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Logistic Challenges in Sub-Saharan Africa Landlocked Countries: Case Study of Chad

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Abstract:

Landlocked refers to the geographical position of a country without through access to the ocean. Around one out of five nations on the planet are landlocked. They are sixteen landlocked countries in Africa. Those nations face particular defies. They do not have straight littoral access to the ocean and also to oceanic exchange and facade particular defies. The absence of regional access to the ocean, inaccessibility, also detachment from international trade charges continue to inflict severe restrictions on the most improvement of landlocked countries. Logistics in Chad is considered very poor, low level of development of logistics infrastructure. This paper analyzes the problem of logistic in landlocked countries, taking example of Chad, to evaluate the current status of logistics in Chad and try to give some suggestions to improve logistic in that country.

Keywords: Africa, cha, logistic, landlocked countries

1. Introduction

In Africa, 16 countries are landlocked, have no through coastal access to the sea, to maritime trade, consequently facade very big defies. Burkina Faso, Mali, Niger, in west Africa. Chad and the Central African Republic in central Africa. In East Africa Rwanda, Burundi, Ethiopia, South Sudan, Uganda are landlocked. They are Zimbabwe, Zambia, Swaziland, Malawi, Lesotho, Botswana, in Southern Africa.

The relative problems we want to show here are those having a negative impact on landlocked countries' logistics performance. Those problems reduce their margins on their international trade and consequently the domestic production becomes less competitive on the world market as inputs external source to the country is costlier.

Landlocked is completely or almost completely surrounded by terrestrial, that significance they do not have a coastline. Landlocked states have characteristic difficulties paralleled to nations with seaside and remote ocean ports. Exchange is more troublesome and expensive in light of the fact that the landlocked nation must access most outside business sectors through worldwide transport passageways interfacing them to ports in neighboring nations, named transit neighbors. Firstly, the problems of trade to and from landlocked countries are the poor infrastructure, disorganized transport facilities, which consequence is not competitive costs and increase in transit time delivering. They are greatly higher for landlocked compare to other countries Sub-Saharan African coastal countries. The transport facilities are usually poor for the reason that infrastructure resources are not well operated, achieved or maintained.

Secondly, the problems of trade in Sub-Saharan African and especially for landlocked countries are the presence of physical and non-physical barriers. This factor hampers the smooth increase of trade in the sub-region. Those problems are the real reason for the poor trade performance in Africa and really constrain landlocked countries in particular.

Exchange fee defines the inland movement of things under taxes regulator that is not unfurnished by taxes. Transportation can occur in the destination/origin of the merchandise (national) or in another country wherever the goods are accepted from an entree an exit post (international). Figure1 descript a comprehensive transit process, the transit relations between international and national systems.

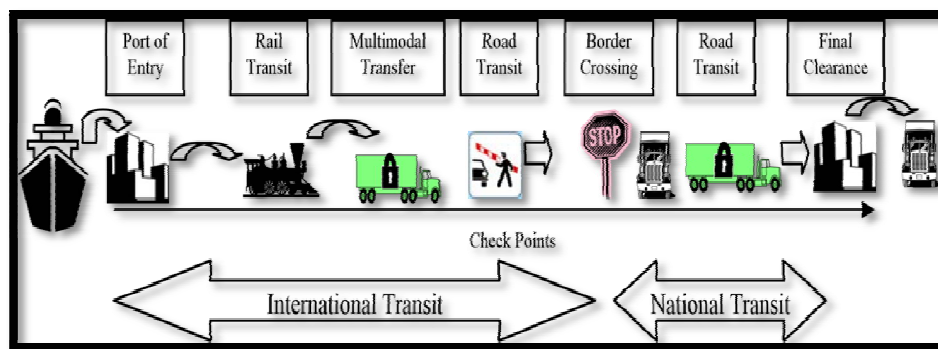


Figure 1: Transit Operation for Imports

Exchange needs more inaccuracy than intra-national exchange over comparative separations. That is on the grounds that however transit is in the long run characterized at a multi-nation level, its usage is at the national dimension. Such exchange likewise relies upon measures taken by nations to control development, individuals, and exchange administrations and remote venture.

2. Chad's Geographic Situation

Chad is a landlocked country located in Central-North Africa. Surrounded by Niger, Cameroon, Nigeria in the west, Libya in the north, Sudan in East and the Central African Republic in south.



Figure 2: Map of Chad

Transport in Chad facing many challenges. The close seaport is in Cameroon (Douala), 1800 km from the capital, N'Djamena. There is no railway service in Chad. The existing railway network, which is located in Cameroon and combines with road facilities, can transport goods to Chad. Chad has no significant milling capacity. Only small and locally used facilities are available.

2.1. Road Infrastructure

Roads, all categories combined, constituting the internal road network of Chad.

Almost 40,000 km comprising:

- 25,000 km of roads of national or regional interest
- 15,000 km of local roads.

6,200 km of roads constituting the national network and 18,800 km of roads constituting the regional road Network linking the intermediate local to the national network.

The domestic highway way contains Surfaced roads and unpaved roads. The unpaved roads are illustrious by their level of progress conferring to 4 official criteria: road landscaped, rough unpaved road, track, and natural terrain.

65% of the 6.162 km national road network supports significant traffic (more than 50 vehicles per day) and 21% has a relatively high traffic of more than 200 vehicles per day.

The traffic is more than 1,000 vehicles per day over 229 km (4% of the national road network); The analysis of the results of the counts shows that the most important traffic is on the axis N'Djamena – Djermaya (East) – Massaguet (East) and the axis N'Djamena – Guelengdeng (South).

The isolation of Chad, exacerbated by exorbitant transport costs on the main regional routes linking the country to the sea, is one of the greatest obstacles to the development of its economy. The nearest port is situated in Douala (Cameroon) at 1,800 km from N 'djamena. Chad also has access to the sea: Lagos (Nigeria) 1,900 km from N'Djamena,

Cotonou (Benin) 2,000 km, Lomé (Togo) 2,100 km, Pointe Noire (Congo) 2,700 km, Port Sudan (Sudan) 3,350 km, Libyan ports more than 3,500 km and Algiers 4,300 km.

Cameroon's road from N'Djamena to Douala is currently Chad's main access route. Nearly 90% of Chad's international cargo tonnage uses the Cameroonian corridor. The latter, composed of land routes for the transit of Chadian goods between N'Djamena and the port of Douala, passes through N'Gaoundéré (north of Cameroon) and includes several variants of routes both on the territory of Chad and on that of Cameroon.

There are 2 alternative routes from N'Djamena to N'Gaoundere:

- N'Djamena → Kousséri → Maroua → Figuil → Garoua → N'Gaoundéré.
- N'Djamena → Guelengdeng → Songor →élo →oundou →aboro → N'Gaoundéré.

There are 3 possibilities to connect N'Gaoundéré and Douala:

- By the railway: 884 km in good security conditions
- By road via bafoussam: 1,050 km, of which more than 500 km uncoated; this route is very little used because of its poor condition
- By road to yaoundé and abong / mbang: 1,083 km. This route is the most used.

2.2. Air Freight

Chad has 53 airports of different size and importance designated as follow. One airport has international rank and capacity in Ndjamena the capital of the country. Five are considered as secondary airports in Abeche, Moundou, Amdjarass, Faya and Sarh small size airports with unpaved runways are considered as emergency airports. Thirteen international carries serve N'Djamena, Also, there are some cargo routes.

2.3. Pipeline

The Construction of the Chad-Cameroon pipeline in 2000 was achieved after the approval of sponsorship, the bilateral agreement signature of February 1996 between Chad and Cameroon governments with the creation of a joint commission in charge of the implementation of this agreement. The project included the development of Doba oil fields in southern Chad and the wide connection buried pipeline of 1,070 Km from the Doba oil fields in Chad to the coast of Cameroon (Kribi), an offshore marine export terminal facility and facilities associated marine was also constructed

The first extraction of crude oil petroleum began in 2004, once the oil is extracted; it is conveyed by a 640-mile underground, a capacity of 225,000 barrel is extracted per day.



Figure 3: Chad-Cameroon Pipeline Map

3. Logistics Costs

The fact of being regularly associated with direct shipping fees, and making an investment in local organization has been seen as the primary detail in lowering these fees. Logistics costs per ton and gateway financial costs per ton are very high in the Douala-N'Djamena than many other corridors. Inland transport also is higher in Central Africa corridor than in other corridors in Africa. The inefficiency of the port system in Douala, Cameroon, promotes intervals and high expenses of shipping merchandise to N'Djamena. The inefficiency of the gateway in the corridors can also be due to the transit traffic quota system and the cargo allocation rules.

4. Logistics Performance of Landlocked

Logistics Performance Index (LPI) is established on data from international carriage forwarders and the key explicit dealers with international operations.

Case research in corridors and effective plans, replicate international trade confronted the identical order of restrictions. The usual imports take much time to arrive, approximately 9 days in sub-Saharan Africa. Since imports are extensively concerned with extra annoying transit panels than exports specified their influences on sales, it is reasonable to characteristic this difference to the transit organization. Furthermore, tax authorization itself does no longer takes greater time in landlocked international locations than in coastal neighbors; These defy the efficacy of the transit system, takings place before the clearance.

Countries		Infrastructure	Lpi Score	Logistics Competences
Costal	South Africa	3.29	3.51	3.42
	Kenya	2.68	2.93	2.88
	Cameroon	2.36	2.43	2.50
landlocked	Chad	2.26	2.34	2.39
	Lesotho	2.02	2.22	2.12
	Burundi	2.00	2.22	2.33
	Zimbabwe	2.01	2.17	2.20

Table 1: Comparing Some Coastal and Landlocked Sub-Saharan African Countries

There is still have evidence that landlocked countries remain at logistics handicaps compared to their transit neighbors. In (Table 1) we can see, logistics performance score is higher in coastal countries.

5 Suggestions for Improving Logistics Performance

In order to improve logistics in Chad, many things have to be done. Firstly, ensuring the actual implementation of the regional trade agreements as the customs tariff enforces, observing the cargo flow quota transport, reducing non-tariff barriers as corruption by insisting on the abolition of this scourge.

Secondly, increase investment in the transport infrastructure by encouraging mutually all sectors, private like public take part as services providers on the corridors because their participation is for a mutual profit.

Thirdly, strengthening interconnectivity and facilitating trade by focusing on trade corridor, delivering competitive transport and logistics services in order to make the trucking environment more competitive with advanced and quality services, efficiency and competitive prices.

5.1. Infrastructure Development

It will be requiring for railway transportation: the expansion of the railway network from Douala to N'Djamena, which must be followed by the expansion of wagon fleet. For road transportation, the amelioration of the corridors transport road infrastructure should proceed by bituminizing the unpaved roads, building bridges, and rehabilitating deteriorated roads.

In the case of Chad to build railways is very necessary. Two lines will be very useful, one from the capital N'Djamena to Moundou (south of Chad) and Koutéré (Cameroon, 528 km), and one from the capital to Sudan (836 km) through Abéché (East) and Adré (East). Figure 4 shows a suggested railway in Chad. The railway will reduce considerably the time of delivery. It will be needing for the railway carrying: the expansion of the railway network from Douala to N'Djamena, which must be followed by the expansion of wagon fleet. For road transportation, the amelioration of the corridors transport road infrastructure should proceed by bituminizing the unpaved roads, building bridges, and rehabilitating deteriorated roads.



Figure 4: Suggested Railway in Chad

Despite the fact that a number of investments in road infrastructure are made by foreign investors, the governments of these three countries should encourage public and private partnerships for the financing, construction, and exploitation of transport infrastructures, to complement the investment of public funds. It will be also necessary to maintain adequate and timely road networks that need to be rehabilitated to reduce financing in the long term.

To raise the competence of logistics services, all the providers relative to the operation of transport and trade (freight forwarders, trucking companies, port authorities, customs authorities, police, etc.) must be able to regulate their services.

To ensure that the professionalism and improvement of the management capacity of these actors, it will require: training sessions for truckers and forwarders relative to their activities, and regulation of logistics services to professionalize their activities.

5.2. Institutional Framework

The enforcement of administrative operations along the corridors will be materialize by: the elimination of the informal checkpoints created along the corridors, the reduction of corrupt practices in control units represented in checkpoints and weighing centers/stations, the creation of proper corridor management institution which will strengthen the enforcement of operations on transport facilitation along the corridors. In a nutshell, to facilitate transit trade flows it will be important to harmonize and simplify procedures required for the carriage of merchandise from one country to another especially regarding regulations, customs, banking operations, and insurance.

It will be necessary to think about the implementation of regulatory measures aimed at reducing accident rates along the corridors, allocate sufficient funds to the security programs, managing traffic and ensuring safety. All these countermeasures will reach the coastal country and both landlocked countries to capitulate important benefits in terms of reducing the delivery times of goods, as well as reducing costs.

5.3. Cooperation and Partnerships

The changing will definitely bring cooperation and mutual benefit between costal and landlocked countries. Comparing to the way that if each party acts independently without any positive result, it will be preferable for all the parties to coordinate their actions if they want to win. Therefore, sharing information between each other on what each party intends to do on an agreed plan is the base of a win-win game which also requires mutual trust between parties. Trade operations cannot be done without a minimum of truth. A relationship built on the trust and credibility of party will be the result of an expansion of trade between the countries and the economic growth of the concerned countries.

5.4. Logistics Centers

5.4.1. Bonded Warehouses

Offer duty-free storage for shipments destined for re-exports and re-distribution set up some facilities around the country.

6. Conclusion

Chad is full of huge natural resources that do not flow easily on the world market; this is due to the barriers of any kind and lack of means of transport that hinder competitiveness internationally. The level of trade between this country and the rest of the world reflects the quality of his transport systems which still very low. This, therefore, calls for the development of the transportation method and the application of measures to promote regional and international trade. The development of the transport system will require the construction of infrastructure as well as improving the quality of service provided by the actors involved in the transport chain.

In the present era of globalization, there is no doubt that with the new information and communication technologies, where all trade transactions of goods and services are made electronically, it is mainly in the delivery or more explicitly through the transport and logistics that the bottlenecks of the economy are found.

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