

An assessment of the competitiveness of traditional livestock trade corridors versus the potential of trade in beef in West Africa

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10 June 2019



RESEARCH
PROGRAM ON
Livestock and Fish



Acknowledgements



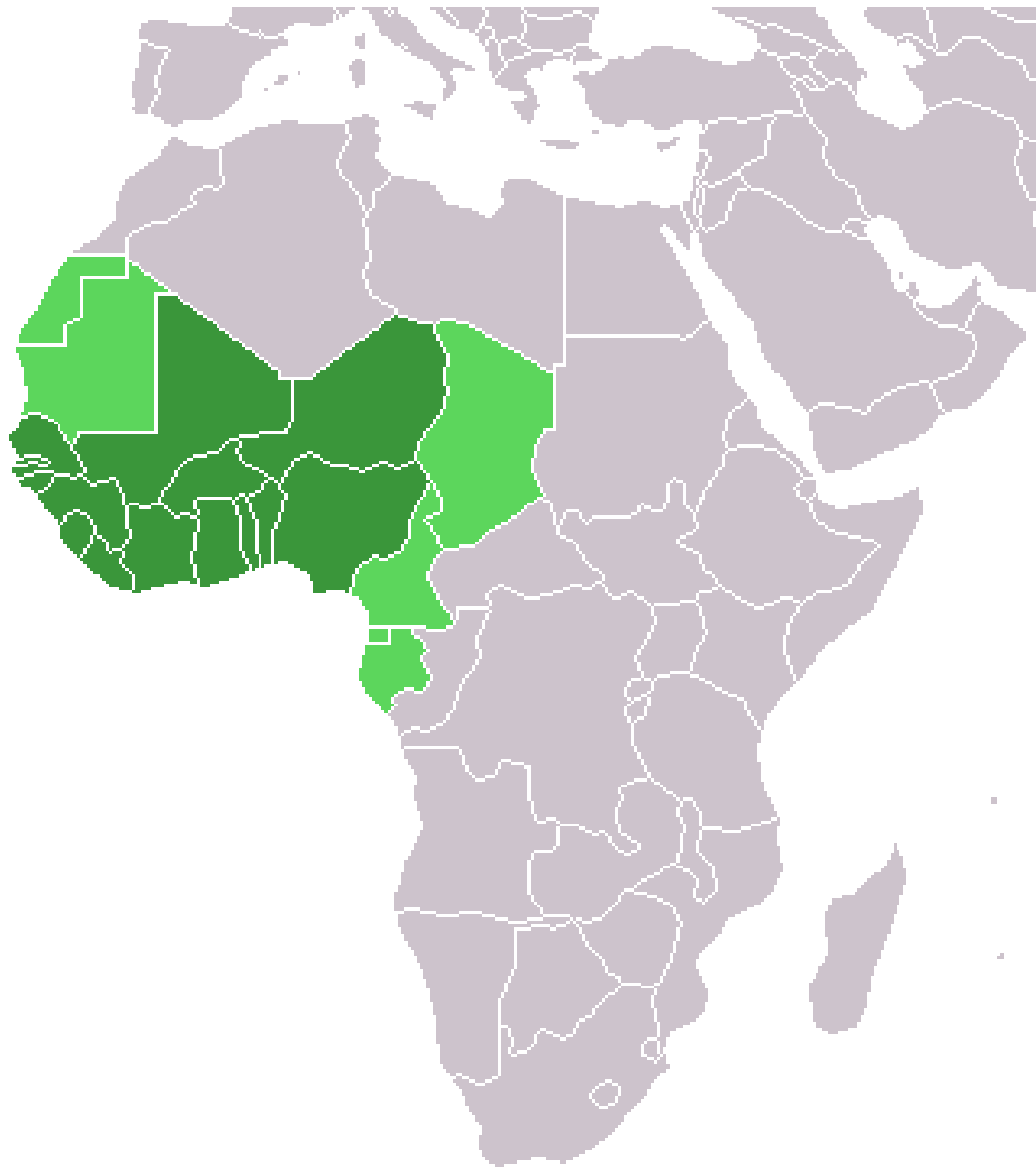
Outline

- Motivation
- Trends
- (How) can West Africa compete in meat?
- Constraints and opportunities

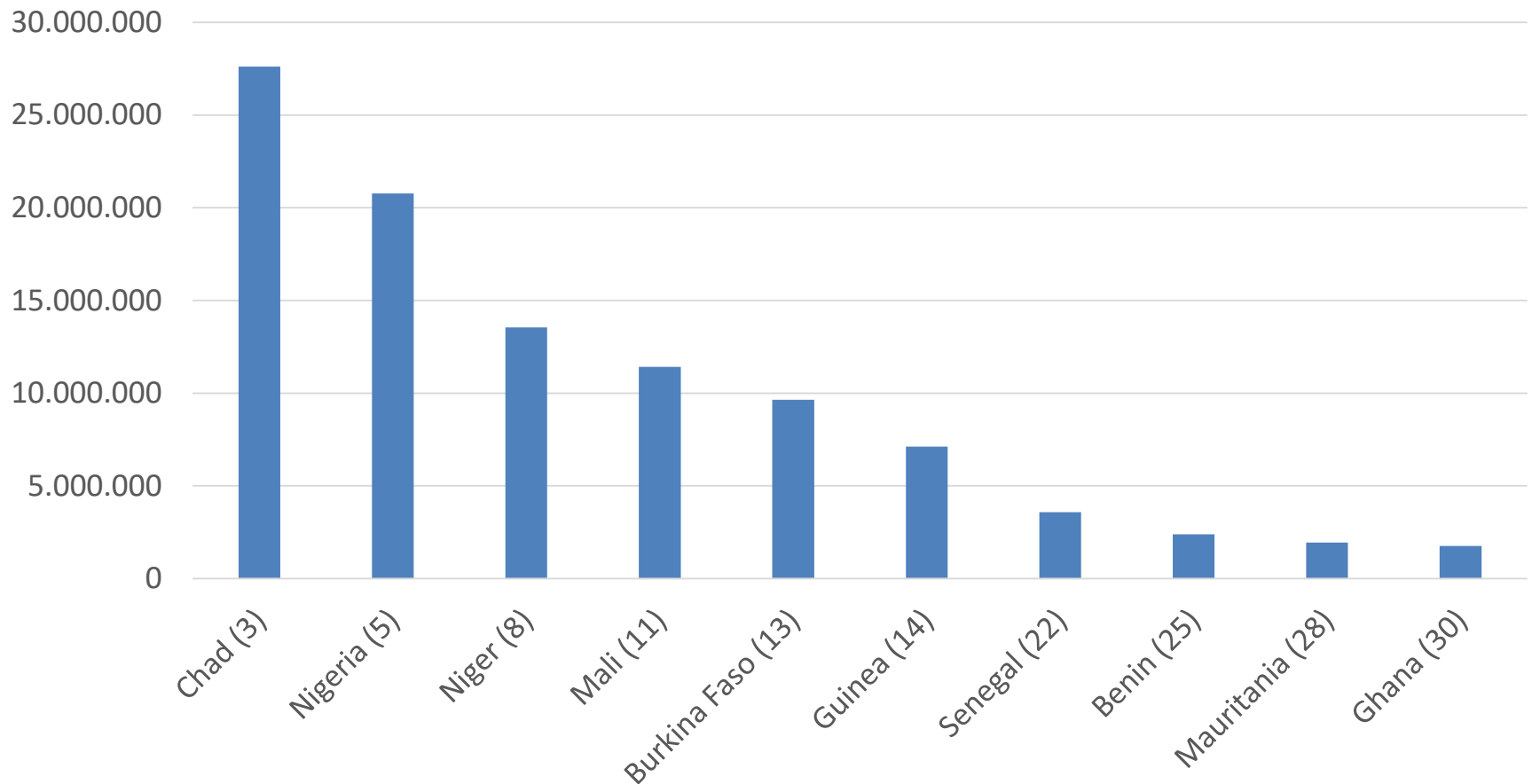
Motivation

Overarching question: *What is the scope for promoting exports of meat from Sahelian countries to coastal countries in lieu of traditional live animal sales?*

Motivation – interest by governments/donors to invest in abattoirs in West Africa.



Animal stocks in selected West African countries + Chad (rank in Africa)



Source FAOSTAT

Other stylized facts:

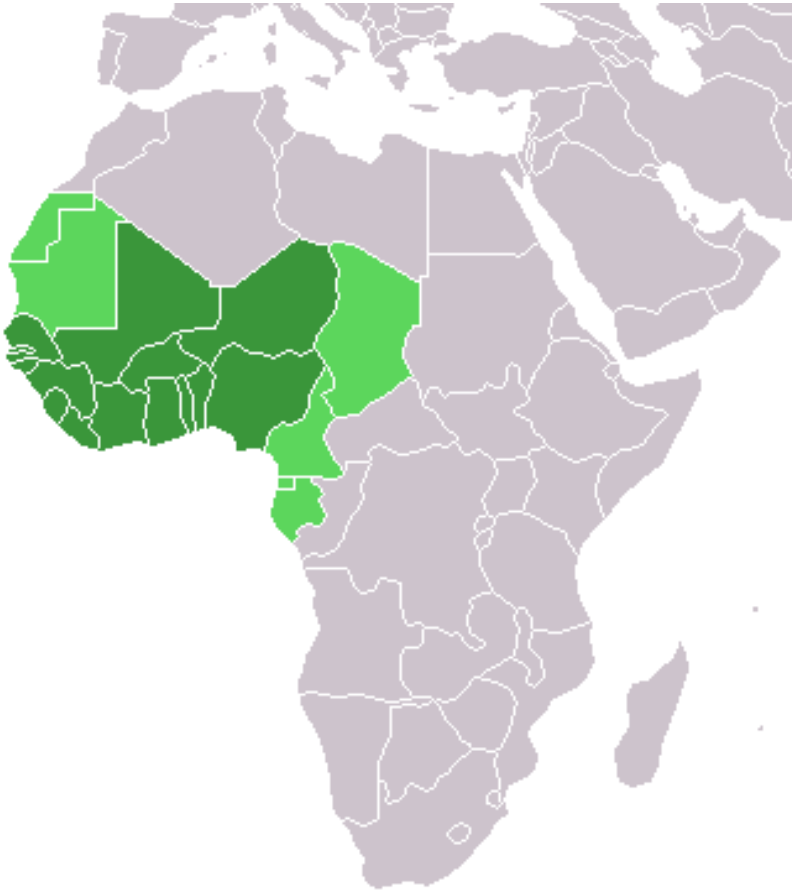
Human population of over 360 million (2016)

High GDP growth: home to nine of top 15 performers (>4.9%)

Country	GDP growth rate (2017), %
Guinea	10.6
Ethiopia	10.2
Eritrea	8.7
Ghana	8.1
Cote d'Ivoire	7.7
Senegal	7.2
Tanzania	6.8
Burkina Faso	6.3
Rwanda	6.1
Guinea-Bissau	5.9

Source:

https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=ZG&most_recent_value_desc=true

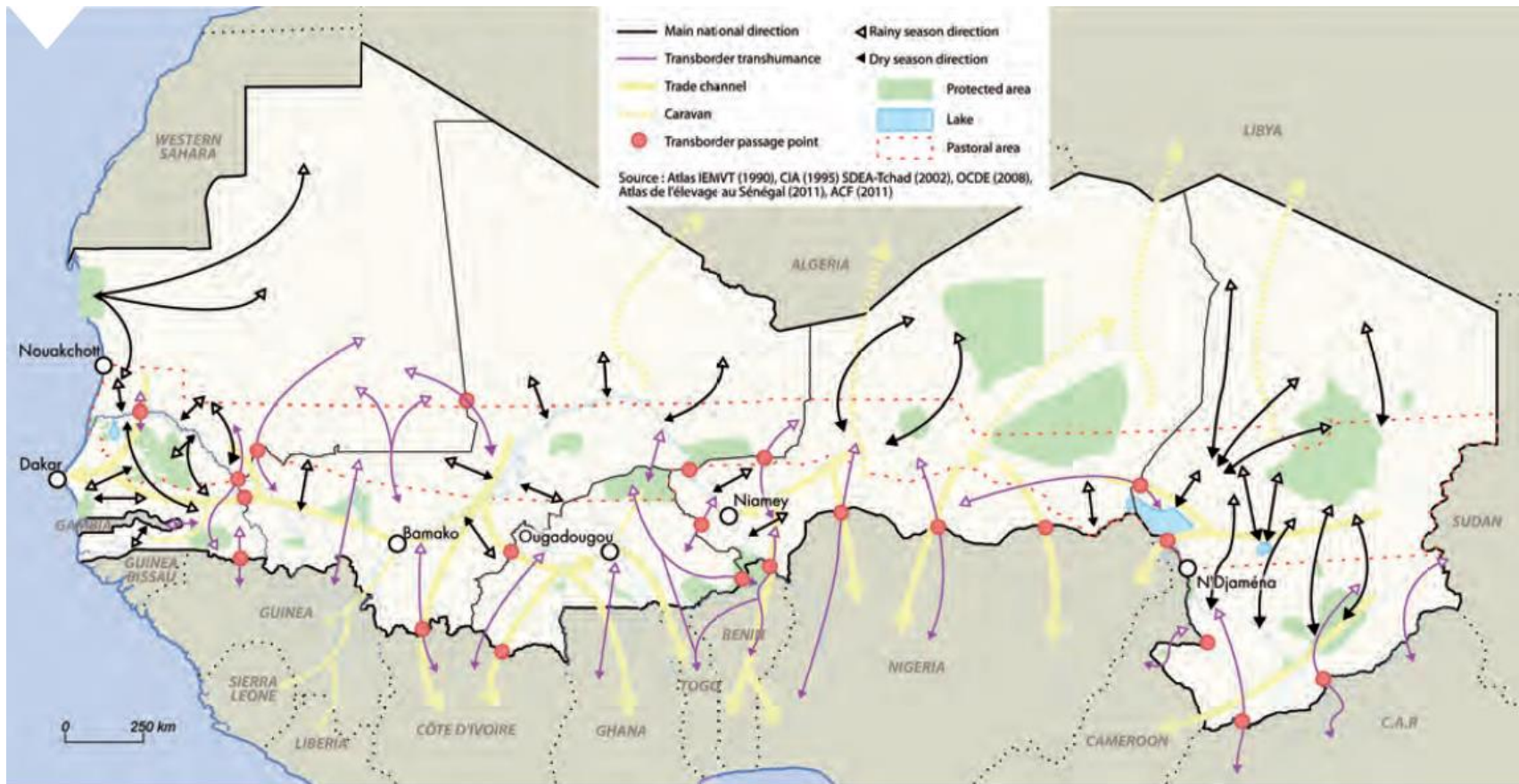


- Significant contribution to GDP
 - 30-50% of agricultural GDP, which itself is 30-50% of overall GDP in Sahel (Burkina Faso, Mali, Niger, Chad)
- Role of transhumance in animal movements
- Role of livestock in pastoral livelihoods → low commercial offtakes (5-10%)
- Low productivity of animals (250-300 kg liveweight); poor feed resources; high incidence of disease
- Low per capita consumption of beef (~5 kg/person/year)



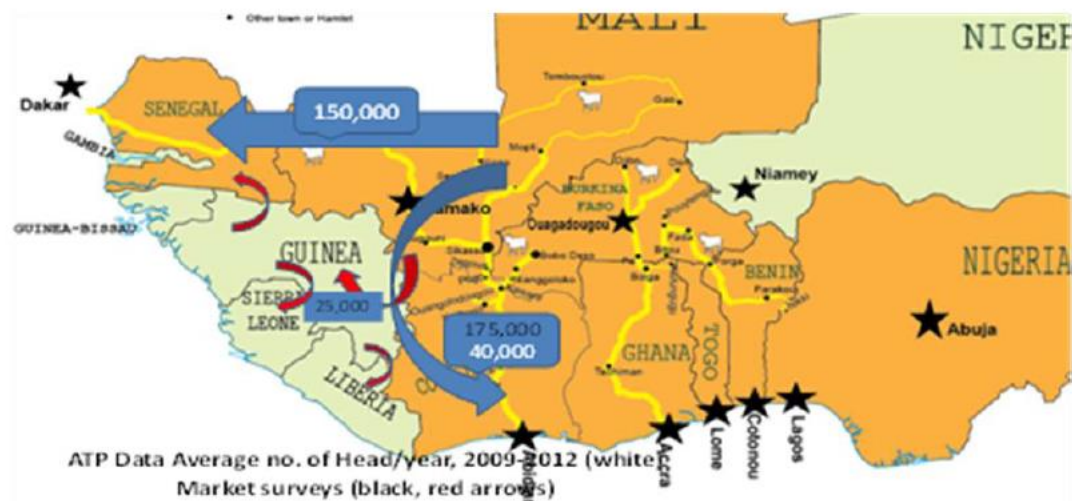


National and transborder herd movements and commercial cattle trade channels in the Sahel

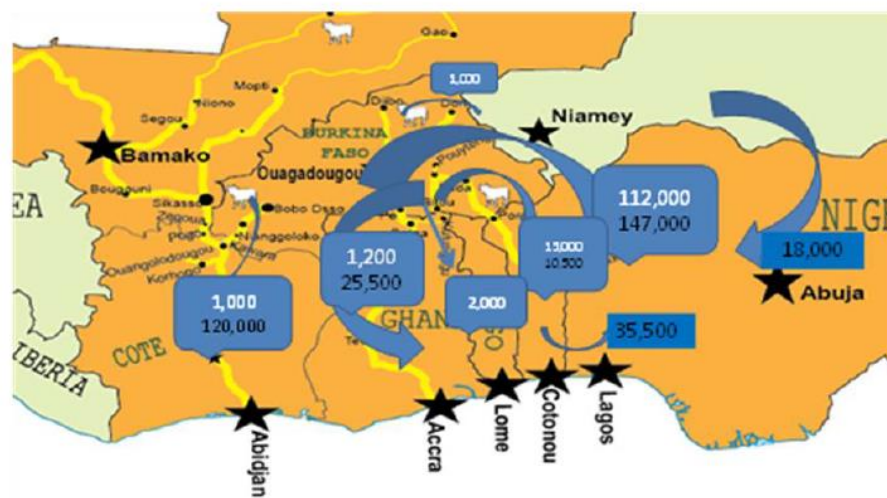


Source: Toure et al. (2012)

MAP 2 - CATTLE FLOWS FROM MALI, GUINEA (TRADE FLOW MONITORING AND MARKET SURVEYS)



MAP 3 - REGIONAL CATTLE TRADE FLOWS (TRADE FLOW MONITORING AND MARKET SURVEYS)



Data Flow Average no. Head/year 2009-2012 (white)
Market Surveys (black)

Source: Josserand (2013)

Cattle Trade Patterns

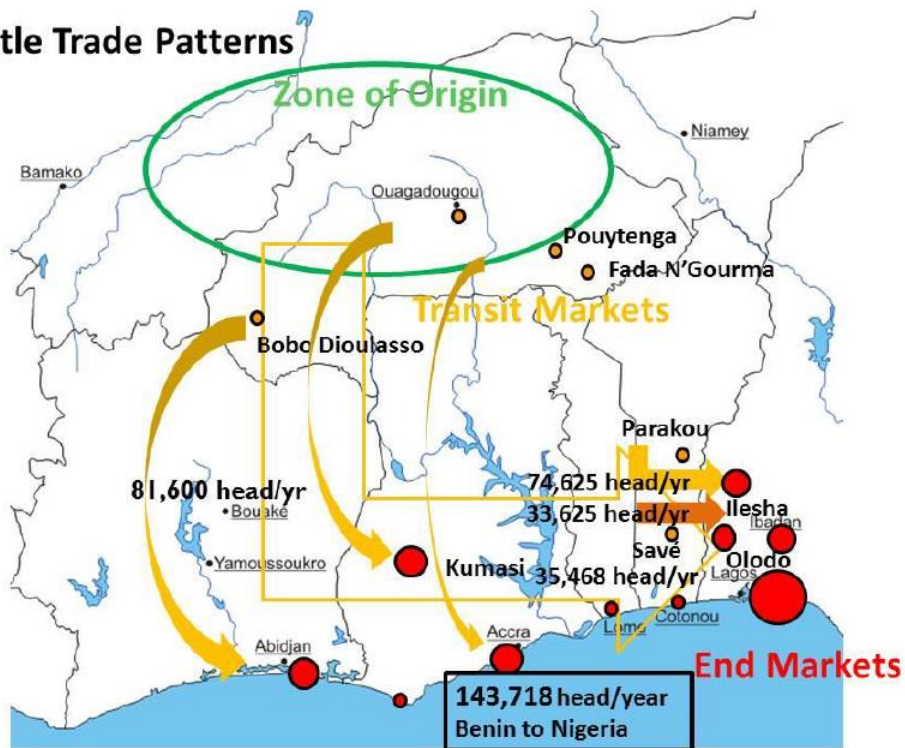


Figure 5: Cattle Trade Patterns and Estimated Flows by Corridor

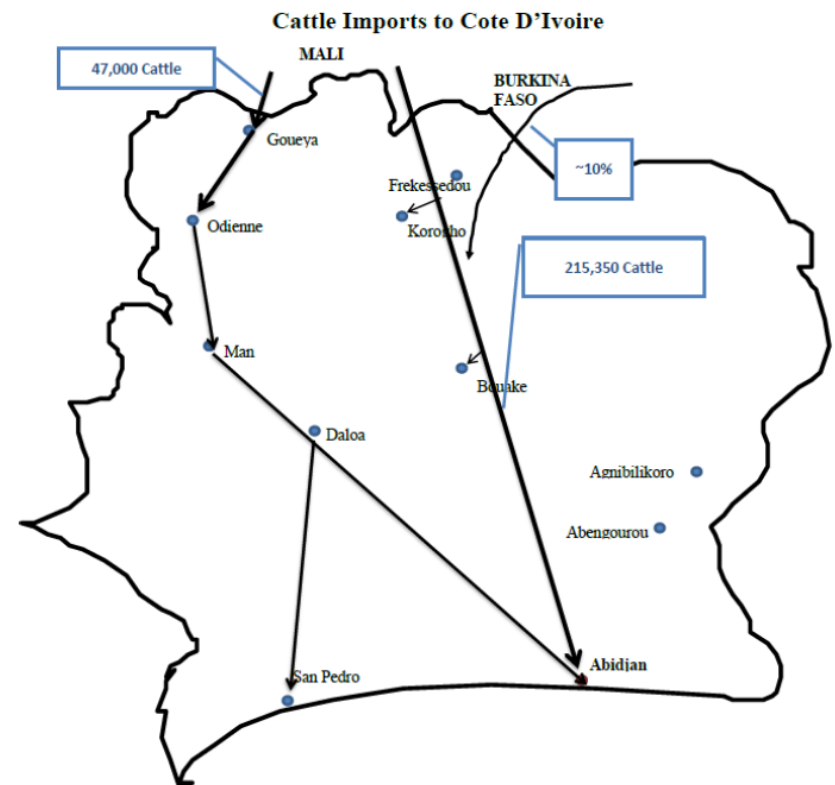
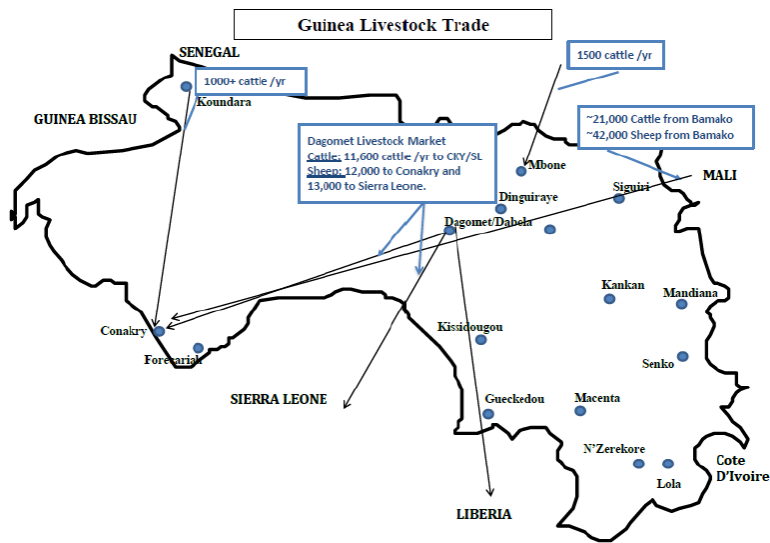
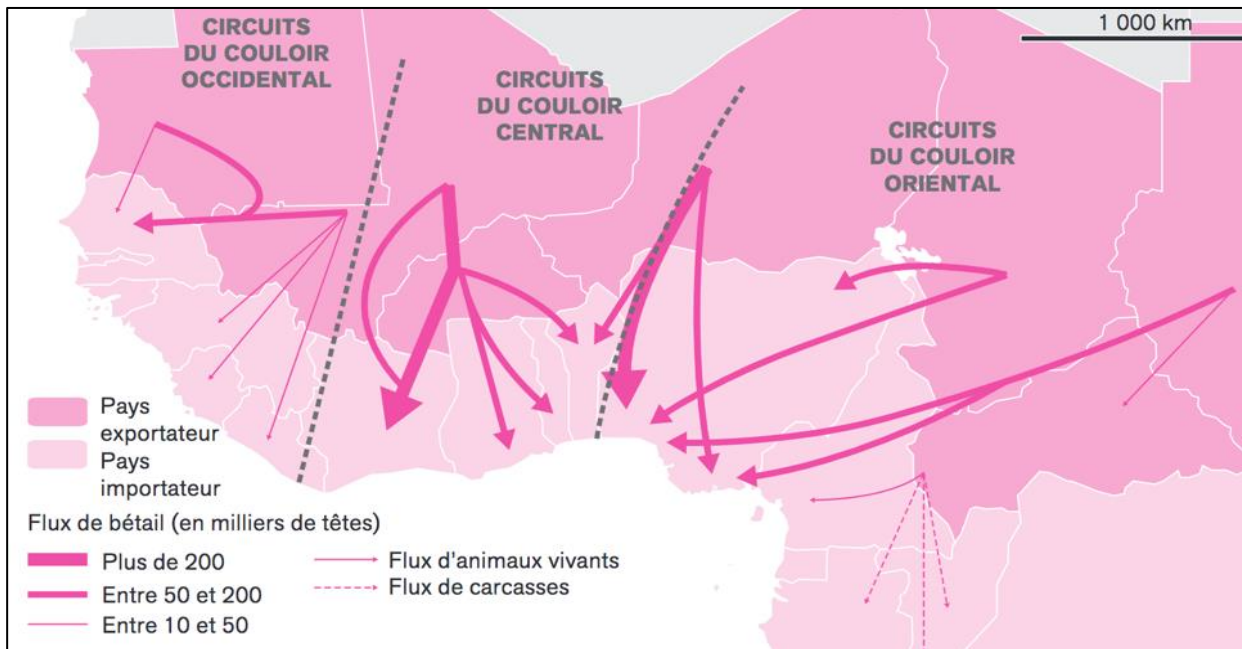


Figure 5. Livestock Flows in Guinea.







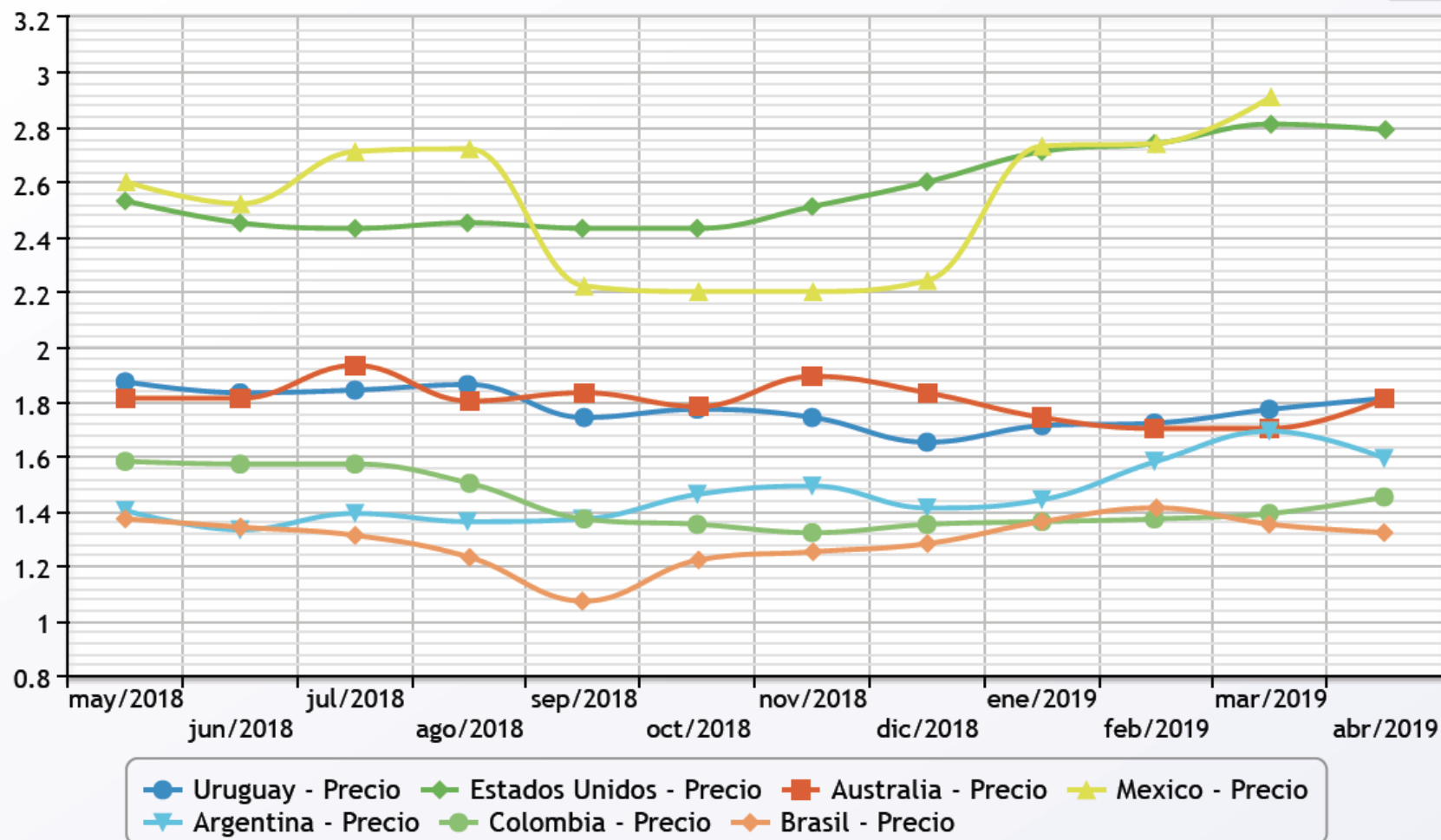
Source : Cesaro et al. (2010), Inter-réseaux Développement Rural (2015)

The “tragedy of borders” in inter-regional trade...



Source: Reproduced from Boyer (2016)

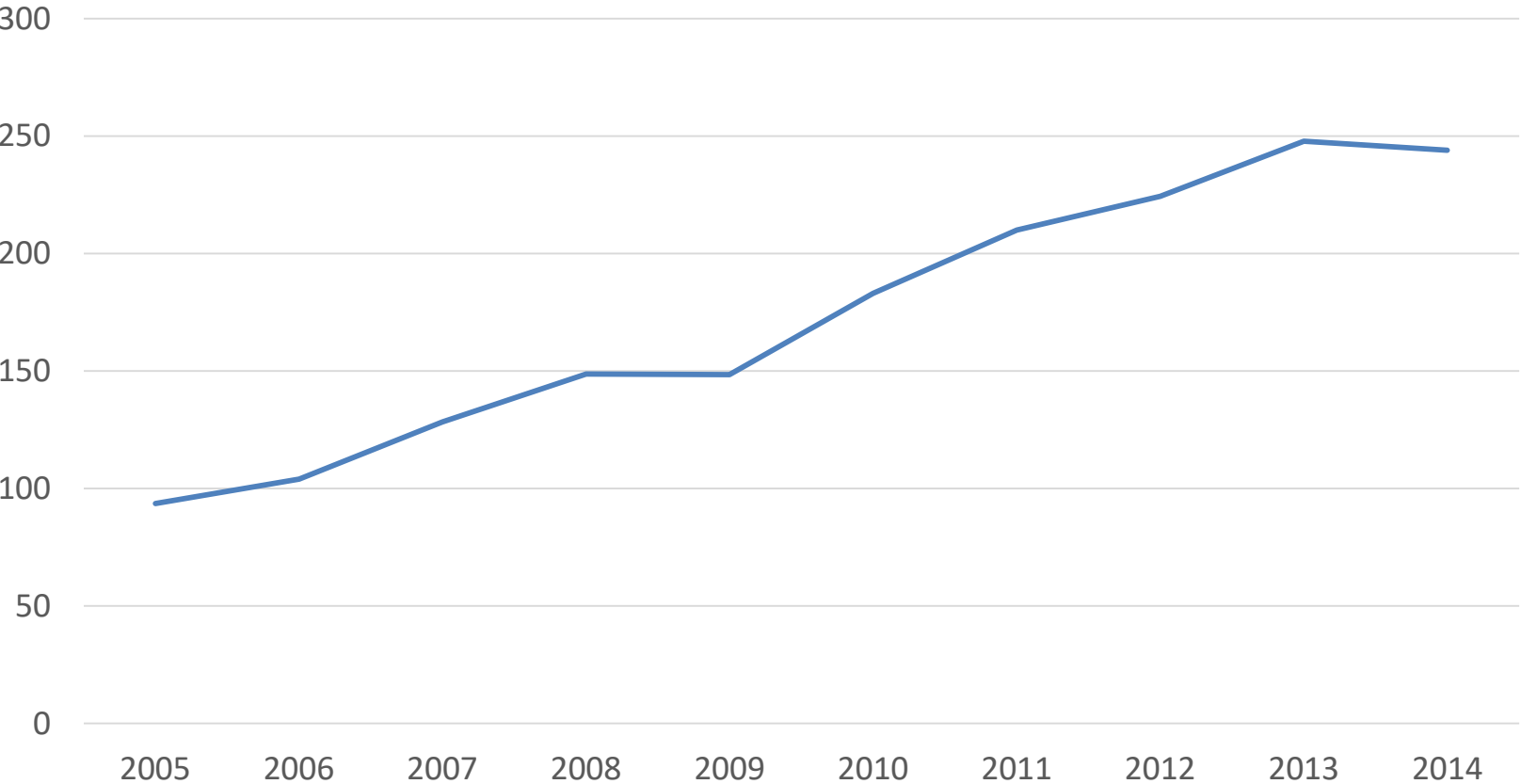
Precio novillo gordo en pie - Países (US\$/kg)



Source: <https://www.fedegan.org.co/estadisticas/precios>

Live weight animal prices: CFA 1,000-1,200/kg
(USD-CFA exchange rate: 556-589 CFA/USD)

Live animal prices in Burkina Faso, '000 CFA/head, 2005-2014

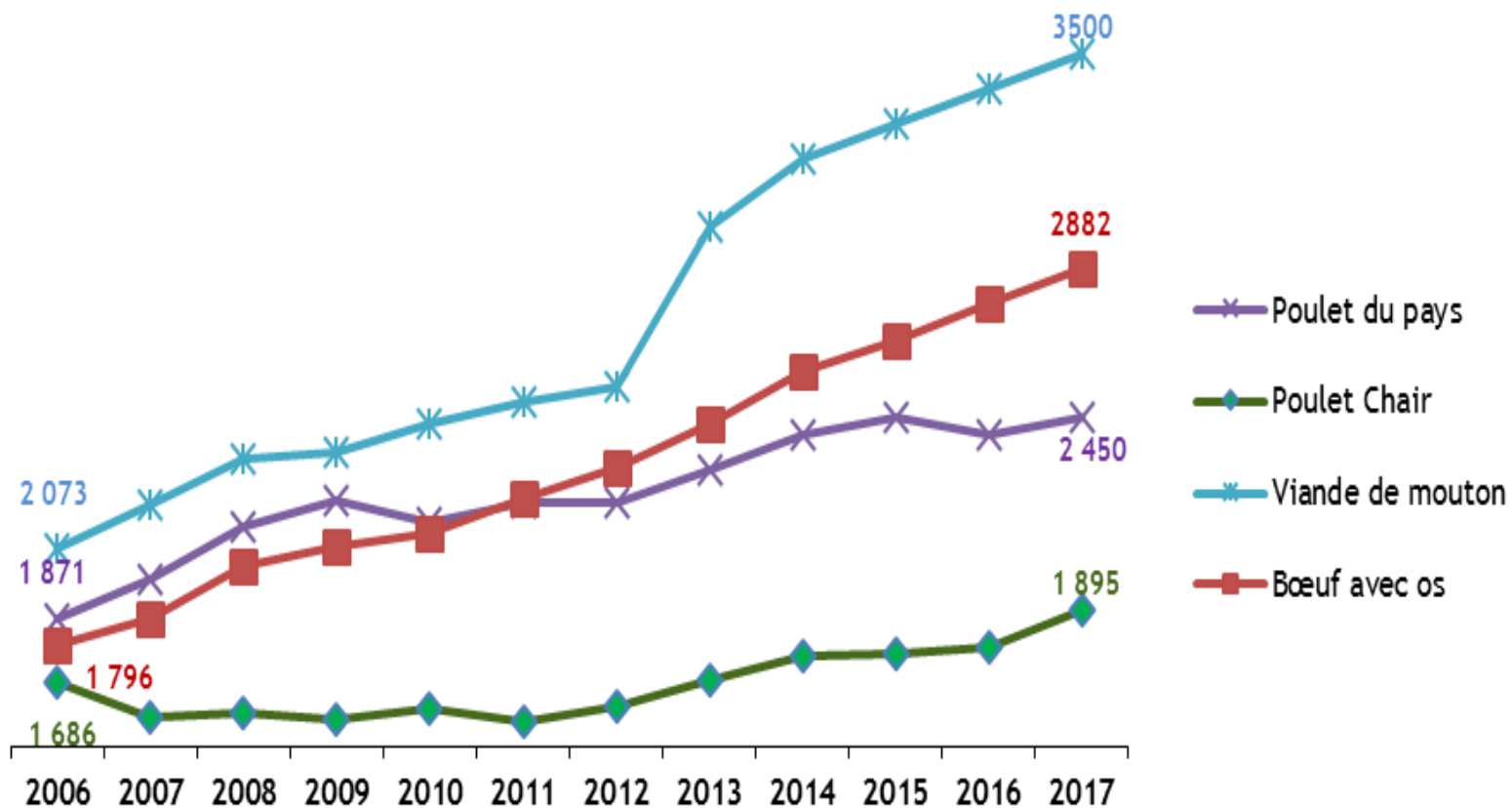


Source: DGESS/MRA (2015)

Meat marketing

- Overwhelmingly undifferentiated in local markets: no distinction on cuts from carcasses
- Retail prices (local markets):
 - ~3,000 CFA/kg (cuts); ~1,500-2,000 CFA/kg (offals)
(Mali/Burkina/Niger/Benin: 2018-2019)
 - Ghana (ex-butcher) 22 GHC/kg (US\$4.62/kg): cuts; 15 GHC/kg (US\$3.15/kg): offals
- Imported meat: mix of offals (coast) and cuts (Senegal, Central Africa), predominantly frozen, hotels/restaurants/foodservice
- Bourgeoning re-export trade, particularly to Nigeria

Price of selected meats in Senegal, CFA/kg 2006-2017

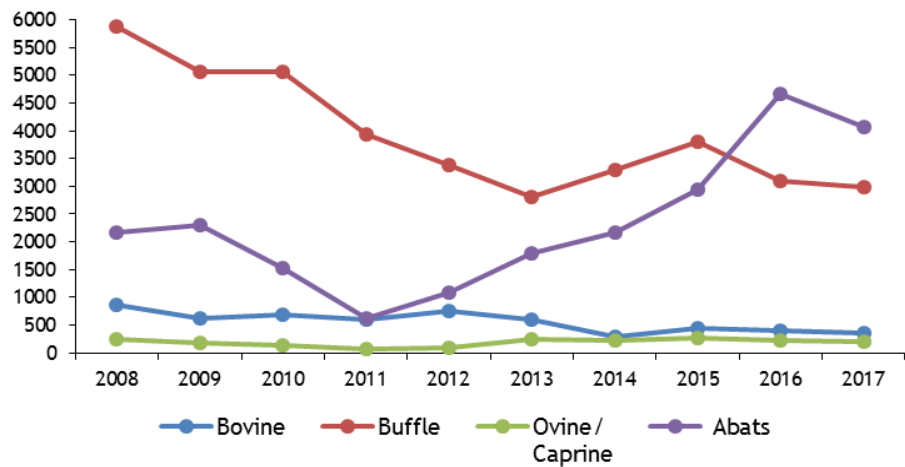
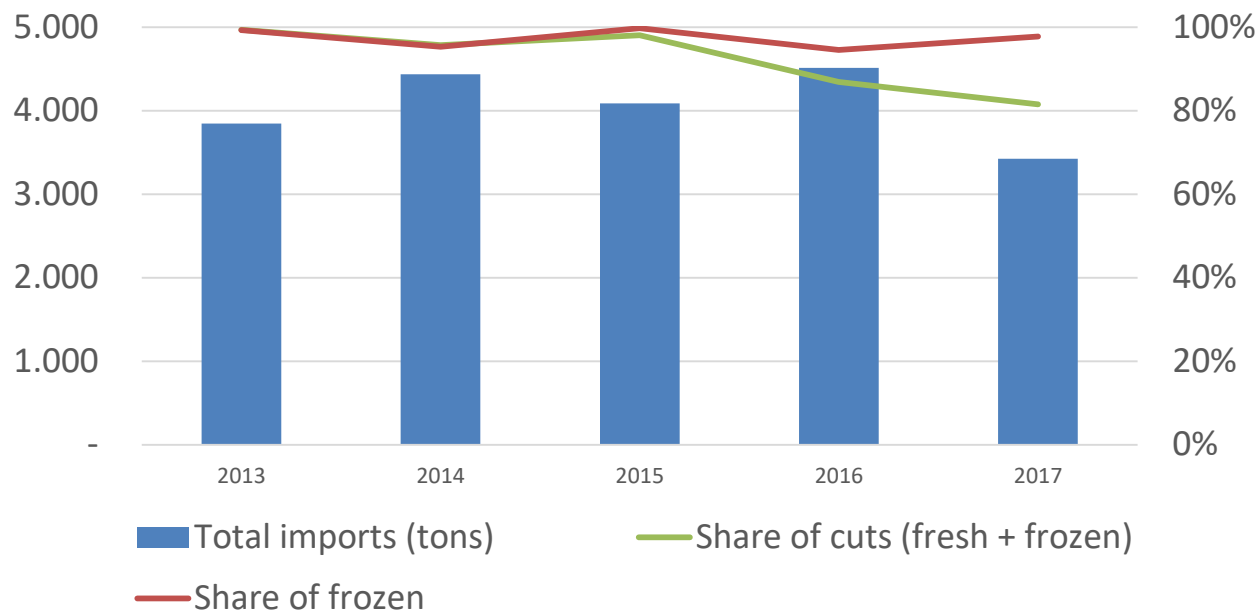


Source: Ndiary et al 2018

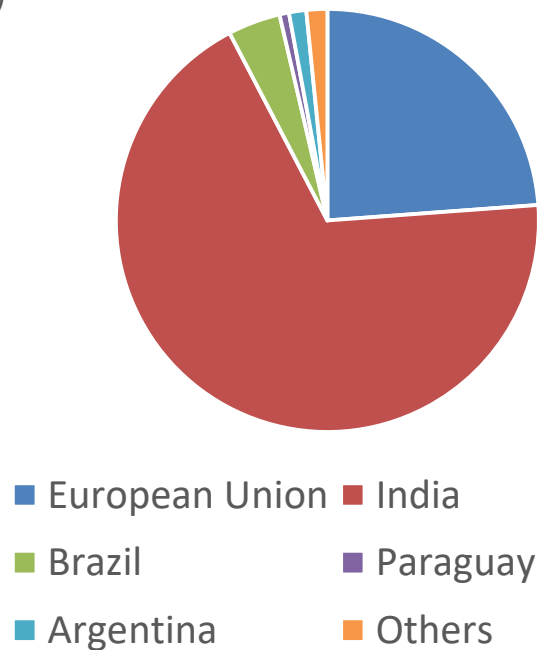
Representative retail beef pricing (all West African meat)

Country (date)	Cut type	Representative price/kg
Senegal (2018)	Entrecote, faux filet	4,890-5,990 CFA (US\$8.58-10.50)
	Cote de bœuf	4,890-6,200 CFA (US\$8.58-10.88)
Ghana (Jun. 2018)	Various (rump, entrecote, etc.)	30-35 GHC (only 1-2 GHC difference in cuts), US\$6.52-7.61
Benin (Jul. 2018)	Filet	6,900 CFA (US\$12.29)
	Entrecote	5,900 CFA (US\$10.50)
	Rump	5,320 CFA (US\$9.47)
	T-bone	4,500 CFA (US\$8.01)
Niger (Mar. 2019)	Filet	5,950 CFA (US\$10.23)
	Entrecote	5,250 CFA (US\$9.03)
	Faux filet	4,750 CFA (US\$8.17)
	Rump	4,500 CFA (US\$7.74)

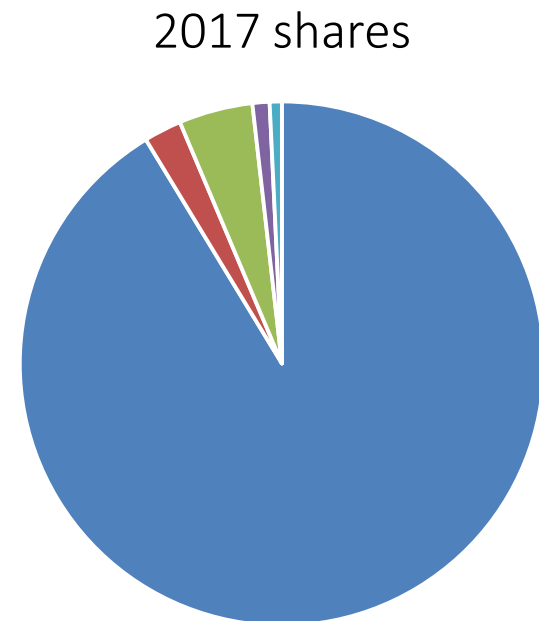
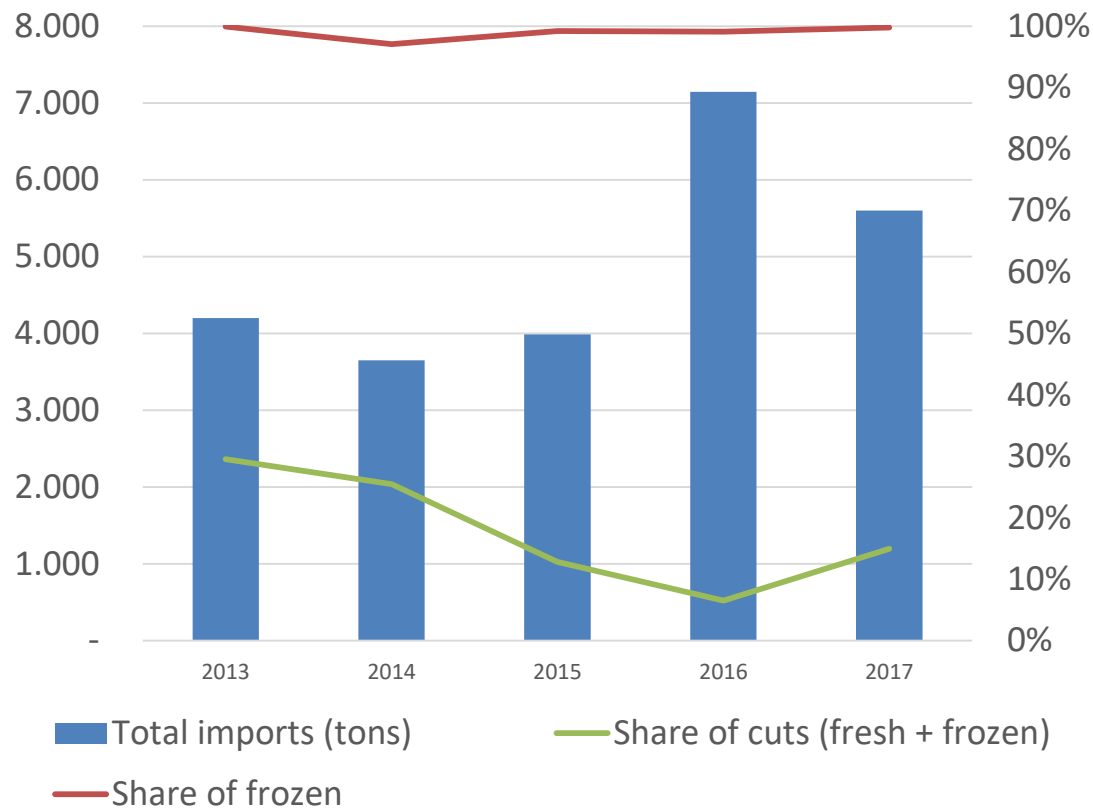
Beef imports: Senegal



2017 shares

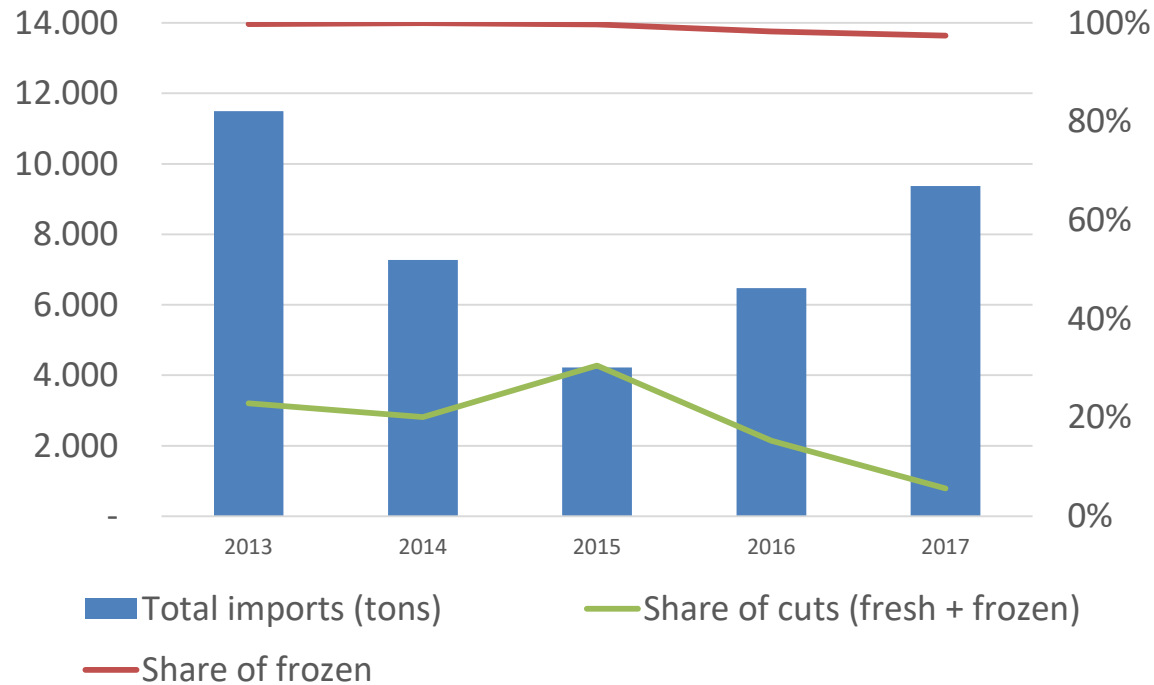


Beef imports – Cote d'Ivoire

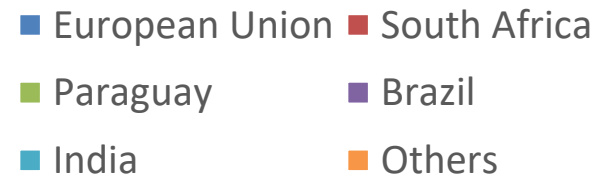


■ European Union ■ India ■ Brazil ■ USA ■ Others

Beef imports: Ghana



2017 shares



Market developments

- Movement in developing abattoirs in Sahel to export beef instead of live animals (Mali, discussions in Burkina/Niger)
- Example: Laham (Kayes, Mali, near the Mali-Senegal border)
 - Opportunities: growing markets on coast (Dakar) + expatriate/UN markets in Mali (Bamako, MINUSMA, mining) for high-value cuts
 - Weaknesses: poor business model in animal procurement → low processing throughput
 - Threats: Construction of large abattoir near Dakar airport (2020/2021?) → bypass Laham through traditional animal sales?

Constraints

- Fragmented value chains
- Lack of cold chains and logistics
- Preference for fresh meat/offals (frozen sold at discount)
- Productivity and offtake rates low
- Climate shocks
- Insecurity

Competitiveness analysis: Burkina Faso-Ghana

Item	High trader margin (8%)	Low trade margin (5%)
FOB price imported offals	1.23	1.23
Freight costs (3500 Euro for 40' container, 25 tons)	0.17	0.17
CIF unit value	1.40	1.40
Tariff (@35%)	0.49	0.49
Trader margin (@min 5%, max 8%)	0.15	0.09
Wholesale price (USD/kg)	2.04	1.98
Wholesale price (CFA/kg)	1,174	1,141

Takeaways:

- Frozen imports of offals cheaper than locally produced fresh
- Prospective Burkinabe imports marginally cheaper than EU/Brazilian ones ...
- ...but this assumes the cold chain & logistics exist – what are added costs?
- Exchange rates a key competitive factor
- Trade with semi-arid markets in North of Ghana – an opportunity?

Item	Price
Pricing of offals from Burkina Faso	
Price of offals, ex-abattoir Ouagadougou, CFA/kg	1,000
Transport costs (10%), CFA/kg	100
Informal charges (1%), CFA/kg	11
Landed price, CFA/kg	1,111
Comparative prices in Ghana	
Price paid by butchers in Ghana for offals (GHS/kg)	12.10
Price paid by butchers in Ghana, CFA/kg equivalent (1 GHS = 116 CFA)	1,404

Source: Rich and Wane (2019)

Competitiveness analysis: Burkina Faso-Ghana

	Baseline	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Price of low-value cuts (CFA/kg)	2,031	2,006	2,107	2,019	1,803
Price of offals (CFA/kg)	1,016	1,003	1,054	1,009	901
Price of high-value cuts (CFA/kg)	2,031	2,468	2,593	4,129	3,686
Quantity of cuts sold per day (kg)	19,433	19,946	17,916	19,685	24,023
Quantity of offals sold per day (kg)	4,843	4,971	4,465	4,906	5,987
Quantity of high-value cuts per day (kg)	6,137	6,299	5,658	6,216	7,586
Revenue generated ('000 CFA)	56,853	60,544	57,126	70,360	76,670
Costs ('000 CFA)	46,562	47,792	51,513	56,599	40,292
Profits ('000 CFA)	10,291	12,752	5,613	13,761	36,378
Profit margin	18%	21%	10%	20%	47%

Source: Rich and Wane (2019)

Scenario 1: Access to Ghanaian market with high-value cuts

Scenario 2: Scenario 1 + 20% increase in marginal costs (MC)

Scenario 3: Access to higher-value West Africa markets (CI, Benin)

Scenario 4: Scenario 3 + 30% decrease in MC

Application of joint-products pricing model under monopoly (Colberg 1941; Houck 1964)

Takeaways

- Sales to higher-value markets has marginal impacts on pricing power of offals
- Best case scenario raises profits significantly and improves competitiveness – but what are investment costs to achieve?

Concluding messages (1)

- Traditional live animal exports have an internal logic, based on geographical, ecological, economic and cultural complementarities
- Live animal exports - still very competitive with strong adaptation capacity to multidimensional shocks and constraints regardless of the mode of transport
- Meat carcasses and cuts unsuitable for current norms and standards
- Building slaughterhouses would be financially relevant but sustainability is still in question.
- Switching from “all live animal” to “all refrigerated lorries” must take place over a long period of time in order to manage certain social and political balance beyond technical and financial drivers (employment etc.).

Concluding messages (2)

- “Tragedy of borders”: how to share gains of trade based on comparative advantage in animals/meat?
- Prospects for regional monopolies in semi-arid areas?
- Competitiveness = market segmentation strategy.
- How to develop the “top 5%” on the coast in high-value cuts (Lagos, Accra, Abidjan, Dakar, etc.) to maximize carcass value?
 - Links to improved efficiency in production, feed, processing, etc. to facilitate.



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