

A REVIEW ON PATTERNS AND CHALLENGES OF CATTLE TRADE CORRIDORS IN NIGERIA

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Abstract

The supply of cattle from the north (northern states of Nigeria and neighbouring countries of Niger, Chad and Cameroon) to meet the demand for animal meat in southern Nigeria generated cattle trade corridors in the country. This study, based on review of literature, described the patterns and discussed the challenges of cattle trade corridors in Nigeria. The study described three cattle trade corridors in the country: cross-border (from Niger, Chad and Cameroon into Nigeria), regional (from northern to southern Nigeria) and local (trade between production zones and local markets). The challenges of cross-border trade corridor relate to movement of people, goods and capital. There are two major challenges of regional trade corridor: high domestic transaction costs and structural constraints of infrastructure and efficiency of transport services. The challenges of local trade corridor are in cattle production, infrastructural services, and security. Recommendations given include rehabilitation of market and storage infrastructure, deployment and maintenance of more security agencies, legislation for easily achievable interventions to resolve conflicts, and simplify cross-border formal trade conditions to reduce trade transaction costs.

Keywords: *Corridor, Infrastructure, Insecurity, Market, Production*

Introduction

The demand for animal source foods in developing countries has been growing rapidly due to population growth and increasing incomes (Easter *et al.*, 2018). The total consumption of meat was growing three fold than in the developed countries, and it was predicted that there would be continuous growth of meat at a rate of 2.8% and milk at the rate of 3.3% in the developing countries up to 2020. This has made livestock as one of the fastest-growing sectors in agriculture, and having opportunities for potential contribution to economic growth (International Livestock Research Institute, 2019; Herrero *et al.*, 2013; Robinson & Pozzi, 2011). In sub-Saharan Africa, especially West Africa, annual growth of the demand for animal products has been increasing at an estimated rate of 4%. This is as a result of population growth, accelerated urbanisation, growing incomes and consequent increase in purchasing power of the people. This is more especially with coastal countries like Benin, Côte d'Ivoire, Ghana, Nigeria and Togo. Indeed, this high demand for animal products has made some experts to predict for "livestock revolution" in about 2023 (Valerio *et al.*, 2020; Kamuanga *et al.*, 2008).

In Tropical Africa, cattle are recognized, economically and socially, as the most important livestock to the people (Udo, 1987). In sub-Saharan Africa, Nigeria has been observed as one of the leading countries in cattle production and trade, which support livelihood of millions of people - employment, income-generation, raw materials, farm power, cultural and ownership prestige, manure, and meat (Mafimisebi *et al.*, 2013). Indeed, cattle trade has been an important aspect of the Nigeria's economy (Hassan *et al.*, 2011). Cattle supply about 45% of total meat consumed and hold a prominent position in livestock industry (Kubkomawa, 2017).

The recent trend is shortage of cattle population. This is as a result of human population growing faster than the cattle population (Kubkomawa, 2017). The decline in supply of cattle and its products has also been attributed to high cost of marketing due to factors of transportation and considerable spatial separation between production and consumption areas (Mafimisebi *et al.*, 2013). Another reason added for failure of the supply to match the demand was that more than 80% of the cattle population is in the hands of traditional pastoralists (Haruna and Murtala, 2005). Easter *et al.* (2018) and International Livestock Research Institute (2019) attributed the excess of demand over supply to restriction of output due to environmental constraints, and the use of conservative and primitive methods.

Nigeria has three major categories of trade corridor: cross-border, regional and local. In cross-border trade, Nigeria receives cattle across its borders from Chad, Central Africa, Niger and Cameroon. In the supply countries, along the border, there are three types of markets: retail, assembly and wholesale. Along the border in Nigeria, there are several transit or frontier markets, which include Illela, Acida, Jibia, Mai'aduawa, Maigatari, Nguru, Damasak and Mubi among others. For regional trade corridor, cattle sold south come from the north, from across border and the northern Nigerian states. Transporting cattle from north to southern markets takes place through hooves conveyance (trekking), railway carriage and road truckage, based on western and eastern corridors. The major corridors include Lagos – Kano – Jibiya (Lakaji), Sokoto – Lagos, Kano – Benin – Warri, Maiduguri – Port Harcourt, Yola – Calabar and Maiduguri – Abuja – Lagos. Local corridors have been generated from cattle trade between production zones and the local markets, and between the markets in Nigeria. The challenges of the trade corridors include insecurity, inadequate and poor infrastructure, expensive production, charges and barriers, cumbersome formal trade conditions, inadequate finance and defective government policies.

Trade Corridor: Conceptual and Theoretical Issues

A corridor has two perspectives of definition, physical and functional. Physically, a corridor is a linear space of many transport routes that connects numerous economic nodes or agglomeration of economic activities and people across a geographic area. Settlements of different sizes (villages, towns and cities) are connected, adjoining one another (Nogales, 2014). In terms of physical components, a corridor is characterized by one or more routes connecting centers of economic activity, the routes aligned differently but having common transfer points, connecting the same end points. The routes link nodes, which support movement of transport services. The end points serve as the corridor entry or exit points (PGlobal Global Advisory and Training Services, 2011). Functionally, a corridor is defined in terms provision of more efficient transport and logistics services, and improvement of infrastructure and services, thereby reducing transport costs and time, rapidly expanding trade, and facilitating national and international integration. These make corridors to possess sustainable competitive advantage, grounded in economic performance (Nogales, 2014; PGlobal Global Advisory and Training Services, 2011).

The functional dimension extends corridors beyond physical transport linkage to incorporate economic, social, technological and policy considerations. In this way, potential development path for corridors is generated, which is made up of five stages: transport, logistics, trade, economic, and growth or development corridors. These are outlined as follows (Nogales, 2014):

- i. **Transport corridors:** These consist of transport routes that link intermediary settlements attached to the land surrounding the corridor, consisting of cities and towns.
- ii. **Logistics corridors:** They are corridors that go beyond physical linkage an area or a region to establish institutional framework regarding logistics and all conditions (technological, organizational and legal) controlling such transportation. The main purpose is to smooth transfer and storage of freight, people and related information.
- iii. **Trade corridors:** These are transport (or logistics) corridors, which deploy additional trade facilitation efforts. Functionally, objective of trade corridors is to eliminate barriers against smooth transfer of goods and passengers, and by streamlining and simplifying trade/customs procedures and trade policy.
- iv. **Economic corridors:** These are defined by the capacity to induce investment and generate economic activities along an area or region. The corridors are in two dimensions, analytical and policy. On one hand, the analytical dimension reinforces the idea that corridors are holistic in nature, which is made up of linear clusters of land uses that interact with each other. In this way, corridors are defined on the basis of spatial-functional forms and patterns. On the other hand, the policy dimension defines corridors as policy and spatial planning instruments
- v. **Development or growth corridors:** The target of these corridors is to elevate an area to a certain level of development. They do this by combing economic initiatives and non-economic elements, such as health systems, environment protection (green corridors), and cultural dimensions.

The stages involved in the potential development path for corridors are not completely exclusive because it is common to have some overlap in them. The target for transport, trade and economic corridors is to foster spatial economic growth, particularly through the establishment and enhancement of basic logistics services along the corridor (Figure 1).

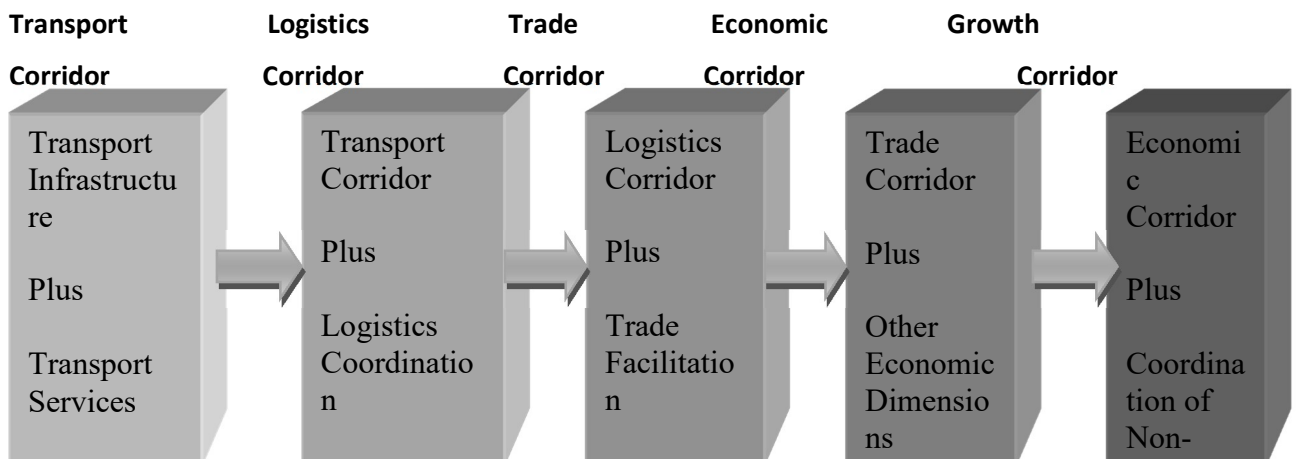


Figure 1: Potential Development Path for Corridors

Source: Redrawn from Nogales (2014)

The development path for corridor illustrated in Figure 1 shows that addition of logistic coordination to transport corridor produces logistics corridor. If trade facilitation is added to logistics corridor, trade corridor is produced. Trade corridor plus other economic dimensions give rise to economic corridor. The last stage along the development path is growth corridor, which is produced from adding coordination of noneconomic elements to economic corridor (Nogales, 2014). However, the success of transport corridor to lead to economic growth and development depends on proper corridor management, and trade transport facilitation (Youssef, 2019; AbdulQuium, 2019; Hope and Cox, 2015).

Corridor is a development tool that has captured the attention and concern of many economically advanced countries, dynamic emerging and developing countries, various international financial institutions, private firms (either local or multinational) and public sector. The reasons behind the fashionable usage of corridor for development include its trial as a tool for integrated territorial planning, having a set of coordinated actions that ensure a critical mass of investments, has the capacity to generate strategic alliances of various stakeholders for development, facilitates symbiotic relationship between regional trading blocs, and ensures best practices for design and implementation that enhanced the performance of corridor interventions (Nogales, 2014).

Cattle trade corridor study has attracted the attention of many scholars with different perspectives and scope. Adamu *et al.* (2005) examined market and transport institutions in Nigeria's livestock trade from Sokoto to Ibadan. They explored the major marketing and transport institutions which regulated the livestock trade and identified areas where the potential for poor people to benefit from the trade could be improved. The principal focus of the study was on cattle, mostly produced in the North and mostly consumed in the South. Hassan *et al.* (2011) assessed barriers to the flow of goods along the Lagos–Kano corridor. Cattle flow was part of the framework they considered in the assessment. They concentrated on one of the major corridors, and suggested the need to conduct further studies along other major trade corridors in the Nigeria. Coste (2014) studied barriers encountered in cattle and leather trade between the northern and southern parts of the country, along the Lagos-Kano corridor. The study concluded that the Lagos-Kano corridor compared unfavorably with the Tema-Ouagadougou corridor linking Ghana and Burkina Faso, with 25% higher costs and 150% longer delays for exports.

Individual markets were studied, with different focus. Haruna and Murtala (2005) analyzed cattle marketing chain in Kano River irrigation project, and Wudil cattle market was part of it. The emphasis was on economic aspects involving production trends and prices, marketing channels, marketing margins and technical coefficients. Mamman (2005) examined transport aspects of livestock marketing at the Achida and Sokoto Kara markets. The main focus of the work was on the transport aspect of livestock marketing. However, the study investigated other aspects of marketing of livestock, like the key actors involved (including the sources of their business capital and cattle supply to the markets), and the role played by State, Local Government Agencies and government parastatal in the business. Yakubu (2014) examined cattle trade and its place in the development of Maigatari economy in Jigawa state, Nigeria between 1960 and 2010. The broad purpose of the study was to research cattle trade in Maigatari from a historical perspective. The issues specifically investigated and analyzed were the genesis and organization of the trade, and the role played by cattle as an epicenter of trade in Maigatari. The study by Yahaya (2018) examined the social and economic contribution of Mubi Cattle Market to the economy of Mubi South Local Government Area. He concluded that cattle marketing is a profitable business if

special priority is given to tackle the problems (especially non-willingness of marketers toward tax payment) affect the smooth and efficient operations of the cattle market.

Other studies have concentrated on cross-border trade. Cross Border Initiative Programme (2007) conducted a workshop on “Food Security and Cross-border Trade”. The aim of the workshop was to launch a cross-border cooperation pilot operation that would focus improvement of the functioning of border markets, rendering border crossings more fluid, enhancing the circulation of information, improving capacities for preventing and managing food crises. Moutari and Tan (2008) described livestock mobility in Niger and examined linkages between Niger and Nigeria. The focus was on nature of pastoralism, institutional context affecting livestock mobility, changing nature of livestock mobility, and promotion of livestock mobility by key development and research actors in Niger and Nigeria. Thus, the emphasis is on mobility of livestock related to pastoralism, not trade. Madaka (2015) analyzed variability in inter-boundary trade between Maigatari and Dungass communities across Nigeria/Niger border. The items involved in the study included agricultural products (i.e. livestock and farm produce). Lawan *et al.* (2016) investigated the factors promoting informal cross-border cattle trade between Nigeria and Chad. The main target was to assist governments of both countries to identify revenue losses in informal cross-border cattle trade, and further understand the operation of the market.

The above scenario shows that most studies have concentrated on one or some of the following aspects of cattle trade corridors in Nigeria: marketing and transport institutions, barriers to flow, historical and socio-economic importance of cattle markets, and cross-border exchange among others. Therefore, there is the need for a study that can reveal a broad picture of cattle trade corridors in the country. This type of analysis (of cattle trade corridors) could help enhance both production and trade. The outcome of enhanced production and marketing of cattle and its products carry the potentials to better the income and nutritional status of households (Mafimisebi *et al.*, 2013). Thus, this paper reviews and harmonizes previous studies on corridors for trade flow of cattle into and within Nigeria. The objectives are to describe the patterns of and discuss the challenges associated with the cattle trade corridors.

Patterns of the Cattle Trade Corridors

This study identifies three categories of cattle trade corridor in Nigeria: cross-border, regional and local. Markets in these corridors are not mutually exclusive; a market can be in more than one trade corridor, as discussed in the following sub-sections:

a) Cross-Border Cattle Trade Corridors

Cross-border trade has been a source of livelihood for millions of people in many countries of Africa (Berhanu, 2016). Nigeria is the main destination of cross-border trade because it receives about 60% of traded cattle crossing national borders, and more than 50% of these cattle are from neighbouring areas of Chad, Central Africa, Niger and Cameroon (Kubkomawa, 2017). A major determinant in cross-border trade between these countries is socio-cultural affinity between traders and border officials (Cross Border Initiative Programme, 2007). The trade takes place mainly at informal level as statistical or formal records of the transaction and documentation of international trade are not used (Ibrahim, 2015; Lawan *et al.*, 2016). This is equally the case with other areas, as is obtainable in Ethiopia-Kenyan borderlands where 71% of total value of live animal exports is through informal channel (Berhanu, 2016). The basis for this informality is partly explained by age-long trade relationship, and ethnic, religious and socio cultural ties (Lawan *et al.*, 2016).

There are cross-border markets in Nigeria and the cattle supply countries. Along Nigeria-Niger border alone, covering 1,500km from Gaya to Diffa, there are about 100 border markets (Cross Border Initiative Programme (2007). In the supply countries, along the border, there are three types of markets: retail, assembly and wholesale (FEWS NET, 2017). The retail markets are for household and abattoir demands. The assembly markets arrange the collection of cattle from pastoralist households and village markets, and sorting for wholesaling. The wholesale, cross-border markets, are fed by retail, village and assembly markets. Some of these markets are located in urban areas close to the border, like Diffa, Zinder and Maradi among others from where cattle are funneled across border through the formal routes (as Terminal Markets) or informally by trekking (Figure 2). An example of cross-border market in Niger is Friday morning livestock market in Torodi, a town 60 km west of Niamey. Livestock (cattle, sheep and goat) are supplied by many smaller local markets to Torodi market from where between five and seven trucks depart each week via Kebbi destined for markets in Southern Nigeria (Hoffmann and Melly, 2015).

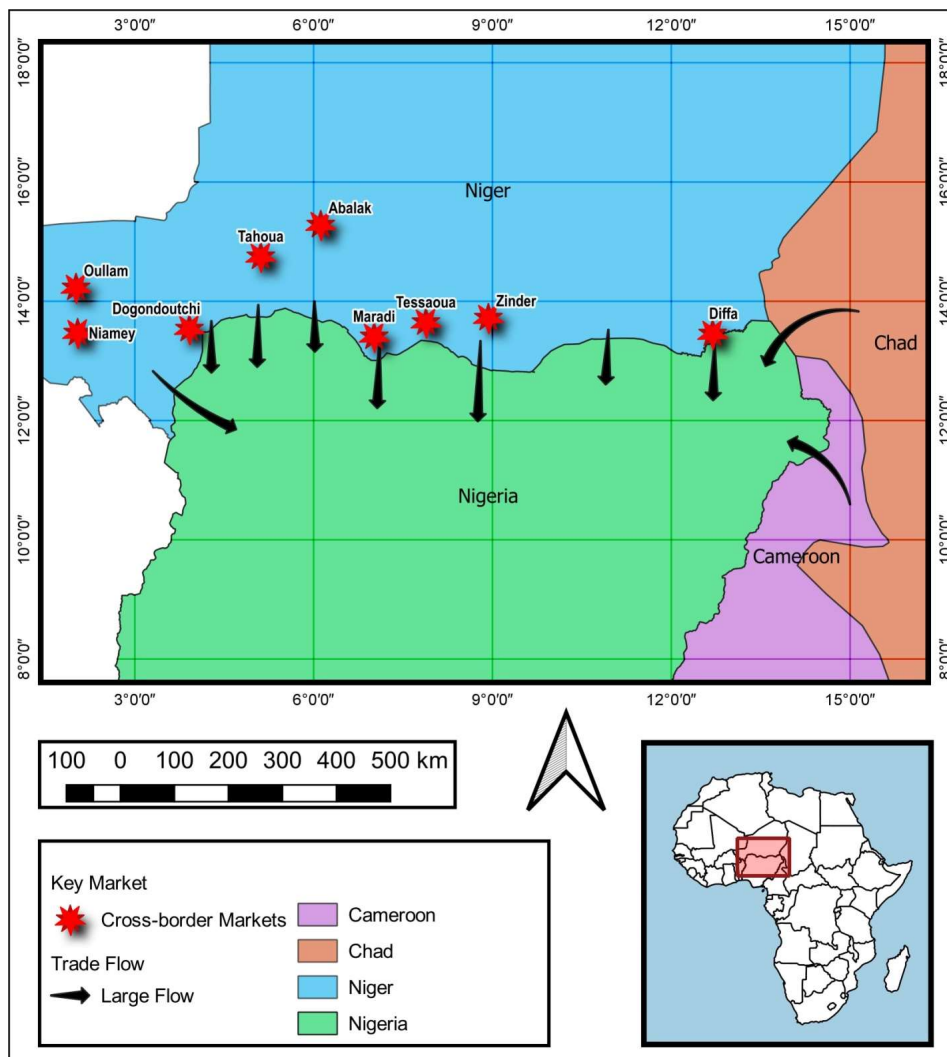


Fig. 2: Cross-Border Cattle Corridors of Nigeria-Niger Republic

Source: FEWS NET, 2017

Along the border in Nigeria, there are several transit or frontier markets that receive the supply of cattle for onward trade through the local or regional corridors. These include Illela, Acida, Jibia, Mai'aduwa, Maigatari, Nguru, Damasak and Mubi among others (Figure 3). Illela market, about 80 km away from Sokoto City, receives cattle supply from Niger Republic via Birnin N'Konni. Vast quantities of cattle and other commodities are traded weekly, every Sunday, in the market. It is regularly patronized by traders from the southern cities of Lagos, Ibadan and Sapele (Hoffmann and Melly, 2015).

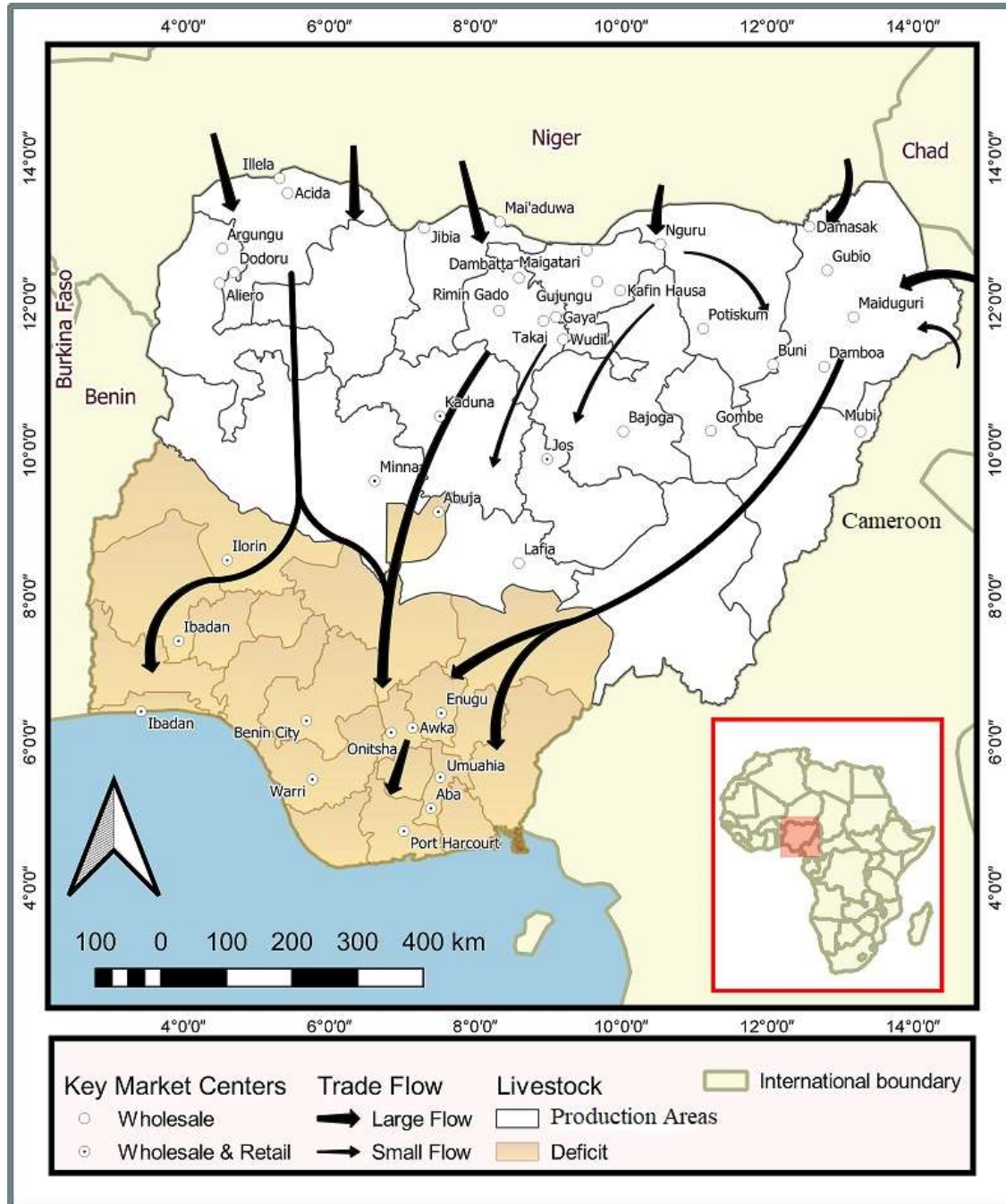


Fig. 3: Cross-Border Cattle Corridors of Nigeria

FEWS NET, 2017

b) Regional Cattle Trade Corridors

The general picture of trade along this corridor is that cattle sold in the south come from the north, including Niger, Chad, Cameroon and the northern Nigerian states (Bush and Noura, 2012). The report about the movement of cattle down south from northern parts of Nigeria can be traced back as early as the 1820s (Coste, 2014). There are three major modes for transporting cattle from north to southern markets in country: hooves conveyance, railway carriage and road truckage. Each of these has its trade corridors (Iro, 2011; Hassan *et al.*, 2011).

- i. **Trekking or Hooves Conveyance:** This is the oldest and still a major method used by Fulani for conveying cattle to markets in southern Nigeria. About 75% of the cattle are carried through this method. The movement is supposed to be along government designated cattle tracks (*burtali* or *labi*). Two major trade corridors have been in use: eastern and western. The eastern corridor begins in the northeast from Maiduguri passing through Kano and Zaria to Calabar in the southeast. This journey takes fifty to fifty four days. The western corridor takes two forms. One starts in northwest from Sokoto to southwest, ending in Lagos. The journey along this corridor lasts for about twenty-four to twenty-seven days. The second western corridor joins Kano and Lagos and takes fifty to sixty days trekking. Okediji (1973) reported that from 1908 to 1910 a total number of about 45,000 animals were moved by trekking from Ilorin southwards to Ibadan, Abeokuta and Lagos.
- ii. **Railway Carriage:** This method was important in the colonial time, but this has been neglected after independence because of gross inadequacy of cattle trains and wagons, insufficient railway freight services and failure of the rail lines not reach the remote cattle producing areas. Up to the 1960s, there were two major trade corridors based on rail lines: western and eastern corridors (Nwaze, 2019). The western railway starts from Lagos to Kano. Rail line from Lagos to Ibadan line was opened in 1901, extended to Oshogbo in 1906 and reached Kano in 1912 (Okediji, 1973). The railway was renovated and re-launched in early 2013. The trip with livestock by train takes averagely 30-48 hours, but the percentage of cattle conveyed is little because of inadequate infrastructure (Coste, 2014). The eastern railway based trade corridor collapsed from the Civil War, and no attempt to bring it back to life, especially because of security threats (Nwaze, 2019).
- iii. **Road Truckage:** The abandonment of railway gave rise to the importance of roads for cattle haulage in the country. In addition, road transport came to be more efficient as private control by individuals has removed government monopoly (Iro, 2011). The major road based trade corridors are six (Figure 4): Lagos – Kano – Jibiya (Lakaji), Sokoto – Lagos, Kano – Benin – Warri, Maiduguri – Port Harcourt, Yola – Calabar and Maiduguri – Abuja – Lagos. All the major cities within the corridors have one or more cattle markets.

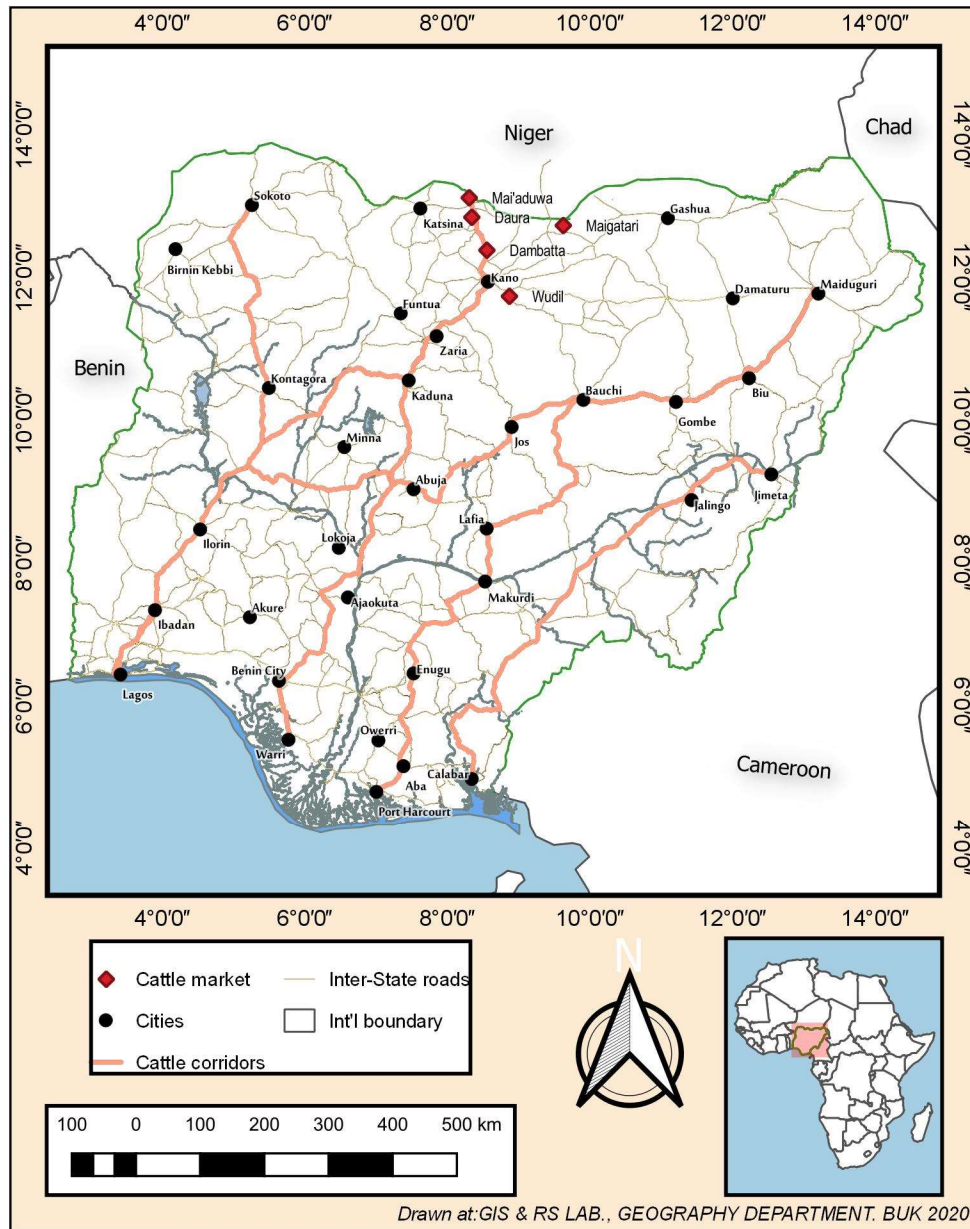


Figure 4: Road-Based Regional Cattle Trade Corridors in Nigeria

Source: Coste, 2014

There are three categories of cattle markets along these corridors, from origin to destination, down south: feeder markets (tributaries), transit markets and consumption/terminal/destination markets. There are several cattle feeder markets (tributaries) for Lagos – Kano – Jibia and Kano – Benin – Warri trade corridors. However, Wudil (50Km south of Kano), Danbatta (80Km north of Kano), Maiadua (140 km North of Kano), Garkin Daura (120Km North – East of Kano) and Maigatari (135Km east of Kano) are the most prominent among these markets (Hassan *et al.*, 2011). For Sokoto – Lagos corridor, the feeder markets are Acida, Illela (Sokoto State), Argungu, Dodoru and Aliero (Kebbi State). The major feeder markets to Maiduguri – Port Harcourt and Maiduguri –

Abuja – Lagos trade corridors are Maiduguri, Gamboru, Damasak, Gubio, Damboa and Buni cattle markets. Yola – Calabar trade corridor has Banki and Mubi markets as main feeder markets.

There are large urban markets located in central Nigeria that serve as transit markets. Few of these include Kaduna, Zaria, Abuja, and Ilorin among others. The destination (terminal) markets along these corridors are Lagos, Port Harcourt, Ibadan, Calabar, Benin, Akure, Abeokuta, Aba among others. Trade in these corridors, like across border, is largely informal. According to Hoffmann and Melly (2015) informal trade, including cattle trade, could account for as much as 64 per cent of Nigeria's GDP.

c) Local Trade Corridors

Apart from cross-border and regional cattle trade, local cattle trade has been in existence between production areas and nearby markets, and between markets in Nigeria. Holt *et al.* (2018) in Livelihood Zones of Nigeria identified nine cattle production areas. These areas largely include extreme northwest, north and northeast, east and central parts of the country. All these areas are connected together, except a small area in the extreme southwest, in Ogun State, north of Lagos (Figure 5).

- i. Sokoto State Production Zone: This includes open plain areas of Sokoto state, northern parts of Kebbi and Zamfara states, and northwest Katsina. The production is by the Fulani people (in largest numbers), including a minority of nomadic or transhumance pastoralists and by the majority Hausa population. The species of cattle kept in this zone are short-horned 'Sokoto gudali' and short-legged zebu.
- ii. Kano-Katsina Sahel: most of Katsina state, the northern part of Kano State, and the northwest extension of Jigawa state. There are more Fulani Cattle owners, although substantial number is owned by Hausa, kept under contract by Fulani for far grazing. The Fulani pastoralists undertake seasonal migration, and transit in the central states.
- iii. Northeast Sahel: This area covers extreme northeastern Nigeria, across Borno, Yobe and Jigawa states. Cattle are kept mainly by the wealthier stock-owners. Extensive pastures support cattle in the wet season; they are moved southward for grazing in Taraba, Adamawa and Plateau states.

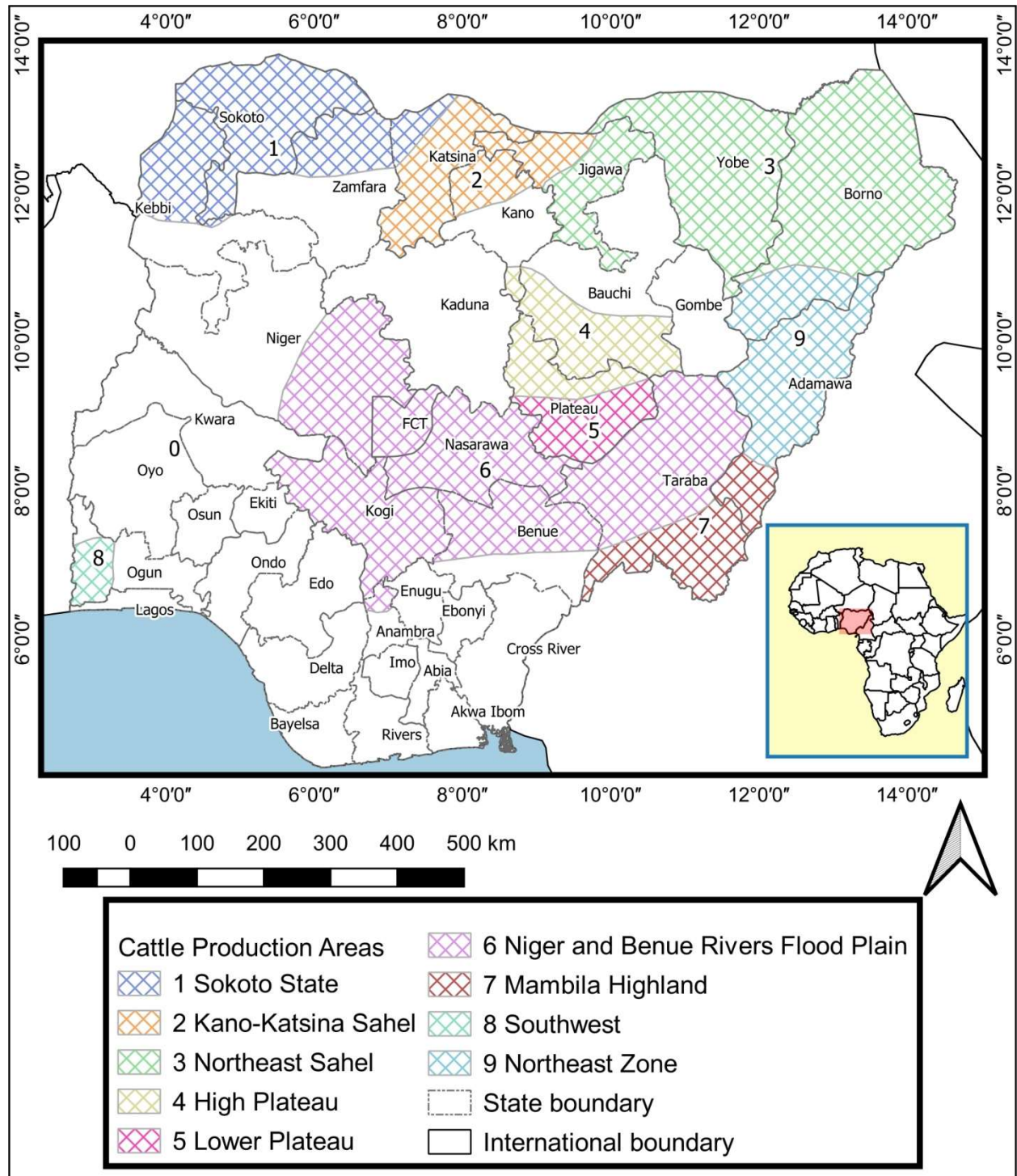


Fig. 5: Cattle Production Areas in Nigeria

Source: Holt *et al.* (2018)

(iv) High Plateau: This zone includes the high plateau area of central Nigeria, mainly in Plateau state and extends into Bauchi. Cattle are owned by all categories of people, more by wealthier people.

(v) Lower Plateau: This zone is in the southern guinea savannah ecology, characterized by foothills and undulating plains. It consists of the LGAs in Plateau state that are not part of the high plateau. The area is conducive to cattle raising. Cattle are owned by wealthier vocation farmers rather than herders. Lower Plateau produces no significant cash crops, thus cattle and small ruminants generate more income to people.

(vi) Niger and Benue Rivers Flood Plain: This zone is composed of the flood plains at the bottom of the Mid-Niger/Bida Basin, the Upper, Middle and Lower Benue Basins, and the Anambra Basin. It begins in Mokwa LGA of Niger state in the west and ends in Adamawa state at the eastern frontier with Cameroon. It extends southward from the Niger and Benue rivers the confluence to Onitsha in Anambra state. The zone is about 1,500km long and 10-15km wide. Cattle are hard to keep in this environment, and they are kept in two ways: on one hand, only wealthier people, in most places, keep one or two animals, whether cows for milk or oxen for ploughing. On the other hand, small minority of people keeps more cattle, but sends them away from the home area with Fulani herders for several months of the year.

(vii) Mambila Highland: This area covers the single, though large, LGA of Sardauna, in the far southeast corner of Taraba state. It has the highest concentration of cattle in Nigeria, and cattle outnumber small ruminants. The sale of livestock is greater than sale of cash crops for income. Cattle are owned mainly by wealthier people.

(viii) Southwest: This small zone is in four western LGAs of Ogun state to the northwest of Lagos city, nestling between the border with Benin. The ecology of the zone is derived savannah. Cattle are the most important livestock. The area is an extension of cattle-favouring natural (guinea) savanna in the middle-belt. Fulani herders seasonally visit the area from the north when Cattle herds outnumber the local ones. All households own cattle (and other ruminants) to complement income generation. Sales, at local level, are not very common.

(ix) Northeast: It is a strip of land along the Nigeria-Cameroon frontier. Its length stretches down from Kala/Balge LGA in Borno state to Ganye LGA in the south of Adamawa state. Its width is only some ten kilometers. It stretches from Sudan savanna down to Guinea savanna agro-ecologies. However, it contains many stretches of highland forest. The environment is particularly suitable for cattle, although the number is not as in Mambila zone. Sales are to southern cities and to Cameroon across border.

Production of cattle is undertaken by pastoralists and settled farmers in Nigeria. However, pastoralists own great majority of the cattle. They are even the ones that manage the cattle owned by settled farmers (Blench, 1999). Local corridors have been generated from cattle trade between production zones and the local markets. There are several markets in production zones, but the main ones can be seen in Table 1. A production zone has markets within and outside. Some of these markets are large, while others are small. There are cross-border markets (like Illela and Acida), feeder markets (Danbatta and Wudil), transit markets (like Jos and Saminaka), destination markets (like Lagos), and across border (to Benin Republic).

Table 1: Main Markets in Cattle Production Zones

Production Zones	Main Markets
Sokoto State Production Zone	Jega, Illela, Shinkafi, Kamba, Acida (within the zone), Kano City (outside the zone),
Kano-Katsina Sahel	Danbatta, Wudil, Unguwa Uku, Maigatari, Mai Adua, Mashi, Charanchi, Garkin Daura (within the zone), Maiduguri (outside the zone)
Northeast Sahel	Geidam, Garin Alkali, Nguru (within the zone), Mai Gatari (outside the zone)
High Plateau	Bukuru, Mobordo, Bokkos, Jos, Mangu (within the zone), Saminaka (outside the zone)
Lower Plateau	Bukuru, Mobordo, Bokkos, Jos, Mangu (within the zone), Keffi, Makurdi, Jalingo (outside the zone)
Niger and Benue Rivers Flood Plain	Bida, Mariga, Zungenu, Gbugbu, Paiko, Shiroro, Awe, Shendam, Abafi, Kwali, Wase, Abafi, Gwagwa, Kuje, Namu, Dengi, Amper, Tingno, Mubi, Mutum Biya, Ngoroje, Zaki Biam
Mambiland Highland	Gembu, Mayo Ndaga, Nguroje (within the zone), Yola, Jalingo, and Cameroon (across border)
Southwest	Lagos and Benin Republic (across border)
Northeast	Banki, Gwoza, Ganye, Mubi, Gashaka, Ngurore (within the zone), Maiduguri, Dikwa (outside the zone)

Source: Holt *et al.* (2018)

Challenges Associated With Cattle Trade Corridors

There are several challenges associated with cattle trade corridors in Nigeria. However, these can be discussed under the three categories of corridors in the country.

Challenges of Cross Border Trade

The challenges of cross border trade are those related to movement of people, goods and capital, and Cumbersome Formal Trade Conditions.

- **Movement of people and goods**

As people move, they are faced with the challenges of time wasting and incurring unnecessary expenses. These result from illegal movement from one country to another without any travelling documents or means of identification, and language barrier when it involves official documentation in which translator or interpreter is highly required especially if it resulted to official correspondences as movement documents. Cross-border transhumance in West Africa is

regulated by the ECOWAS Protocol of 1998. The protocol provides guidance on issues related to cross-border pastoral mobility. It was introduced to reduce problems associated with movement of livestock, which include farmer-herder conflicts, the spread of animal diseases (epizootics), encroachment into protected areas such as national parks, and possible poaching of wildlife, among others. A major challenge to movement of goods in cross border trade is poor transportation system. The vehicles and the goods suffer a serious setback due to poor roads in either one or both countries. Transporting cattle and other agricultural goods from Niger Republic, Chad or Cameroon to Nigeria and vice versa is mainly by road. However, the roads are bad which affect the smooth running of cross border trade. Another challenge involves transporting cattle by trekking or trudging in troops with no adequate availability of food and water for the animals. The implications are normally disease and death of animals, and disaster to the traders.

- **Movement of capital**

The policy that limits currency movement across international boundaries makes it difficult for traders to move with huge amount of money between one country and another. This is applicable to Nigeria, Niger Republic, Chad, Cameroon and other African Countries. Another challenge is that of exchange rate. In Sub-Saharan African Countries (Nigeria and Niger Republic inclusive), the trade involves transactions on credit basis. The value of the CFA or Naira may fall down during payment, and this leads to loss of profit to traders. That also led to the expansion of informal trade, making it difficult for the countries to have adequate statistics of the trade (Ibrahim, 2015; UNOWAS, 2018).

- **Cumbersome Formal Trade Conditions**

Vast majority of cross-border traders are driven into informality by formal economic and governance framework. The factors behind this are slow, complex and expensive formal processes for clearing customs, rigid and dysfunctional enforcement of foreign-exchange and banking regulations which merely push most smaller traders into the incompletely regulated parallel exchange market, heavy burdening traders with corruption and unofficial 'taxation' along major border highways. The effects of informality are state loss of direct tax revenues that would be generated by formal cross-border trade, undermines social contract, further knock-on effect that removes non-trade business activity from the reach of federal and state domestic taxation which maintains a permissive environment for mismanagement and corruption, places informal trade beyond the reach of Nigerian national or ECOWAS regional policy-making, and excludes manufacturers from most support on offer, whether from government or from institutions (Hoffmann and Melly, 2015). Prohibition of import duties and bribery and corruption encourage smuggling, and ultimately results in clashes between Fulani and farmers (Yahaya, 2018).

Challenges of Regional Trade

There are two major challenges to regional trade in Nigeria: high domestic trade transaction costs and structural constraints related infrastructure and the efficiency of transport services (Coste, 2014; Alidou, 2016; UNOWAS, 2018):

- **High Domestic Trade Transaction Costs**

Cattle corridors in Nigeria are associated with high trade costs, and this is equally a great obstacle as border crossings. The high trade costs result from:

Roadblocks/Barriers: there are delays and charges at road blocks. Cattle traders and truckers report an average of 20 roadblocks by various institutions (police, army, other security forces and

vigilante groups, customs, veterinary services, National Drug Law Enforcement Agency, Federal Road Safety Commission, etc.) and hoodlums on the corridor. Nigeria is among the countries in West Africa with the most roadblocks along transport corridors.

Regulatory requirements and charges: truck owners and drivers complain about the various licenses and charges that must be paid every year (often without the issuance of a receipt) to operate. Many of these licenses are imposed in successive States/Local Government Areas (LGAs) across the corridors, which are not mutually recognized between administrative authorities and must be renewed annually in each locality. The results of failure to comply are more extortion and harassment at roadblocks.

Insecurity: the challenges of insecurity include blocked or cultivated transhumance routes and loss of grazing reserves leading to conflicts between crop farmers and pastoralists, banditry in parts of central and northern Nigeria and cattle rustling in all parts, the Boko Haram insurgency that crippled markets, trade routes and trade relationships, the Lake Chad Basin which is an important agricultural and pastoral zone but is noted for farmer-pastoralist violence, beating and even killing of traders or truckers by thugs for refusing to pay the sums they demand, and frequent reports of robbery of traders' sales. Truck drivers and traders, who usually accompany their cattle to markets in southern parts of the country, find it dangerous transporting cattle along the corridors. Adamu (2005) noted that transporting livestock from Acida Market in Sokoto to southwestern states was not secured because the informants to the study revealed their experiences or other people's experiences with armed robbers on the road to Lagos, Warri or Ibadan.

- **Structural Constraints**

Infrastructure: Road corridor infrastructure in Nigeria is in bad condition, and with no adequate maintenance. Railway that can relieve pressure on road network is not functional and even non-existent in some parts.

Transport services: Adequate regulations regarding the licensing and qualifications of road transport operators are not enforced, and transporters and public officials in regulatory and control agencies are not well trained.

Challenges of Local Trade

- **Cattle Production Challenges**

The main challenges associated with cattle production include inadequate capital, high cost of animal feeds, animal diseases, inaccessible and expensive veterinary services-vaccines and drugs, low level of education, defective government policies, rapid urbanization, inadequate storage facilities for animal products, inadequate extension services, inadequate skilled manpower, bad transport networks, inadequate basic infrastructure, climatic and environmental constraints and unfavourable regard to animal production (Bamaiyi, 2013). The results of these would be inefficiency in production, reduced productivity, difficulty to employ modern animal production techniques, reduced profitability, and slow growing animal industries.

- **Infrastructural and Services Challenges**

Markets all over Nigeria lack adequate stalls, animal shelters, tarred surfaces, running water, and abattoirs or cold rooms. During the rainy season, the market space is often unusable. State governments have been very slow in building the critical infrastructure needed to sustain and boost this vital border and interior markets. Transport infrastructure and services are frustrating. Inadequate and dilapidated railway infrastructure has resulted in too much pressure on road network. High cost of trade will remain unchanged if there is no bold improvement in infrastructure (Hoffmann and Melly, 2015).

- **Security Challenges**

Markets have been parts of the targets by insurgency and banditry attacks, particularly in Northern Nigeria. Insurgent attacks destroyed market infrastructure including marketplaces and storage facilities in many locations. In a number of cities, including Damboa, Monguno, Konduga, Mafa, Jere, and Maiduguri, traditional market days were banned (USAID, 2017). In particular, four cattle markets were shut down, including Gamboru, Dusuman, Shuwari and Ngom. This affected cattle trade in the region and led to raise in cattle prices (BBC, 2016).

In the Middle Belt, between 2015 and 2017, conflicts and clashes resulted in the killing of over 1,425 people in clashes between farmers and herders, and 470 people in cattle rustling related incidents. Again, 1,300 people died resulting from the conflicts in the first quarter of 2018. Other challenges that could affect cattle trade in the belt and other parts of Nigeria have included attacks against communities, armed robbery, and kidnappings among others (Kwaja and Olubukola, 2018).

Conclusion and Recommendations

The patterns of cattle trade corridors in Nigeria as revealed in this study show that consumption markets located in major cities of southern Nigeria get their supply from cross-border trade in the northern frontiers and domestic production mostly in the northern states. In this way, millions of people in Nigeria make their livelihood from cattle industry. Out of the many sources of animal protein in the country, people subscribe more to cattle and cattle products to derive animal protein. Thus, improvement in cattle production and marketing has the potentials to improve the income, nutritional status and living standard of households in the country (Mafimisebi *et al.*, 2013).

Trade corridors are meant to provide framework of smooth transfer of goods and passengers, and eliminate barriers. However, this study revealed challenges that tamper with the smooth operation of corridors in Nigeria, which include insecurity, inadequate and poor infrastructure, expensive production, charges and barriers, cumbersome formal trade conditions, inadequate finance and defective government policies. Addressing these issues would mean greater performance of cattle trade corridor as a major employment creator, revenue generator and animal meat provider.

The infrastructural challenges of the markets can be addressed if the state governments recognize their potentials for developing the economy at the sub-national level. The markets should be considered by the authorities as important parts of the economy, and as strategic centers for regulating all forms of trade and boosting state revenue (Hoffmann and Melly, 2015).

Marketplaces and storage facilities need to be rehabilitated. Rehabilitation can provide labor opportunities, increase opportunities for income-generation, improve storage of foodstuffs and, in the long run, enhance food security (USAID, 2017).

Previously, it was allegedly observed that security forces could not ensure sufficient protection of traders despite their excessive presence along the corridor (Coste, 2014). The government has responded through deployment of security agencies, including the military, across the Middle Belt to complement civilian forces through targeted operations to quench all forms of insecurity and establish long-term solution to conflicts and criminal operations (Kwaja and Olubukola, 2018). This has been equally done in the Northeast and Northwest of the country. In order to find lasting peace, this tactic should be vigorously maintained and applied to all parts of the country. The recurring conflicts between crop farmers and pastoralists can be addressed by putting into operation legislation and legal texts that have been formulated and passed by the various countries in ECOWAS (Economic Community of the West African States). Some cases of conflicts are amicably settled by conflict resolution committees. However, court settles most of the disputes (Alidou, 2016).

To reduce domestic trade transaction costs at least in the short run, Coste (2014) recommended what he called relatively easily achievable interventions: (i) The federal, State and local governments must ensure that official or unofficial roadblocks are used in a proper manner; they should not be used for rent extortion; (ii) Security forces should strive to reduce insecurity, through the support of the government; (iii) To ensure that licensing requirements and regulatory charges for transporters do not represent an excessive burden, they should be reviewed in a way to harmonize them across States; (iv) To improve the performances of trade and transport corridors in terms of infrastructure, services and institutions, international best practices of corridor management should be followed; (v) There is the need to rehabilitate and upgrade the quality of infrastructure and the efficiency of transport services; (vi) To reduce domestic trade transaction costs, consideration should be given to regional initiatives to facilitate trade, particularly at the ECOWAS level.

To facilitate cross-border trade, formal trade conditions should be made simpler. The documents required for a formal cross border trade should be within the reach of traders. As contained in Ibrahim (2015), they include:

- a. Commercial documents: they are used for commercial transaction, which include: Pro-forma Invoice, used for the purpose of exchange allocation; Financial Commercial Invoice, used in cross border trade as "duty payable"; Certified Invoice, used for independent verification; and Packaging list, used to supplement the commercial invoice.
- b. Quality documents: These involve Certificate of Quality and Fumigation issued by Federal Produce Inspection Service which ascertains the quality of primary agricultural commodities for export; Certificate for Sanitary and Hygienic Goods, for foods, cosmetics and drugs for export, issued by National Agency for Food, Drugs Administration and Control (NAFDAC); Clean Certificate of Inspection (CCI) that gives the guaranty of quantity, quality and price as stipulated in the Export Contract Agreement.
- c. Transport documents: Bill of Lading, Single Goods Declarations Form (SGD) Form C2010), explains the particulars of consignment which is endorsed by the Nigerian Customs Service; Certificate of Origin, testifies the legality of the goods, the origin of the goods and where the goods are transported to and is usually issued, signed, stamped and sealed by the Chamber of Commerce.

d. Financial documents: Form NXP (Nigerian Export Proceeds), issued by the Central Bank of Nigeria (CBN) and it is obtainable at Commercial Banks; Certificate of Insurance, is very important for exporters of Agricultural commodities especially perishable goods and is issued by Insurance Company.

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