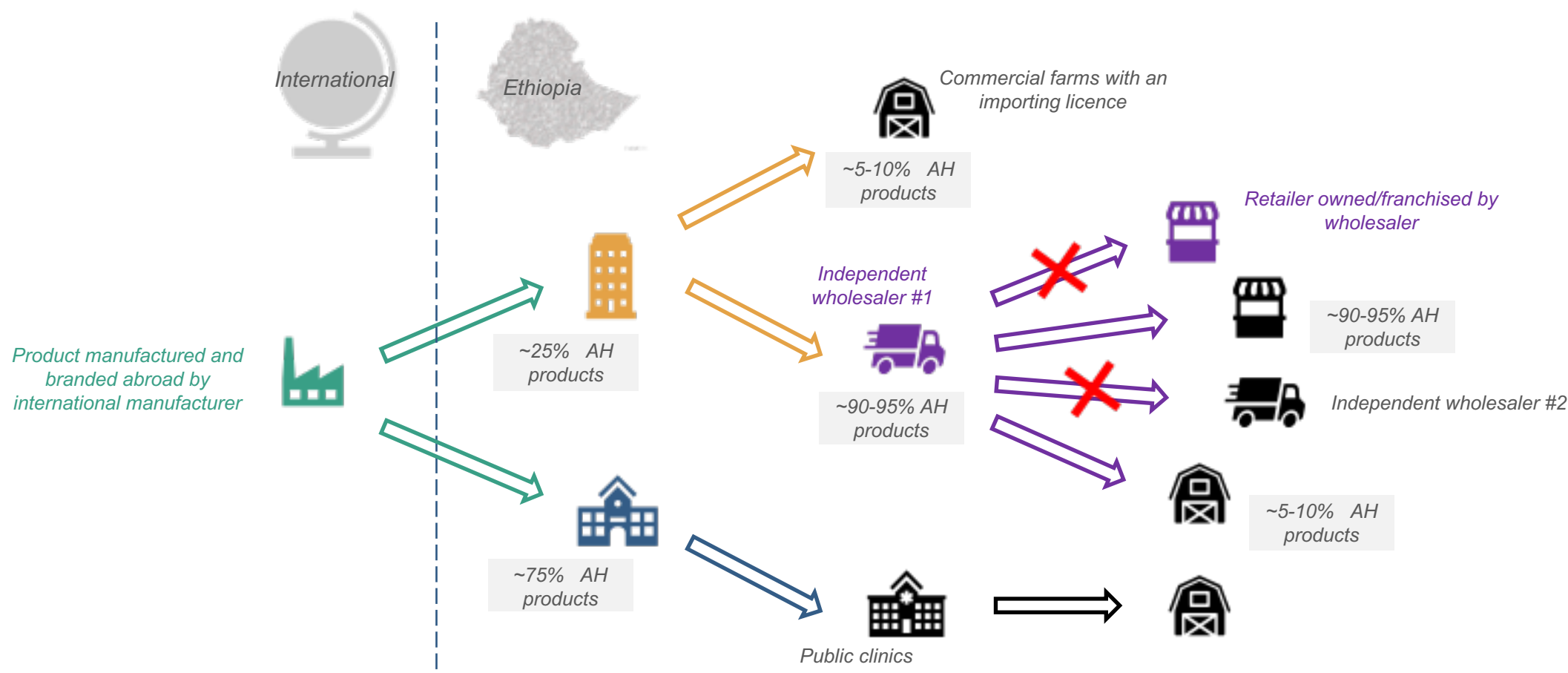


Image source: Archipel&Co

*In Ethiopia, "distributors" or "drug shops" are terms used for retailers, i.e. the last player before reaching the end consumer.

Sources: Questionnaire and interviews lead by Archipel&Co 2020

Importers – Diagram showing possibilities of product flow control by different actors



Importers – Examples

AL Impex Vet Drug Importer



Addis Ababa



Got its importer license in 2017



al-impex.com

- **Focus:** quality poultry AH products to sell directly to commercial farms
- **Main supplier:** Zoetis
- **Main customer:** Ethiochicken farm
- **Forex:** principally exports crops to be able to generate forex
- **Competition:** Asian players entering the market through tenders
- **Recent challenges:**
 - VDFACA rejected the registration for a Zoetis product he was trying to import
- **Point of innovation:**
 - Sells diagnostic kits with his products, for end consumers to make sure they are using the appropriate drug or vaccine when treating their animals



Puremix Trading



Addis Ababa



Got its importer license in 2017



puremixtrading.com

- **Focus:** multi-sector; feed premixes, generic and non-generic pharmaceuticals, vaccines and equipment
- **Main supplier:** Boehringer Ingelheim and Ashish Life Science but works with more than ten international manufacturers
- **Main customer:**
 - Large poultry farms and wholesalers
 - Feeds are principally sold to large commercial farms while drugs and biologicals to wholesalers and retailers
- **Forex tip:** exporting to the same country from where Puremix imports AH products allows to facilitate transactions, reduce costs and be more time efficient
- **Point of innovation:**
 - Sells thermostable vaccines for Newcastle Disease so that they can be used safely in remote areas
 - Part of the LastMile initiative*, aiming to raise AH awareness among SSPs and drug shops by implementing teams of paravets carrying out field visits



*Established by BI with support from GALVmed and funded by the BMGF, LastMile seeks to bridge current gaps in access, availability and awareness of AH solutions for small-scale producers in SSA. For more information, see [here](#).

Importers – Recent growth trends to continue fueled by a rising interest by international manufacturers in the Ethiopian AH market

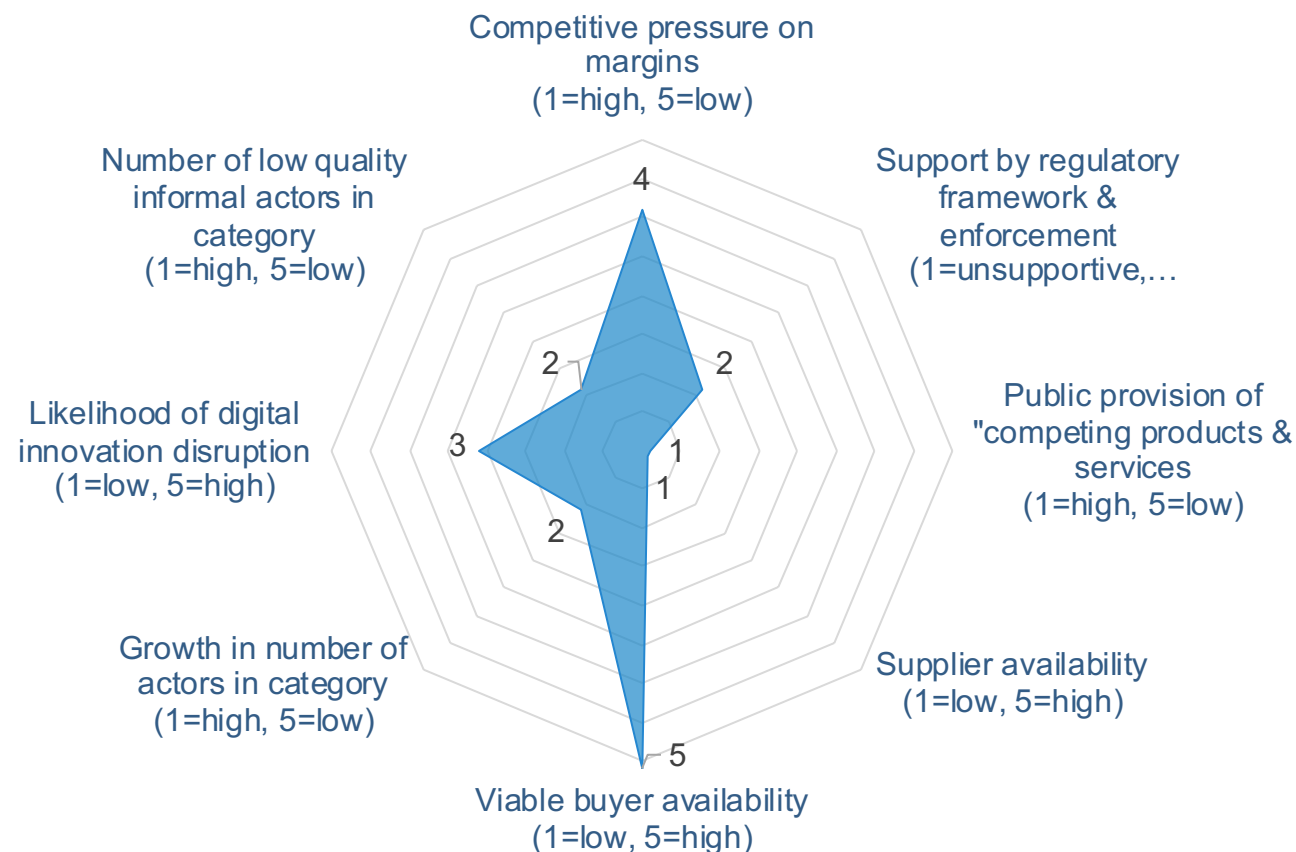


Products arriving to a wholesaler from an importer in Merkato, Addis Ababa

Image source: A&Co

The graph shows an **overview of the AH market** from the **perspective of new entrants or innovators** considering to enter the market as importers. It includes **ratings across 8 factors** and ratings have been determined from both desk-based and interviews carried out as part of this study.

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Wholesalers – An emerging player in the product chain, mirroring the on-going development of the Ethiopian AH private sector



Until recently importers had to deal directly with drug shops (*retailers*)*, but the increasing number of AH products getting into the market through different channels (other than public tenders) has favoured the emergence a new player in the product chain: wholesalers. These actors, who play the role of distributors*, are fairly widespread geographically. They differ from importers in that they do not have a licence to import, and from drug shops in that they cannot sell to end consumers.

2 wholesalers
registered by VDFACA in
2014



85 wholesalers
registered by VDFACA in
2019



Even though no official confirmation was found within the framework of this study, mark-ups applied by wholesalers seemed to be controlled by the GoE

Opportunities

1. The activity of wholesalers is now regulated, allowing them to play a key role in the product chain
2. **Little private competition**: 85 wholesalers registered in the country
3. A growing number of **drug shops**: a good signal for increasing demand trends to persist

Challenges

1. Dependency on **importers** being able to supply required quantities
2. Lack of **AH awareness** among end customers (farmers)
3. Deficient **infrastructure** conditions (electricity, roads,...) make it difficult to access remote regions

Wholesalers – Overview

GEOGRAPHIC COVERAGE
PRINCIPALLY FOCUSED ON THE
VERTICAL AXIS OF THE COUNTRY
(HIGHLANDS)



- While **47% (40)** of the wholesalers are based in Addis, **5 other regions** also have **registered wholesalers**. This covers the regions where we can find mixed crop-livestock farming and commercial/specialized farming systems. In the lowland regions, where most pastoralists are, the number of wholesalers is very low, and they usually have to import from other regions.

LEGALLY, THE WHOLESALER LICENSE
IMPLIES THAT THEY CAN ONLY
DISTRIBUTE AH PRODUCTS



- As for most actors in the product chain, **VDFACA** regulates wholesalers. In order to run a wholesaler business and obtain the required license, **a wholesaler must count with at least one veterinarian**.
- The legal requirement to have a veterinarian is a valuable lever to raise awareness among drug shops, improve the sales and build customer loyalty

NON-EXCLUSIVE PARTNERSHIPS WITH
IMPORTERS



- Majority of wholesalers **will buy products from various importers, in order to have a diverse range of products** to sell to drug shops. However, they **rarely are in possession of biologicals**, as these are mainly under control of NVI.

THE CHALLENGE TO HAVE ENOUGH
SUPPLY



- Wholesalers are dependent on the amount of supply importers can bring into the country. Selling their supply is not a challenge, allowing for attractive margins. Competition by other wholesalers is not yet a matter of concern.
- Even though no official confirmation was found within the framework of this study, **mark-ups** applied by wholesalers seemed to be controlled **by the GoE**.

Wholesalers – AH product distribution is still largely a public affair, even if presence private wholesalers continues to increase

Market share of wholesalers based on the totality of AH products present in the country

Products distributed by the government

- The government oversees the distribution of products arriving through tenders and through NVI

Declining activity as the GoE opens to private sector

Products distributed by private wholesalers

Offer increasing

Legend :
The size of circles is an estimation of the market share of each type of actor

Main actors buying products from private wholesalers

Drug shops

Farms

Even though it is financially more beneficial for end consumers to buy directly from wholesalers, they need a specific license to buy their products. Hence, the main customers for wholesalers are drug shops.

- Some commercial farms have the required license to buy directly from wholesalers. However, they still represent a small segment and if they have the license, they will prefer to buy from importers for better prices.

Legend :
The size of circles is an estimation of the purchasing amounts of each actor



A wholesaler at Merkato, Addis Ababa

- As a relatively new player in the ecosystem, wholesalers still have an moderate role in the product distribution chain. However, as market penetration of international manufacturers rises (through other channels other than public tenders), the market share of importers and wholesalers is growing proportionally.
- This trend is confirmed by the growing number of players on the sector reported by VDFACA.

* In Ethiopia, "distributors" or "drug shops" are terms used for retailers: the last player before reaching the end consumer.
Sources: Questionnaire and interviews lead by Archipel&Co 2020

Wholesalers – Examples

Merkato in Addis Ababa

25 wholesalers are found at Merkato, equivalent to **30%** of the total Ethiopian wholesalers

- Merkato is known as the largest African open-air marketplace. Located in Addis Ketema, a district of Addis Ababa, it employs more than 13 000 people and has 7 100 different business entities.¹
- Within merkato, there is a "hub" of wholesalers, established as one the largest distribution platforms for AH products. Most drug shops buy directly on the spot. For those in more remote regions, transport services are available.



Image source: Living in Addis

Sultan Yosuf Veterinary Drug Wholesale

Considered one of the biggest wholesalers in Merkato

- This wholesaler employs 7 people excluding the workforce in charge of transporting the AH products
- Buys from more than 10 different importers
- Has employed two veterinarians
- Mainly sell supplements and pharmaceuticals and some equipment. They do not sell biologicals
- Declares 5-10% mark up

Wholesaler #2

Considered a medium-sized wholesaler of Merkato

- This wholesaler employs 4 people excluding the workforce in charge of transporting the AH products
- Buys from around 10 different importers
- Has employed one veterinarian
- Principally sell supplements and pharmaceuticals and some equipment. They do not sell biologicals
- Main non-generic brands mentioned: Ceva, VMD Livestock Pharma
- Main generic brand mentioned: Ashish Life Science

Wholesalers – Recent growth trends to continue among the private wholesaler segment despite dependency on importers

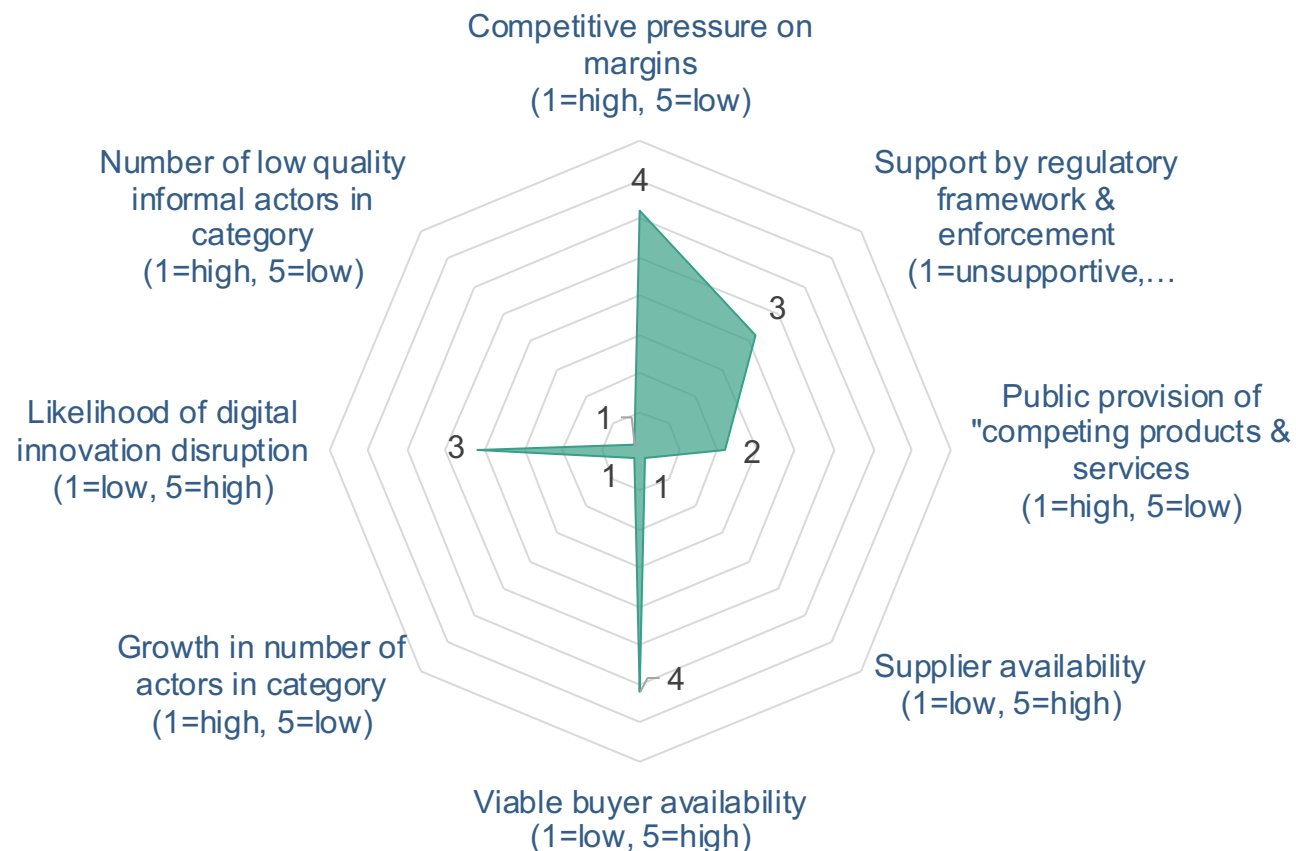


Image source: A&Co

Example of license issued by VDAFACA to a wholesaler

The graph shows an **overview of the AH market** from the **perspective of new entrants or innovators** considering to enter the market as wholesalers. It includes **ratings across 8 factors** and ratings have been determined from both desk-based and interviews carried out as part of this study.

How to interpret the graph? Each factor has been rated from 1 to 5. Higher ratings (i.e., the larger the colored area) indicate a more attractive market for new entrants. For example, a rating of 5 on “Competitive pressure on margin” should be read as a low competitive pressure. On the other hand, a rating of 5 in “Buyer availability” should be read as high buyer availability.



AH Public Service Providers – Main suppliers of AH products to end customers, despite challenges to meet demand

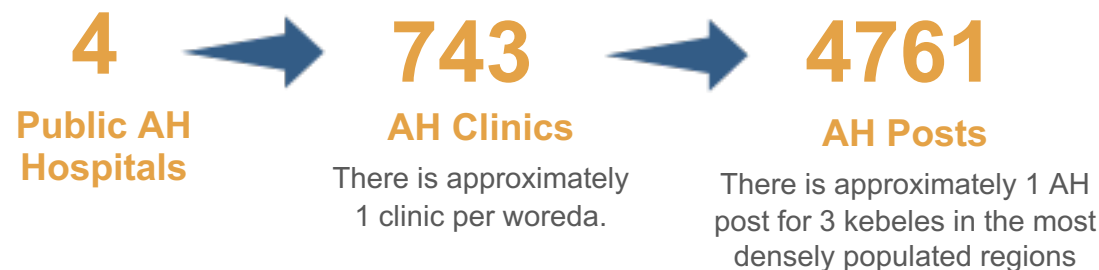


Majority of AH products on the market transit through public clinics, following tenders issued by regional state agricultural bureaus. Even though clinics are subsidized, AH products are sold at total price and a small mark-up is added to cover for the service. It is estimated that public clinical services only meet 30% of the demand. In order to improve their service coverage, they are becoming more and more ambulatory.



Image source: Archipel&Co

A veterinary ambulance from the College of Veterinary Medicine and Agriculture



- Depending on the level of their **veterinary qualification**, veterinarians can practice in different different set-ups and carry out provide different services
- The country has **1 312 CAHWs**, who play dual role, as pastoralists and as a wing of the government by providing AH support to other farmers

AH Public Service Providers – Overview

70% OF VETERINARIANS WORK IN PUBLIC VETERINARY SERVICES¹



- However, the country faces **high veterinary unemployment**. Therefore, many veterinarians move to the private sector as part of the product distribution chain, in commercial farms or in private research institutions.

ALL AH PRODUCTS USED BY PUBLIC VETERINARY CLINICS ARE PROVIDED BY PUBLIC TENDERS AND NVI



- Yet, clinics frequently **lack AH product supply**.
- **Private clinics** are nearly **nonexistent**. Those present in the sector are mainly intended for pets.

AH CLINICS RARELY HAVE REQUIRED COLD CHAIN INFRASTRUCTURE, A CRITICAL CHALLENGE FOR VACCINES



- Usually, **vaccines are not stocked at the clinics**, and vaccination campaigns are carried out as quickly as possible when vaccines arrive.


THE ETHIOPIAN VETERINARY ASSOCIATION



- A dedicated association to veterinary professionals which has more than **2 000 members**.

AH Public Service Providers – Examples

College of Veterinary Medicine and Agriculture / AH Hospital

 Addis Ababa University

- The oldest veterinary college of Ethiopia that also serves as an AH Hospital.
- As an AH hospital:
 - They provide **capacity training** to graduate vets
 - They **manage larger amount of AH supply** than clinics
 - Can **perform any type of operation** on all type of animals (equine, pets, livestock)



Image source: Archipel&Co

Image source: Archipel&Co

Examples of Veterinarians working in different set-ups



1 of the 4 development agents of the Agricultural Bureau of woreda 02 of Yeka subcity



Veterinarian working in a private feed lot with 1 000 cows



Veterinarian at the public clinic of Hrabo, a woreda in Oromia region



Veterinarian who opened a drug shop

Retailers – Private drug shops are scarce; their main role is to help serve the demand that public service providers cannot meet



Private AH retailers, locally known as drug shops, are licensed to sell animal-related products only, including livestock and pet pharmaceuticals, biologicals, vitamins and minerals. Drug shops are the last actor in the product distribution chain before the product arrives to the farmers. Drug shops are managed by veterinarians, whose medical expertise is key to raise awareness on AH related issues within SSPs.

93 AH professionals owning drug shops registered by VDFACA in **2014**



460 AH professionals owning drug shops registered by VDFACA in **2019**



Image source: Archipel&Co

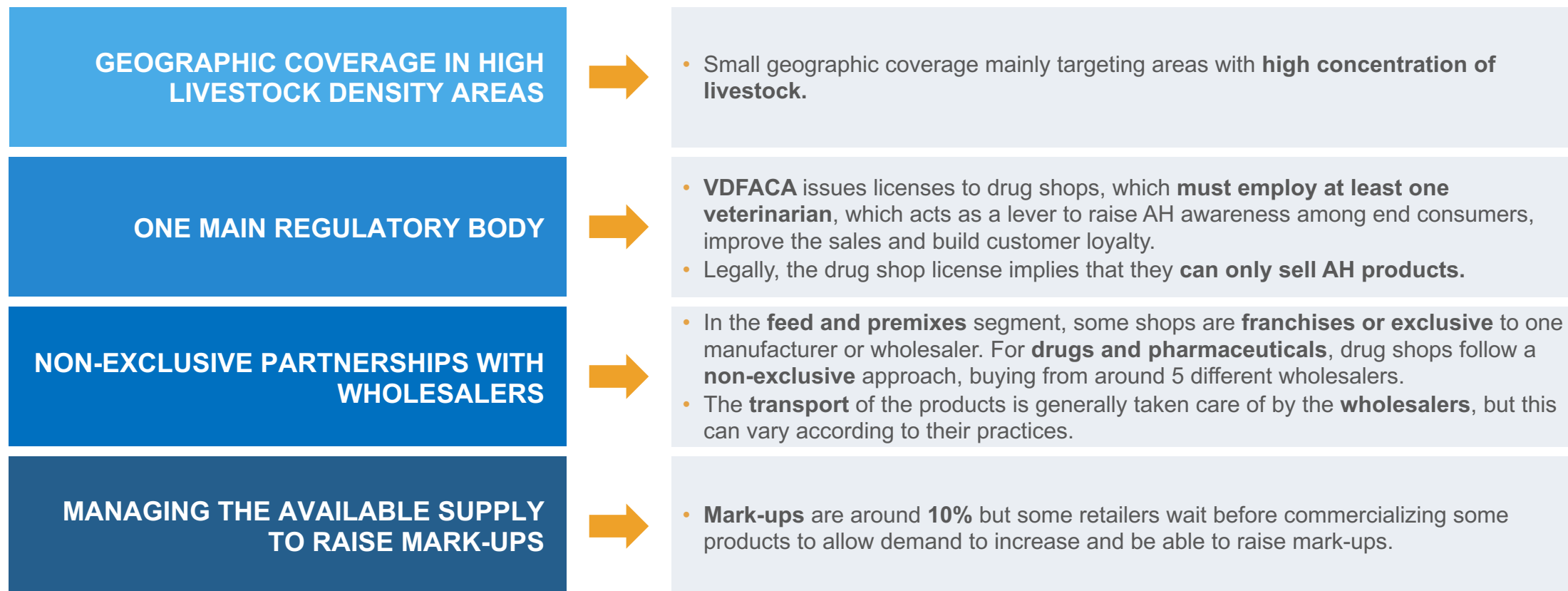
Opportunities

1. Even if the number of drug shops is growing, there is very **little competition**. In comparison, in Kenya there are over 10 000 similar shops (agro-dealers)
2. A growing number of drug shops: a good signal for **increasing demand** trends to persist

Challenges

1. Dependency on **wholesalers' supply**
2. Raising **AH awareness** among SSPs
3. **Commercial farms** have specific **licenses** that allow them to buy directly in bulk to importers or wholesalers

Retailers – Overview



Retailers – A player that is growing as an alternative solution to public clinics for SSPs

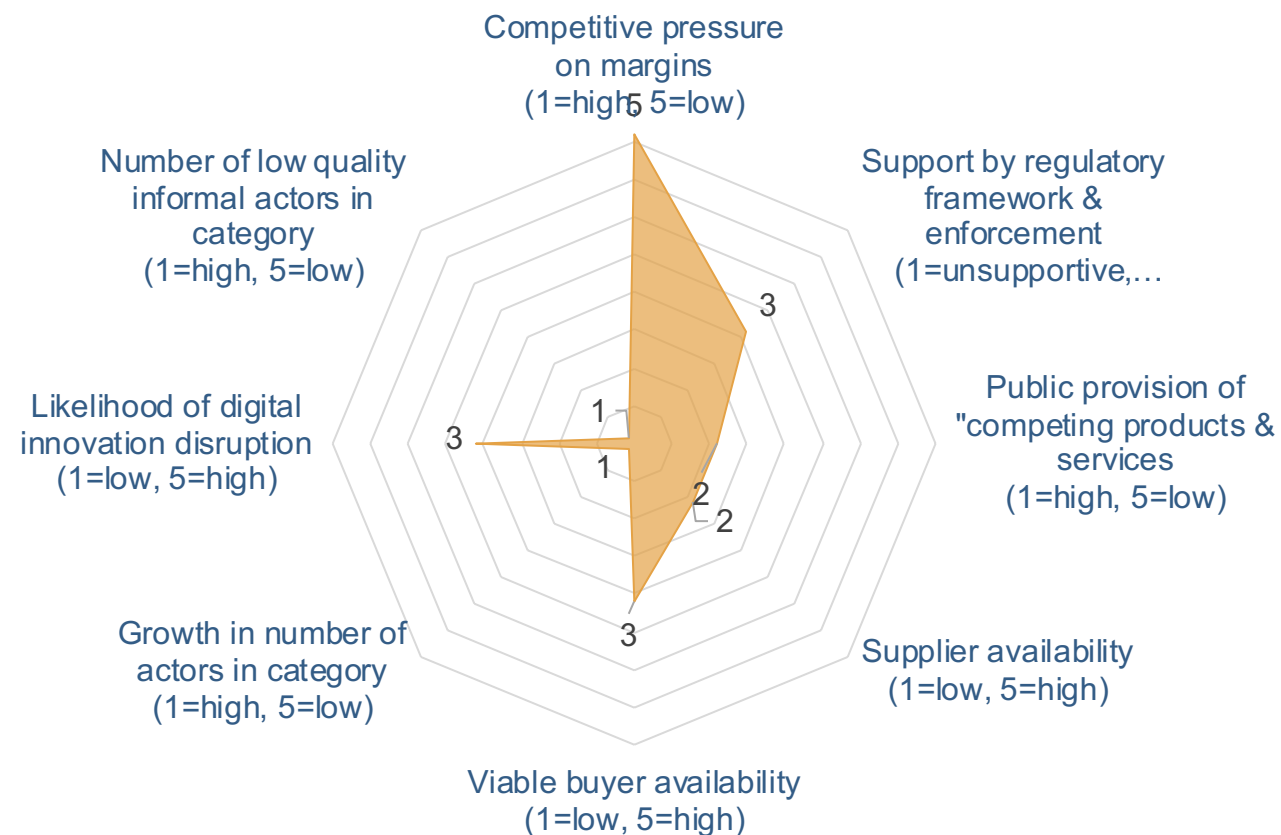


Image source: A&Co

Drug shop in Bishoftu

The graph shows an **overview of the AH market** from the **perspective of new entrants or innovators** considering to enter the market as retailers. It includes **ratings across 8 factors** and ratings have been determined from both desk-based and interviews carried out as part of this study.

How to interpret the graph? Each factor has been rated from 1 to 5. Higher ratings (i.e., the larger the colored area) indicate a more attractive market for new entrants. For example, a rating of 5 on “Competitive pressure on margin” should be read as a low competitive pressure. On the other hand, a rating of 5 in “Buyer availability” should be read as high buyer availability.



Retailers – Examples

Dr Sisey's Drug Shop



Bishoftu



Got its importer license in 2017

- **Focus:** poultry AH products, aligned with farming practices around Bishoftu
- **Suppliers:** 3 different wholesalers
- **Main customer:** SSPs
- **Main type of products sold:** only sells pharmaceuticals, vitamins and supplements. Most of the products in the drug shop come from **Germany and India**.
- **Competition:** in 2 years, 3 different drug shops have opened close by
- **Recent challenges:**
 - **Accessing enough supply** is his main challenge. When a drug store nearby knows he is the last drug store with a given product, he will significantly raise prices
 - **Some of the products he sells do not work or are misused** by the farmers, which creates trust issues



Image source: Archipel&Co



New initiative – Agricultural One Stop shops

The Ethiopian Agricultural Transformation Agency (ATA) has recently kicked off a pilot program aiming to launch “**agricultural one-stop shops**”.

The objective is to “*scale up the farm service centers in four regions (Amhara, Oromia, Tigray and SNNPR) by establishing over 30 one-stop input centers and 150 retail shops, and thereby enhance the access of smallholder farmers to agricultural and livestock inputs and advisory services.*”¹

Sources: 1. [ATA](#)

End customers – Farming mainly as subsistence activity, limiting the demand and penetration of quality AH products

Livestock keepers are classified in three main different production systems: (1) mix crop and livestock, (2) pastoralists and (3) commercial or specialized farming. Most end consumers of AH products fall within the first two categories, which are subsistence activities.

Mix crop and livestock production systems

- Mainly found in the highlands of the country
- Priority is crop, livestock comes second
- Subsistence activity with a small number of animals

Access to AH products:

- Principally buy pharmaceuticals and vitamins/supplements from public clinics or retailers
- Rarely vaccinate their animals, unless there is a public vaccination campaign

Pastoralists and agro-pastoralists

- 28% of the livestock population is found in the pastoralist's regions, where 30-40M people live
- Pastoralists have a large number of animals
- The entire camel population is found in these areas, together with majority of sheep and goats

Access to AH products:

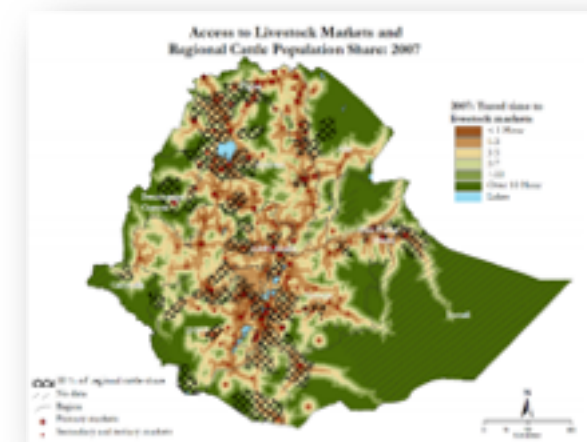
- Limited access to veterinary services
- Traditional medicine is still very present
- Increased efforts are been focus in veterinary campaigns to reach pastoralists

Commercial or specialized farming

- Around 300 commercial farms are found in Ethiopia
- Mostly focused on dairy and feedlots, but poultry is rapidly growing
- Mainly found in urban and peri urban areas, predominantly around Addis Ababa

Access to AH products:

- Principally buy AH products directly from importers or wholesalers
- For ad-hoc needs, they will purchase products at retailers
- Vaccines will be bought directly at NVI or from international manufacturers when possible



- Map from 2007 that shows the time it takes to reach the closest livestock market (green = longer)
 - Veterinary services are often close to or in the same areas as livestock markets.
- ➔ Populations having easiest access to AH products are the ones in the highlands and closest to Addis

End customers – Examples

Alfa feeder and dairy farm

Commercial farm

- Biggest dairy farm in Ethiopia with 400 meat and 200 dairy cows, all imported from the Netherlands
- 3 veterinarians working full time
- Recently lost 45k€ worth of livestock due to casualties from FMD – they did not have the appropriate vaccine
- Use minerals imported from the Netherlands and do not use supplements. They will occasionally buy pharmaceuticals from a local drug shop



Image source: Archipel&Co

Unknown name

Mix crop and livestock farming

- Has two cows to help him on the crops (ploughing)
- They are not vaccinated
- Buys pharmaceuticals from the public clinic and from drug shops
- Is facing antibiotic and antimicrobial resistance



Image source: Archipel&Co

Public training farm at woreda 02 of Yeka

Specialized farming

- These farms are put under the control of apprentice farmers so that they can train themselves during five years
- A development agent will advise them on the medication to use
- They buy all the products from public clinics
- Their main expenses are on feeds – 60%



Image source: Archipel&Co

Role of NGOs and development agencies in the AH sector

Role of NGOs and Development Agencies in the AH sector

- Provision of extension services and education to SSPs, pastoralists on AH diseases and medicines
- Building trust on the ground for outside agencies
- Grassroot level data gathering from end consumers
- Support national and state governments in policy and strategy development and implementation
- Financial aid and philanthropy
- Important publications and data collection on livestock sector.
- Act as interface between local communities and government

Objectives of their work in Ethiopia

- Partnership building between NGOs and international development agencies powerful to seal glaring market failure and policy gaps.
- Improvement incomes & nutritional status of SSPs and prevents systematic bottlenecks.
- Increases VC participants engagement & investment and sustainable development of sector.
- Encouraging women to take leadership roles via livestock and agricultural training (e.g. USAID)

Examples of livestock related programs in Ethiopia

- LD4D site records 51 livestock projects in Ethiopia by 41 grantees
- Main funders: BMGF, DFID, USAID
- Grantees include academic/research organizations (e.g. ILRI), NGOs (e.g. Send a cow), private organizations (e.g. EthioChicken, see [slide](#) for more details) or UN agencies (e.g. UN women)

- Program: **Feed the Future Ethiopia**
- Funder: USAID
- Grantee: Fintrac Inc
- Objective: integrate nutrition-sensitive interventions and climate-smart agriculture with value chain development

- Program: **EQUIP – Strengthening smallholder livestock systems for the future**
- Funder: BMGF
- Grantee: University of Florida
- Objective: increase livestock productivity through increased supply of quality feeds and develop poultry sector

- Program: **The Ethiopian Agricultural Transformation Agency (ATA) support**
- Funder: BMGF
- Grantee: Ethiopian ATA
- Objective: developing a tef planter machine

Important presence of informal sector in the AH market but difficult to quantify and to tackle

KEY INSIGHTS

TYPES OF INFORMALITY

- **Products:** (i) Counterfeit medicines and fake drugs sold to unsuspecting customer. (ii) Low quality/ diluted vaccines/ medicines sold. (iii) Informal and itinerant drug traders, unauthorized outlets,
- **AH workers:** Unqualified vets or unofficial practice of public sector workers

AWARENESS & ISSUES CAUSED

- Drug Resistance: bad handling, utilisation, poor drug quality causes drug resistance in cross border AAT
- Misuse of Drugs: lack of knowledge and education among SHF leads to misuse of drugs threatening animal health and product.
- Public Health : through animal products like meat or milk with harmful levels of antibiotics.
- High mortality rates, low productivity: Creates lower quality animal products and high mortality.
- Economic losses: The presence of counterfeit drugs skews the market causing market failures.

FACTS

- The counterfeit trade is a billion-dollar trade in Africa
- According to a UNOCHA report of 2005, the magnitude of the informal export trade of animal trade in volume and value accounted for 80% of exports¹
- Ethiopia also has a substantial informal livestock trade south into Kenya
- Prevalence of informal pastoral livestock exports, which pass via Somaliland, Somalia and Djibouti to the Gulf States

SOLUTIONS

REGULATION

- VDFACA developed a model directive called Vet drug retail outlet certification & control directive.
- Regional state regulatory bodies also conduct inspections – based on Veterinary drugs & animal feed administration & control 728/2011

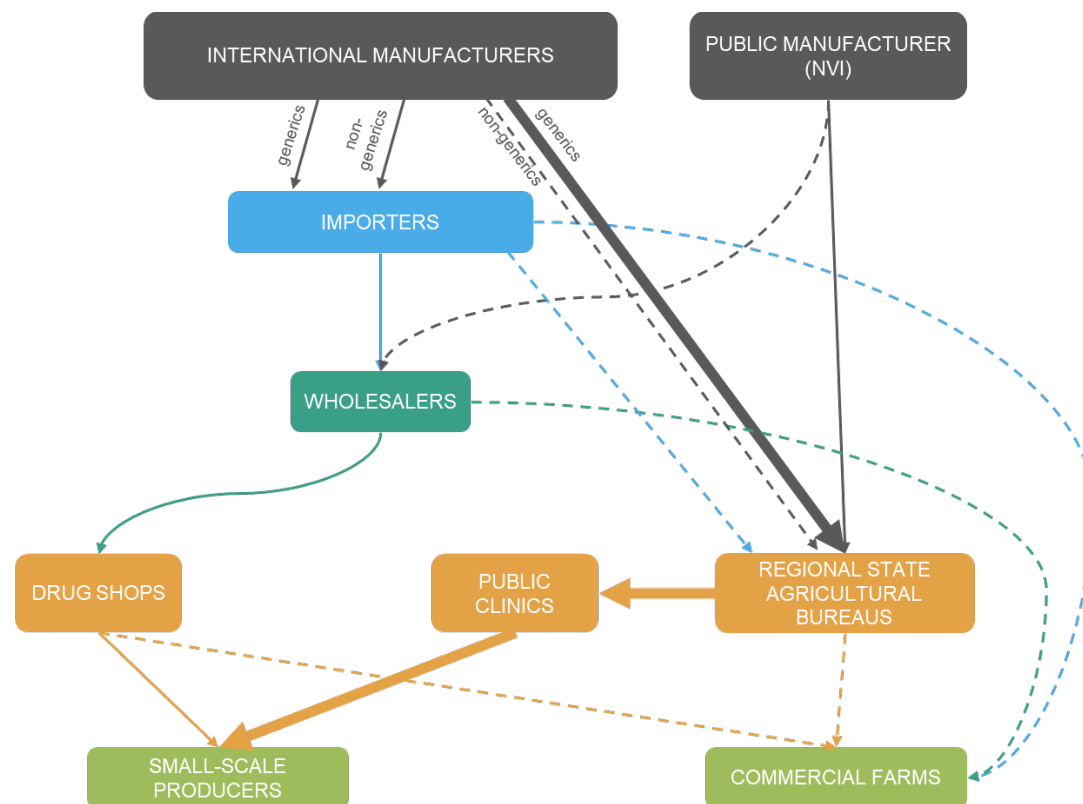
POSSIBLE SOLUTIONS

- Better end customer education (especially SSPs)
- Enforcement of regulation in storing, dispensing, selling and use of products. Potential role of associations supporting authorities in enforcement activities
- Explore technology solutions (e.g. blockchain) for improved traceability

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 - d. Innovation landscape
6. Appendix



General AH Product Flow – Key Learnings



See next slide for larger view of the general product flow diagram

- No single actor can play multiple roles due to Ethiopia's regulatory framework and VDFACA licensing regime
- Therefore, few opportunities exist to capture value by collapsing the value chain
- Foreign companies are not allowed to operate in any distribution business
- Compared to other countries in the region, there are fewer categories of actors involved in the product chain
 - E.G. there are no private national manufacturers present
- There are two, highly differentiated product routes: (1) through public tenders and (2) through importers
 - Majority of international manufacturers will enter the market by responding to public tenders
 - The importer route has been experiencing constant growth for over a decade
- The GoE tries to control the mark up fluctuation of AH products. However, this will vary across the country according to:
 - (1) transport accessibility, (2) principal diseases in the region, (3) current supply and demand and (4) season of the year
- Vaccines are the most difficult product category to access on the market
 - VDFACA favours national production hence most vaccines will be provided by NVI.

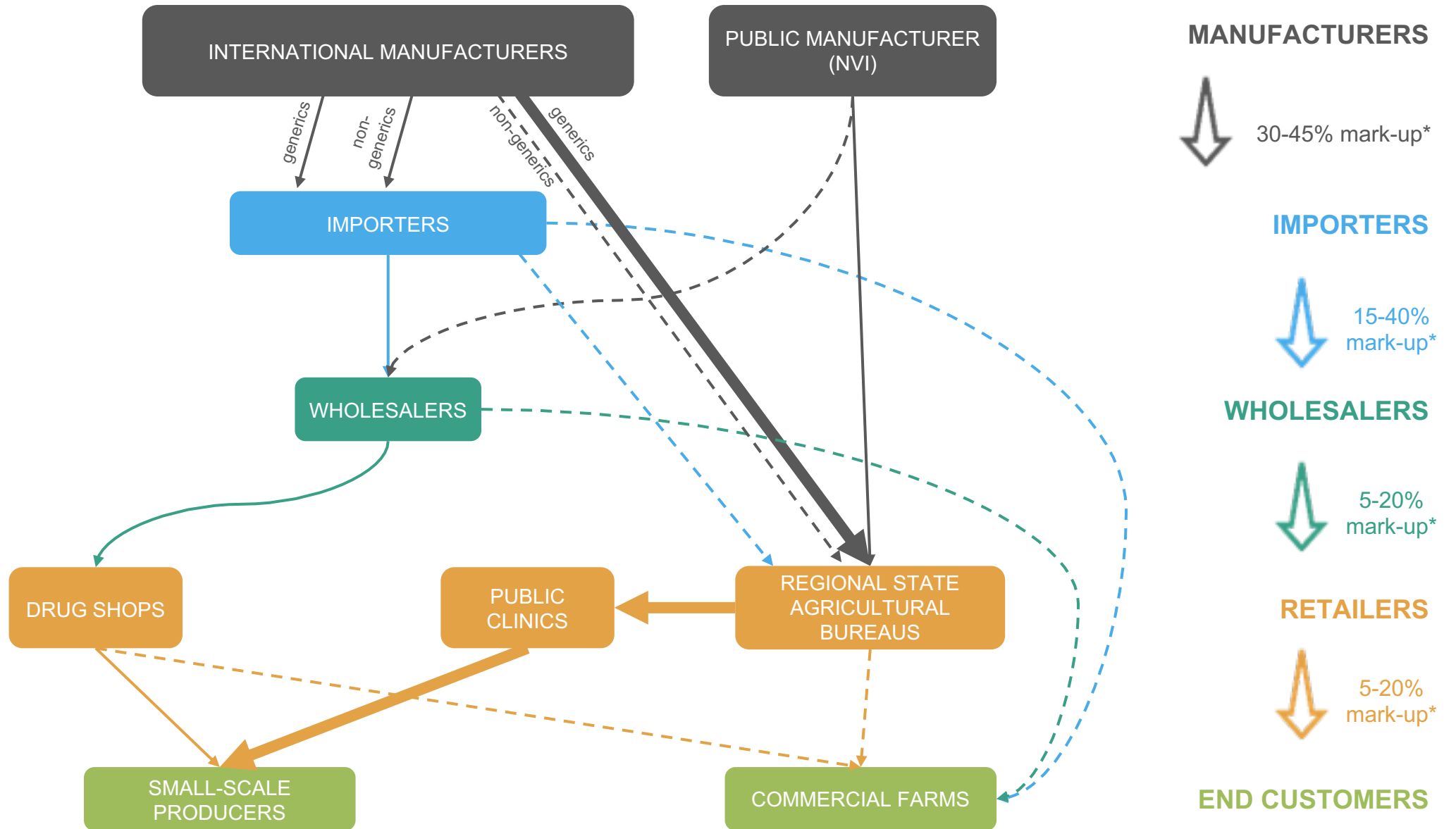
General AH Product Flow – Diagram

- Low product flow
- Average product flow
- Important product flow

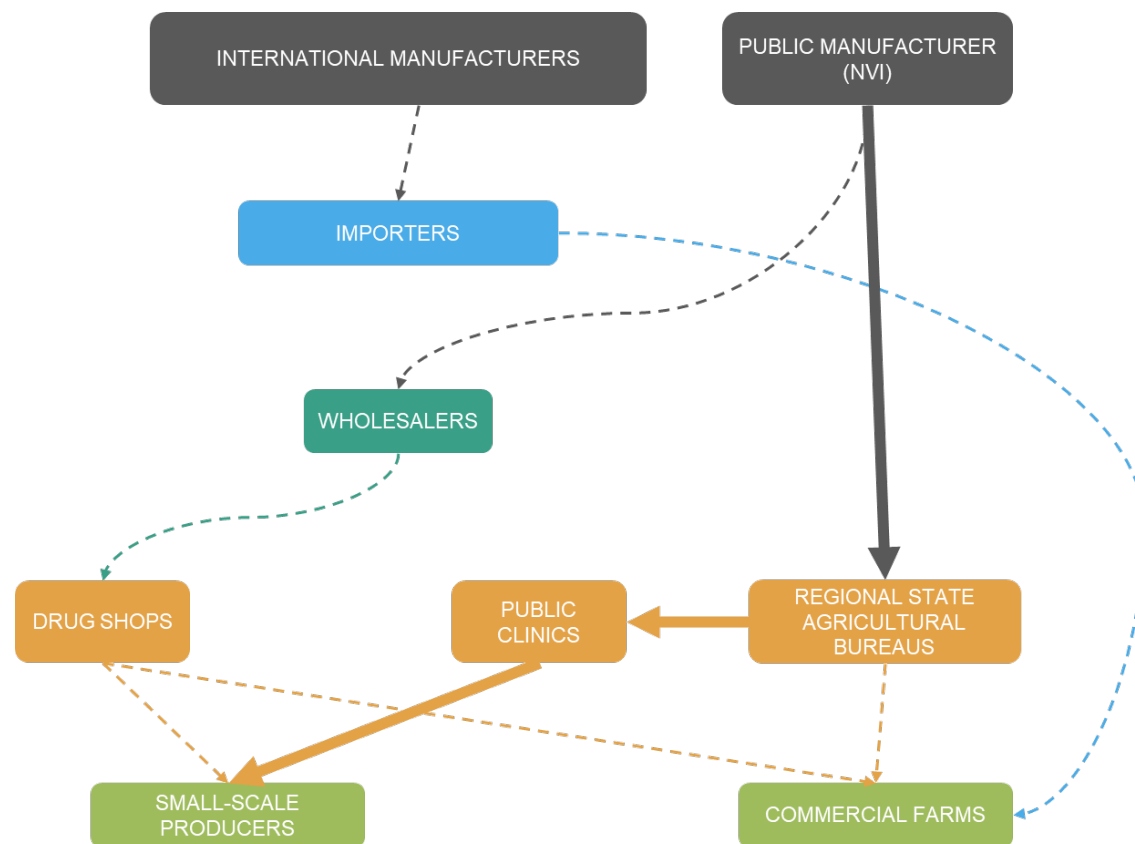
*NOTE: Mark-up information is indicative based on qualitative interviews

* Generics and non-generics have been separated in the product flow as their distribution routes are often different

Source: Questionnaire, interviews and field study led by Archipel&Co 2020



Biologicals AH Product Flow – Key Learnings

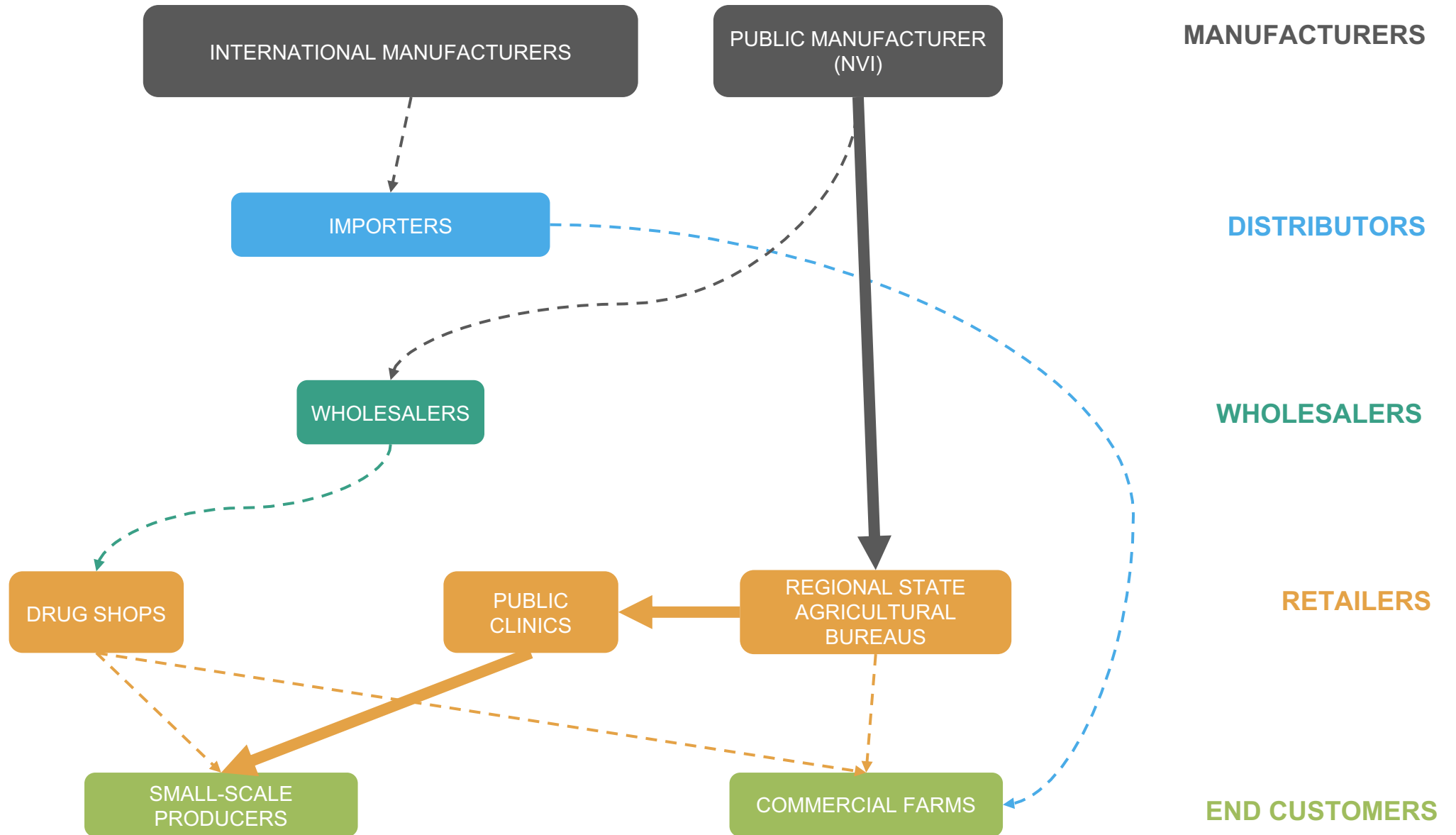


See next slide for larger view of the product flow diagram

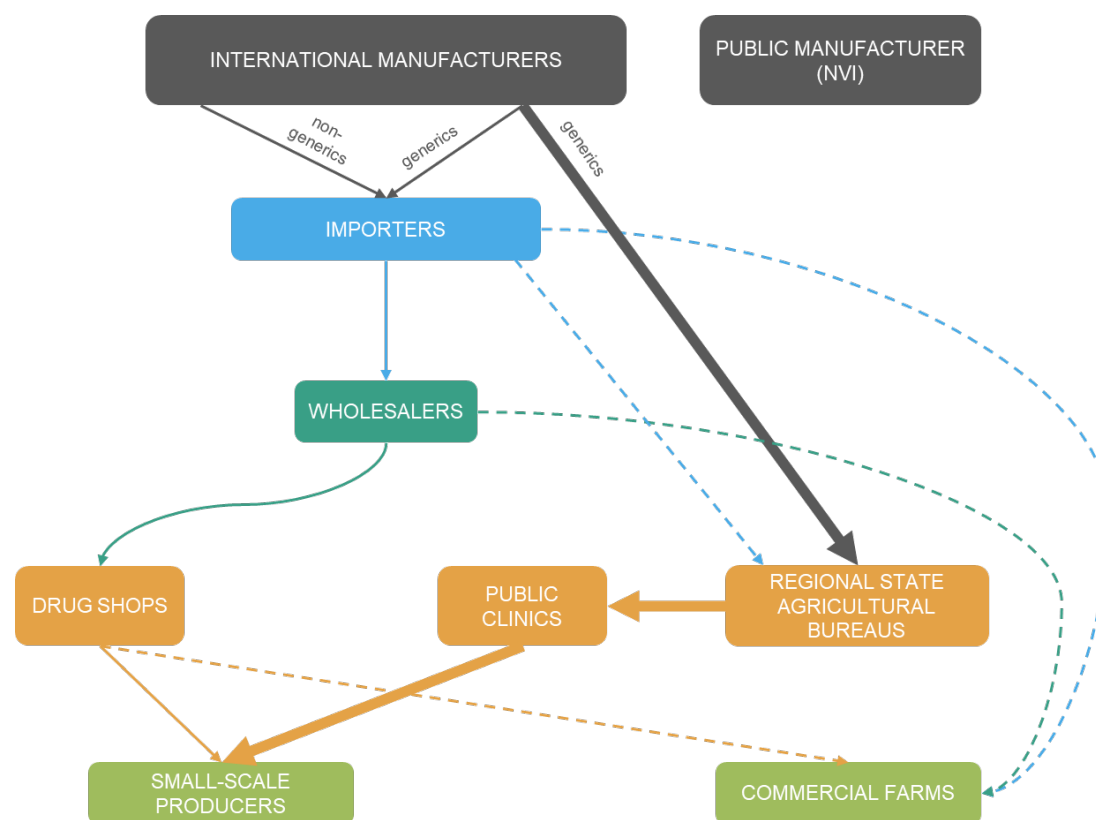
- **NVI has a quasi-monopoly on the biologicals market, resulting in only one distribution route emerging**
 - NVI commercializes 19 vaccines for livestock, however, these are not enough to meet all demand
- **Biologicals are the products in shortest supply in the product flow**
 - This is also due to a lack of AH awareness among end consumers and drug shops, that do not prioritize their preventive aspect
- **The lack of variety of biologicals available and reliance on a single manufacturer poses a big challenges when outbreaks occur**
- **The main vaccines available on the market are for FMD and Newcastle Disease**
- **International manufacturers are primarily selling biologicals for Newcastle and Marek's diseases (poultry) and come from France, Belgium and South Africa**
 - This is consistent with the fact that there is a rising number of commercial farms producing poultry
- **Poultry biologicals are mainly sold directly from the importer to commercial farms**

Biologicals AH Product Flow – Diagram

- Low product flow
- Average product flow
- Important product flow



Pharmaceuticals AH Product Flow – Key Learnings



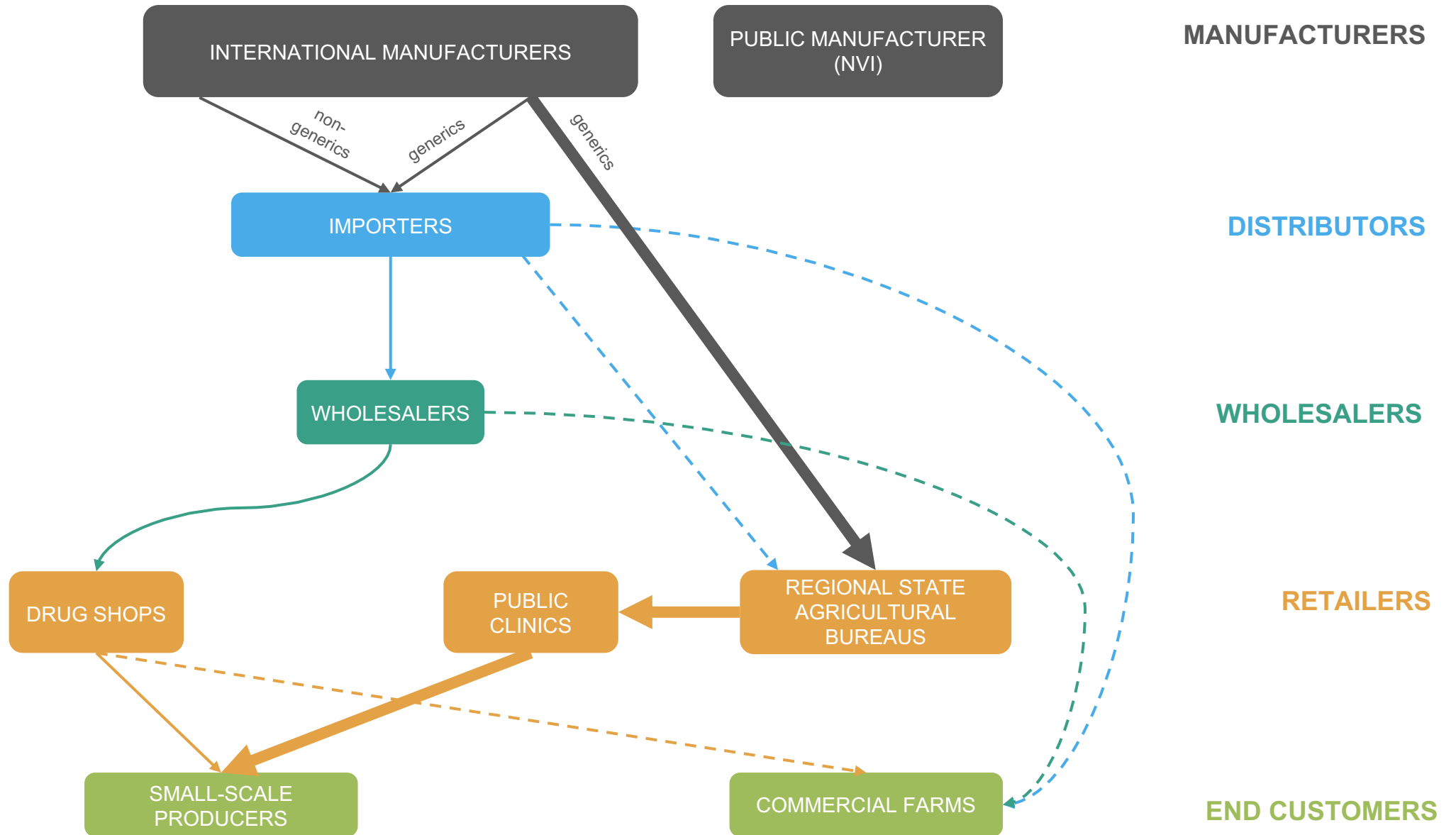
See next slide for larger view of the product flow diagram

- **Most pharmaceuticals entering the market go through public tenders coming from regional states**
 - Tenders only include pharmaceuticals and vitamins/supplements
 - In comparison to other countries international companies producing non-generic products cannot usually meet the prices in the tenders
 - Intensive farmers, who require an on-going supply, often cannot wait for tenders to be awarded
- **As opposed to vitamins & supplements, for pharmaceuticals importers primarily sell via wholesalers with very limited relationship directly to farms**
- **The main countries exporting pharmaceuticals to Ethiopia via importers are India and China. Out of a sample of pharmaceuticals imported into Ethiopia*1:**
 - 56% had a registered manufacturer in India
 - 43% had a registered manufacturer in China
 - 22% had a registered manufacturer in Netherlands
 - 14% had a registered manufacturer in Belgium
- **The main pharmaceuticals sold by international manufacturers via importers in 2019 were*1 :**
 - Oxytetracycline 10% and 20% Injection, 100mL of bottle
 - Ivermectin Injection 1%, 50 mL bottle
 - Diminazene Diacetate 2.36G
 - Albendazole 2500mg, 50 boli box

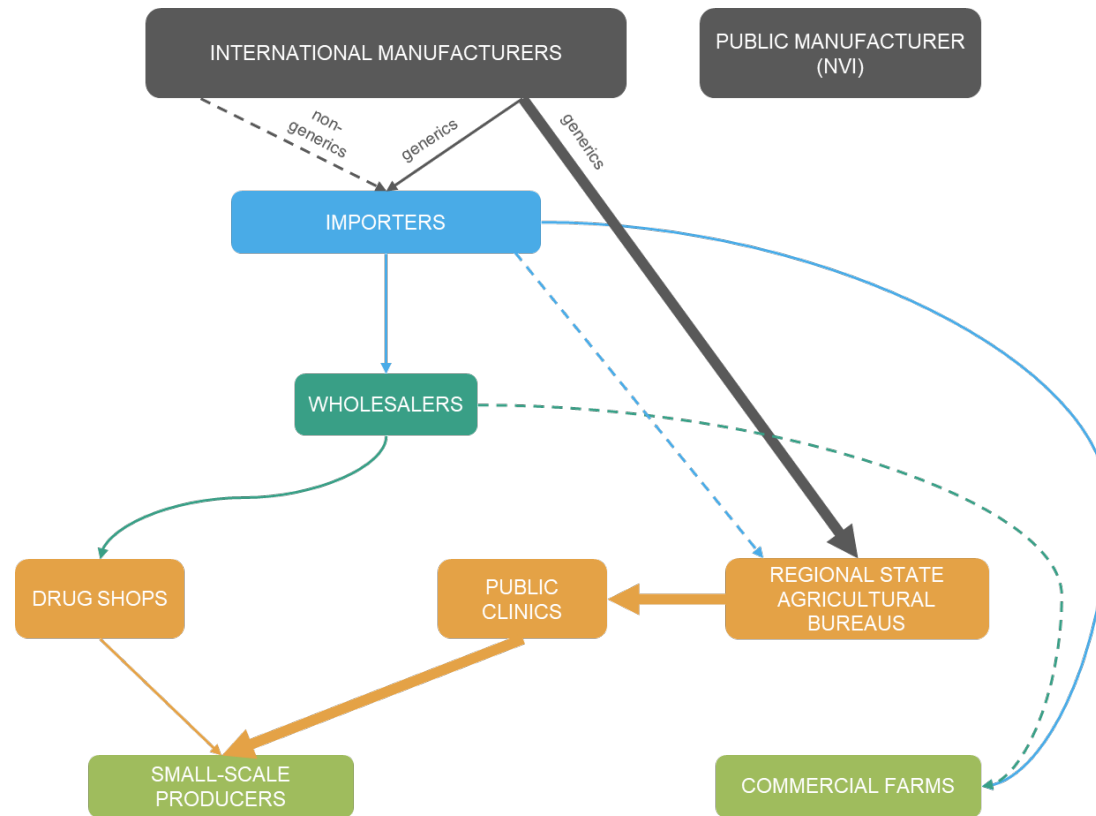
*The data comes from a sample of products imported into Ethiopia and traced by VDFACA.

Pharmaceuticals AH Product Flow – Diagram

- Low product flow
- Average product flow
- Important product flow



Vitamins & Supplements AH Product Flow – Key Learnings



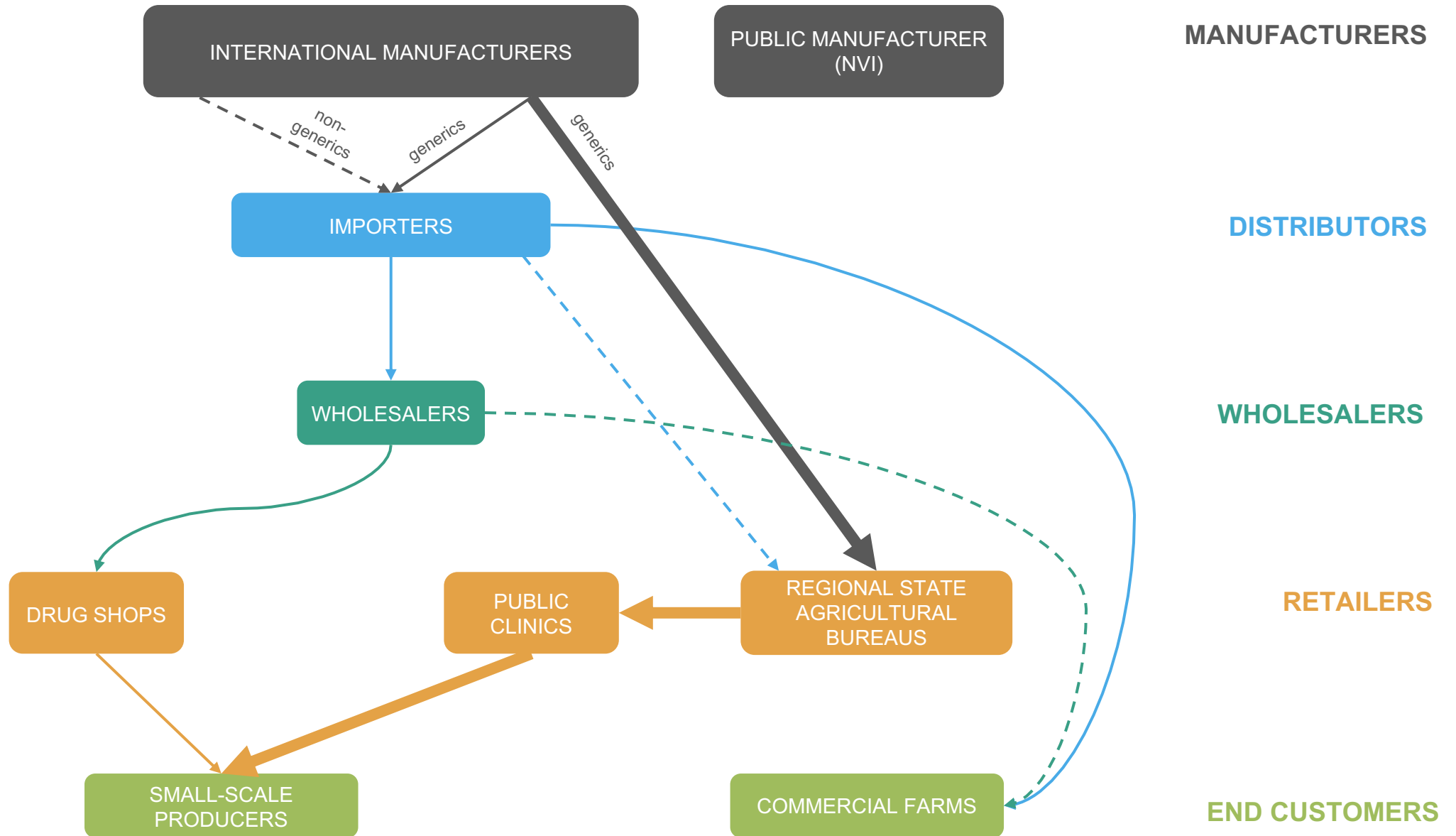
See next slide for larger view of the product flow diagram

- Compared to other East African countries, there are less vitamins & supplements in the Ethiopian market, due to a smaller and underdeveloped dairy sector
- Imported vitamins & supplements on the market are primarily found directly in feed premixes
- The number of registered vitamin and supplement products imported is lower compared to pharmaceuticals¹
 - The Ethiopian animal health sector is more focused on curative measures and, therefore, most financial resources go into pharmaceuticals
- In 2019, importers purchased vitamins from China, Netherland and Vietnam and minerals from the UK and Saudi Arabia*¹
- As opposed to pharmaceuticals, for vitamins & supplements importers often prefer selling directly to commercial farms, given volumes and consistent demand.

*The data comes from a sample of products imported into Ethiopia and traced by VDFACA.

Vitamins & Supplements AH Product Flow – Diagram

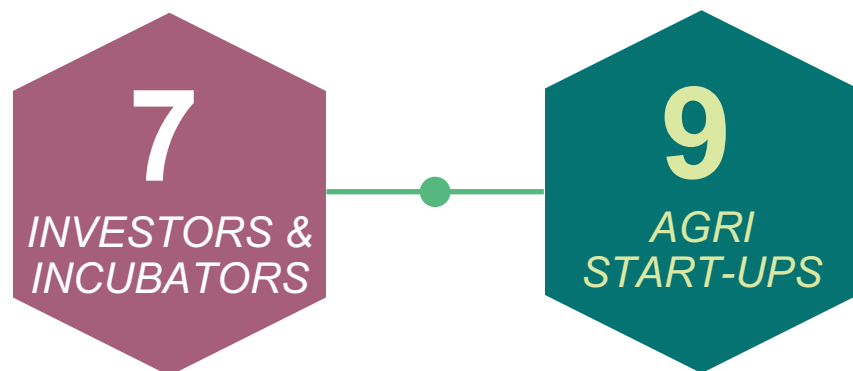
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1. Executive Summary
2. Context
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Slow but steady growth in Ethiopia's start-up ecosystem, held back by structural challenges faced by new businesses



- [blueMoon](#) Established in 2016 as Ethiopia's **first youth agribusiness incubator**
- The hub offers a six-month start-up **incubation programme** during which entrepreneurs work on their idea
- Beyond the incubation programme, blueMoon also serves as the **first investor** in startups that pass through the programme by providing a seed funding of \$10k (295,750 Ethiopian Birr) to enable them build their prototype as well as proof of concept.

- **Universities** have historically been the predominant source of the country's innovators.
 - OCP Africa and Mohammed VI Polytechnic University (UM6P), launched a start-up acceleration program in 2019 to build linkages between corporations and start-ups using agritech solutions in Ethiopia.
- The **Ethiopian government** is gradually realizing the potential of agriculture technology, helping drive adoption and growth.
 - The **Ethiopian Soil information System (EthioSiS)** project, led by the Agricultural Transformation Agency, is using remote-sensing and satellite technology to create a digital map of the country's soil. Based on these data, Ethiopia has revamped its fertilizer recommendations.
 - **Policy innovations** like **incentives on foreign investment** have aided the appearance of new private companies like **Ethiochicken** (see next slide for details), which is the only private company in Ethiopia focused exclusively on reaching smallholder farmers, and has created an innovative, economically viable, and replicable distribution model to reach rural households.
- On the **livestock sector**, an ILRI study from 2018³ explains that **livestock development efforts in Ethiopia have been based on isolated interventions and it concludes that commercialization of livestock production requires interventions beyond the provision of a technical solution to biophysical problems such as feeding, breeding, and animal health.**

Ethiochicken – Pioneer company transforming the poultry sector

PROFILE



HQ in Addis Ababa

Operating since 2010

Website: <https://www.ethiochicken.com>

BUSINESS MODEL



- EthioChicken produces highly fertile, disease-resistant chickens and sells them to smallholder farmers in Ethiopia through an agent-based distribution model.
- EthioChicken breeds day-old chicks (DOCs) and sells them to agents/growers who rear them for about 45 days (including vaccination) before selling them on. In tandem, local government officials aggregate rural demand for chickens on the behalf of smallholder farmers and facilitate the sale of 40-day-old chickens to rural households.

OTHER PRODUCTS & SERVICES



- Training of agents/growers to raise the chickens, including vaccination
- Training of extension services workers
- Supply vaccines
- Veterinarian visits per cycle time
- Feed manufacturing: starter feed (for the first 6 weeks) and grower feed (between 6 to 20 weeks)

IMPACT



- As of 2018, distributed > 20 million chickens per year to rural households and 20,000 MT of feed
- 80 veterinarians working at zonal and woreda levels
- 8 poultry breeder farms and 2 feed mill production plants in four regions of Ethiopia



Source: ft.com

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6. Appendix



Methodology for Market Evaluation Matrix

- **Proxy indicators to determine market opportunity**
 - Economic Growth
 - Livestock population
 - Animal produce demand projections
 - Financial losses due to diseases
 - Animal health coverage
 - Livestock productivity
 - Presence of low quality/counterfeit products
- **Proxy indicators to determine ease of doing business / enabling environment**
 - World Bank Doing Business ranking
 - World Bank Sustaining livestock index
 - Institutional support/focus on livestock
 - Government influence/power
 - Ability to cope to climate risks
 - Access to finance
 - Access to livestock market data
 - Communications infrastructure
 - Start-up ecosystem
- **Each of the above indicators has been evaluated using data from the study and the weighted average calculated to determine a rating between 1 and 5 for market opportunity (y-axis) and ease of doing business (x-axis)**
 - For Ethiopia:
 - Market opportunity = 4.125
 - Ease of doing business = 1.7

List of stakeholders interviewed by Archipel&Co (1/2)

Name	Organization	Function
Adesola Tolefe	Veterinary Medicine Directorate UK	Project manager
Amsale Mengitsu	BMGF	Senior Program Officer
Andrew Peters	SEBI – <i>the University of Edinburgh</i>	Program Director
Andrew Terwin	Zoetis – <i>Manufacturer</i>	Operations lead Ethiopia
Attie venter	CEVA Santé Animale	Operational Director, EA, Nigeria & Angola
Berhanu Assefa	Ellemtu Dairy farm	Board member
Chindo Anchala	Ethiopian Agricultural Transformation Agency	Senior Director, Production and Productivity
Comfort Phiri	Elanco – <i>Manufacturer</i>	Business Unit Manager SSA
David Chemirmir	Boehringer Ingelheim – <i>Manufacturer</i>	Area Business Manager, SSA

Name	Organization	Function
Dr. Bertuken	Eleri Poultry farm	Farm manager and veterinarian
Dr. Miherat & Dr. Abanazer	Alfa Feeder and Dairy Farm	Veterinarians
Dr. Sisey	Drug shop Bishoftu	Owner
Dawit Yacob	Puremix Trading - <i>Importer</i>	Owner and Manager
Edmealem Shitaye	Ethiopian Veterinary Association	President
Enrique Hernández Pando	GALVmed	Senior Director
Fitih	Puremixx - <i>Distributor</i>	LLSP
Karen Smyth	SEBI – <i>the University of Edinburgh</i>	Deputy Director
Kristin Girvetz	Agri Reseaux International	Consultant
Noel Joseph	Veterinary Medicine Directorate UK	Head of International Office

List of stakeholders interviewed by Archipel&Co (2/2)

Name	Organization	Function	Name	Organization	Function
Ruth Pearson	Veterinary Medicine Directorate UK	Senior Scientific Officer	<i>Anonymous</i>	Wholesaler 1 - Merkato	Employee – veterinarian
Sam	AL Impex Vet Drug Importer	Owner and Manager	<i>Anonymous</i>	Wholesaler 2 - Merkato	Owner
Tom Osebe	GALVmed	Senior Manager			
Ulric Daniel	Ethiochicken	Managing Director			
Xavier Cadiou	Agri Reseaux International	Founder/Owner			
Yitbarek Semeane	Ethiopian Agricultural Transformation Agency	Director of input and plant protection			
Yoseph Mekasha	Ethiopian Agricultural Transformation Agency	Director of Livestock and Fishery sector development			
Zerihun Asefa	Addis Ababa University	Prof. of Veterinary Epidemiology			
<i>Anonymous</i>	Bureau of Agriculture of Yeka subcity, Woreda 02	Development agent			

Ethiopia 2020 Doing Business scores – Detail

Starting a Business (rank)	168	Getting Credit (rank)	176	Trading across Borders (rank)	156
Score of starting a business (0-100)	71.7	Score of getting credit (0-100)	15.0	Score of trading across borders (0-100)	56.0
Procedures (number)	11	Strength of legal rights index (0-12)	3	<i>Time to export</i>	
Time (days)	32	Depth of credit information index (0-8)	0	Documentary compliance (hours)	76
Cost (number)	45.4	Credit registry coverage (% of adults)	0.4	Border compliance (hours)	51
Paid-in min. capital (% of income per capita)	0.0	Credit bureau coverage (% of adults)	0.0	<i>Cost to export</i>	
Dealing with Construction Permits (rank)	142	Protecting Minority Investors (rank)	189	Documentary compliance (USD)	175
Score of dealing with construction permits (0-100)	59.7	Score of protecting minority investors (0-100)	10.0	Border compliance (USD)	172
Procedures (number)	15	Extent of disclosure index (0-10)	3.0	<i>Time to export</i>	
Time (days)	136	Extent of director liability index (0-10)	0.0	Documentary compliance (hours)	194
Cost (% of warehouse value)	12.6	Ease of shareholder suits index (0-10)	2.0	Border compliance (hours)	72
Building quality control index (0-15)	11.0	Extent of shareholder rights index (0-6)	0.0	<i>Cost to export</i>	
Getting Electricity (rank)	137	Extent of ownership and control index (0-7)	0.0	Documentary compliance (USD)	750
Score of getting electricity (0-100)	60.1	Extent of corporate transparency index (0-7)	0.0	Border compliance (USD)	120
Procedures (number)	4	Paying Taxes (rank)	132	Enforcing Contracts (rank)	67
Time (days)	95	Score of paying taxes (0-100)	63.3	Score of enforcing contracts (0-100)	62.8
Cost (% of income per capita)	768.5	Payments (number per year)	29	Time (days)	530
Reliability of supply and transparency of tariff index (0-8)	0	Time (hours per year)	300	Cost (% of claim value)	15.2
Registering Property (rank)	142	Total tax and contribution rate (% of profit)	37.7	Quality of judicial processes index (0-18)	7.0
Score of registering property (0-100)	50.9	Postfiling index (0-100)	51.6	Resolving Insolvency (rank)	149
Procedures (number)	7			Score of resolving insolvency (0-100)	30.3
Time (days)	52			Recovery rate (cents on the dollar)	27.3
Cost (% of property value)	6.0			Time (years)	3.0
Quality of the land administration index (0-30)	5.5			Cost (% of estate)	14.5
				Outcome (0 as piecemeal sale and 1 as going concern)	0
				Strength of insolvency framework index (0-16)	5.0

Sustaining Livestock indicator – Data Points

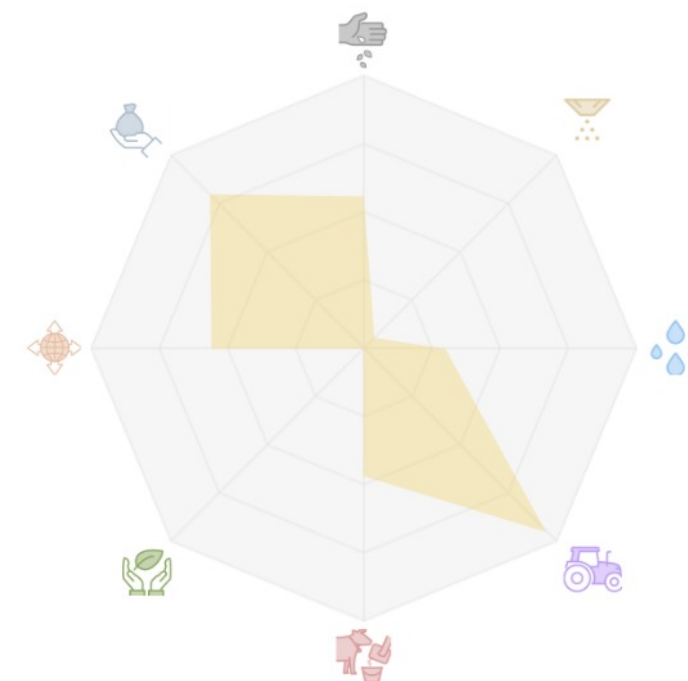
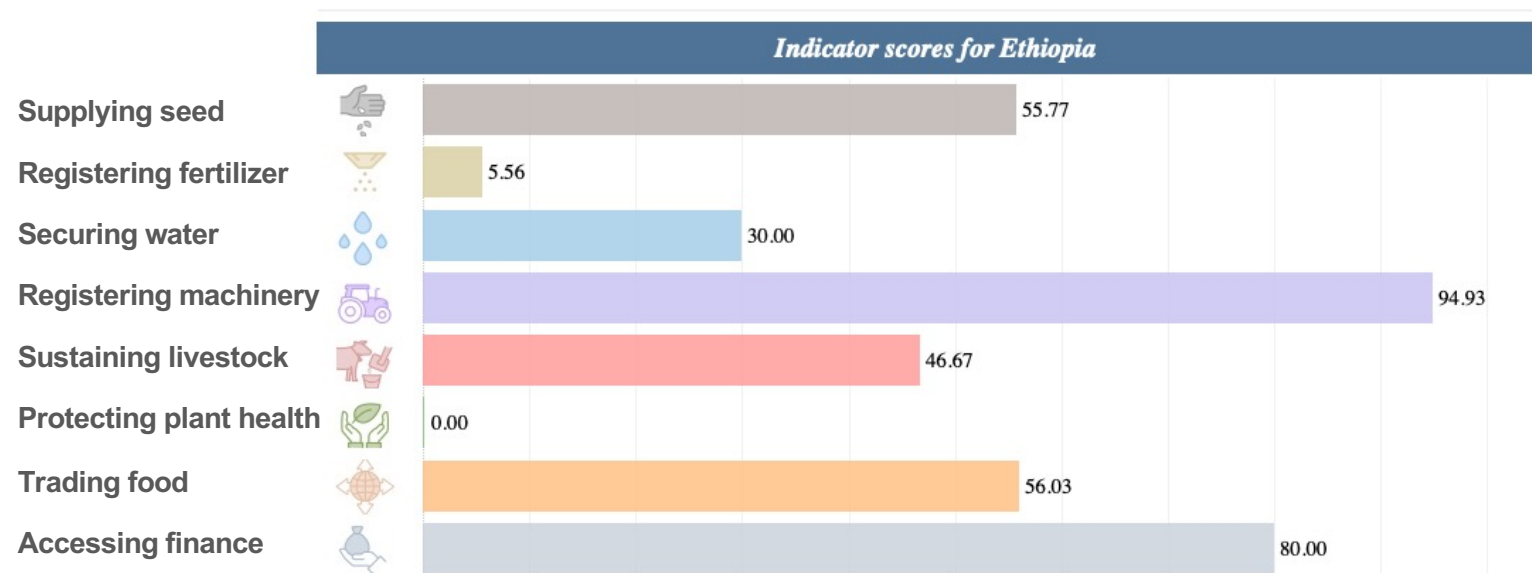
- The indicator includes two legal components that cover: (a) manufactured feed and (b) veterinary medicinal products.



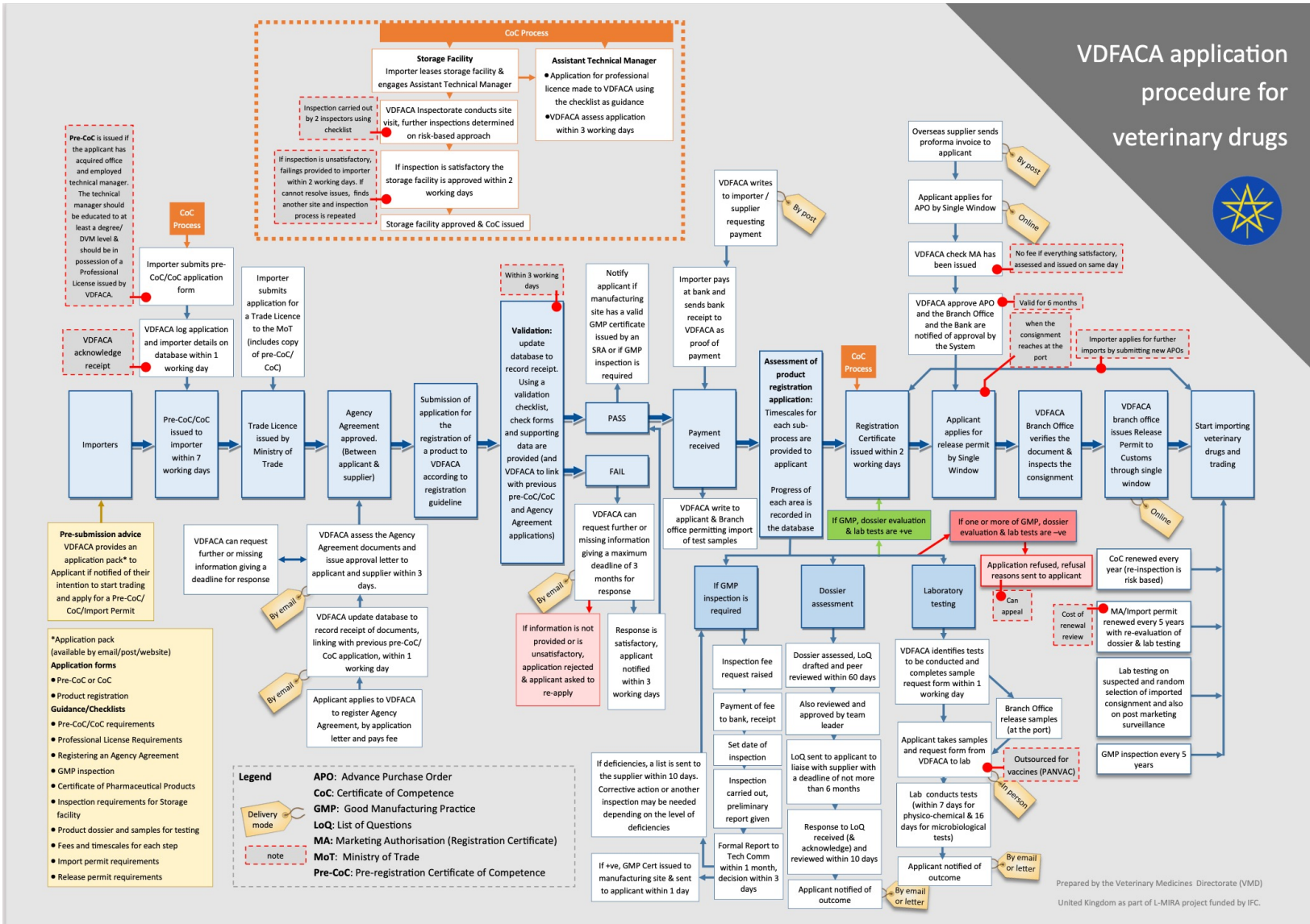
Table 3.7 Sustaining livestock indicator data points and scoring methodology

DATA POINT	SCORING
a. Quality of manufactured feed index	Sum of sub-questions
Must feed manufacturing facilities be approved before the start of operations?	1/0
Are inspections of in-use feed manufacturing facilities based on a risk assessment?	1/0
Must manufactured feed be labeled?	1/0
Must manufactured feed sold in bulk be accompanied by a document containing all mandatory labeling information?	1/0
Are feed manufacturers required to keep monitoring records?	1/0
b. Quality of veterinary medicinal products index	Sum of sub-questions
Must the veterinary medicinal products be registered to be commercialized (in non-emergency or normal situations)?	1/0
Is there a specific timeframe set by law for dossier revision?	1/0
Is there a list of officially registered veterinary medicinal products on the website of the relevant regulatory authority?	1/0
Are generic versions of a registered brand-name veterinary medicinal products allowed by law?	1/0
Is there a specified proprietary time between registration of a generic and a registered brand-name veterinary medicinal products?	1/0
Must registration holders of veterinary medicinal products have a mechanism to capture unexpected or dangerous reactions to marketed veterinary medicinal products?	1/0

Ethiopia Enabling Business of Agriculture scores as of 2019



Process map for registration and market authorization of veterinary drugs



Link to file [here](#)



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