REPUBLIC OF TURKEY
ÇUKUROVA UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
DEPARTMENT OF PUBLIC FINANCE

TRANSPORTATION NETWORK EFFECTS on ECONOMIC and SOCIAL DEVELOPMENT in DJIBOUTI

ROUKIA SOULEIMAN ABDI

MASTER'S THESIS

ADANA-2021

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ABSTRACT

TRANSPORTATION NETWORK EFFECTS on ECONOMIC and SOCIAL DEVELOPMENT in DJIBOUTI

Roukıa SOULEIMAN ABDI

Thesis for the Master Degree, Department of Public Finance

Supervisor: Professor Haşim AKÇA

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Located at the mouth of the Red Sea, the Republic of Djibouti controls with Yemen the Strait of Bab-el-Mandeb between the Arabian Peninsula and the coasts of East Africa. This geostrategic position at the crossroads of two continents gives it the status of a meeting ground. The liberal commercial regime that applies there for a very long time relies on perfectly modern port infrastructures which allow to have a real commercial platform.

The country plays the card of a natural bridge between an Africa, which abounds in raw materials, and an Arabian Peninsula whose investment capacity is one of the highest in the world. Thus, this dual membership of these two blocks is an undeniable advantage and the key to sustainable development. The Republic of Djibouti has made the development of the transport chain a national priority.

From the beginning of the last century until the 1960s, the activity of the transport sector suffered a significant contraction in the 1980s and 1990s, due in particular to competition, and the weakness of port infrastructure and the last ten years Djibouti has developed their sector of servıces and 80importation and exportation pass through of Djibouti port nowadays the sectors Air Djibouti has not developed but recently in 2015 Air Djibouti start flying in different destination such as Addis Ababa, Yemen, and Somalia.

Additionally, the sector road of Djıbouti has always a difficult to develop because of the truck Ethiopia and their experience in the market.

Finally, the railways sector of Djibouti has started working in 2018 up now and this news sector activity will increase the development of the countries.

Key Words: Transport Chain, Infrastructure, Development **importation exportation market**

ÖZET

CİBUTİ'DE ULAŞIM AĞININ EKONOMİK ve SOSYAL KALKINMA ÜZERİNE ETKİLERİ

Roukıa SOULEIMAN ABDI

Maliye Anabilim Dalı Yüksek Lisans Tezi

Danışman: Prof. Dr. Haşim AKÇA

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Kızıldeniz'in ağzında yer alan Cibuti Cumhuriyeti, Yemen ile birlikte Arap Yarımadası ile Doğu Afrika kıyıları arasındaki Bab-ül Mendeb Boğazı'nı kontrol ediyor. İki kıtanın kavşağında bulunan bu jeostratejik konum, ona bir buluşma alanı statüsü veriyor. Orada çok uzun süredir uygulanan liberal ticaret rejimi, gerçek bir ticari platforma sahip olmayı sağlayan mükemmel modern liman altyapılarına dayanmaktadır.

Ülke, hammadde zenginliğine sahip Afrika ile yatırım kapasitesi dünyanın en yüksek Arap Yarımadası arasında doğal bir köprü rolü oynuyor. Dolayısıyla, bu iki bloğun bu ikili üyeliği yadsınamaz bir avantajdır ve sürdürülebilir kalkınmanın anahtarıdır. Cibuti Cumhuriyeti, ulaşım zincirinin gelişimini ulusal bir öncelik haline getirmiştir.

Geçen yüzyılın başından 1960'lara kadar, ulaştırma sektörü faaliyeti, özellikle rekabet ve liman altyapısının zayıflığı nedeniyle 1980'lerde ve 1990'larda önemli bir daralma yaşadı ve Cibuti, son on yılda sektörlerini geliştirdi. hizmetleri ve 80 ithalat ve ihracat Cibuti limanından geçmekte olan Air Cibuti'nin gelişmediği sektörler bugünlerde Air Cibuti 2015 yılında Addis Ababa, Yemen ve Somali gibi farklı destinasyonlarda uçmaya başlamıştır.

Ayrıca Cibuti sektör yolunun geliştirilmesi, Etiyopya kamyonu ve pazardaki tecrübesi nedeniyle her zaman zor olmuştur.

Son olarak, Cibuti'nin demiryolları sektörü 2018'de artık çalışmaya başladı ve bu haber sektörü faaliyeti ülkelerin kalkınmasını artıracak.

Anahtar Kelimeler: Taşıma Zinciri, Altyapı, Kalkınma

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ABBREVIATIONS

TGV: - Train à Grande Vitesse

SNCF: - Société National Chemin de Fer

ITS: - Intelligent Transportation System

GDP: - Gross Domestic Product

PAID: - *Port* autonome *international* de *Djibouti*

AID: - Airport International Djibouti

DPI: - Dubai Ports International (DPI

FSC: - Food Safety Committee

EASC: - East Africa Shipping Company (EASC),

PSA: - Port Authority of Singapore (PSA),

DER: - Djibouto-Ethiopian Railway

GD: - General Director

DRA: - Djiboutian Roads Agency

MET: - Minister of Equipment and Transport

NR: - National road

PFZAD: - The Ports and Free Zones Authority of Djibouti,

IATA: - From the International Air Transport Association (IATA).

EASC: - Doraleh Multi-purpose Port

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CHAPTER I

INTRODUCTION

Humanity has always sought to free itself from the physical constraints that geographic distance places on the movement of people and goods. Therefore, it has developed various means of transport from the domestication of animals (ox, donkey, horse, camel) from the prehistoric period to the discovery of motorized transport (railroad, boat, and automobile, plane) through the invention of the wheel and navigation. The evolution of these means of transport has accompanied that of technical progress.

By contributing to the facilitation of the movement of people and goods, transport networks take part in improving the economic dynamics, people's living conditions, and their availability conditions any process of economic development. The development of transport networks lowers transport costs and promotes increased trade.

In A. Smith (1776) book The Wealth of Nations already underlined the importance of water transport at the time when the author was writing his book, the railroad had not yet made its existence and land transport was designated by low capacity and high transport costs) for the industrialization of coastal towns, thanks to the extension of market areas that these means of transport offered. In addition, while their economies stagnated until the end of the 18th century, the appearance of rapid means of transport (steamboat, railroad). At beginning of the 19th century, the revolution of the booming industrial known as developed countries, nowadays, the ongoing progress recorded in the fields of transport and communications, which made regular reductions in the costs of transport and transmission, both continental and intercontinental, compose the main vector expedition of the phenomenon of globalization.

The importance of transport systems in economic growth, and in improving living conditions is reflected in the special attention this sector receives from policy makers in both developed and developing countries, and by the large share of investments devoted to it in public investment expenditure. Additionally, mobility is an essential prerequisite for economic growth: it guarantees access to employment, education, health and many other

services. In our globalized economy, the mobility of goods also plays a crucial role in supplying markets across the globe. In this title, we can consider that transport is the engine of development.

Furthermore, Africa's poor performance in terms of economic and social development since independence and its inability to combine into international trade is partially associated with poor transport conditions (World Bank, 1994). High transport costs due to insufficient quality transport networks hamper interregional trade and erode the continent's competitiveness. According to D. Salvatore (2008), transport costs in sub-Saharan Africa are five times higher than those in developed countries and are almost double those of other developing countries. This is to make up for this deficit in transport infrastructure more generally, public infrastructure, and allow Africa to catch up with the rest of the world.

Africa's economic growth only reinforces the strategic importance of the transport sector in building a sustainable development agenda focused on the needs of people. Developing affordable, clean and safe transport systems would provide a smart and efficient response to the need for mobility and the consequences of the continent’s rapid urbanization.

In the case of the Republic of Djibouti, the importance of the transport sector is underlined by fact that transport chain is the engine of economic activity.

The organization of this chapter is as follows. In the first section of this chapter, we will present the economics of the Transport Sector (and transport networks in particular) the links between transportation and economic growth, and the Historical of the first transportation. The second section will be devoted to the place of the transport sector in the Djiboutian economy. Finally, we will show in the third section the Regulation of transportation economic in Djibouti.

1.1 Significance of The Study

The Government Republic of Djibouti wishes to make the transport and telecommunications system the essential tool for sustainable development, decides to implement sectoral policy reforms essential for this purpose. The purpose of these reforms is to give the Djiboutian transport and telecommunications system the necessary level of efficiency and competitiveness enabling it a decisive external trade in East Africa and to

participate significantly in the development of the African East. International transport activity by making Djibouti a GREAT INTERMODAL REGIONAL SITE

1.2 The Importance of Research

The world has become smaller today due to the speed in the flow of information. However, the physical distances are at the same distance. Researchs conducted in this context show that, as in communication technologies, developing technologies can also create new opportunities in the transportation sector (Goetz et al. 2000: 4), for this reason the importance of this study is to show that Djibouti is a strategic place where the entire transport chain to a large extent lives at the rate of its seaport. This chain is articulated around transport infrastructures and services with an international vocation, interurban and urban.

1.3 Research Problem

The economic problem is often identified with unlimited human needs faced with the scarcity of goods (shortage of resources), and the economy of Djibouti is confronted by a lack of satisfaction of needs and therefore: Djibouti government lacks a coherent development strategy transport and logistics services.

Djibouti's workforce lacks technical skills and does not master enough English. The government offers only limited training programs to acquire the basic technical skills needed in the transport and transport sector logistics, whether in the management and operation of services in each mode of transport (land, rail, maritime, and air) or in the planning of new infrastructure. According to the private sector, Djibouti suffers from a lack of technicians specialists (for example, mechanics and logisticians), who could fill the gap that exists today between the unskilled labor force and university graduates. More of, modern logistics beyond Djibouti's borders require skills in

English — working language of international maritime and air transport, and also language used to deal with Ethiopian traders and state structures involved in international trade — but only a minority of Djiboutian at most mastery.

Ethiopian trucking companies dominate traffic on the Djibouti-Addis corridor. Their market share is estimated at nearly 97% .Most Truck Driver Jobs and mechanics therefore returned to the Ethiopians.

The transportation sector has a vital importance in social and economic life. Therefore, it allows people to explore their environment, exchange goods, discover other cultures and make everyday life easier. One of the basic dynamics on which modern economies are based is the ability to transport people and goods in accordance with their purpose. As mobility is a fundamental dynamic of quality of life, new mobility needs arising as a result of growing population and economy are met. In order to meet the requirements, it is necessary to create a more effective transportation infrastructure.

1.4 Theoretical Explanations and Related Researches

It was extended in 2002 with the construction of the Doraleh oil and container port. The port of Djibouti is the main maritime outlet for Ethiopia, a landlocked country since the independence of Eritrea in 1993. 90% of traffic is carried by road.

The year 2017 will remain historic for the Djibouti port sector. The country created the event in May with the inauguration of the new multi-purpose port, built in Doraleh Bay, opposite the city of Djibouti, for $ 580 million (around 520 million euros). In June, it also took delivery of its first decentralized ports, at Tadjourah and Goubet, in the North.

The port of Djibouti became, from the start of its activity, the main foreign trade port of a large landlocked neighbor, Ethiopia.

Today, with the development of numerous port projects (Tadjourah, Goubet, Damerjog, multifunctional port in Doraleh), the Republic of Djibouti must prepare the communications routes necessary for the evacuation of goods processed in its various ports. The conquest of the hinterland and the loyalty of the main customers of the Ethiopian hinterland and beyond (South Sudan) go through the development of a multimodal transport network where rail and road can each have their place to ensure the movement of goods in these regions.

However, the competitiveness of rail transport vis-à-vis road will, to a large extent, depend on the role of the Ethiopian state in creating a competitive environment in the transit market. In addition, the Ethiopian authorities will also have to find a compromise with the lobby of road carriers to overcome possible attempts to foreclose the latter's market.

1.5 Method Research

Literature review related to the thesis subject will be done by using other thesis, articles and books. Research application examples will be evaluated and concepts and results will be prepared through WORD. Panel Data program will be applied to obtain the most appropriate and efficient results during the analysis of the data.

1.6 Research Plan

Chapter 1

The objective of this thesis is to analyze the economic characteristics of transport networks and to study the transport sectors of Djibouti; it is articulated in three chapters.

Is devoted to the analysis of the economic characteristics of transport networks. As a component of network industries, transport networks exhibit three distinct and interdependent morphologies (infrastructure, the function of intermediary infrastructure, and the services provided by the network to end users.

Then to study the importance of transport in the economy, it is essential to know if transport stops for these reasons such as bad weather, strike, demonstration or war and all economic life would be in danger.

This chapter will also be an opportunity to show, by way of example, that the historical development of railways in Western Europe in the 19th century perfectly illustrates the theoretical framework of network industries.

Chapter 2

Presenting a study of the transport sector in Djibouti and its importance in economic activity, and analyzes its development potential. The interesting location of the country in the sea and the existence of a vast landlocked hinterland (Ethiopia) allowed the development of a transport chain, which very quickly became the engine of economic activity.

During the first two years after independence, faced with reduced demand for transport services and poor public management, transport infrastructure suffered severe degradation and a significant drop in inefficiency. Port infrastructures have not benefited from the necessary investments to enable them to keep up with technical developments in the

maritime transport industry and have fallen far behind competing for regional ports, however today the maritime transport sector occupies an important place in Djibouti's economic activity.

Regarding the railway, a victim of low traffic and neglect of the two co-owner states (Djibouti and Ethiopia), it has suffered a gradual decline.

We will also propose in this chapter some strategic orientations that the public authorities must favor the attractiveness of the transport chain.

Chapter 3

In the third part, we will study the regulation of different sector activities (Maritime, Rail, land, Airplanes). Such as the background regulatory framework in Europe and Djibouti

CHAPTER: II

ECONOMIC OF TRANSPORT SECTOR

2.1 Transportation as a Network Industry

Transport networks is important in economic development. They are both a finished product that directly meets the need of intermediate product that contributes to increasing the productivity of the production sectors.

The availability of quality transport networks conditions the initiation and preservation of sustained economic growth and contributes to the competitiveness of the economy. However, the construction and installation of transport infrastructure requires high and irrecoverable initial investments, the payback period of which is often very long. In addition, the evolution of demand is characterized by a high degree of uncertainty while the proliferation of parallel networks does not meet any economic viability.

In addition, once installed, these infrastructures are difficult to move and generally cannot be used for other activities. These particular characteristics make transport networks a component of network industries, just like telecommunications, water and energy distribution, the audiovisual industry and even the post office.

The latter are the source of positive external effects which are diffused throughout economic activity and which make them an essential factor of economic and social development.

These important properties, which defeat regulation by market mechanisms, have led states, whether after World War II in Europe or after independence in Africa, to take control of these industries and erect them into public monopolies. Vertically integrated. The objective of states was to support the development of these industries during their emergence phase and to assign them a public service mission once they reached maturity.

Network industries have their own technical and economic characteristics, which differentiate them from other industrial production organizations. According to N. Curien (2000), the network is conceived through two conceptions. For the engineer, the network is

a spatial interconnection of compatible and / or complementary equipment put in relation with the aim of carrying out the transport of people, goods, energy or information from one point to another.

The network is seen here as the physical network and the ambition of the engineer is to optimize the arrangement of the various constituent elements of this network in order to offer better use.

The network defined as *"practical support for economic intermediation"* (Currien N. 2000)

In this case, the main role of the network concerns the connection between producers and consumers, are characterized high intensity, the capital factor, and by significant fixed costs, which are generally irrecoverable (sunk costs). The goal of the economist is to determine the best market structure that can ensure effective intermediation. An efficiently designed network is, from an economist's point of view, one that minimizes overall production costs.

Transport networks have their own characteristics that differentiate them from others. A transport network is a network based on flows made up of the movement of people and goods. The transport networks have a physical inscription on the ground. The other particularity of the transport network lies in the multimodal nature of the "transport" activity.

The concept of transport network can refer to sea, river or designate single mode in particular. The demand for transport being a need for movement (of people or goods) from a point of departure to a point of arrival, it can be ensured by means of a single mode of transport or combination several movements. The important thing being the efficiency (speed, convenience, and quality) with which the movement was carried out.

This particularity highlights the fact that while the different modes of transport compete, they are above all complementary in the accomplishment of end-to-end movement. And this complementarity is all the more relevant given that certain modes of transport (maritime, river, air) are characterized by rigidities which limit their ability to provide final services because they are technically enclosed in their infrastructures (sea or waterways). , port, airport). These modes of transport generally require the intervention of other

complementary means of transport to ensure the delivery of goods or travelers to the final destination, under good conditions.

Katz and Shapiro (1985) define networks as *"a system of compatible devices, a system that can be any combination of durable good and associated goods and services that perform some desired function"*. Applied to the case of transport, this definition implies that the objective of transport networks is to meet a demand for the movement of people and goods by relying on fixed equipment (highways, port and airport facilities, railways), mobile equipment (cars, boats, planes, trains) and human capital (Yevdokimov. Y, 2001).

Producers of transport services thus combine these three interdependent components to meet transport demand.

Network industries have a number of common morphological characteristics that we will discuss in the next paragraph.

2.2 Morphological Approach of Three-Layer Networks

N. Curien (2000) sees the network as a juxtaposition of three complementary layers. He notes that "a network reveals a stratified structure presenting a vertical segmentation of activity, within which we can identify three main layers" (N. Curien, 2000,):

- *The infrastructure* which constitutes the lower layer of the network includes equipment that can be material and / or immaterial (computer software). For transport, this component corresponds to the physical network inscribed on the ground (roads, ports, airports, railroads). The constitution and interconnection of these infrastructures generally require significant fixed costs, which generate increasing returns to scale. The infrastructures have the characteristics of a natural monopoly.
- *The function of intermediary infostructure* services is to guarantee the proper use of infrastructures. These include, among other things, traffic routing and air traffic control for air transport, traffic police or remote computer traffic control systems in the case of urban transport, lighthouses and beacons, logistics. They are intermediary services in the economic sense of the term, that is to say, self-consumed by the network in order to optimize its own operation.

- Finally, the last layer corresponds to *the services provided by the network to end users*. Its role is to provide differentiated services according to customer preferences, relying on the network infrastructure. This is the passenger and freight transport service.

For example, transport bottom layer is the physical infrastructure, stations, rails and catenaries; intermediate services correspond to the allocation of access rights (train paths), the development and management in real time of a traffic graph, signaling and switching; and the final service concerns the transport services provided by the railway undertakings which provide the transport by train of passengers and freight.

In the case of maritime transport, the lower layer corresponds to the fixed physical infrastructures (container terminal, bulk terminal, quayside, gantries) allowing the reception of ships as well as the operations of embarkation and disembarkation of goods and passengers. The infostructure is linked to the management of information processing and vessel allocation operations; while the final service relates to freight transport services performed by service providers (shipowners) to their shipper customers passenger.

2.3 Historical of the First Transportation Sector

Railways appeared at the start of industrialization as a crucial element in economic development. The golden age of railways began before the turn of the century and lasted until 1930; their development then largely based on private initiative.

From the 1930s onwards, rail transport suffered from growing competition from road transport and then, thirty years later, from air transport, a financial crises hit most of the private companies, which became unable to cover their operating costs and ensure the investments necessary for their development. These crises were at the origin of the idea that the public authorities should ensure the ownership and the direct management of the companies.

Since the postwar years, in Europe, and almost the whole world, it has been generally accepted that rail transport should be provided by a public monopoly and that it should be tightly regulated. There are several reasons for this; First of all, rail transport was seen as a natural monopoly. Besides, the State wanted to intervene extensively for social and equity reasons on the range of cost and services offered by the railways.

In addition, there was the desire to facilitate the accessibility and development of the regions, using rail as the most effective alternative to combat congestion and environmental damage caused by other modes. There were also purely political reasons.

2.3.1 Railway

A brief historical reminder of the development railways, especially of the evolution management of the railway companies which we will approach below can allow us to highlight the different stages crossed by the railways and by a transport policy called to frame them.

Born and developed at the beginning of the 19th century, rail transport is developing rapidly as an essential element in the economic development of most countries and has even influenced the history of several criteria. The idea of guiding the wheels by a metal rail, and thus saving traction energy, came from tests carried out in English and German mines in the 18th century. James Watte's first steam engine (1765) led to the steam locomotive of Richard Trevithick (1804) in England and Seguin (1827) in France.

In 1825 was the first railway line, Stockton -Darlington, the first section accessible to travelers, was initiated in England. In 1830, England had opened the Liverpool-Manchester line. After the success of Liverpool-Manchester, large and small railway lines succeeded one another in England and also, at a slower pace, in Belgium and France.Since then, similar developments have been observed successively in most European countries:

- ✓ At the beginning, construction and operation by multiple private companies, land use concessionaires on different sections of their network;
- ✓ The domination of railways compared to other traditional modes, with the division of land transport costs by ten and the multiplication of their speed by ten;
- ✓ The railways quickly had a local transport monopoly, easily outclassing traditional modes;
- ✓ To avoid monopoly abuses and build networks in the general interest, the State has started to intervene and impose public obligations; in return, the State provided financial guarantees for unprofitable lines;
- ✓ The merger of small regional networks into some large national networks for financial reasons;

- ✓ Faced with competition from other modes, the nationalization of railways was generalized;
- ✓ Recently, a break from an administrative economy towards a market economy.

National railway company (SNCF) played a decisive role in the reconstruction of the country until the first oil crisis of 1974, which marked the height of freight traffic. Since then, rail transport has entered a period of stagnation, or relative decline, and retraction of its network, a period in which the network effects have worked in reverse (spiral of decline). The appearance of the TGV, however, demonstrated the possibilities of rail renewal.

Table 1: The historical synopsis of French railways from the birth to the creation of the SNCF

		Relationship betwen the state and the railway companies			Legal
Aspect	**Year**	**State responsiblity**	**Private campanies skills**	**Network development**	**Transport policy**
Nascency	1823-1842		The lines were built and operated by private contractors in a some what scam setting	Network traces	
Development 1st report on general interest	1859	The purchase of land -decision of the outline charging of structural work	Exploitation for ninety nine years-at the end of which these must become state property	-setting up the "star" -marger of network large campanies replace the 28 existing campanies	The law of 1842
Secondary Network	1883	Financial guarantee fort he service of the unprofitable live	-The public service obligation fort the secondary network	-The fast growth of rail networks and the concentration of concessionary companies -Construction of secondary networks	The concessions low of 1859
Maturity	1921	Charging most of the expenses and the infrastructure and superstructure -the state repay the interest on land	Campagnies are obliged to accept the incorporation of new lives into their network -participates up to a maximum of 25000	-Mesh densification and corrections	The convention of 1883
Decline	1937	-The management committee -the higher railway council	A common fund guarantees the financial charges	" Unnecessary " complement	The convention of 1921
Nationalization creation of SNCF	1937				The convention of 1937

Source: Pierre Merlin, 1994, Transport in France, p.30.

In Britain, as in France, British railways were founded by private companies, under public control. At first, this public control was exercised by Parliament. Each concession project was analyzed by a specific Parliamentary Commission, which followed its execution.

In the middle of 1860s, control of the monopolies gradually shifted from Parliament to the legal system, notably with the creation of specialized committees. Until 1923, there were 150 companies, which had common services and formed a compatible network (edition of timetables, ticket office).

After the First World War, the companies became catastrophic and the State, refusing the nationalization that many demanded, decided in the Railways Act of 1921 the constitution of four large private companies united in order to balance the loss making and profit lines.

In 1947, the state nationalized the railways and created British Railways, to keep control of the main strategic of production and ensure the provision of a basic service corresponding to needs, without constraint of balance of accounts.

In Germany, the first railway line, Nuremberg-Furth, was built in Bavaria by the Frenchman Paul-Camille Denis in 1837. Saxony, Prussia and Brunswick followed.

In 1840, the whole of the territory had 500 km of lines. The various states then promulgate laws on the railway to establish the concession rules, the layout of the lines and the operating conditions. In 1865, the north-south and east-west axes, essential for the unification of the country, were created; Germany then has 14,700 km of lines.

In 1920, the Weimar Republic integrated the railways into the central administration. This integration, which left the government only a power of control, led to the creation, in 1924, of the Deutsche Reichsbahn, a private company to which all the railway companies are engaged. One of the purposes of this reorganization is to cope with the heavy investments necessary to electrify the network.

To sum up, these three examples show a similar development of the railways in France, Great Britain and Germany; private initiative first plays an important role then is supervised by the State, which gradually takes control as the financial difficulties of the railway companies.

2.3.1.1 Technical and Economic Characteristics of Rail Transport

Railway, a guided and rigorously programmed of transport, which ensures regularity and safety, but also rigidity**.** Start from the post-war years and until recent years, it was generally accepted almost everywhere in Europe that the rail transport industry should be operated by a public monopoly. According to NASH (1993), there are two main reasons: "*The first is that we considered rail transport as a natural monopoly ... The second is that the Governments wanted to intervene extensively for social reasons on the range of costs and services offered by the railways".*

However, we can certainly add several reasons, which justified the intervention of the public authorities in rail transport. We will consider here the technical-economic characteristics of the railways, which justify the public intervention carried out so far.

2.3.1.2 The railway as a natural monopoly

With regard to the rail sector, the concept of natural monopoly is linked to three characteristics of railways.

- The first characteristic of railways is the existence of high fixed costs, that is to say, costs independent of the quantity produced. The presence of fixed costs leads to decreasing costs within the capacity limit. The researchers suggests that between 25% and 33% of railway, costs are related to the costs of tracks and signaling systems (see Table 1.1.2) (SHRIES, PRESTON, NASH & WARDMAN, 1994). Most networks have significant fixed costs allowing economies of scale. This situation imposed a non-duplication of infrastructure and encouraged the concentration of activity in the hands of from the same operator.

- Second, the railway structure represents "sunk cost". As PRESTON (1994) indicates, this infrastructure has a long lifespan and is geographically located in a specific way: it cannot be redeployed elsewhere and its value as scrap is negligible. Indeed, even in the long term, when it is possible to adjust, capacity and signaling, it is in a large indivisible measure but it allows economies of scale. According to Nash (1993), if one goes from the single track to the double track, the costs are not multiplied by 2, but because of the elimination of "conflicts", the capacity is often multiplied by 4.

- The third characteristic is that the railways constitute a multi-product sector. The origin destinations meet the demands different types of travelers and goods. Given the fixed costs and the indivisibilities, this means that there are a large number of common costs, which are difficult to allocate between the services.

Table 2: Breakdown of railway costs

	1979 study	1990 study
Operation	25%	26%
Maintenance and depreciation	20%	16%
Stations and terminals	15%	16%
Pathways and signaling systems	25%	34%
Administrative costs	15%	8%
Total	100%	100%

Source : Preston (1994

All these economic characteristics, railways have normally considered as a decreasing cost sector, and unity of membership in governments. Thus, the existence of a decrease in costs and economies of scale, both for infrastructure and operations services, justified the creation of large integrated companies.

In addition, this integration was also justified by the inseparability between infrastructure management and service operation because of the rigidity of the programming train movements.

CHAPTER III

THE PLACE OF THE TRANSPORT SECTOR IN THE DJIBOUTIAN ECONOMY

3.1 TRANSPORT SECTOR IN THE DJIBOUTIAN ECONOMY

Transportation can be defined as the transportation of assets from one place to another (Orhon, 1983: 5). In other words, transportation activity is the transportation of people (passengers) or animals and goods (loads) between certain points by different vehicles. It can be defined as relocation (Abaç, 1984: 1329). Reaching is all of the works and means by which people, goods, and news reach.

The Republic of Djibouti is located in an arid region, which is not conducive to the development of agriculture. The country is poorly endowed with natural resources and the industrial sector is insignificant. It enjoys a distinctive geostrategic location and well located on sea, which has a vast hinterland.

Djibouti ports are the third gateway to East Africa after Kenya and Tanzania, and the 11th largest container port in Africa in terms of capacity. The quantity of goods passing through Djibouti ports has increased steadily in recent years, from 5.78 M in 2012 to 8.8 M tons in 2016.

In 2018, according to the World Bank Index on logistics performance, Djibouti was in 90th position out of 160 countries. Additionally, the port of Djibouti being the gateway to a large landlocked country of over 110 million people, Ethiopia. This situation has favored the development of an economy focused mainly on the tertiary sector, which represents more than 80% of the GDP. However, the good performance of this sector is conditioned by the performance of the transport sector and more particularly by that of the port infrastructure and land transport networks, which ensure the evacuation of goods handled by the port to the hinterland.

The transport sector is therefore the mainstay of economic activity and currently contributes around a quarter to national wealth (World Bank, 2005). Favored by its strategic

geographical position on one of the most active maritime routes, Djibouti has become the logistics hub of the Horn of Africa. Ethiopia, completely landlocked and developing strategy of diversifying its road and rail corridors with neighboring countries. In Ethiopia as in Djibouti, the activities of the transport and logistics sector are held by historical monopolies. Ethiopia has, however, embarked on a process of opening up since 2018, which is still very partial.

Djibouti takes advantage of the Strait to establish itself as the main gateway to the Horn of Africa. Thus, Djibouti aims to be the first commercial logistics hub in East Africa by 2035; it is predominant in trade flows with Ethiopia, via the northeast Ethiopian corridor, which nearly 95% of Ethiopian exports and 80% of Ethiopian imports pass directly through Djibouti ports. Due to the size of the Ethiopian market (110 million inhabitants), the volume of trade x could double by 2035 via Djibouti, if Ethiopia does not develop alternative corridors with other border countries.

Djibouti has invested since 2012 in port and logistics infrastructure, now operated by the Ports and Free Zones Authority: 5 ports, a free zone and a large industrial park project under construction. While the country has managed to maintain positive growth thanks to its port activities despite the pandemic (GDP growth rate of 1.4% in 2020), the economy is characterized by a very high sensitivity to global maritime traffic. (World Bank 2021)

These institutional changes led to the privatization of the technical and commercial operation of the Autonomous International Port of Djibouti (PAID) in June 2000, followed two years later by that of the Airport International Djibouti (AID), the management of these two public companies being conceded to the same private operator, Dubai Ports International (DPI, DP World currently).

The objective of this chapter is to shed light on the importance of the transport chain in economic activity and to analyze its development prospects. In the first section, we will discuss the current situation and the development potential of maritime transport. The second section will be devoted to land transport. In particular, we are going to see the gradual decline of rail transport and the important challenges it has to face in order to regain a new dynamic; before developing road freight transport, which currently provides all Ethiopian transit. We will discuss air transport in the third section. Finally, in section four, we will try to propose

some strategic orientations that the public authorities must favor in order to improve and ensure the long-term attractiveness and competitiveness of the transport chain.

3.1.1 Transport Maritime

Maritime transport is more preferred than other modes of transport because it transports the loads that make up the industrial raw material at once and in large quantities at a cheaper cost. In addition, marine transport is more preferred because it is safe and comfortable, pollutes the environment less, consumes less energy, and costs less to maintain and repair. Maritime transport is capital-intensive

Advantages:

• Lowest cost mode of transport,

• There are no transit passes and customs procedures between foreign-destination ports.

• Does not require infrastructure investment (such as Railway, Highway and Airway)

Disadvantages:

• Shipping by sea can be slower than other transport modes and bad weather can add further delays

• Routes and timetables are usually inflexible

• Tracking your goods' progress is difficult

• You have to pay port duties and taxes

3.1.1.1 Current Status of Land Transport in Djibouti

In the classic sense of the term, the port is a place of transit, an interface between sea and land (Vigarié, 1979). It is a meeting point between requests for land and sea transport whose function is to transport travelers and goods. When it was created in 1888 by the French colonial authorities, the port of Djibouti aimed to capture and redistribute goods from and to the Horn of Africa region and in particular to attract trade Ethiopian exterior.

The maritime transport sector occupies an important place in Djibouti economic activity, which fluctuates according to the performance of port infrastructure. Because of the loss of its function as the main maritime outlet for the great Ethiopian neighbor at the end of

the 1960s and the poor endowments of its infrastructure which did not follow the profound technological changes that affected the maritime transport industry, the port of Djibouti suffered a sharp slowdown in its activities until the end of the 1990s. It took the armed conflict between Ethiopia and Eritrea and the diversion of all Ethiopian foreign trade to Djibouti for the port to regain an improvement in its activities. This renewal also coincides with the disengagement of the State and the concession of the management of the port to a private operator in June 2000. These events allowed the port to experience a new dynamic and to undertake a program of major investments for its operations. " adapt to new maritime transport requirements and position itself as a regional transshipment and distribution center, the construction of the Doraleh port complex being the high point of this policy.

The Port of Djibouti and Port Sudan face the Red Sea, which is part of the larger route world trade between Europe and Asia, play a major role with the greatest volume transport. The port of Djibouti (capacity of containers: 1.2 million TEU) is made up of three major port facilities, the old port of Djibouti, the container terminal of Doraleh and the oil jetty, and the multi-purpose port of Doraleh, which were put into service in May 2017. The port of Sudan has equivalent handling capacity to that of the port of Djibouti, although the volume actual treaty is about 2/3 of that of the port of Djibouti. The port of Berbera in Somalia (mainly used by Ethiopia) and the port of Lamu in Kenya (used by Ethiopia and the South Sudan) are used, although their volume handling is low. Figure shows the volume of cargo handled from the port of Djibouti. Both imports and exports increased approximately 1.5 times over the past five years and the lack of facility capacity is a concern. With the opening of the Doraleh multipurpose port, further growth in services is expected.

The vocation of the main Ethiopian maritime outlet for the port of Djibouti was specified from its creation at the end of the 19th century by the peace and friendship treaty signed by Menelik king of Ethiopia and Léonce Lagarde then Governor of the French Somali Coast (C Dubois, 2003), in addition to the vocation to serve as a port of call for merchant and military ships providing the link between the metropolis and Indochina and the Mascarene archipelago. It materializes with the construction of the railway between Djibouti and Addis Ababa. In view of the harsh climate of the Food Safety Committee (FSC), which does not favor agricultural development and the low density in terms of population, the port could not find within the territory in which it is inserted sufficient and profitable traffic. The political

authorities of the territory very quickly understood that the survival and reliability of the port were closely linked to its ability to attract Ethiopian trade. This is why they mobilized strongly support the construction of the railway and its expansion to Addis Ababa, then the new Ethiopian capital, as reported by C. Dubois (1997) "*I can think of it as a report that the Africa committee will use in the parliamentary debate on the Ethiopia case that I want to point out. Whether or not we save our situation in Ethiopia, we need a port of call in Djibouti. Its development will be expensive and it is obviously better to find the money on the spot than to ask the French taxpayers. To find it there, Djibouti must be a living point, that is to say the transit point for a large trade, giving rise to the collection of taxes. This situation can only be ensured at our port if it remains the head of the line of the penetrating railway in Ethiopia (...). This is one more reason not to give up having a French company as far as Addis Ababa… ".*

The creation of the railway boosted the transit activity of goods from and to Ethiopia, handled by the new port of Djibouti, which gradually outclassed the old ports in the region (Zeyla, Tadjoura and Massaoua) which will see their economic importance inexorably decrease. Additionally, the extension of the railway to Addis Ababa completed in 1917 and the resulting increase in traffic have enabled the port to assert itself more and more as an essential Ethiopian transit port but also highlighted the inadequacies of its equipment to respond to continuously increasing traffic. A policy of expanding port infrastructure was then undertaken. It aimed to make the port a deep-water port, able to cope with both Ethiopian transit and local demand (although this is not significant given the low production and consumption capacity of the territory) and transshipment operations. This equipment program also aimed to ensure the harmonious development of port and rail infrastructure for rationalizing operations of goods and to ensure the complementarity of the two modes of transport over time. A section of the railway was thus extended to the ship berth to limit the costs associated with a break-in load.

In parallel with the development of the deep-water port, and under the simultaneous impetus of considerations of military strategy and the interest expressed by the private sector, the port further consolidated its role as a port of call on the Gulf of Aden by establishing an oil port at the end of the 1930s. In a more than uncertain international context where the

shadow of the second war hangs over the world, France wanted to ensure a secure supply of hydrocarbons to its warships operating in this region and those in Indochina.

The port of Aden, under British control, was then the main oil port in the region. Backed by the political guarantee, East Africa Shipping Company (EASC), in collaboration with British and American oil companies (Shell and Standard Oil), created the Djibouti Oil Company. The port then equipped itself with an entire oil platform (dock for receiving oil tankers, several hydrocarbon storage tanks) to position itself as the preferred bunkering port in the region and the hydrocarbon market. Ethiopian.

This broad policy of modernization and constant improvement of port infrastructure coupled with rapidly growing rail traffic enabled the port of Djibouti, on the eve of the Second World War, to adapt to the new requirements of maritime transport and to keep up. Provide the means to achieve its ambitions: ensure the dual function of the main port of call on the Gulf of Aden and the Ethiopian transit port in an optimal manner. The increase in port activity will then stimulate the economy of the FSC and breathe new life into the city of Djibouti. However, the outbreak of war put an end to this economic dynamic and plunged the territory into a deep economic slump because of the drop in port traffic and the rise in the cost of living.

After the Second World War, at the cost of significant public investment in modernization, the port experienced spectacular growth and became the vector for the development of the territory. The volume of freight passing through the port increased considerably and reached at the end of the 1950s more than 1.5 million tons. The port of Djibouti is then considered the third French port behind Le Havre and Marseille. Over two-thirds of Ethiopia's exports and imports were then routed through the port, which now asserts itself as Ethiopia's main gateway.

However, after the creation of the Ethiopian-Eritrean federation in 1952, then allowing latter to have access to the sea, the Ethiopian authorities decided to favor the Eritrean ports of 'Assab and Massaoua as maritime outlets for its trade, to the detriment of the port of Djibouti. The port of Massaoua, far out of the center of northern Eritrea and far from the Ethiopian capital, could not compete directly with the port of Djibouti. The situation is quite different with the port of Assab. The latter is located not far from that of Djibouti and

had already benefited during the Italian occupation of Ethiopia, from basic facilities supplemented by a motorable road that connects it to the capital Addis Ababa.

The Ethiopian government then made significant investments to improve port infrastructure and tarring the road. A fierce competition began between the two ports, which gradually turned to the advantage of the Eritrean port. The volume of Ethiopian traffic handled by the port of Djibouti has since seen a steady decline, dropping from over 60% of goods to and from Ethiopia in 1964 to almost 10% in 1984.

At the same time, while the competition from the Eritrean ports was made more and more urgent for the evacuation of the Ethiopian foreign trade and repeated closures of the Suez Canal between 1956 and 1975 strongly affected the traffic. Maritime transport between Europe, East Africa, and Asia, which passes through the Red Sea26. The closures also deprived the port of Djibouti of the ability to function as a port of call. The combination of this double constraint port activity has had negative economic consequences on the territory at the same time that it has called into question its strategic importance.

It is in this context of economic slump that the country acquired its independence in 1977. The government of the new state endowed the port with a new status with the creation of the Port Autonomy International de Djibouti (PAID), an industrial and commercial establishment. After the reopening of the Suez Canal and the gradual resumption of maritime traffic between the Mediterranean and the Indian Ocean, the disaffection of Ethiopian transit traffic in favor of Eritrean ports has led the Djibouti government to orient the function of the port towards a specialization on handling transshipment traffic in order to take full advantage of the port's strategic location.

The Djibouti port authorities realized early on of the growing importance of container traffic in global maritime trade and put in place an effective strategy to exploit the opportunities offered by the handling of transshipment traffic. The port thus acquired a container terminal with two gantry cranes and a 400 m long quay in 1984, thanks to France, which has largely contributed to the financing of infrastructure. Transshipment traffic very quickly experienced strong growth, achieving an increase of more than 35% in two years (1984-1986). These significant investments have enabled the port to take a substantial lead over its competitors (Aden, Assab, and Salalah). At the same time, a free zone benefiting

from tariff exemption is set up in order to attract companies of international size and promote the development of Djibouti as a major regional commercial platform. The combined effects of these policy initiatives should, according to the authorities at the time, offset the decline in Ethiopian transit activity and revive the country's economy.

However, these efforts to equip and modernize port infrastructure did not continue due to the economic recession that appeared at the end of the 1980s and aggravated by the economic instability resulting from the internal conflict that took place between 1991 and 1994. In the meantime, competing ports, conceded to international stevedoring companies, have made significant investments and equipped themselves with modern infrastructure to position themselves as major regional transshipment centers. Thus, the Port of Aden, in collaboration with the Port Authority of Singapore (PSA), is developing a modern container terminal which, having started commercial operation in 1999, has rapidly experienced strong growth. Likewise, the world's leading ship-owner, Maersk Line, takes control of the port of Salalah in the Sultanate of Oman to develop a container terminal there. Started in 1998, the latter quickly became a regional transshipment center. As a result, on the eve of the 21st century, the port of Djibouti has not only been able to consolidate the advantage it has been able to gain over its main rivals, but it has found itself at the back of the pack in the race the processing of regional transshipment activities.

3.2 Rail Transport

Rail transport is a mode of land transport by rail. It is intended for both people and goods. It has the advantage of being relatively fast and not very polluting.

Being suitable for mass transportation, it creates a reducing effect on the densities caused by other transportation types (Çancı and Erdal, 2009: 28-29).

Despite high initial investment and maintenance costs, rail transport's operating costs are quite low compared to other modes of transport.

Advantages:

• A safer system compared to other modes of transport,

• Minimal impact from weather conditions and traffic restrictions,

• Transition facilities compared to the highway in country crossings,

• Possibility of carrying heavy tonnage,

• Cost and hardware supply advantage in high volume/planned shipments.

Disadvantages:

• Extensive and high quality railway infrastructure is needed.

• In order to have cost and planning advantages, high volume transportation is needed. (Block Train System)

• High internal transportation costs at points where the transportation cannot reach,

3.2.1 The Djibouto-Ethiopian Railway (DER)

The railway line that connects Djibouti to Ethiopia was built about a century ago, since construction work began in 1897 and ended around 1917. It is a single-track non-electrified line, 781 km long, it suffers from its configuration, from a fairly severe layout and profile in several places on its course due to the terrain it traverses. Leaving Djibouti at sea level, it had to cross the Ethiopian highlands to reach Addis Ababa (around 2400 m altitude). It is therefore built through rough terrain and has severe characteristics with ramps up to 27 ‰ and radius of curves of 120 mr. This situation limits the speed of the trains and forces the operators to multiple pulls which are very penalizing for the normal routing of goods.

The DER fleet in 2008 consisted of 2 railcars, 9 locomotives including 7 in service, 22 passenger wagons, 248 freight wagons and 111 tank wagons, most of them in very poor condition. However, nearly 50% of the fleet is defective and is also faced with a problem of lack of availability of spare parts.

Since the 1981 bilateral agreement between Djibouti and Ethiopia, the Djibouti-Ethiopian Railway is a binational public industrial and commercial establishment whose head office is in Addis Ababa and is headed by a General Director (GD) also based in Addis Ababa. The latter is assisted by an Administrative and Financial Director, also based in Addis Ababa, a Technical Director residing in Dire-Dawa and a Commercial Director based in Djibouti and who is also the representative of the Managing Director in Djibouti. Between 1981 and 2006, the total workforce (Djibouti and Ethiopian alike) of the DER remained unchanged and hovered around 2,500 despite the continued decline in its activities and the deterioration of its financial condition. But in 2006, more than 40% of the staff on each side

of the border were made redundant in view of the prospect of concessioning the DER to a private company and the company currently employs 1,400 people.

3.2.2 Historical Overview of the DER Development Process

Before the arrival of the colonial powers in the Horn of Africa, the trade relationship between the region and the rest of the world was done through four ports (Berbera, Massaoua, Zeyla and Tadjoura), the most important of which was the port of Zeyla . Land transport between these coastal ports and the interior of the region was provided by camel caravans. When the French settled in the French Somali Coast (FSC) and decided to create the new port of Djibouti in 1888, they came into contact with the then King of Ethiopia, Menelik, to build a path railway line between Djibouti and Addis Ababa, then the new capital of the Ethiopian kingdom.Construction began in 1897 and ended twenty years later in 1917.

Very quickly, the construction of the railway completely changed the conditions of transport and the situation of the relationship between the coast and the high plateaus suppliers of fresh products, compared to the pre-colonial period, allowing the port of Djibouti to become the 'main axis of exchange to the detriment of the old routes (Zeyla, Berbera, Tadjourah). The train improves the capacity and the quality of transport by allowing a significant massification and an unprecedented increase in the speed of transport of goods. This led the merchants and traders of the region to turn to this new means of transport and to gradually abandon the camel caravans. The arrival of the railway accelerates the development of the port of Djibouti which attracts more and more merchants and has succeeded in positioning itself in a very short period of time as the main port in the region.

From the start of its operation, the railway has experienced a steady increase in its activity. Thanks to efficient management and a continuous program of modernization and maintenance of infrastructure as well as rolling stock, it has been able to retain its customers, constantly increase its traffic, repay loans granted by the French State and return substantial profits. to its shareholders from 1923. At the same time, it plays an important role in the economic development of the two countries and in the spatial organization of the territories it crosses. This is how a center of economic activity is created at each station and stopover, so that a large number of towns and villages have been formed along its route.

In addition,the railway is behind the spectacular development of Ethiopia's three largest cities of Addis Ababa (3 million inhabitants), Dire daoua (400,000 inhabitants) and Nazareth (300,000 inhabitants). Born with the first section of the railway of which it was the terminus from 1902 to 1912, the city of Dire daoua, located about 473 km north-east of Addis Ababa and 310 km from Djibouti, has grown fast to become a dynamic hotbed of urban and industrial concentration while at the same time the ancient city of Harar began to decline in favor of this new neighboring city. Moreover, the complementary relationship between the port and the railway had created snowball effects which were at the origin of the rapid development of the city of Djibouti. The continuous increase in rail traffic until the mid-1960s had a permanent positive impact on economic activity and pushed it to constantly improve the quality of its port infrastructures and to increase the range of services offered (bunkering activities , boat repair, storage warehouses).

The demand for labor expressed by this increased activity exerted a permanent attraction on the surrounding nomadic population but also encouraged the immigration of the population from neighboring countries (Ethiopia, Somaliland and Yemen). This movement of concentration then contributed to the creation of related economic activities and the gradual transformation of the port into a dynamic industrial and commercial place.

The Italian occupation of Ethiopia in 1935 accelerated the growth of railway traffic to meet the war effort and a vast program of equipment and major works undertaken by the Italians to develop the new empire and the construction by the latter of a dirt but undamaged road from Addis Ababa to the port of Assab ended the railway's monopoly on the transport of Ethiopian goods and brought about fatal competition from road transport. Despite a difficult period resulting from road competition and especially from the blockade imposed on the FSC by the British during the Second World War, the railway gradually resumed its activity and gained market share.

From almost zero to 3,864 tonnes in 1942 at the height of the blockade, train traffic grew dramatically to reach 126,570 tonnes in 1945, at the end of the Great War. This improvement in rail activity continued after the war and reached a peak of 303,000 tonnes of goods transported by the railroad in 1953, thanks in particular to an equipment policy which enabled the railroad to start a process of dieselisation of its equipment. However, from this

date, train traffic will experience a downward trend due to the intensification of road competition and the diversion of a large part of Ethiopian trade to the port of Assab, which has become an Ethiopian port due to the incorporation of Eritrea into Ethiopia in 1952. The drop in traffic weakens the financial balance of the company which has to face repeated deficit years that the French State is forced to permanently fill .

In 1959, the French government decided to share half of the management of the railway with Ethiopia in the hope that the latter would give particular importance to the train by transferring a large part of its foreign trade to the port of Djibouti. . The agreement also provides for the extension of the railway to the south, with the construction of a 310 km line connecting Nazareth to Dilla, in order to capture the traffic of goods produced in the Sidamo country, rich in agricultural products from exports (coffee, cereals, livestock, timber). Although the construction of this line has not been completed, the Ethiopian government decides to encourage the activity of the railway by diverting these exports to the rail in order to improve the financial situation of the company. This decision will be of great benefit to rail transport, which will henceforth experience a notable performance of its activities in the 1960s and the mid-1970s with an annual traffic volume of 397,600 tonnes in 1964 and 476,600 tonnes in 1976. But the the fall of the kingdom and the arrival of a communist military regime in 1974 which undertook a nationalist policy of promoting the Assab - Addis Ababa route was fatal to the railroad. However, it was above all the Ogaden War that damaged the railway infrastructure and led to the total cessation of rail activity in 1978, which seriously undermined the role of the railway in routing and the evacuation of the Ethiopian transit.

The decline of rail transport for the transport of Ethiopian transit has also accelerated with the finalization of a road linking the Ethiopian and Djibouti in 1976. It should also be noted that road transport has a significant advantage over rail transport. Indeed, trucking benefits from greater flexibility compared to the railroad by ensuring the routing of products from production areas to the port (and vice versa) without going through Addis stations. Abeba or Dire-Dawa, in order to avoid load breaks. The volume of goods transported therefore hardly experienced significant changes in the 1980s and 1990s, and fluctuated between 200,000 and 300,000 tonnes.

3.3 Road Transport

Road transport is all transport activities carried out using highways on a single piece of land where passenger or freight transport is needed, or over a large area that can be land connected with each other by bridges or other connection methods.

Due to the wideness of the highway networks and the recent increase in the number of transit roads all over the world, it is the most widely used type of transportation (Çancı and Erdal, 2009: 27). Road transportation is the most expensive and the most dangerous mode of transportation in terms of human life (White Paper, 2001: 65).

Advantage

• Infrastructure investments are less compared to other forms.

• Terminal requirement is generally low.

• It is the most convenient way of connecting all production and consumption centers, that is, door-to-door transportation.

• Under favorable geographical conditions, the transport network is almost unsettled.

• Provides express service.

• It provides convenience in loading and unloading processes.

• It is more efficient and economical in a short distance.

Its main disadvantages can be grouped under the following headings;

• Customs procedures and vehicle transits in transit countries,

• Additional waiting times.

• High transportation costs.

• Weight and time limitations.

• Lack of hardware in high volume outputs.

• Price uncertainty in market fluctuations.

3.3.1 Current Status of Road Transport of Djibouti

Favored by its strategic geographical position on one of the most active maritime routes, Djibouti has become the logistics hub of the Horn of Africa. Ethiopia, completely landlocked, and seeking strategy of diversifying its road and rail corridors with neighboring countries. In Ethiopia as in Djibouti, the activities of the transport and logistics sector are held by historical monopolies.

Djibouti road transport is the only mode of land transport allowing goods to be brought to and from the hinterland of Ethiopia, which is the port standard. The competitiveness of the port of Djibouti is therefore, for the moment, conditioned by the performance of road transport. Moreover, given the strong uncertainties hanging over the future development of rail transport, the importance of this mode of transport in the economic activity of the two partner countries is growing.

3.3.2 Djibouti Road Sector

In Djibouti, the Djiboutian Roads Agency (DRA) manages national roads and urban streets. The total length is 1,806 km, with 38% (688 km) of Coated roads and 68% (1,117 km) of unpaved roads, as shown in the following table

Tablo 3: Djibouti Road Sector

Type	**Road length (km)**			**Percentage**
	National	**Urban streets**	**Total**	
Coated roads	519	169	688	38%
Unpaved roads	675	442	1117	68%
Total	1194	611	1805	100%

Source: Final report of the preparatory study on road maintenance equipment (2016) JICA'

3.3.3 The International Road Corridor

Although the diversion of almost all foreign trade flows through the Djibouti road corridor and this has contributed to a significant improvement in Djiboutian economic activity, the trucking sector creates few jobs. Djiboutian transporters find it very difficult to be competitive in this sector and 98% of truck transport is provided by Ethiopian companies. The preponderance of Ethiopian carriers stems from the accumulation of two determining factors. The first factor is economic. Given the high cost of living and the remuneration system in Djibouti where wages are much higher than in Ethiopia, the market conditions prevailing in this sector are not favorable for the integration of companies and Djiboutian drivers.

Given the high cost of living and the remuneration system in Djibouti where wages are much higher than in Ethiopia, the market conditions prevailing in this sector are not favorable for the integration of companies and Djiboutian drivers. The Djiboutian trucking industry faces much higher operating costs than the Ethiopian industry. In addition, as the integrated framework (2004) asserts, *"under current economic conditions, the Djibouti trip - Addis Ababa should be charged US $ 3,000 for a 40 ton truck, as market conditions dictate a price below US $ 1,500.*

The lack of competitiveness of the Djiboutian trucking industry results from the disadvantages linked to factor costs (wages, fuel). The level of average monthly salaries of Djiboutian drivers (around 70,000 DJF, around 300 €) is three times higher than those of Ethiopian drivers. In addition, it turns out that employers' social charges borne by Djiboutian companies are much higher than those of Ethiopian road transport companies (integrated framework, 2004).

The second factor is linked to the presence of skills deficit compared to Ethiopians. Since the mid-1960s when road freight transport on the Assab - Addis Ababa corridor weakened rail transport, Ethiopian truckers have developed a wide range of expertise (drivers, mechanics) and have gained a considerable lead compared to their Djiboutian counterparts who only discovered this type of transport in 1998. There is also a training school in Addis Ababa for truck drivers where they learn general mechanics and emergency

repairs on the network road, which Djiboutian transporters do not benefit from. The result is low labor productivity in the Djibouti road transport industry.

The construction of roads calls for considerable investments that States, faced with recurrent budget deficits, cannot constantly mobilize.

In a study given to the assessment of deteriorating road conditions in developing countries, including African countries, CG Harrall and A. Faiz (1988) point out that *"lack of road maintenance equals to a disinvestment since it amounts to sacrificing the investments made previously".* These conditions show that the issue of road maintenance is as important as that of road construction

3.3.4 Road Traffic between 2010 to 2018

Road traffic on the international corridor between the port of Djibouti and Ethiopia decreased by 8.5% between 2017 and 2018. At the same time, revenues generated by road traffic decreased somewhat, from 1,49 billion FDJ to 1.37 billion FDJ, year over year.

Table 4: Road Traffic Movements

Road Traffic Movements, 2010-2018 (In number of trucks)					
Year	**1st trimester**	**2nd trimester**	**3rd trimester**	**4thtrimester**	**Total**
2010	65.514	61.498	48.170	46.603	**221.785**
2011	52.661	53.761	54.166	71.345	**231.933**
2012	74.168	71.196	69.084	69.124	**283.572**
2013	70.628	73.371	67.425	76.528	**287.952**
2014	79.708	77.150	82.614	85.561	**325.033**
2015	85.736	89.629	96.757	101.604	**373.726**
2016	105.865	108.466	114.503	108.929	**437.763**
2017	99.386	99.386	107.170	109.355	**423.066**
2018	97.095	95.332	102.317	92.313	**387.057**

Source: Djiboutian Road Agency

3.4 Transportation Airways

Air transport is the transportation of passengers, cargo and mail, with or without a schedule, by aircraft for commercial purposes (Wells, 1999: 25).

Advantages:

• Short transport time,

• High level of security in transportation and handling,

• Having alternative means of transport (airline companies), flexible planning,

• The undamaged transportation of sensitive cargo (electronic etc.),

Disadvantages:

- In airline transport, 75% of the total flight time in a medium-haul transportation operation is spent on non-flight activities such as Check-in and Checkout. Again, in times of low visibility, airway is the most affected mode of transportation (Nijkamp, 1998: 117-119).
- Fuel costs account for 30% of all costs in airline transportation. Due to this high rate, the crises experienced in the world and affecting the oil prices have led to the bankruptcy of many airline companies.

3.4.1 Air Transport Djibouti

Djibouti is an East African country located on the strategic point of Bab Al-Mandeb. Considered the gateway to Ethiopia, the country has focused on the development of its maritime and land activities. The development of the airline sector remains timid and the national company, Air Djibouti, struggles to develop. The Ports and Free Zones Authority of Djibouti, PFZAD, however, aims to make the country a land-air-sea hub by acquiring a new airport dedicated to cargo activities with Air Djibouti.

The country has five airports, each airport being located in the capital of each of the five main regions of the country (Djibouti, Ali-Sabieh, Dikhil, Obock and Tadjoura). However Only the Djibouti International Airport (DIA) located in Djibouti-ville, is of international class. The other four airports have only secondary type facilities with unpaved runways intended only for domestic traffic. DIA has an airstrip of over 3,000 m that can accommodate all types of aircraft.

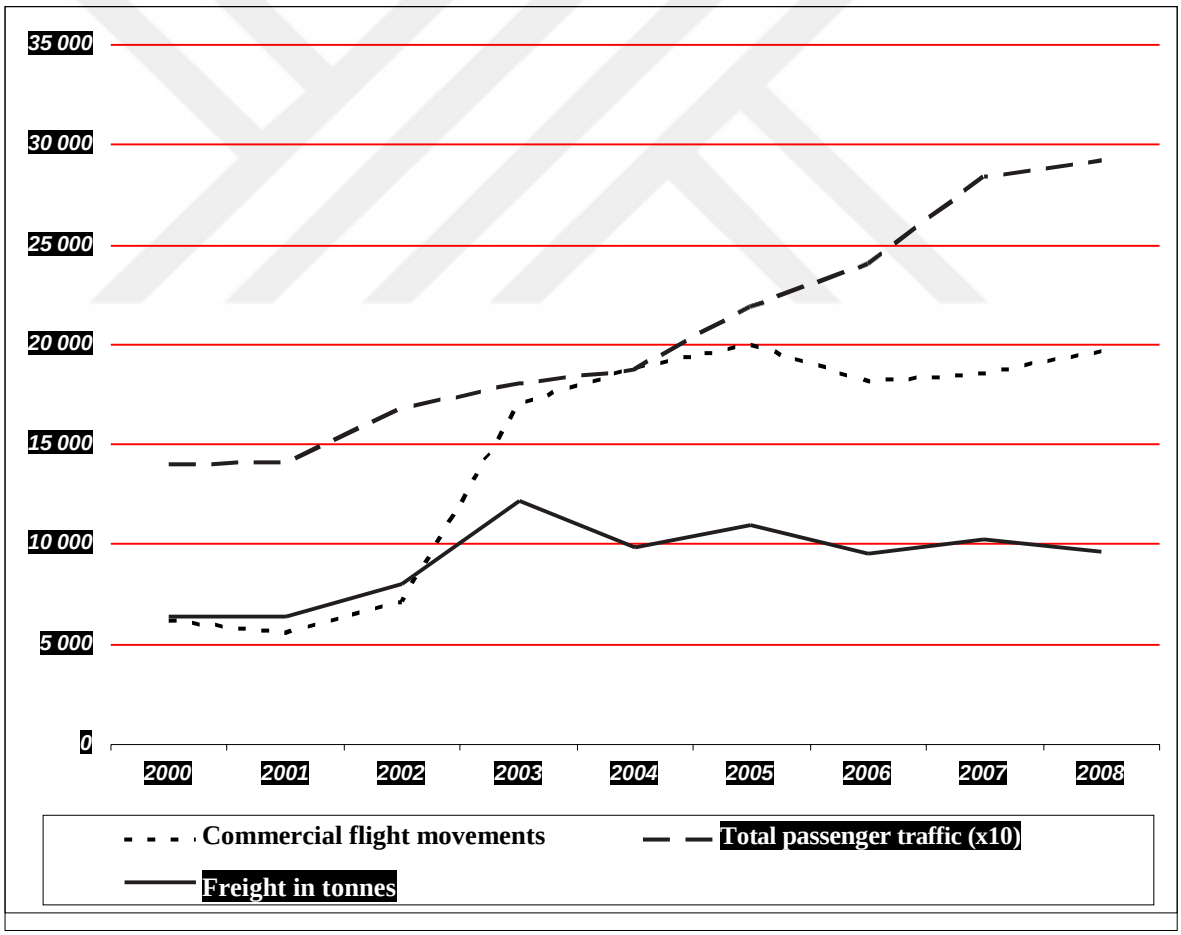
3.4.2 The evolution of DIA

Air Djibouti is the national airline of the Republic of Djibouti. 1963, it was founded by Air France and operated until 2002, when it ceased operations. The evolution of

commercial traffic at Djibouti International Airport (DIA) over the period 2000-2008. The latter suggests a steady growth since the beginning of the 2000s.

The movement of commercial flights more than doubled between 2000 and 2008, going from 6,220 to 19,684 commercial aircraft, an increase of 15.5% per year on average over the period considered. At the same time, the total passenger traffic shows a strong perpetual growth of 9.7% per year on average between 2000 and 2008. This strong evolution results from the growing increase in the number of local passengers and especially that of transit passengers even if the latter is down 8% in 2008 compared to 2007.

Figure 1: Evolution of global DIA traffic between 2000 and 2008



Source: Economic Information Bulletin (Department of the Economy)

In 2013, a feasibility study was conducted by Lufthansa Consulting followed by the authority designating Cardiff Aviation of the UK to manage the startup phase and as a result, cargo services were launched in August 2015 serving four regional destinations. Passenger

service was launched in 2016 with launch routes, Hargeisa, Mogadisho, Addis Ababa and Dire Dawa. Phase two routes included Aden and Jeddah.

The airline plans to limit its network to a maximum of 15 destinations until 2023, when the construction of a brand new airport should be completed. Lufthansa Consulting carried out a feasibility study for two airports to replace the current mixed-use (civil and military) and one for tourist traffic in Ras Siyyan in the north of the country which is being developed as a resort town

Air Djibouti has secured two aircraft for its launch in a form of a boing 767-200ER, Boeing 737-400. With a European standard operation provided by Cardiff Aviation, it plans to offer a high standard service and a direct connection to key towns and cities making it convenient for both leisure and business travelers in and out of Djibouti.

CHAPTER IV

REGULATION OF TRANSPORTATION ECONOMIC

4.1 The Road Regulatory Framework in OECD Countries

The road freight industry is a structurally competitive sector dominated by competition on price and service quality. Two broad categories of road freight regulations exist in OECD (Organisation for Economic Co-operation and Development) countries: traffic and vehicle regulations and market operation regulations. The first category includes traffic regulations, labor regulations, regulations on the transport of dangerous goods and traffic restrictions. The second category mainly covers market access conditions and price regulation.

The main justifications for the regulation of road freight activity relate to road safety, the environment and the use of fixed infrastructure. The industry has significant externalities related to car crashes involving heavy vehicles, levels of harmful noise emissions, air pollution from vehicle exhaust and congestion, and damage to the road network. These involve social, environmental and economic concerns, which have been addressed by safety and technical standards, rules on traffic and driving conditions, and charges on the use of motorways. Over the past two decades, most OECD countries have strengthened safety and environmental controls and some have improved the effectiveness of road pricing systems.

The challenge facing road freight regulators is to do so without distorting the extent of competition within the industry and between the industry and other modes of freight transport.

This section analyzes the so-called “economic” regulations relating to the conditions of entry into the road freight services markets, the supply and the pricing of these services. Emphasis is placed on the distortion of national and international competition that these regulations imply.

4.1.1 Historical Developments

Historically, economic regulation of the road freight industry has often been driven by the desire to protect the regulated rail industry, as well as by 'public service' considerations (OECD, 1990). According to the United States Bureau of Transport Statistics (1999a), in the past, regulation of market access and prices has also been driven by fear within the industry that fierce competition, instability causes would lead to the bankruptcy of road transport companies and worsen working conditions.

The regulatory reform aims to ease the conditions for entry into the sector and to liberalize the prices and supply of transport services. Greater competition between road hauliers can help improve productive efficiency and service quality while lowering prices.

4. 1.2 The Situation in 1998

In order to provide the broadest possible overview of the current state of regulatory reform in the road freight industries of OECD Member countries in 1998, different types of regulation will be addressed separately: procedures and criteria for market entry; restrictions affecting foreign carriers; restrictions affecting certain activities; price regulation and driving time regulation. The role of industry commercial organizations or lobbies in the definition and implementation of regulations and the impact of government supervision on certain companies are also taken into account. The geographical coverage of the analysis differs between these different types of regulation (Boylaud, 2000).

In addition to general regulations (accounting, taxation), the sector has specific regulations:

- ✓ The driver: driving license
- ✓ The vehicle: insurance, sticker. For the gray card, it is the Mines service which is competent and which carries out two technical visits per year in the presence of the owner.
- ✓ The concession of exploitation: a tourist certificate is given by the Ministry for the buses having to leave the territory + certificate of not pledge by the Service of the Mines and tax stamp with 500 DJF or 2.80 $ and inscription on a register.
- ✓ The license: it is payable in advance before March 1 of each year to the Direct Contributions branch of the 1st arrondissement.

- ✓ The rates: are fixed by ministerial decree and must be displayed "inside the vehicle, in perfectly legible characters".

Table 5: Passengers and Freight in Djibouti

ROAD	PESSENGER	FREIGHT	TON
REGIONAL BUS ARTA ALI SABIEH DIKHIL OBOCK TADJAURAH	30 35 35 35 35	2,25 3,37 3,94 12,25 28,12	
BUS	35	0,28	
MINIBUS	25	0,28	
TAXI	2	5,28-11,25	
TRUCK	2		20-40

Source: created by me

4.1.3 Different Type of License

B permit

Vehicles with less than 10 seats and a GVW less than or equal to 3.5 ton

C permit

Goods transport vehicles with a PATC greater than 3.5 t (heavy goods

D permit

Public transport vehicles with more than 9 seats or carrying more than 9 people

4.2 Regulation of Railway

The political objective of the public service obligation is often supported by the idea that rail transport contributes less to the increase in negative externalities than other modes of transport, in particular road transport. There is ample empirical evidence showing that the external costs derived from congestion, accidents or environmental impact (noise, visual impact, pollution, etc.) could be reduced if a substantial share of the road traffic market were transferred to the rail. This intermodal externality stems from the fact that road transport does not do not fully internalize all the social costs it generates and economists often recommend the use of congestion and/or pollution taxes, for example, to take this into account. However, where these mechanisms are not feasible or politically viable, it may be preferable to lower

rail fares in order to achieve better intermodal balance. These principles must also be taken into account when defining the appropriate regulations for the railway industry. The regulatory requirements for the railways, in a given situation, will depend on their economic characteristics and their performance.

4.2.1 Reduced Time And Cost Of Transporting Goods

The railway line, which can transport some 3,500 tons of goods per day with trains traveling at 90 km/h, will reduce the time for transporting goods between the Red Sea and Ethiopia from the three days currently required for transport by the road in about ten hours, a train being able to transport the same amount of goods as 200 trucks, according to officials.

The line will carry around 6 to 7 million tons of freight per year in its first year of operation, according to the ERC, a volume that is expected to increase by up to 10 million tons over time.

Long in sight, the rail link is expected to cut freight and passenger transport times from days to just 10 hours.

The Railway Infrastructure is part of the public domain of the Djiboutian Railway Company.

Any operation relating to the public domain of the railway shall be adopted by the Board of Directors of the Djiboutian railway Company, acting with the prior consent of the Government and without prejudice to the application of statutes.

The capital of the public limited company "Djibouti Railway Company" may be opened to public or private operators, by decree issued by the Council of Ministers.

The Minister of Economy and Finance in charge of Industry and the Minister of Equipment and Transport are responsible, each as far as they are concerned, for the execution of this Decree, which will be published in the Journal Official of the Republic of Djibouti.

4.3 Regulation Of Maritime

The main objective of the regulation of port activities is the competitiveness of the performance, costs and quality of all the services provided by the port of Djibouti. The scope of this regulation would cover all port activities of Djibouti. Appropriate regulatory

procedures will have to be provided to take into account the specificity the different types of port activities, their operating conditions and the legal nature of the operators concerned. These regulatory procedures must in particular take into account the specific legal conditions of each specialized terminal concession contract and examine the possibilities and possible needs for adapting said contract to the objectives of regulating the terminal's activities (tariffs, performance, quality of service. etc.).

The official designation of the port activities regulator will clarify the roles of the various institutions concerned with improving the competitiveness of ports from Djibouti.

The regulator of port activities could be the Ports and Free Zones Authority or the Ministry of Equipment and Transport. The Djibouti Ports and Free Zones Authority (DPFZA) reports directly to the Presidency of the Republic and is notably responsible for the port administration and the monitoring of port activities. The ports of Djibouti are also attached to the Ministry of Equipment and Transport, which issues the approvals of different types of port operators (handlers, freight forwarders, shipping agents, etc.)

4.3.1 Reduction of Service Prices in The Port of Doraleh

The Djiboutian government has announced that the tariffs for the services of the multipurpose port of Doraleh (DMP) will drop by 45% on average. Until now, ships have paid between US $ 17,000 and US $ 25,000 on average for port, parking, loading and unloading costs, depending on their size. Inaugurated in 2017, this multifunctional port covers 690 hectares and required more than 580 M USD of investments. Largest port in the country, connected to road and rail networks and equipped with equipment allowing it to accommodate 100,000 ships and handle 8.8 million tons of goods per year, it embodies Djibouti's desire to become the main hub regional.

4.3.2 Regulation of Port Activities In Djibouti

Regulation of Port Activities In Djibouti is shown in Table 8

Tablo 6: Regulation of Port Activities in Djibouti

N	ACTION	PILOT INSTITUTION	PRIORITY & DEADLINE	GOAL	ORIENTATIONS & OPTIONS
1	Appoint the regulator of port activities	Presidency of the Republic	Priority 1 to 6 months	Clarify roles to improve the competitiveness of the ports of Djibouti	- Legal text designating the port regulator, its field of intervention and its prerogatives **Option 1**: Ministry of Equipment and Transport **Option 2**: Ports and Free Zones Authority
2	Establish a port community	International Autonomous Port of Djibouti	Priority 1 to 6 months	Have a framework for regular consultation of all the actors concerned by the competitiveness of the ports of Djibouti	- Framework for consultation of all stakeholders and advisory role of the regulator and public authorities - Composition to be defined with in particular 1 to 2 representatives per profession and representatives of Djiboutian and Ethiopian shippers - Choice of representatives by the representative professional organizations concerned or election representatives by each profession
3	Update and harmonize the port and maritime legal framework	Presidency of the Republic	Priority 1 12 months	Have a framework adapted to objectives regulation	- Clarify the roles and relationships of the different public institutions concerned - Improve the conditions for exercising operators
4	Update the maximum rates for licensed material handlers	Authority of Ports and French Zones	Priority 2 12 months	Have competitive prices adapted to changes in port handling conditions	- Analytical study of the constituent costs of various handling services by large port traffic category - Regional comparative study of competitiveness of all port transit costs - Need for external technical assistance
5	Revise the decree and the specifications of approved freight forwarders	Regulator Port	Priority 2 12 months	Have text (s) suitable for objectives of regulation of activities concerned	- **Option 1:** Distinguish the approval test from the profession of customs broker, exclusively responsible for documentary services, and the profession of freight forwarder-logistics documentary and material services - **Option 2:** Keep the Djiboutian definition of forwarder with better control of requirements regulations of the profession

Source: Study on the regulation of private operators at the port of Djibouti

4.4 Air Regulation

4.4.1 Regulatory Framework

Regulations increasingly shape the structure, conduct of civil aviation industries, and can affect flight safety. Some researchers argue that in industries such as aviation, power, railways, telecommunications, banking, and pharmaceuticals, regulation is the greatest uncertainty affecting capital expenditure, corporate image business and risk management (Beardsley et al.2005). Similarly, regulation reflects an explicitly formal contract between business and society in many respects. Even in the absence of regulation, informal agreements may require organizations to take on certain social responsibilities. Therefore, when deciding on a regulatory position, aviation organizations must consider complicated trade-offs between maximizing profits while considering the safety of flight operations.

The aviation regulatory system has come a long way. Transition from civilian to military hands and back to civilian control; it has seen tremendous technological advancements in air navigation, aircraft and airport systems.

A Canadian study found that the emphasis on regulation has shifted from strict economic regulations to more relaxed regulations, but retains control where public interest and flight safety are justified (Fiorita 1995).

Civil aviation regulation can be divided into two broad categories. First, one that includes safety rules, which cover flight operations, airworthiness of aircraft, air navigation, airport, airspace and licensing of aircraft personnel. Second, an economic category is distinguished which relates to the commercial activities of the civil aviation industry, such as bilateral air transport service agreements and other commercial uses of aircraft and airports.

Regulation establishing common rules in the field of civil aviation and establishing a European Aviation Safety Agency (EASA)

Regulation 1592/20029 granted the Community exclusive competence in the field of airworthiness and environmental compatibility of aeronautical products. Furthermore, the Regulation has helped to encourage the free movement of goods, persons and services as well as to avoid duplication of work on regulatory and certification/licensing procedures.

This supports consolidated and uniform interpretation and implementation by Member States of their commitments under the "Chicago Convention". Furthermore, the cooperation of the Community and its Member States with third countries and International organizations are

strengthened by the joint efforts of national aviation authorities to jointly develop the necessary provisions and to apply and implement them in a uniform manner.

In order to fulfill all specifications based on this regulation, the European Aviation Safety Agency (EASA) was launched in 2003. It is a legally, administratively and financially autonomous Community agency and constitutes the essential component of an integrated European aviation.

Security architecture. EASA supports the European Commission by developing implementing rules. In addition, it takes the necessary measures within the framework of the powers and functions conferred on it by the Regulation, other legal provisions of the Community or international agreements in force. In particular, EASA performs the following tasks:

Issue type certificates of aeronautical products, parts and appliances as well as the appropriate environmental certificates.

• Issue and renew certificates for design organizations worldwide and for production and maintenance organizations outside the EC (and within a Member State if requested by that State).

• Assist in the area of harmonization of rules and mutual recognition of approvals.

• Prepare regulations, issue drafts, submitted in the form of an opinion to the European Commission in order to help draw up legislative proposals and implementing procedures, provide the Commission with the necessary technical support.

• Publish certification specifications (including airworthiness codes and acceptable means of compliance) as well as any guidance document for the application of this regulation and its implementing rules perform technical inspections associated with the certification of products, parts and appliances (by itself or through national aviation authorities or qualified entities).

• Carry out inspections and audits of organizations it approves (by itself or through national aviation authorities or qualified entities).

• Conduct standardization inspections in order to check the application of the regulation and its implementing procedures by the national aeronautical authorities.

• Carry out technical investigations to monitor the effectiveness of the application of the regulations and of their methods of application; conduct safety inspections and develop training and standardization programs for uniform implementation of European safety regulations.

• Collect and analyze data, develop research activities and coordinate them with those of the European Commission and the Member States.

• To assist the Community and its Member States in their relations with third countries cooperate with aeronautical authorities of third countries and international organizations and help Member States to fulfill their international obligations (in particular those deriving from the "Chicago Convention").

4.4.2 Regulation of Air Transport Djibouti

Air Djibouti was first established in April 1963 but was relaunched in 2015 under a new committee, new aircraft and also its first ever Cargo services. Air Djibouti commonly as “The Red Sea Airlines” is head quartered in the capital, Djibouti city and has hub at Ambouli International Airport.

Air Djibouti passenger services has 6 destinations weekly and it is committed to bridge the horn of Africa and it is peoples. This destination is:

Tablo 7: Destination of Flying in Djibouti

Destination	**Price in $**
Hargeisa	200
Mogadishu	235
Bossaso	270
Garoowe	250
Addis-Ababa	200
Aden	260

Source: created by me

Air Djibouti has fleet size of 2 Aircraft in services. These aircraft are Embraer types built as Embraer ERJ-145 made in Brazil, South America. Its configuration is as follows:

- A dual Rolls Royce Engine type AE3007A1E jet

- Maximum cruise speed is at 517 mph (832 km/hr) with a maximum range of 1956 miles (3147km)
- Maximum operating altitude is at 37 000 ft

It can accommodate around 50 peoples plus the pilot, its first officer, a flight engineer and 2-cabin crew.

CHAPTER V

GENERAL CONCLUSION

The objective of this thesis was to analyze the economic characteristics of networks of transport and assess their macroeconomic contributions for the case of the Republic of Djibouti.

We performed this analysis within the theoretical framework of the networking industry and endogenous growth models, which consider that public infrastructure, including are part of the transport infrastructure, are an essential determinant of long-term economic growth alongside private factors of production.

The difficult climatic conditions, the absence of proven natural resources, its strategic location on a major sea route and the existence of a vast landlocked hinterland have led the Republic of Djibouti to develop an economy heavily dependent on the transport chain. After experiencing steady growth from the beginning of the last century until the 1960s, the activity of the transport sector suffered a significant contraction in the 1980s and 1990s, due in particular to competition, and the weakness of port infrastructure that has not kept up with the technical developments in the maritime transport industry. At the same time, the railway, complementing port activities, a victim of low traffic and the neglect of the two co-owner countries, which have not made any significant investment to maintain and improve its infrastructure, has experienced a gradual decline. The diversion of all Ethiopian traffic since 1998 and the structural reforms initiated by the State which resulted in the concession of the management of the Port and the Airport to a private operator, enabled the activity of the chain of transport, to regain a new dynamic, which in turn stimulated the country's economic growth.

The Djiboutian government, in collaboration with DP World, wishes to increase the attractiveness of the port location of Djibouti so that the latter eventually becomes a regional center of intermodal transport and an important regional place of commercial distribution and that it can have spillover effects on economic growth and employment. The objective is to attract transshipment traffic circulating on the Red Sea and at the same time become a gateway for the COMESA market. The construction of the Doraleh port complex, equipped with a container terminal capable of accommodating the largest container ships in service today, meets this ambition.

Recommendations

1. To increase the market share of Djiboutian road transport companies, the Djiboutian government recently introduced into negotiations with Ethiopia a request for a quota

reserved for Djiboutian transporters. However, due to the current limited capacity of Djiboutian trucking companies, the establishment of such a system can only be done gradually and aim for a reasonable objective of 5 to 10% of the transit market share, at least in the short term and middle term.

2. The weakness of the international road freight transport sector in terms of job creation results from the lack of Djiboutian drivers with skills in general mechanics and emergency repairs. To overcome this insufficient, the government should strengthen the training of road transport operators by supporting the World Food Program (WFP). This training should first point to the large number of dropouts from secondary school who enter the labor market without qualifications.
3. The weak competitiveness of the Djiboutian trucking industry also results from the high costs of renewing the truck fleet and the difficulties of accessing the international transport market. Government to then resell them to Djiboutian road transport companies at cost price would make it possible to renew the national heavy vehicle fleet at a reduced cost.

- Preferring maritime transport in freight transport,
- Preferring road transport, provided that it is developed,
- Preferring road transport for delivery to the door in the last leg of long-distance transport by sea, air and rail,
- Use of airports at full capacity for stable growth in airline transportation,
- Preferring large-bodied aircraft for long-distance transport,
- Small-bodied aircraft should be preferred if short-haul transport is to be carried out by airmail,
- Shifting the slots to long distances in short and medium distance airline transportation,

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