



**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**SCHOOL OF MANAGEMENT SCIENCES**

**COURSE CODE: TPM 201**

**COURSE TITLE: BASIC HISTORY OF TRANSPORT**

**COURSE  
GUIDE**

**TPM201  
BASIC HISTORY OF TRANSPORT**

Course Team

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Published By:  
National Open University of Nigeria

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## **INTRODUCTION**

Welcome to **TPM 201: The Basic History of Transport**. TPM 201 is a two-credit unit course that has the minimum duration of one semester. It is suitable for all undergraduate students of Transport Planning and Management. The course consists of fourteen units and a course guide. It has been designed to examine the historical evolution and development of transport from the Ancient period to contemporary times. The method adopted in writing this course material is historiographical. Hence, the material herein are structured and developed to reflect global to local developments in the world of transport.

This course guide avails you an overview of the course. It also provides you with information on the organisation and general requirements of the course and gives you some guidance on your Tutor Marked Assignments (TMA). Other basic and general rudiments of the course are contained here for your perusal. You are advised to attend tutorial classes to discuss challenges with course facilitators at the study centre.

## **COURSE AIMS**

The aim of this course is to give the undergraduate students of Transport Planning and Management sound and comprehensive knowledge of the evolution of transport from the ancient historical period to the modern era. It appraises the major contributions of four epochs in human history – the Ancient/Classical period, the Renaissance period, the period of the Industrial Revolution and the Contemporary period, to the development of modes of travelling or transport. By this approach, it is expected that students' understanding of the subject matter of this course will be deep and penetrating. Following from this perspective, this course has been meticulously prepared and it is poised to:

- i. expose students to the meaning, concept, modes, scope and functions of transport.
- ii. trace the changes that have taken in the evolution and technologies of transport with regards to land, water and air transport.
- iii. interrogate the development of transport infrastructure in Nigeria, for example, the development of ports and inland waterways, road, rail and air transport.

- iv. analyse the impact of the development of these transport modes in Nigeria, which was an essential component of the colonial enterprise in Nigeria.
- v. Investigate the development of communication and its impact on spatial interaction in Nigeria

## **COURSE OBJECTIVES**

To achieve the aims set out above, *TPM 201: Basic History of Transport* has certain overall objectives; while each unit also has specific objectives. The unit objectives are stated at the beginning of each unit. You should endeavour to read the objectives before going through the unit. You may wish to refer to them during the study of the unit to assess your progress. Highlighted here are the major objectives for the course as a whole. It must be said that meeting the stated objectives is as good as realizing the aims of this course. On successful completion of the course, students should be able to:

- (a) Understand and explain the concept of transport
- (b) Identify and highlight advantages of the different modes of transport
- (c) Assess the scope and boundaries of the study of transport
- (d) Explain the importance/functions of transport
- (e) trace the historical evolution of transport from the earliest times to contemporary period
- (f) Discuss the development of transport infrastructure in Nigeria with particular reference to the development of ports and inland waterways, road, railway and air transport
- (g) Portray the motives, challenges and impact of the development of transport infrastructure on the socio-economic and political life of the people of Nigeria
- (h) Describe the development of telecommunication and the impact it has had on spatial interaction and intergroup relations in Nigeria.

## **WORKING THROUGH THE COURSE**

To complete the course, you are required to read the study units and other related materials. You will also need to undertake practical exercises for which you need a pen, a note-book, and other materials that will be listed in this guide. The exercises are to aid you in understanding the concepts being presented. At the end of each unit, you will be required to submit written assignment for assessment purposes.

At the end of the course, you will write a final examination.

## **THE COURSE MATERIAL**

The basic material you will need for this course are:

1. Course Guide
2. Study Units
3. Writing material such as pencil, biro, jotter etc.
4. Assignments file for your tutor-marked assignments.
5. Study references and textbooks that are recommended at the end of each unit of the course.
6. Other relevant material you may come across in the course of personal study.
7. As a history course, you will do well to take note of personages, important events and their dates and pay attention to detail as you go through the units of this course.

## **STUDY UNITS**

There are four (4) modules, made up of fourteen (14) units in this course. They are listed as follows:

### **Module 1: Concept, Definition and Scope of transport**

Unit 1: What is Transport?

Unit 2: The Scope of Transport

Unit 3: The Functions and Importance of Transport

## **Module 2: Historical Evolution of Transport**

Unit 1: Transport during the Ancient and Classical Periods (Pre-1300 A.D)

Unit 2: Transport during the Renaissance Period (1300 – 1600 A.D)

Unit 3: Transport during the Industrial Revolution (1700 – 1900 A.D)

Unit 4: Transport in the Contemporary Times (1900 – Present)

## **Module 3: Historical Development of Transport Infrastructure in Nigeria**

Unit 1: The Development of Ports and Inland Waterways in Nigeria

Unit 2: The Development of Road Transport in Nigeria

Unit 3: The Development of Railway Transport in Nigeria

Unit 4: The Development of Air Transport in Nigeria

## **Module 4: The Development of Telecommunications in Nigeria**

Unit 1: Telecommunications in Pre-Colonial Nigeria

Unit 2: Telecommunications in Colonial Nigeria

Unit 3: Telecommunications in Post-Colonial Nigeria

## **TEXTBOOKS AND REFERENCES**

Certain books have been recommended in this course. You may wish to purchase them for further reading.

## **ASSIGNMENT FILE**

An assessment file will be made available to you. In the assessment file, you will find details of the works you must submit to your tutor for marking. There are two aspects of the assessment for this course; the tutor marked assignment and the written examination. The marks you obtain in these two areas will make up your final grade for the course. The assignments must be submitted to your tutor for formal assessment in line with the deadline stated in the presentation schedule and the assignment file. The work you submit to your tutor for assessment will count for 30% of your total score.



## **TUTOR-MARKED ASSIGNMENT**

You will have to submit a specified number of TMAs. Every unit in this course has a tutor- marked assignment. You will be assessed on four of them but the best three performances from the TMAs will be used for your 30 per cent grading. When you have completed each assignment, send it together with a tutor-marked assignment form, to your tutor. Make sure each assignment reaches your tutor on or before the deadline for submissions. If, for any reason, you cannot complete your work on time, contact your tutor for a discussion on the possibility of an extension. Extensions will not be granted after the due date unless under exceptional circumstances.

## **FINAL EXAMINATION AND GRADING**

The final examination will be a test of three hours. All areas of the course will be examined. Find time to read the unit all over before your examination. The final examination will attract 70% of the total course grade. The examination will consist of questions, which reflect the kinds of self- assessment exercises and tutor marked assignments you have previously encountered. And all aspects of the course will be assessed. You should use the time between completing the last unit, and taking the examination to revise the entire course.

## **COURSE MARKING SCHEME**

The table below lays out how the actual course mark allocation is broken down.

Assessment Marks	Marks
Assignments (Best Three Assignments out of Four)	= 30%
Final Examination	=70%
Total	<b>100%</b>

## **PRESENTATION SCHEDULE**

The dates for submission of all assignments will be communicated to you. You will also be told the date for completing the study units and dates for examinations.

## COURSE OVERVIEW

Unit	Title of Work	Week of Activity	Assessment (End of Unit)
	Course Guide		
<b>Module 1: Concepts, Definition and Scope of Transport</b>			
1.	What is Transport?	Week 1	Assignment 1
2.	The Scope of Transport	Week 3	Assignment 3
3.	The Functions/Importance of Transport	Week 3	Assignment 4
<b>Module 2: Historical Evolution of Transport</b>			
1.	Transport in the Ancient and Classical Periods (pre-1300A.D)	Week 4	Assignment 1
2.	Transport during the Renaissance Period, c.1300-1600	Week 5	Assignment 2
3.	Transport during the Industrial Revolution, c. 1700 – 1900	Week 6	Assignment 3
4.	Transport during the Contemporary Period, 1900 – Present	Week 7	Assignment 4
<b>Module 3: The Development of Colonial Transport in Nigeria</b>			
1.	The Development of Ports and Inland Waterways in Nigeria	Week 8	Assignment 1
2.	The Development of Road Transport in Nigeria	Week 9	Assignment 2
3.	The Development of Railway in Nigeria	Week 10	Assignment 3
4.	The Development of Air Transport	Week 11	Assignment 4
<b>Module 4: The Development of Telecommunications in Nigeria</b>			
1.	Telecommunications in Pre-Colonial Nigeria	Week 12	Assignment 1
2.	Telecommunications in Colonial Nigeria	Week 13	Assignment 2
3.	Telecommunications in Post-Colonial Nigeria	Week 14	Assignment 3

## **HOW TO GET THE MOST FROM THIS COURSE**

In distance learning, the study units replace the university lectures. This is one of the great advantages of distance learning; you can read and work through specially-designed study materials at your own pace, and at a time and place that suits you best. Think of it as reading the lecture instead of listening to the lecturer. In the same way a lecturer might give you some reading to do the study units tell you where to read, and which are your text materials or text books. You are provided exercises to do at appropriate points, just as a lecturer might give you an in-class exercise. Each of the study units follows a common format. The first item is an introduction to the subject matter of the units, and how a particular unit is integrated with the other units and the course as a whole. Next to this is a set of learning objectives. These objectives let you know what you should be able to do by the time you have completed the unit. These learning objectives are meant to guide your study. The moment a unit is finished, you must go back and check whether you have achieved the objectives. If this is made a habit, then you will significantly improve your chances of passing the course. The main body of the unit guides you through the required reading from other sources. This will usually be either from your text books or from a reading section. The following is a practical strategy for working through the course. When you need assistance, do not hesitate to call and ask your tutor to provide it.

1. Read this Course Guide thoroughly, it is your first assignment.
2. Organise a Study Schedule. Design a 'Course Overview' to guide you through the Course. Note the time you are expected to spend on each unit and how the Assignments relates to the units. Whatever method you choose to use, you should decide on and write in your own dates and schedule of work for each unit.
3. Once you have created your own study schedule, do everything to stay faithful to it. The major reason why students fail is that they get behind with their course work. If you get into difficulties with your schedule, please, let your tutor know before it is too late to help.

4. Turn to Unit 1, and read the introduction and the objectives for the unit.
5. Assemble the study materials. You will need your text books and the unit you are studying at any point in time. As you work through the unit, you will know what sources to consult for further information.
6. Keep in touch with your study centre. Up-to-date course information will be continuously available there.
7. Well before the relevant due dates (about 4 weeks before due dates), keep in mind that you will learn a lot by doing the assignment carefully. They have been designed to help you meet the objectives of the course and, therefore, will help you pass the examination. Submit all assignments not later than the due date.
8. Review the objectives for each study unit to confirm that you have achieved them. If you feel unsure about any of the objectives, review the study materials or consult your tutor.
9. When you are confident that you have achieved a unit's objectives, you can start on the next unit. Proceed unit by unit through the course and try to pace your study so that you can keep yourself on schedule.
10. When you have submitted an assignment to your tutor for marking, do not wait for its return before starting on the next unit. Keep to your schedule. When the assignment is returned, pay particular attention to your tutor's comments, both on the tutor-marked assignment form and also the written comments on the ordinary assignments.

## **FACILITATORS/TUTORS AND TUTORIALS**

Information relating to the tutorials will be provided at the appropriate time. Your tutor will mark and comment on your assignments, keep a close watch on your progress and on any difficulties, you might encounter and provide assistance to you during the course. You must take your tutor-marked assignments to the study centre well before the due date (at least two working days are required). They will be marked by your tutor and returned to you as soon as possible.

Do not hesitate to contact your tutor if you need help. Contact your tutor if:

- you do not understand any part of the study units or the assigned readings;
- you have difficulty with the exercises;
- you have a question or problem with an assignment or with your tutor's comments on an assignment or with the grading of an assignment.

You should try your best to attend the tutorials. This is the only chance to have face-to-face contact with your tutors and ask questions which are answered instantly. You can raise any problem encountered in the course of your study. To gain the maximum benefit from course tutorials, prepare a question list before meeting them. You will learn a lot from participating actively in discussions.

## **SUMMARY**

This course guide is designed to enlighten you on what to expect in **TPM 201: The Basic History of Transport**. You will find the course guide very useful in familiarizing you with the basic and potential rudiments of the course. A diligent and painstaking study of this course guide will get you prepared to master the course easily.

We wish you success in the course and look forward to your successful completion of TPM201: Basic History of Transport.

## **CONTENTS**

### **Module 1: Definition, Concept and Scope of Transport**

Unit 1: What is Transport?

Unit 2: The Scope of Transport

Unit 3: The Functions and Importance of Transport

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Unit 1: Transport during the Ancient and Classical Periods (Pre-1300 A.D)

Unit 2: Transport during the Renaissance Period (1300 – 1600 A.D)

Unit 3: Transport during the Industrial Revolution (1700 – 1900 A.D)

Unit 4: Transport in the Contemporary Times (1900 – Present)

### **Module 3: The Development of Colonial Transport in Nigeria**

Unit 1: The Development of Ports and Inland Waterways in Nigeria

Unit 2: The Development of Road Transport in Nigeria

Unit 3: The Development of Railway Transport in Nigeria

Unit 4: The Development of Air Transport in Nigeria

### **Module 4: The Development of Telecommunications in Nigeria**

Unit 1: Telecommunication in the Pre-colonial Period in Nigeria

Unit 2: Telecommunications during the Colonial Period

Unit 3: Telecommunications during the Post-Colonial Period

## **MODULE 1: CONCEPT, DEFINITION AND SCOPE OF TRANSPORT**

Unit 1: What is Transport?

Unit 2: The Scope of Transport

Unit 3: The Functions and Importance of Transport

### **UNIT 1: WHAT IS TRANSPORT?**

#### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Concept and Definition of Transport
  - 3.2 Modes of Transport
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

#### **1.0 INTRODUCTION**

Any attempt to define a concept in the social sciences is often faced with some challenges. This is so because many concepts in the social sciences do not have a universally accepted definition. There are often many definitions to a concept as there are many scholars in the academic field. This unit is an introduction to our discourse on the history of transport. It is dedicated to the general notion of transport as a way to provide solid foundation for the discussion in subsequent units and modules. It examines the concept of transport and provides a working definition of the concept for this course. It discusses the three major modes of transport, that is: land, water and air, and briefly

brings into perspective the evolution and development of each mode. It also portrays the advantages that each mode of transport has over the others.

## **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Define and explain the concept of transport
- Identify the different modes of transport
- Discuss the distinctiveness of each mode of transport
- Highlight the advantages of each mode of transport.

## **3.0 MAIN CONTENTS**

### **3.1 What is Transport?**

Transport (British English) or transportation (American English) simply means the movement of people or goods from one location to another. The term is derived from two Latin words, *trans* meaning “across” and *portare* meaning “to carry”. Hence, transport literally means “to carry across” which presupposes ‘movement across space.’ Transport as a human endeavour or activity is as old as human existence. Its history dates back to the dawn of recorded history or beyond. Right from the start of human history, man has remained a gyrary or itinerant animal moving from one place to another in search of food, shelter and for exchange of goods and services. Although the modes used have changed through ages, its importance to the development of cultures and advancement of civilisations cannot be overemphasized.

Transport, or mobility, is central to all activities of man and its history is the history of human civilisation. It laid the foundation for the discovery of agriculture and the sophisticated tradition of iron metallurgy. For instance, early agricultural activities began when the early man through his nomadic tendencies observed the germination of discarded seeds in his environment and also started making simple implements for hunting games. It has been posited that no society can develop beyond its transport



system. Hence, a society without an efficient and developed transport system remains primitive. It is on record that all imperial empires and great kingdoms in history had all achieved their greatness by first contriving an efficient and developed transport system. It is therefore no exaggeration that transport is the tonic of human existence.

The meaning and definition of transport are many and varied. Transport, according to Wayne (1983:1), is “an activity that provides for the movement of goods or individuals from one place to another”. According to Wikipedia, the online free encyclopedia, transport is the movement of humans, animals and goods from one location to another. When people or goods are moved from one place to another, it is known as transport. A vehicle or system of vehicles such as buses, trains etc. is the means of getting from one place to another. (Cambridge Advanced Learners Dictionary, 2008). The important common element in any definition of transport is movement, changing physical location of people, animals and goods. However, the concept of transport goes beyond the movement of people and goods from one point to another. It also takes into consideration the means of conveyance or travel.

From the foregoing, therefore, transport can be defined as the movement of persons, animals, goods, ideas, information etc. from one point to another and the means by which such movement is accomplished.

## **SELF ASSESSMENT EXERCISE 1**

What do you understand by the concept, ‘transport’?

## **3.2 MODES OF TRANSPORT**

By mode of transport, we mean the different ways by which people, goods and things are generally moved from one point to another. The earliest means of transport for people and goods in human history included trekking and human portage, the use of rafts, canoes, and boats in riverine communities, and the use of pack animals or beasts of burden such as donkey, mules, camels and horses in the savannah region etc. At present,

there are lots of means of transport, which help people to move from one place to another, to get to very distant places in a very short time, to overcome seas and oceans and even fly to the stars and to transport huge amount of goods and commodities.

People move from one place to another for different reasons. They either travel for fun or out of necessity. An everyday form of mobility includes going on holidays, shopping; commuting to workplaces, schools, places of worship; and to visit friends, family and associates. There are two ways of commuting: one is the use of private means of transport and the other is to rely on the public transport services. However, there three modes of transport and they are classified on the basis of the medium, the vehicle, the motive power and the terminals. The three major modes of transport are: land transport, water transport and air transport. The other modes are pipeline (for gas or oil transfer), cable (for internet and energy supply) and space (satellite).

## **(A) LAND TRANSPORT**

Land transport is the mobility or movement of people, animals and goods from one location to another on land. Land transport is generally classified into three: pathways, roadways and railways.

### **I. Pathways**

The use of pathways is the oldest means of transport known to man. In remote villages and distant rural settlements, particularly in developing countries of Africa, Asia and Latin America, pathways are still very important modes of transport in forest and hilly areas. Even in desert areas, there are desert paths which connect one location to another. It involves trekking on foot and the use of human portorage or head loads (also referred to as human transport) and the use of pack animals or beasts of burden (also known as animal transport). Animals used in this form of transport include horses, donkeys, asses, camels, elephants, buffaloes, yaks etc. This mode of transport is very flexible, no specialised machinery or technique is necessary for its use; however, it is very strenuous

in the case of long journeys. It is common in backward regions, where civilisation and modernisation have not yet taken root.

## **II. Roadways**

Road transport is one of the most important modes of transport. Today, it is the commonest mode of transport and offers the greatest variety of means of transport. This involves the use of different motor vehicles such as cars, buses, trucks, lorries, bicycles, tricycles, motorcycles etc. There are different kinds of roads according to size and functions. While some roads are tarred and metropolitan, others are not tarred and they serve rural communities. The best of these roads are modern highways (also called expressways), which links major towns and cities. The history of road transport dates back to ancient antiquity. Although stone-slab surfaces date back to Persian and Roman times, it was really until the eighteenth century that road proper ceased to be mere dirt tracks potholed in summer and water logged in winter. The first metalled surfaces appeared in Britain (designed by such men as Telford and Macadam), but soon spread throughout the civilised world. Vehicles, too improved and carriages became swift, smoother and larger.

Road transport can be sub-divided into two viz: **motorised or vehicular transport and non-motorised or non-vehicular transport**. Motorised or vehicular transport involves the use of road vehicles or automobiles consisting of wheels and powered by an internal engine. These are used to transport people and items from one location to another on roads. These include the use of cars, buses, lorries, trucks and tricycles. Non-motorised or non-vehicular transport involves the use of small-wheeled transport such as skates, push-scooters, handcarts, rickshaws and wheelchairs. Non-motorised transport is also known as active transport or human-powered transport; these modes of transport are mostly used for recreational purposes.

## **III. Railways**

Rail transport is the conveyance of passengers and goods by means of wheeled vehicles specially designed to run along railways or railroads, which are located on tracks or guide

ways. In contrast to road transport, where vehicles run on a prepared flat surface, rail vehicles are directionally guided by the tracks on which they run. Since this system runs on metal (usually steel) rails and wheels, it has an inherent benefit of lesser frictional resistance which helps attach more loads in terms of wagons or carriages. This system is known as a train. Usually, trains are powered by an engine locomotive running on electricity or on diesel. Rail transport is an important means of land transport and suitable for carrying heavy and bulky articles over long distances.

Railway has been the pioneer of modern mechanical transport. It has brought the greatest revolution in transport. Until the introduction of motor transport, railway had the monopoly as the land transport. Trains are very fast and one of the most dependable modes of transport in terms of safety. They are least affected by usual weather turbulences like rain or fog, compared to other transport modes. However, the cost of construction, maintenance and overhead expenses are very high compared to other modes of transport. It is as flexible as other modes of transport because it has fixed routes and schedules. Rail transport originated from human-hauled contraptions that run on ancient stone-etched “wagon ways” in ancient Greece. Now, it has evolved into a modern, complex and sophisticated system used both in urban and cross-country (and continent) networks over long distances.

## **(B) WATER TRANSPORT**

Water transport refers to the movement of people, goods etc. by barges, boats, canoes, steamers and ships over a river, lake, canal, sea, ocean and other waterways. It is one of the oldest and cheapest forms of transport known to man. Two-thirds of the world’s surface is covered by water. Hence, water transport is a natural means of transport. It does not require large amount of capital expenditure for the construction of roads and railway tracks, except for canal transport, as in the case of land transport. It is very flexible and cost of running is comparatively lesser. This mode of transport is common among people and communities in riverine regions and it is suitable for transporting

perishable and imperishable goods over long distances. These goods are generally referred to as cargo.

Water vehicles are suitable for long-distance travels, commuting, cruising, racing, and off-road riding. Examples of water vehicles include raft-boats, canoes, riverboats, sailboats, speedboats, ferry, yachts, motorboats, tug boats, cruise ships, cargo ships, etc. Rivers, if naturally navigable, have always been used for transport since the dawn of human civilisation. However, but only during the last two hundred years have canals been specially constructed on a large scale (although the tradition of man-made waterways or canals dates back to the civilisations of both Egypt and China more than two hundred years ago). Britain pioneered inland water transport but now has little use of it, owing among other factors to the narrowness and shortness of her canals.

There are two major types of water transport and they are: Inland water transport and Ocean water transport.

### **I. Inland Water Transport**

The inland water transport is the system of transport through all navigable rivers, lakes, man-made canals and other water bodies available for transport within a country. Many large rivers in different parts of the world are used by ships and barges for transport. The main rivers where inland water transport is important are the Rhine and Danube in central Europe, the Congo and Zaire in central Africa, the Nile in North Africa, and the Niger in West Africa. Others include St. Lawrence in Canada and the Mississippi in the United States. Inland water transport is further categorised into two; **River Transport and Canal Transport.**

River transport, which includes lakes, creeks, backwaters, is dictated by nature. In other words, rivers are waterways endowed by nature. It was highly developed in the pre-railway days. But with the development of railways, river transport was neglected and it decayed over time. On the contrary, canals are artificial or man-made waterways constructed for the purpose of inland navigation and irrigation. They are sometimes built

to link up two navigable seas and oceans, for instance, the Suez Canal which links the Red Sea and the Mediterranean Sea and the Panama Canal which links the Atlantic with the Pacific Ocean.

## **II. Ocean Transport**

Ocean transport refers to the movement of passengers and freights on/across the high seas. Ocean transport is indispensable for foreign trade. It has brought the different parts of the world together and has knitted together all the nations of the world into one big market. It operates on a natural track, that is, the sea does not require any investment in the construction and maintenance of its track. It is without any doubt the cheapest mode of transport. Ocean transport can be categorised into: **Coastal Shipping and Overseas Shipping**. Coastal shipping is a speedy, flexible and economical form of transport for the movement of passengers and commercial goods especially bulky and heavy cargoes from one coast to another. Though across the sea, the movement is essentially within a country. Usually, coastal shipping is reserved for the indigenous business and national shipping line. Coastal shipping is more popular in countries with large coastlines like India, Japan, United States and Indonesia.

On the contrary, overseas shipping is the most popular method of transporting passengers and goods internationally. It is now commonly used more for international trade. Compared to other methods such as air freight transport, overseas shipping is much more affordable and practical for large quantities of goods. There are four types of vessels employed in overseas shipping and they are: **the Liners**, which are ships with regular fixed route, time and charges. Liners sail on scheduled dates and time, whether full of cargo or not. They can be Passenger Liners or Cargo Liners; **the Tramps**, which are ships with no fixed route, schedule and charges. Usually, they do not sail till they have full cargo and can be chartered by exporters and are ready to sail anywhere and at any time. They are not as fast in speed as liners and are more suitable for carrying seasonal and bulky goods; **the Oil Tanker**, which are vessels specially designed to carry oil, petrol and such other liquids. They usually have large capacity to carry several tons of oil

and finally; **the Refrigerated Ships**, which are designed for transporting perishable goods such as fish, meat, dairy products and wines.

### **(C) AIR TRANSPORT**

Air transport refers to movement of passengers and goods from one place to another by air through the use of aircraft such as aeroplanes, jets, helicopters, airships, gliders etc. It is the quickest, costliest and most comfortable means of transport. It is suitable for carrying important articles, mails and high-class passengers. Unlike land transport, it does not require the construction and maintenance of roads and tracks for its operation but it is most expensive because of heavy investment in the construction of aircrafts, airports, hangars, wireless and meteorological stations, wind indicators, control towers, floodlight houses etc. Air transport can be classified into passenger air transport and cargo air transport.

It is the most recent mode of transport. It is the gift of the twentieth century to the world. The two world wars gave a great impetus to the development of air transport. The first flight in the air was made in 1903 lasting only twelve seconds. It was successfully used as a means of transport after World War I (1914 – 1918). The first air service was started in 1919 between London and Paris. Today, every nation of the world has an airport. It has no physical barriers as in the case of other modes of transport. Political boundaries are also immaterial although it has to observe the requirements of the International Law. The supreme advantage of air transport lies in its quickness. However, the cost of its operation is very high and thus it is suitable for only rich and influential passengers, light and costly cargoes. In advanced countries like Germany, United States etc., air transport offers a tough competition to the railways.

### **SELF ASSESSMENT EXERCISE 1**

Identify the different modes of transport and mention the merits and demerits of each mode?

#### **4.0 CONCLUSION**

We set out, in this unit, to examine the concept of transport and come up with a definition of the concept with which to work with in this course. We also intended to describe the modes of transport, which include three major one: Land transport. Water transport and Air transport. All these have been exhaustively discussed and presented in this unit. In our attempt at defining transport, we noted that any definition of the concept must take into account or consideration the means of conveyance or travel. This is in addition to the common element which is movement or physical translocation of people (passengers) or goods (freights). In doing justice to the segment on modes of transport, attempt was made to compare and contrast the different modes with a view to indicating the advantages and disadvantages that each mode has over others and vice versa.

#### **5.0 SUMMARY**

As an introduction to the much wider and comprehensive discussion in this course, this unit provides a solid background to the meaning of the subject matter of the course which is transport. We have defined transport as the movement of people, animals, goods or anything at all from one geographical point to another and the means by which such movement or translocation is accomplished. A careful examination of the different modes of transport was equally carried out. It is believed that a thorough study of this unit will provide students with a good foundation on which the discussions in subsequent units and modules of this course will rest.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

1. How would you define ‘transport’?
2. Give and explain the working definition of transport in this unit.
3. Critically examine the three major modes of transport presented in this unit.

#### **7.0 REFERENCES/FURTHER READING**

Adeleke, B.O. *et al* (2002). *Physical and Human Geography for Senior Secondary School* (West African Edition). Ibadan: Oxford.



- Akpoghomeh, O.S. (1995). "The Development of Air Transportation in Nigeria, 1936 – 1987." *The Nigerian Geographical Journal* Vol. 2, 50 – 63.
- Cooley, H.C. (1894). "The Theory of Transportation" *Publication of the American Economic Association* Vol. 9 (3), 13 – 148.  
<https://www.jstor.org/stable/pdf/2485676.pdf>
- Hilling, D. (1996). *Transport and Developing Countries*. London: Routledge
- Munby, D. (1968). *Transport*. Harmondsworth: Penguin Books.
- Rodrigue, J. (2020). *The Geography of Transport Systems* (5<sup>th</sup> Edition). New York: Routledge.
- Waugh, D. (1995). *Geography: An Integrated Approach* (Second Edition). China: Nelson

## **UNIT 2: THE SCOPE OF TRANSPORT?**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Transport Studies and Other Disciplines
  - 3.2 Scope of Transport Studies
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
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### **1.0 INTRODUCTION**

Mobility is a natural instinct in man. There is no activity known with man that does not entail some form of movement. Hence, the centrality of transport to all human endeavours is not in doubt. It is against this submission that this unit introduces students to the relationship between transport studies and other disciplines. It is also the central objective of the unit to interrogate the development of transport as a distinct field of study and what constitutes the scope and delimitation of the discipline.

### **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Describe how the study of transport is related to other disciplines
- Explore the development of the transport as an academic field of study
- Explain the extent to which these disciplines have influenced the transport studies
- Discuss the scope of transport studies\
- Identify the sub-disciplines of Transport Studies.

### **3.0 MAIN CONTENTS**

#### **3.1 Transport Studies and Other Disciplines**

Transport, which is the movement of people (passengers) and goods (freights) from one location to another, is one of the most important human activities the world over. The centrality of transport to every activity of human endeavour makes its study interdisciplinary involving among others civil engineers, economists, urban planners and geographers. Transport, and mobility, has been the subject of inquiry in several academic fields, where some are at the core such as economics, geography, engineering, planning and administration. In contrast, others are more peripheral, such as history, sociology and politics. Until recently, transport did not assume a distinct field of academic study. It was studied as a subfield of disciplines such as Geography, Economics, History, Engineering, Planning and Management etc. As a result, there have emerged such fields as Transport Geography, Transport Economics, Transport History, Transport Engineering, Transport Planning and Management and so on.

It is valid, therefore, to assert that Transport Studies as a field of inquiry has been greatly influenced by several concepts and methods initially developed outside the discipline, which have been adapted to its particular interests and concerns. The key concepts, methods and paradigms in transport studies are closely linked to geography, economics, political science, sociology, history, including natural sciences such as mathematics and engineering. However, transport is an infrastructure intensive activity, implying that engineering has been the dominant methodological paradigm for transport studies.

The development of transport as a distinct academic field of inquiry dates back a century ago with the establishment of the British Institute of Transport and its subsequent incorporation by means of Royal Charter in 1919. Today, the discipline has grown in leaps and bounds with the discipline being hosted at both the undergraduate and postgraduate levels in several universities in the United Kingdom, Europe and across the globe.

## **SELF ASSESSMENT EXERCISE 1**

Explain the relationship between transport studies and other academic disciplines

### **3.2 SCOPE OF TRANSPORT STUDIES**

The scope of study or issues of concern in transport studies include but not limited to the following areas:

- ❖ **Transport Modes:** This is the study of how the major transport modes such as roads, railways, waterways and airways and the vehicles employed for movement play a different though overlapping role in the supply of transportation. It x-rays the challenges faced by the various modes.
- ❖ **Transport Networks:** This refers to the structure or pattern of the transport routes. The complementarity and synergy of transport networks is of concern here.
- ❖ **Urban Transport:** This investigates the complexities of various forms of transportation that move people and cargoes within the territory of a city and the immediate suburban zones. This is for the purpose of planning and provision of public services and amenities.
- ❖ **Rural Transport:** This examines the transport demand of rural communities, constraints and access to facilities as well as mobility and pattern of movement in rural areas.
- ❖ **Interrelationships:** This considers the effect or impact that transport system may have on the physical, social and economic environments of a city or region. For instance, the implication of transport for economic development is an example of these interrelationships.
- ❖ **Transport and the Environment:** These studies the impact of transport infrastructure and use of transport vehicles on the environment, especially with

regard to noise and air pollution, emission of greenhouse gases, ozone depletion and global warming among other environmental issues.

- ❖ **Transport History:** This refers to the development or evolution of the various modes of transport over time and space. It considers change and continuity in the way travel and transport has been conducted over time.
- ❖ **Transport and ICT:** This examines the relationships between the developments in information and communication technology and the use of transport facilities.
- ❖ **Miscellaneous:** This encompasses other activities related to transport and its relevance for human endeavours.

## **SELF ASSESSMENT EXERCISE 2**

What in your opinion constitutes the issues of concern in transport studies?

### **4.0 CONCLUSION**

Transport is fundamental to all human activities. As a result, its study cuts across many fields of academic study. It is for this reason that interdisciplinary or multidisciplinary approach remains at the core of transport studies. Transport is as important in the preoccupation of economists, geographers, urban planners as it is equally relevant to sociologists, historians, and politicians. In this unit, the relationship between the study of transport and other disciplines was examined. It also presents the scope and issues of concern in transport studies.

### **5.0 SUMMARY**

This primary focus of this unit is the relationship between the study of transport and other academic disciplines. It was established that the fledging discipline of transport has borrowed much of its analytical and methodological tools from several cognate disciplines. It also considered the scope and delimitation as well as the evolution of transport studies.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Critically examine the relationship between transport and other related disciplines.
2. Identify and analyse the scope of transport studies.
3. Why do you think interdisciplinary approach so fundamental to the study of transport?

## **7.0 REFERENCES/FURTHER READING**

Bonavia, M.R. (1979). "Transport as an Academic Discipline, a Profession and Object of Common European Economic Policy: A British View". *Transportation Journal* 18 (4) URL: [www.jstor.org/stable/201712529](http://www.jstor.org/stable/201712529)

Hilling, D. (1996). *Transport and Developing Countries*. London: Routledge.

Onokala, P.C. (2015). *Transportation Development in Nigeria: The Journey So Far and the Way Forward*. Inaugural Lecture delivered at the University of Nigeria in September, 2015.

Simon, D. (1998). *Transport and Development in the Third World*. London: Routledge.

## **UNIT 3: FUNCTIONS/IMPORTANCE OF TRANSPORT?**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Functions/Importance of Transport
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The role of transport in bringing about development and advancement throughout human history cannot be contested. Transport cuts across all human endeavours. Without it, life will come to a halt. Advances in transport have made possible changes in the way people live and the way in which societies are organised and therefore have a great influence in the development of civilisations. This unit conveys an understanding of the functions and importance of transport in modern society. It is the last unit in this module and it closes our discussion on the background and introduction to transport.

### **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Discuss the functions and benefits of a developed and efficient transport system in any society.
- Explain the importance of transport to the advancement of economic, social and political development of mankind.

### **3.0 MAIN CONTENTS**

#### **3.1 FUNCTIONS/IMPORTANCE OF TRANSPORT**

The importance, benefits or functions of transport can be studied under three subheadings which are: Economic, Social and Political.

##### **A. ECONOMIC BENEFITS/FUNCTIONS**

The economic benefits/functions of good transport facilities are more preponderant and evident than social and political importance and they are as follows:

**1. Extensive Market:** Transport helps in the assembly of raw materials and distribution of finished goods. It makes it possible to move goods from the point of production to the place where they are to be consumed. In the olden days, there were only local markets due to absence of developed and safe means of transport. Today, however, the development of safe and efficient means of transport has knit together all the nations of the world into one big market. Trade is no longer restricted to the boundaries of a nation, but has spread throughout the world. Even perishable goods like fish, dairy products, fruits etc are being transported to distant places of the world. But for good transport system and facilities, such a development in trade and commerce would have been possible.

**2. Industrial Development:** Transport facilitates the industrial development of a country. It helps the growth of industries by making available various factors of production. It would have been impossible to put together factors of production so easily without efficient means of transport. It is the functions of transport in bringing about the quick and easy movement of raw materials, manpower, machinery, finished goods etc. that makes it a veritable role in fostering rapid industrial development.

**3. Development of Agriculture:** Transport has helped in the development of agriculture and agro-allied industries. The business of agricultural products has grown to such a large and incredible extent due partly to efficient and developed means of transport. It would



have been impossible to have access to farm produce, use modern techniques of agriculture, improved quality seeds etc. from distant lands but for good transport facilities.

**4. Employment Opportunities and Increase in the National Income:** Transport is one of the largest employers of labour. The various modes of transport provide employment for several millions of people throughout the world, thereby creating wealth for households. This in turn contributes substantially to national income and therefore the economic development of a nation.

**5. Specialisation and Division of Labour:** Transport helps each region and country to make optimum and efficient use of its national resources. Each region can concentrate on the production of those goods for which it is best suited. Thus, movement of people and goods from one place to another leads to specialisation and division of labour which results in minimum wastage of resources and reduction in the cost of production. Ogunremi (1982:3) succinctly captured this point in the following words:

*Transportation enables society to enjoy advantages of specialization of resources, and the benefits of domain of labour by making it possible for products to be brought from distances, thus avoiding the necessity for local production*

**6. Mobility of Labour and Capital:** Transport reduces the rigours of immobility of certain factors of production. Mobility of labour and capital is one of the advantages of an efficient transport system. A developed network of transport services encourages the movement of people (workers) from one location to another. This is referred to as the geographical mobility of labour. Labour can migrate to the place where they can get better job opportunities, which reduces the exploitation of workers. The development of Australia and the United States would not have been possible without immigrations from Europe. With the development of transport, the investment of capital is also channelled to new lands and other places of the world.

**7. Discouragement to Monopoly and Consumer's Benefit:** The development of transport has resulted in the easy and quick transport of goods and services across space and locations. As a result, local producers cannot charge arbitrary prices as commodities can easily be transported from elsewhere. This discourages monopoly and encourages competition. In addition, consumers can enjoy the benefit of use of many goods, which cannot be produced at their place. It also helps in reducing the cost of goods for consumers and increases their purchasing power.

## **B. SOCIAL BENEFITS/FUNCTIONS**

Beyond economic importance, transport has substantially influenced the life of the people. Here are some of the social advantages of an efficient transport system.

**1. Growth of Cities and Urban Centres:** Transport has helped in the discovery of new lands and settlements and the growth of cities and urban settlements. Due to the availability of long distance cheap transport, land has been utilised to the maximum benefit of the people all over the world. Even the wastelands are now being used. It also increases the value of land. We, generally, find the value of land, situated on the roadside or near the railway station or bus stops, has increased tremendously.

**2. Diffusion of Population:** Transport has helped in the diffusion of population and reducing the concentration of population in the area of production or city centres. In addition, people have had cause to move away from their place of origin to other lands in search of greener pastures. All these are possible because of adequate and efficient system of transport.

**3. High Standard of Living:** Transport helps in the increase of production thereby raising the standard of living of the people. It is possible only through the means of transport that the 'five M's – men, material, money, machinery and management' can be assembled at the place of production. So, industries depend upon efficient system of transport and it creates new industries.

**4. Mutual Understanding and Broad Outlook:** Transport removes the problem of distance and geographical isolation. It also broadens the outlook of the people and helps the people of different regions to come in contact with each other, encourages exchange of ideas and culture, and promotes co-operation, understanding and cordial relations, among the peoples of the world

**5. Emergencies and Natural Calamities:** Transport enables the society to face natural calamities and emergencies such as famine, earthquakes, drought, floods, etc. In such emergencies, rescue intervention, relief materials and commodities can quickly be transported to the places of mishap.

### **C. POLITICAL BENEFITS/FUNCTIONS**

In addition to the economic and social advantages and functions, transport enjoys a great political significance:

**1. National Unity, Integration and Peace:** Transport helps in maintain internal peace and national unity of a country. It brings about national integration. A vast and heterogeneous country like India and Indonesia cannot be held together without efficient means of transport. Transport encourages economic and political interdependence by promoting specialisation and division of labour and this strengthens the need for unity and national integration.

**2. National Defence and Security:** Transport is important for strengthening the national defence of a country. In the circumstances of war, it is only through improved means of transport that the defence personnel, material and equipment can be moved rapidly to the border areas. Defence and security of a country, therefore, necessitates the existence of improved transport facilities.

**3. Political Awareness and Hegemony:** Efficient means of transport helps in creating political awareness in the people; facilitates the growth of civilisation and can also promote political expansion and domination of a tribe of people over the other.

**4. Growth of Civilisation:** Transport has been responsible for the rise and growth of great civilisations in history. Such great civilisations include Egyptian, Babylonian, Persian and Roman empires. Effective administration of great kingdoms and empires had always been based on the ability of government to send or get information to or about its peoples. This may include laws to be followed, security and other needful information needed to generate awareness.

**5. International Cooperation:** Transport has helped in fostering international understanding and cooperation. Relations among countries of the world are now all-time high. It can be economic, political, security, trade-related and socio-cultural. All these would not have been possible without the cohesion that transport avails.

#### **4.0 CONCLUSION**

The transport system of a country plays an integral role in its growth and development for a number of reasons. Due to the quick and easy movement of raw materials, machinery, labour, finished products etc., it benefits industries. Beyond this, however, transport has transformed the way people live and feel about themselves and government. In this unit, we explored the benefits and importance of transport. We examined this under three subheadings: economic, social and political functions of transport. The approach employed is simple and straightforward; it is hoped that this method will enhance students' understanding of the subject matter.

#### **5.0 SUMMARY**

Our preoccupation in this unit is to explore the benefits and importance of transport in any society. In doing this, we examined the economic, social and political functions or benefits of an adequate, efficient and modernised transport system. After a diligent study of this unit, students are better equipped to appreciate the essence and benefits of a well-developed and efficient transport in any society.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. No society can develop beyond its system of transport. Discuss.
2. To what extent is the assertion true that transport is central to all human endeavours?
3. Discuss the functions of transport in any society.

## 7.0 REFERENCES/FURTHER READING

Adeleke, B.O. et al (2002). *Physical and Human Geography for Senior Secondary School*

(West African Edition). Ibadan: Oxford.

Chapter IV. "History of Transportation and Its Workforce" Retrieved from

[https://shodhganga.inflibnet.ac.in/bitstream/10603/69376/11/11\\_chapter%204%20history%20of%20transportation%20and%20its%20work%20force.pdf](https://shodhganga.inflibnet.ac.in/bitstream/10603/69376/11/11_chapter%204%20history%20of%20transportation%20and%20its%20work%20force.pdf)

Iloeje, N.P. (1999). *A New Geography of West Africa*. Hong Kong: Longman.

Ogunremi, G.O. (1982). *Counting the Camels: The Economics of Transportation in Pre-Industrial Nigeria*. New York: Nok Publishers International Ltd.

Wayne, T.K. (1983). *Introduction to Transportation*. Cincinnati, Ohio: Southwest Publishing Company

## **MODULE 2: HISTORICAL EVOLUTION OF TRANSPORT**

Unit 1: Transport during the Ancient and Classical Periods (Pre-1300 A.D)

Unit 2: Transport during the Renaissance Period (1300 – 1600 A.D)

Unit 3: Transport during the Industrial Revolution (1700 – 1920 A.D)

Unit 4: Transport in the Contemporary Times (1920 – Present)

### **UNIT 1: Transport during the Ancient and Classical Periods (Pre-1300 A.D)**

#### **CONTENTS**

1.0 Introduction

2.0 Objectives

3.0 Main Contents

3.1 Transport in the Ancient Period

3.2 Transport during the Greco-Roman Period (Classical Era)

3.3 Transport during the Middle Ages

4.0 Conclusion

5.0 Summary

6.0 Tutor-Marked Assignment

7.0 References/Further Reading

#### **1.0 INTRODUCTION**

In Module One of this course, we explored the concept and definition of transport, the modes and scope of transport, and the importance of transport as a solid background to our discussion in this module and subsequent ones. This module examines the historical evolution of transport from the Ancient period to contemporary times. However, in this unit, which is the first in this module, we shall be focusing attention on the major developments and modes of transport in the Ancient period, the Classical period of the Greco-Roman civilisation and the Middle Ages. This is with a view to signposting the

major contributions of these historical epochs to the development of transport. This unit is historical and you will do well to pay special attention to events and dates. We wish you a pleasurable reading.

## **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Highlight major developments in transport in the Ancient period, the Classical era and the Middle Ages.
- Identify the major modes of transport employed during these historical periods.
- Describe the various vehicles that were made use of during these periods in history
- Explain the major improvements that were made during these periods.

## **3.0 MAIN CONTENTS**

### **3.1 Transport in the Ancient Period**

The history of transport is an integral part of the history of mankind. As a matter of fact, the history of mankind is replete with movement of people across land and space – movement of armies, of a whole people in migration due to plague, war, famine or drought and of trade. The evolution of transport, just like that of man, has gone through trials and errors as it evolved through time. Throughout history, man has had to slowly but surely and painstakingly evolve his means of transport to where it is today. Many modes of transport have developed alongside man's increasing knowledge and understanding of his environment.

The earliest form of transport was, of course, by **human foot**. Man from the beginning was characterised by movement from one place to another, searching for food and game, attacking his neighbours, in search of wife from other groups and so on. This form of transport was very slow as man on his own feet could not travel more than three miles per hour. The main goals of man in early stages were: fruit gathering, hunting and abduction. Despite the flexibility of his physical structure, he was compared to other animals, which were stronger, more agile and swifter, but the human animal had certain advantages: big

brain, flexible hand structure, he had to walk upright, freeing his hands for the use of tools.

Later, man started to evaluate and devise substitutes. First, he had dragged any load too heavy to be carried. But large objects are often of awkward shape and texture, liable to snag on any roughness in the ground. The natural solution is to move them on a platform with smooth runners – a sledge. Wooden sledges are first to be known, by at least 7,000 B.C, among communities living by hunting and fishing in Egypt, northern Europe, on the fringes of the Arctic. It is possible they were drawn behind a man or beast, but the technological advance is valuable even without human or animal power. On icy ground, a man can move a heavy load on a sledge with relatively little effort.

With the domestication of cattle, man learned the use of animals for transport. The animals such as donkeys, horses, camels, oxen and elephants became the first to be used for the purpose of transport. More importantly, the discovery that a castrated bull becomes the docile but very powerful ox means that human can transport heavier loads than before. This is done at first on sledges, which slither adequately over the dry grasses of the steppes of southern Russia and on the parched earth of Mesopotamia. In both regions, ox-drawn sledges are in use by the 4th millennium B.C. Donkeys and horses were probably domesticated between 4,000 and 3,000 B.C. Camels were domesticated slightly later between 3,000 and 2,000 B.C.

Another mode of transport used during the Ancient period was created in the effort to transverse water – boats. Those who colonised Australia roughly 60,000 – 40,000 years ago have been credited as the first people to cross the sea. However, there is some evidence that seafaring trips were made as far back as 900,000 years ago. The earliest known boats were simple logboats, also referred to as dugouts, which were made by hollowing out a tree trunk. Evidence for these floating vehicles comes from artifacts that date back around 10,000 – 7,000 years ago. The Pesse canoe – a log boat – is the oldest



boat unearthed and dates as far back as 7600 BCE. Rafts have been around nearly as long, with artifacts showing them in use for at least 8,000 years.

About 3,100 B.C, the riverine peoples of Egypt and southern Iraq invented the seagoing boat. They were made of papyrus reeds tied together. They had simple square sails made of sheets of papyrus or later of linen. However, the sail could only be used when sailing in one direction. With the right conditions, sailing vessels could average 5 to 6 knots (5 to 7 miles) per hour. When travelling against the wind, the boat had to be rowed. Later on, about 2,700 B.C, the Egyptians began using wooden ships for trade by sea. Early ships were steered by a long oar.

A major advancement in the way transport was conducted during the Ancient period is the introduction of wheeled transport. Archaeological evidence shows that the oldest wheeled carts were used in Mesopotamia as from 4,000 B.C, among the Sumerians, Akkadians, Elamites and Chaldeans. Sumerians were the first people to reach the civilisation and would have been the first to use the full wheel. The wheels of the first wagons were made from three planks of wood, which were pegged together in a rough circle. Speed is not the main characteristics of such a vehicle. By 3,000 B.C, wagons had acquired a regal status in addition to their practical uses. They can only transport the king on his throne at about two miles per hour in a public ceremony, but royal tombs reveal that both wagon and oxen are valued enough to be required in the next world. For more glamour and far greater speed, two new elements were needed – the horse and wheels equipped with spokes.

With the introduction of horses from central Asia, horse-drawn chariots made its appearance in 17 B.C. It became the principal weapons of the Assyrians, who eventually subdued most of the civilised world. Babylon under Nebuchadnezzar had its famous 'Procession Street', which was made with large stones over a foundation of asphalt, leading through the city to a substantial bridge across the Euphrates. The cutting of canals for irrigation has been an integral part of the civilisation of Mesopotamia, controlling the

water of the Euphrates and the Tigris. Several canals link the two rivers, and small boats used these waterways. However, the world's first canal created purely for water transport is an incomparably more ambitious affair. Between about 520 and 510 B.C, the Persian emperor, Darius I, invests heavily in the economy of his newly-conquered province of Egypt. He builds a canal linking the Nile and the Red Sea. Its access to the sea is close to modern Ismailia, which much later becomes the terminus of another great waterway, the Suez Canal.

### **SELF ASSESSMENT EXERCISE 1**

What is your evaluation and assessment of transport in the Ancient period?

### **3.2 Transport during the Greco-Roman Period (Classical Era)**

The Greco-Roman period, also popularly referred to as the Classical antiquity, the Classical era or the Classical age, is the period of cultural history between the 8<sup>th</sup> century and the 6<sup>th</sup> century A.D. One of the most significant accomplishments of the Ancient Roman Empire is the great networks of roads and the arterial system they built across their Empire. Indeed, the famous dictum, "All roads lead to Rome," attests to the accessibility of Rome from any corner of the Roman Empire due to adequate road network. The Roman road networks were important both in maintaining the stability of the empire and for its expansion. The famous Roman roads were so well designed and built that many still lie beneath the motorways of many European countries

These highways were elaborate technological undertakings built by the Roman legionaries, with the assistance of prisoners of war and slave labour. The road served numerous functions, such as military movements, political control, cultural exchanges and trade. Although primarily built for military purposes, the roads were equally useful for long journeys or travels by the rich on covered wagons or by the commoners on foot. The Roman road system made it possible to use different types of vehicles and also develop new ones. There was the two-wheeled *carpentum*, which was very fast and light

and a leather hood for protection of drivers, to the four-wheel carruca, which could carry a whole family.

In addition to this, many influential and wealthy Romans also employed chariots as a mean of travelling and getting around. These horse-pulled chariots had two wheels and looked like a cart. This was a favourite way for the Ancient Romans to travel because the horses could get where they were going very fast. The rich often travelled lying down in a litter carried on the shoulders of slave or seated in a sedan chair, also carried by slaves. Soldiers and officials on important assignments would often ride on horseback. This was a fast and easy way to get around, and it was affordable for the soldiers to have these horses. To improve the travelling speed, posthouses with fresh horses were laid at every fifteen kilometers along the route and lodgings for travellers could be found about every forty kilometers. This distance corresponded to the average distance a traveler could cover each day.

For haulage purposes, these roads were less satisfactory, because the straight nature of the roads results in some steep hills. Anyone with a wagon and horse would prefer an altitude less severe than that of the Roman engineers. By the 2nd century A.D, the network spreads all round the Mediterranean and throughout Europe up to Danube, the Rhine and northern England, amounting to more than 400,000 kilometres of roads, including over 80,500 kilometres of paved roads. When Rome was at the height of its power, no fewer than 29 great military highways radiated from the city. Hills were cut through and deep ravines filled in. At one point, the Roman Empire was divided into one 113 provinces traversed by 372 great road links. In Gaul alone, no less than 21,000 kilometres of road are said to have been developed. In Britain, at least 4,000 kilometres of such roads were constructed. There were footpaths on each side of the roads.

Transport by water was also important to the Romans. They built wooden barges, boats and sailing ships that they used to travel on rivers, seas like the Nile River, Rhine River, Danube River and the Mediterranean Sea. They travelled as far as Africa, China, Britain,

Arabia and India. They built large merchant ships called *cortia*, which could carry up to one thousand tons of cargo. Roman ships had a single main mast, which carried a rectangular sail, although some ships also had small sails at the bow and stern. They, however, did not have rudders; instead, they were steered by oars. The Romans also built lighthouses to aid shipping. Merchant ships brought silk from China, perfumes from the Middle East, cotton, precious stones and dyes from India, spices from the Middle East and India, gold, bronze silver, copper from Britain which they used to make coins and jewellery and wheat from Egypt make bread and papyrus.

Several reasons accounted for the Romans' preference for sea travel, if they were given a choice. First, travel on the sea was generally more comfortable than over the land because road travel was on foot, or in spring-less carriages, carts or chariots that bounced and bumped over every cobblestone. Second, roads were often frequented by bandits and one who travelled without a good company of slaves or armed retainers risked losing his life. Third, the few inns at which a traveller could find lodging for the night were of dubious standards or quality at best and downright risky at worst. Most innkeepers were crooks, the food was bad, and the inns were patronised by cutthroats and drunks. All kinds of lice and other insects infested the beddings, and the traveller might not even find a bed at all because they were all taken by other guests by the time he arrived at the inn.

Incredible as it may sound, there were even bridges that were built during the Ancient Roman times. The bridges were built over rivers, and since there were many Roman craftsmen, they knew how to use concrete to construct roads and bridges and so they were sturdy and lasted for many years. The Romans were also famous for constructing large ditches throughout their Empire. These were drainage ditches that would allow the central part of major cities and particularly Rome (popularly called "the Area" or the "Roman Forum") not to be flooded. There is abundance of evidence that aqueducts and artificial water channels were extensively constructed to give water to the people of Ancient Roman Empire.

## **SELF ASSESSMENT EXERCISE 2**

What are the major contributions of the Classical period to the development of transport?

### **3.3 Transport during the Middle Ages**

The Middle Ages, or Medieval period, is used to refer to the period of time in European history between the end of antiquity in the 5<sup>th</sup> century and the Renaissance, or rebirth of classical learning, which began in the 15<sup>th</sup> century and spread to the 16<sup>th</sup> century. It is generally believed to have started with the fall of the Western Roman Empire in 476 A.D and stretched until the end of the 14<sup>th</sup> century. The period is probably called the ‘Middle Ages’ because it is the time that straddles the fall of imperial Roman civilisation and the beginning of the Early Modern Europe. The Medieval period is also often referred to as the ‘Dark Ages’ because the great civilisations of Rome and Greece had been conquered. The period was marked by intellectual darkness due to loss of classical learning, mass migration, wars and general insecurity, and plagues. This lasted some three hundred years until the development of feudalism partly diminished the continuous violence.

Transport in the Middle Ages was very much based on the methods and innovations that came earlier. While the Romans showed great ingenuity in building a network of roads across Europe, the Middle Ages saw a decline in ease and access of transport. The once prevalent interconnected roads and bridges collapsed with the fall of Rome and even those roads that remained from the dynasty of the Roman Empire had long fallen into poor conditions. The roads reverted to uneven and furrowed dirt paths, which was disadvantageous in inclement weather such as winter.

With the rising popularity of wheeled-carts, smooth roads were very much needed again, as wheels could not roll over shaky or unstable ground. Ships were also renovated both in building techniques and design in order to fit larger quantities of cargo and transport cargo and passengers over longer distances. The rise in mobility and transport in the Middle Ages allowed for an increase in trade and travel throughout Europe. Merchants of

all types of goods were able to gain access to foreign markets and take more products with them, which highly benefitted the economy.

The most important and famous benefit of the strides made in improving transport in the Middle Ages was the discovery of the Americas or the 'New World,' which brought new types of goods (e.g maize, potato, tomato, tobacco and cocoa) to Europe and promoted communication and travel. Transportation was essential to not only the economic benefit and development of Europe but also the social improvement. Transport by both land and sea during the time was integral to the booming economy and major innovations that resulted in the eras after the Middle Ages.

With regard to transport on land, those in the upper socio-economic echelons in the Middle Ages occasionally travelled in covered wagons. Another transport option for the elite was in a carriage-like box balanced on two poles, the front and back ends of which were attached to two horses that were trained to walk at the same speed. These forms of transport were generally reserved for the royalty and the nobility, the wealthy and well-off traders and some other Medieval folks such as knights, diplomats/envoys and mounted soldiers. They must have been very uncomfortable as they did not have suspensions and roads were bumpy and rutted.

A common method of transport however, was on horseback, which was not limited to the upper classes. Any individual who could afford to buy or rent a horse would use the animal for transport. Long lines of packhorses were used across Britain to transport goods like wool for trade. These trains contained as many as fifty horses in a single file line that was led by a horse wearing a bell. Horses in the Middle Ages, however, were different in size and breed from today's horses. They were also generally smaller than the modern horses. Mules were also often used.

In the Middle Ages, it was not unusual for people of all classes and backgrounds and socio-economic statuses to travel and they often travelled long distances. It was a period in which travel by foot was the commonest way of journeying for the majority of the

people. The speed of transport by land varied greatly depending on the purpose. Large containers or carts of cargo could potentially slow horses down, thus rendering a day's journey into a weeks. Also, trains of horses were often accompanied by servants travelling by foot, who could definitely impede the pace of the cavalry.

While transport on land showed a decline from the prior era, transport at sea flourished in the Middle Ages. Sea travel proved to be the quickest, cheapest and most efficient option for transporting people and goods, especially for distant journeys. Many inventions helped render transport at sea much more desirable and possible. While technically invented by the Chinese centuries before, the compass was first used by Europeans in the Middle Ages, thus helping navigation. The Middle Ages also saw the European discovery of the rudder (which was, again, developed by the Chinese hundreds of years before), which made ships much easier to manoeuvre. Europeans also made advances in shipbuilding: by the 15<sup>th</sup> century, ships were built with three masts. In the Middle Ages, boats were powered by sails or oars.

In the Early Middle Ages, the sailing ship used the most was a Knarr, which was a kind of vessel used for cargo. In order to propel, it used a square-rigged sail. In the High Middle Ages, two types of ships were used: the Trade-Cog and the Hulk. The Trade-Cog had only one mast, steep sides, and a flat bottom, which allowed them to settle flatly in harbour, facilitating loading and unloading of cargo. They were also frequently used for military transport and as warships because the steep sides made it difficult for pirates and other intruders to board. The Hulk was also flat-bottomed like the Trade-Cog but had neither a stern nor sternposts. It was chiefly used as a river or canal boat as it had limited ability for ocean transport.

In the Late Middle Ages, the Caravel and Carrack ships were widely utilised. The Portuguese developed the Caravel ship for exploration voyages. These ships were either square and lateen rigged or only lateen rigged. Caravel ships had lateen sails, which gave the ships speed and the ability to sail towards the wind. Two famous Caravel ships are the

*Nina* and the *Pinta*, both of which Christopher Columbus used in his first voyage to the Indies in 1492.

The Carrack ship, developed in southern Europe (particularly Portugal) in the 15<sup>th</sup> century, was larger than the Caravel and used four masts. The *Santa Maria*, another of Christopher Columbus' ships on his 1492 voyage is the most famous example of a Carrack ship. They were big enough to be stable in unsteady waters and large enough to carry provisions for long voyages.

Galley ships were invented in the 8<sup>th</sup> century and remain in use for transport throughout the Early Middle Ages. Chiefly used for trade and warfare (as well as piracy), galleys were propelled mainly through rowing, which was actually helpful for the erratic wind conditions of the Mediterranean Sea. The Vikings most famously used long ships, clinker-built ships with overlapping wooden slates and fitted with oars along practically the entire length of the vessel. They were used not only for transport but also for trade, commerce, and warfare. Long ships were refined, long, narrow and light and therefore intended on being extremely speedy. These ships were also double-ended, which allowed the ship to reverse its direction quickly without turning around, a facet especially useful when navigating seas with icebergs.

### **SELF ASSESSMENT EXERCISE 3**

What was transport and travelling in the Middle Ages like?

## **4.0 CONCLUSION**

This module is meant to introduce students to the historical evolution of transport from Ancient antiquity to the contemporary period. However, this unit is the first of the four parts into which the module is divided. It focuses attention on the developments in transport during the Ancient period, the Classical era of the Greco-Romans and the Middle Ages. We have been able to demonstrate what transport looked during the Ancient period, showing the strengths and inadequacies of the transport system. The major contribution of the Romans, as have been captured in this unit, is their ingenuity in



road and bridge construction. The famous Roman Roads were so well-constructed that they can still be seen in some parts of Italy. Indeed, much of the roads lie underneath many modern roads throughout Europe. The Middle Ages is generally considered a period of intellectual darkness, emptiness and backwardness in Europe. However, with regard to transport, we have shown that progress was made as the period was marked by unprecedented mass movement or migration of people as a result of warfare, religious persecution, famine and drought etc. More importantly, the Middle Ages laid the foundation for the modern transport system that evolved thereafter during the period of Renaissance and the Industrial Revolution.

## **5.0 SUMMARY**

This unit sets out to interrogate transport in the Ancient and Classical Periods. The period covered in this unit is pre-1300 A.D, and it is popularly referred to as the Ancient antiquity. It ends with the Middle Ages, or Dark Ages, which precedes the Renaissance period. The Renaissance, which was marked by a renewed quest for classical learning or knowledge of the Greco-Roman era, opened the Early Modern Age in European and World History. We have in this unit painstakingly highlighted the major contributions and development in transport and mode of travelling of the period to which the unit is subdivided. We hope that the simplicity and style of presentation will aid your understanding of the subject matter of this unit.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. “The Middle Ages was a dark period as there was no progress in civilisation” How would you react to this view with regard to transport in that period?
2. Do you agree with the view that the Romans revolutionised the conduct of transport up to that particular era?
3. “Necessity is the mother of invention.” Would you say this adequately captures the conduct of transport in the Ancient antiquity?

## 7.0 REFERENCES/FURTHER READING

Philips, J.R.S. (1988). *The Medieval Expansion of Europe*. Oxford: Oxford University Press.

Newton, P.A. (1968). *Travels and Travellers of the Middle Ages*. New York: Barnes and Noble.

Rodrigue, J. (2020). *The Geography of Transport Systems* (5<sup>th</sup> Edition). New York: Routledge.

Nguyen, T.C. (2020). "The History of Transportation" Thought Co. Available online at [www.thoughtco.com/history-of-transportation-4067885](http://www.thoughtco.com/history-of-transportation-4067885)

Demartini, J. (2014). "The Evolution of Transportation" *Jetset Magazine* Online Version [www.jetsetmag.com/travel/aviation/evolution-of-transportation/](http://www.jetsetmag.com/travel/aviation/evolution-of-transportation/)

## **UNIT 2: Transport during the Renaissance Period (1400 – 1600)**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Transport during the Renaissance Period (1400 – 1600)
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

This unit discusses transport during the Renaissance period in Europe. The Renaissance was the period in European history marking the transition from the Middle Ages to the modern era generally covering the period from the 15<sup>th</sup> to the 17<sup>th</sup> century. As noted earlier in the last unit, the Middle Ages, which preceded the Renaissance was referred to as the “Dark Ages” because there was no progress in science, learning and arts even as the knowledge of the Classical period was lost. Instead, people made recourse to fallacies, dogmas and superstitions. The Renaissance therefore marked the period of the ‘rebirth’ or ‘reawakening, of the knowledge and learning of the Ancient Greco-Roman period. This unit highlights major contributions of the era to the evolution of transport.

### **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Understand what Renaissance means and how events of the period significantly affected the way transport was done at the time.

- Discuss the major development in the historical evolution of transport during the Renaissance period in Europe.
- Identify the major modes of transport employed during the Renaissance period.
- Describe the various vehicle employed in transport during this period.

### **3.0 MAIN CONTENTS**

#### **3.1 Transport during the Renaissance Period (1400 – 1600)**

The historical period known as the **Renaissance** was a period of intellectual resurgence and activism spanning the period between the 15th and 17th centuries. ‘Renaissance’ means ‘rebirth’ or ‘reawakening’. During this period, Europe left behind the fixed ideas of the Middle Ages and created the beginning of the modern world as we know it. The civilisations of ancient Greece and Rome were rediscovered, inspiring an interest in Classical learning which challenged medieval beliefs and ideas. The Renaissance period cultivated a new change in art, knowledge and culture. It changed the way the people thought, with first the rediscovery of classical philosophy, literature, and art, as well as the new discoveries in travel, invention and style. This era is so important because it introduced new ways of thinking, with new inventions, styles and explorations that are still influential and occurring to this day. Of all the areas of human life that Renaissance had made great impact, the way people travel or conduct transport stood out.

Transport, or mode of travelling, during the early period of Renaissance was not radically different from that of the medieval period. Generally, travel by ships, boats was more popular, quicker and more efficient than land transport. However, advances in both land and sea travel occurred over the course of the Renaissance. People travelled for a number of reasons during the Renaissance. Explorers sailed far from Europe to discover new territories for their monarchs and to win glory and riches to themselves. Commerce, politics and diplomacy accounted for much, if not most, travels at this time. Other reasons for trips included pilgrimages (journeys to sacred places) and pleasure travel, though that was only popular among the privileged class.

The poor state of roads, which was a hangover from the Medieval period, made travel over land slow and difficult, especially in winter when many roads could not be navigated by wheeled vehicles. Most people travelling on land went on foot or rode mules or donkeys. Rich people tended to ride horses, although many of them preferred trained mules. Wealthy or sickly individual might rode in litters or sedan chairs, carried either by animals or by several servants. People of all classes also accepted rides on carts carrying goods to market. Several models of wagons and cart emerged for different road conditions. Pack animals, such as donkeys, mules and oxen were used to transport goods as well.

For most people travelling by land during the Renaissance was limited to the local fair or farmer's market. Peasants did not have the time, resources or reasons to travel far from their farm or home. Getting from place to place was not easy. The roads were rocky pathways and could be dangerous with bandits ready to attack. For this reason the wealthy travelled with an army of men-at-arms for protection. Travellers still needed overnight accommodations. They could rent a bed at inns. These were extremely expensive and the beds were less than ideal. During peak periods, and perhaps most of the time, two or three strangers would have to share a bed. Travellers might be contaminated with illness, odour, and lice and other travellers could get lice or sickness.

The first passenger coaches appeared in Hungary in the early 1400s. These were essentially heavy wagons pulled by two or more pairs of horses. More advanced coaches, which were easier to turn, came into use during the 1500s. These new models could carry up to eight people with luggage. As from the mid-17<sup>th</sup> century, stagecoaches ran regularly between the major towns in Europe. However, they were very expensive and very uncomfortable without springs on rough terrains. There was also the danger of the highwaymen. By the late 1600s, private carriages became fashionable among the upper classes. Despite their relative comfort, coaches often moved more slowly than foot on Europe's poor roads. The speed of land travel changed little until the late 1700s.

As noted earlier, Renaissance witnessed a surge in travelling on the high seas. This is because water travel was the quickest and cheapest. Travels on the sea were usually done by merchants, students, missionaries, soldiers and pilgrims. Pilgrims sold metallic items, souvenirs and candles. This helped improve the economy. As trade and exploration increased during the Renaissance, overseas travel became more popular. Though you could travel to distant lands by ship, it was not without serious danger. There were pirates that were abundant to wreck ships. Storms could also wreck ships. You could not travel far distances without the danger of storms and sea robbers. They were always a problem.

In many parts of Western Europe, water was also very popular for short travels. Canals, rivers, lakes were very effective for inland water transport and were of a much quicker travel time than by land. However, this is not without its own challenges too. If a barge or boat was trying to travel against the current, it could take three times longer than going downstream. Tolls along the river or canal would slow travel down even more, if there was a line at the crossing. The major downside to travelling on a river is that in dry seasons water levels could drop too low for barges or boats to travel along. So, water travel has its ups and downs in spite of its popularity and widespread appeal during the Renaissance period.

As a result of the widespread use of both water and sea or ocean travels, shipbuilders in Europe produced a variety of ships of different types and sizes for transport, trade, fishing, exploration or warfare. Ships ranged from single-person fishing vessels to large carracks that could hold a thousand passengers and up to two tons of cargo. Travel time was difficult to estimate. The length of time it took to sail from one port to another varied according to the season, the weather, the tides, the cargo, the crew and a host of other factors. With time, shipbuilding was also improved upon during the Renaissance, as large ships called galleons became commonly used. These ships were powered by sail rather than by men using oars, and were more stable in the face of strong winds and storms.

Tools developed in the Middle Ages for exploration continued to be used during the Renaissance. One of these was the astrolabe, a portable device used by sailors to help them find their way on the high seas. By measuring the distance of the sun and stars from the horizon, the astrolabe helped determine latitude, an important tool in navigation. Another tool, the magnetic compass, which had been invented in the 12th century, was improved upon during the Renaissance. Maps, too, became more reliable as Portuguese map makers, called cartographers, incorporated information provided by travellers and explorers into their work.

The breakthrough in sea exploration came in the 14th and 15th centuries when caravel was popularly used. The caravel is better suited for sailing in violent oceans. With the caravel, travel becomes possible to any coast in the world other than the frozen Arctic and Antarctic. The caravel made the ‘discovery’ of America and the circumnavigation of the world possible

#### **4.0 CONCLUSION**

As have been presented in this unit, Renaissance marked a radical departure from the practices and beliefs that generally conditioned the preceding period, the Middle Ages. The superstitions, dogmas and unscientific notions that permeated the Dark Ages were upturned and disproved. People were eager to test the Classical ideas and knowledge of the Greek and Roman civilisation. The result of this is that new knowledge and ideas were generated about exploration and ocean navigation that led to the ‘discovery’ a hitherto unknown continent, the New World, by Christopher Columbus in 1492 and the circumnavigation of the globe by Ferdinand Magellan in 1522.

#### **5.0 SUMMARY**

In this unit, we set out to examine transport and mobility during the Renaissance period. As have been pointed out in this unit, transport and travel methods were not radically different from the period of the ‘Dark Ages’. This is so because for the most part transport was accomplished through the land and the sea. The major component of

transport by land constituted the travelling on foot, which was the commonest form of mobility among the peasants. There was also travel on horse, donkeys, mules and animal-driven carts and wagons. However as from the 1600s, passenger coaches operated in major cities in Europe. However, the state of the roads made travel on land most inconvenient and tedious. Many people stuck to water and sea travel as a result. The popular preference for sea and water transport made innovations in the shipbuilding and maritime travel technology possible, which ultimately resulted in the ‘discovery’ of the American continent, which was hitherto unknown to the Europe and ultimately the circumnavigation of the world.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. How did the people travel during the Renaissance?
2. How did the ideas of the Renaissance affect the way transport was conducted during the Renaissance?
3. Of what importance is the innovation in shipbuilding and navigation instruments to the revolution in transport during the Renaissance period?

## **7.0 REFERENCES/FURTHER READING**

Darby, G. (2013). “Transport during the Renaissance” Retrieved from [http://prezi.com/9lcqnoz0-a\\_z/transportation-during-the-renaissance/](http://prezi.com/9lcqnoz0-a_z/transportation-during-the-renaissance/) on 01/07/2020

Demartini, J. (2014). “The Evolution of Transportation” *Jetset Magazine* Online Version [www.jetsetmag.com/travel/aviation/evolution-of-transportation/](http://www.jetsetmag.com/travel/aviation/evolution-of-transportation/)

Essay, UK. (2018). History of Transportation. Retrieved from <http://www.ukessays.com/essays/transportation/history-of-transportation.php?vref=1>

Lambert, Tim. “A Brief History of Transport.” Retrieved from <http://www.localhistories.org/transport.html>



Marco Polo. (1958). *The Travels*. Translated by Ronald Latham. London: Penguin.

## **UNIT 3: Transport during the Industrial Revolution (1700 – 1900 A.D)**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 The Turnpike Era and the Development of Road Transport
  - 3.2 Water Transport and the Age of Canals
  - 3.3 The Development of Railways
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

This unit explores transport during the period of the Industrial Revolution in Europe. The Industrial Revolution was a period of major industrialisation and innovation that transformed largely rural, agrarian societies of Europe and America into industrialised, urban ones. It is generally believed to have started in the mid-1700s and lasted until around the 1920s. Fuelled by the use of steam power, the Industrial Revolution began in Britain and spread to the rest of the world, including the United States. However, scholars and historians have posited that the world has witnessed two industrial revolutions. The first began around 1750 and ended around 1850. The second started as from 1860 and ended around the 1920s. Both revolutions were very important periods in the history of the human society because they influenced almost every aspect of life and especially brought the world entirely new kinds of transports. Steam engine, waterway, road and railroad experienced major improvement during the first revolution, and the second revolution brought the inventions of automobile and airplane; both have played an

essential role in the development of transport in history. Of particular interest to us in this unit are the changes or improvements that occurred to transport during this period.

## **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

1. Explain what Industrial Revolution is all about and its significance in European and World history.
2. Discuss the major developments in the evolution of transport during the period of Industrial Revolution in Europe.
3. Identify the major means of transport popularly employed during the period.
4. Describe the various vehicles employed in transport during this period.

## **3.0 MAIN CONTENT**

### **3.1 The Turnpike Era and the Development of Road Transport**

As noted earlier, the art of road construction was first introduced into Europe and Britain by the Romans. These roads were meant primarily to serve military functions; their social and commercial roles were secondary. They were used for mobilising soldiers and policing conquered territories. These roads were so solidly made that some of them survived hundreds of years till the period of the Industrial Revolution. However, much of the roads suffered neglect and were never maintained after the fall of the Roman Empire and throughout the Dark Ages.

Consequently, the British road network was generally poor at the beginning of the Industrial Revolution. British early roads were narrow and often flooded in winter. Travelling was done on foot or horseback as little wheel traffic was known. In the 17th and 18th centuries, pack horse was almost the universal means of carrying goods over land. Before the 17th century, wheel vehicles were little used on the roads. It was not until the early 18th century that stage coaches driven by a coach man first appeared on British roads. Even then, the heavy wheeled-vehicles destroyed this type of road and they were regarded as nuisances.

However, there was great improvement in road transport in Britain in the late 18th and 19th centuries. This was as a result of the Turnpike system and also improvement in highway engineering. The idea behind the Turnpike system was that travellers be made to contribute to the cost of road construction and maintenance through payment of tolls. The idea was also to relieve the heavy financial burden of road maintenance on the parishes (local administration). The Turnpike system contributed towards improving the standard of British roads in the 18th and early 19th centuries. It brought some improvement in the methods of road construction. Indeed, with little support from the parishes and the central government, very little road improvement would have been possible without the Turnpike Trusts.

Turnpike Trusts were statutory bodies created by the parliament to administer the Turnpike system. By the 19th century, the Trusts produced an ever increasing mileage of good highways throughout the country. Mere horse tracks were converted into something resembling modern roads. The Turnpike system laid the foundation for the development of modern transport system in Britain. In spite of its advantages, the system faced a number of problems.

- (i) Administrative inefficiency
- (ii) It failed to establish a national system of road communication. Rather, it produced a multitude of scattered, unconnected Turnpike administrations.
- (iii) Financial mismanagement due to very loose supervision. In the collection of tolls, the system led to ‘endless evasion, inequalities and favouritism of all kinds, arbitrary exactions and systematic petty embezzlements.’

These deficiencies, coupled with the bitterness of many people against the Turnpike trusts, often resulted in confrontations. This was because lots of people were very angry that they had to pay money to use roads that had previously been free. In some places there were violent protests and toll houses and toll gates were the targets of angry mobs. These protests were called the **Rebecca Riots**.

Modern road administration in Britain began with the disappearance of the Turnpike system from the end of the 19th century and the emergence of county councils as the authority responsible for highway maintenance. This led to a better condition of roads and their widespread use in Britain. As a result of economic necessity, further efforts were made to improve British roads in the 19th century. Following improvements in road quality by 1830 practically every important place was connected with London and provincial centres by a network of fast stage-coach services. The stage coaches of the 1820s and 1830s were much improved vehicle than the heavy, slow wagons of the 18th century.

Throughout the 19<sup>th</sup> century, passenger traffic by road continued to grow and horse-drawn passenger vehicles of several kinds provided passenger services in London and the large cities in Europe. The British omnibus, the ancestor of the modern motor bus was introduced into Britain in 1829. With this, many bought buses and put them in hire-service. Many of the operators were one-man businesses; few companies participated. However, the 20th century witnessed an unprecedented growth of the motor road transport in Europe. This growth was the result of remarkable development of the internal combustion engine. The commercial success of powered vehicles was preceded by a long period of experiment dating to the 19<sup>th</sup> century. Various vehicles were made in the 15<sup>th</sup> century including those powered by steam, coal, gas, and later on the gasoline or petrol-powered engines.

The commercial production of motor vehicles in Europe began in 1880s. It started in Germany and then France. In 1888, Karl Benz established the world's first automobile production. Benz's automobile was technically a tricycle, but it was the first serial production motorised vehicle. The following year, Wilhelm Maybach and Gottlieb Daimler built a new type of vehicle, which was, from ground up, designed as an automobile, not a carriage or a coach with an engine suspended on it. By the end of the 1890s, several types of cars were produced in Britain. With these developments, the era of automobiles had effectively begun.

## **ASSESSMENT EXERCISE 1**

Assess the contribution of Turnpike system to the development of British transport system.

### **3.2 Water Transport and the Age of Canals**

Rivers had been used for transport for centuries, but they have limitations. To be sure, one of the best ways to travel or transport goods and heavy items before the Industrial Revolution was the river. However, rivers were restricted to the routes nature had given, and the sea, taking goods from port to port. More so, boats could travel downstream quite easily using the wind current but travelling upstream was very difficult. At the beginning of the revolution, attempts were made to improve water transport such as cutting long meanders, and out of this grew the canal network, essentially man-made waterways which could move heavy goods more easily and cheaply. However, the problem of travelling upstream was solved during the Industrial Revolution through the invention of the steam engine. In 1807, Robert Fulton built the first commercial steamboat. It used steam power to travel upstream. Steamboats were soon to transport people and goods along rivers throughout Europe.

The canal system dates to Roman Britain, but was largely used for irrigation or to link up rivers. The navigable water network in the British Isles grew as the demand for industrial transport increased. A canal has several advantages over using roads. First, a boat, or barge, on a canal is not going to have a bumpy journey. So, fragile, precious goods are much less likely to break en route. Second, a canal barge is much larger than a horse-drawn wagon and so it can be used to carry much more than wagons on Turnpike roads could be expected to. Third, canals are very cheap to use once they are constructed. If a barge can carry 50 tonnes of coal and it only took two men to look after the barge, consider how much has been saved in wages if the largest wagon on the road could carry

two tonnes. Finally, canals were mostly built to connect rivers, lakes, and oceans. They therefore penetrated interior areas and services on them were more regular.

Industrialists soon realised that canals were a very good idea and invested heavily in the construction of this new form of transport. One of the first modern canals in the world was the Bridgewater Canal built by the Duke of Bridgewater in 1761. With the completion of the canal, the supply of coal to Manchester was greatly improved. Thereafter, Liverpool was also linked by a canal in 1767. The most important canal built in the United States was the Erie Canal, which is 363 miles long and connected Lake Erie to the Hudson River and the Atlantic Ocean. It was completed in 1825 and became a source of commerce and travel from the Western States to New York.

One of the famous canal builders and engineers of the period was James Brindley, who built Bridgewater Canal. By the end of 'canal mania' of the 1790s, it was just about possible to use inland waterways to get goods from most cities to any of the major ports. The canals played a crucial role in determining the location of British industries. Canal construction, which covered 4,000 miles by 1850, stopped with the invention and development of steam-powered locomotives. Most of the canals of the industrial age are still navigable today.

The invention of steam engines, the discovery of fossil fuels such as gas, petrol and diesel, and the innovation in steel technology were epoch-making in the history of transport and particularly during the Industrial Era. Modern boats and ships were built of metal and they had engines in them. Voyage time across the Atlantic using those ships took four times less than by sailing. As early as 1815, steamships were crossing the English Channel. The *Savannah* became the first steamship to cross the Atlantic in 1819. Meanwhile, it used to take several weeks to cross the Atlantic. Then in 1838, a steamship called the *Sirius* made the journey in 19 days. However, steam did not completely replace sail until the end of the 19<sup>th</sup> century when the steam turbine was used on ship.

As from the 1870s, international transport entered a new phase with improvements in engine propulsion and a gradual shift from coal to oil, which increased the speed and capacity of maritime transport. Global maritime communication and travel were also dramatically improved when infrastructures to reduce intercontinental distances, such as the Suez Canal in 1869 and the Panama Canal in 1914 were constructed. With the Suez Canal, the far reaches of Asia and Australia became more accessible while the Panama Canal linking the American East and West coasts shortened maritime journeys by more than 13,000 kilometres and reduced the distances from various locations globally. Because of these developments, ships also dramatically increased in size and port infrastructure had to expand in order to accommodate them. From the 1880s, regular intercontinental liner passenger transport services linked major ports of the world until the 1950s when air transportation took over.

## **ASSESSMENT EXERCISE 2**

Why do you think that the construction of canals was imperative during the Industrial Revolution?

### **3.3 The Development of Railway**

The inadequacy of canal and road transport prompted the development of the British railway by the beginning of the 19<sup>th</sup> century. Indeed in the 1820s, cotton reportedly lay at Liverpool for weeks waiting for transportation. In fact, it is said that it took longer to move goods from Liverpool to Manchester than to cross the Atlantic! Additionally, some of the canals were accused of overcharging and making excessive profits. It was these inadequacies that induced manufacturers and others to risk money on railway development. The introduction of trains and railway revolutionised and transformed inland transport in the second half of the 19<sup>th</sup> century. Two factors aided railway development. First was the availability of capital. This was the result of the industrial and commercial progress brought about by the Industrial Revolution. Second was the perfecting of the steam locomotive that could run on rails.



Thomas Newcomen was the first person who invented the steam engines in 1712. They were successfully put to use in pumping water out of mines in Britain with the engine on the surface working a pump at the bottom of the mine by a long connecting rod. However, these were large machines, requiring a lot of capital to build. They were also largely inefficient and consume a lot of fuel. Despite these shortcomings, Newcomen's engine was used in the coal fields until the end of the 19<sup>th</sup> century because they were reliable and easy to maintain. In 1765, James Watt, a Scottish inventor and mechanical engineer, greatly reformed the steam engine to be efficient and consume less fuel. After the improvement, the steam engine had been used widely in ships and locomotives.

The first full-scale working railway steam locomotive was built in the United Kingdom by Richard Trevithick, a British engineer. It however proved unsatisfactory because the engine was too heavy for the rails. The first commercially successful steam locomotive was Matthew Murray's rack locomotive *Salamanca* built for the Middleton Railway in Leeds in 1812. This was followed in 1813 by the locomotive *Puffing Billy* built by Christopher Blackett and William Hedley.

In 1814 George Stephenson, inspired by the early locomotives of Trevithick, Murray and Hedley, built the locomotive *Blusher*. His designs considerably improved on the works of earlier pioneers. In 1825, he built the locomotive *Locomotion* for the Stockton and Darlington Railway in Britain. This is the first public steam railway in the world, although it used both horse power and steam power on different runs. In 1829, Stephenson built the locomotive *Rocket*, which established him as the pre-eminent builder of steam locomotives for railways in Great Britain, Ireland, the United States and much of Europe.

The first public railway which operated with only steam locomotives, all the time, was Liverpool and Manchester Railway, built in 1830. It was the first line built for the sole purpose of carrying passengers and goods and relying solely on the steam locomotive for power. It was with this railway that the potentialities of steam were fully realised. As

most of the early railway companies were very successful, the railway spread across the country at an amazing rate as many companies were built and run new lines. By 1837, over 80 of such companies existed. That year alone, over a thousand miles of track were laid. This was what was termed 'Railway Mania'.

The importance of railway soon became clear and its use spread across the continent of Europe and the United States, where it began its rapid expansion across newly-acquired lands and American long push to "civilise" the western frontiers. Starting with national railway systems, transcontinental railways were constructed from New York to San-Francisco in the United States in 1869, the Trans-Canadian Railway in 1886 and the trans-Siberian railway in 1904. As railway technology progressed, inter-city railway tracks and underground tunnels emerged. The famous "London Underground" began work in 1863 and continued to grow until 1890 when entire London train fleet started using electrical engines. This marked the beginning of new era of urban rapid transit systems, and underground 'metros' started appearing across the entire world.

Another important moment in the history of the railway was the introduction of diesel engines, which brought the end to the age of steam locomotives. This is often termed 'dieselisation.' The first diesel railway was created in Switzerland in 1906 as a collaborative effort between Rudolf Diesel, Adolf Klose and Gebruder Sulzer. Despite not achieving immediate commercial success, the idea of diesel-powered railways took off almost straight away after Hermann Lemp, an electrical engineer perfected a control system which simplified the driving of diesel trains down to a single lever.

Although railway grew haphazardly throughout the length and breadth of Britain and Europe in general, its impact was numerous and varied. A few of them will suffice. First, passenger travel by rail influenced the growth of towns. The first suburbs in Britain were products of the railway development. It was through improved communications that populations distributed themselves away from crowded city centres. Second, railway narrowed social and class distinctions. Noble and servants, manufacturers and peasants

alike all shared the comfort, convenience and the dispatch of railway travelling. Third, it improved the food supplies of large cities and urban centres in Europe. Perishable goods such as fruit, vegetables, tomatoes and meat could now be brought in by rail from a great distance. Landowners and farmers who had initially feared the coming of the railways soon discovered they could get their supplies more cheaply as well as have access to the best markets for their livestock and produce.

In addition, the railway broke the monopoly of canal transport. When a railway was built, the insolence of the navigations ceased and competition forced a reduction in rates. Indeed, after the coming of railways, canals attracted no new traffic and no new capital. One of the reasons why the canals lost much traffic to the railway was because of the obvious technical superiority of the railways in speed and cheapness of conveyance as well as a clear advantage for long haul traffics. In the same manner, the railway also drove the stage coaches from the highways in many European cities. Indeed by 1850, stage coaches had all been driven off the road, accompanied by ruin for many who had worked in the trade and ancillary services. People preferred railway to stage coaches because they save money and time. Finally, railway development adversely affected the Turnpike Trusts. Between 1837 and 1850, the toll revenue of the Turnpike Trusts dropped by one-third because of railway competition. The railway thus aggravated the evil of bad management and debt which already bedeviled the Trusts. The Trusts thereby fell easy prey to railway competition.

### **ASSESSMENT EXERCISE 3**

Of what importance is the development of railway transport in the 18<sup>th</sup> century?

### **4.0 CONCLUSION**

Our discussion on transport during the Industrial Revolution centred on three major developments: The Turnpike System and its impact on road transport in Britain as well as the invention of motor road vehicles; the popularisation of canal transport and the introduction of railway transport. Of the three, two were entirely novel innovations that

resulted from the economic progress and exigencies of the period. These were canal and railway transport. These innovations themselves stemmed from the invention and subsequent development of the steam engine, which became a major source of power. The steam engine had more implication for transport than any other sector of the economy. It was used to power boats, ships, motor vehicles, trains etc. In the end, the invention of steam-powered locomotive became the most important transport technology that did not only transform but revolutionise the way transport was conducted in the pre-industrial era.

## **5.0 SUMMARY**

This unit interrogates transport during the Industrial Revolution. The aim is to show how transport was carried out in the pre-industrial period so as to establish the contributions the period under study has made to the evolution of transport system in Europe in particular and the world in general. The major achievement of the period as have been presented in this lesson is the invention steam engine by Thomas Newcomen in 1712 and its subsequently perfection by James Watt 1765. The breakthrough had transformational effect on transport particularly the development of modern motor vehicles, boats, ships and ultimately all kinds of locomotives powered by steam technology.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Discuss the motives for the development of British railway transportation system and examine its impact in the period before the 20<sup>th</sup> century
2. What were benefits of canal transportation? Identify and discuss the problems associated with canal transportation in Britain.
3. Write short notes on the following:
  - (i) Turnpike system
  - (ii) Road motor transport up to 1939

## **7.0 REFERENCES AND SUGGESTED READING**

Albert, W. (1972). *The Turnpike Road System in England, 1663 – 1840*. London: Cambridge University Press.

- O'Brien, P. (1977). *The New Economic History of the Railways*. London.
- Onokala, P.C. (2015). *Transportation Development in Nigeria: The Journey So Far and the Way Forward*. Inaugural Lecture delivered at the University of Nigeria in September, 2015.
- Osborne, R. (2014). *Iron, Steam and Money: The Making of the Industrial Revolution*. London: Pimlico Publishers
- Pawson, E. (1977). *Transport and Economy: The Turnpike Roads of Eighteenth Century Britain*. London and New York.
- Stacey, J. (2018). "A brief history of the railways." Retrieved July 14, 2020, from [www.raildiscoveries.com/the-discovery-blog/2018/september/a-brief-history-of-the-railways](http://www.raildiscoveries.com/the-discovery-blog/2018/september/a-brief-history-of-the-railways).
- Szostak, R. (1991). *Role of Transportation in the Industrial Revolution: A Comparison of England and France*. McGill-Queen's University Press. Retrieved July 14, 2020, from [www.jstor.org/stable/j.ctt8112c](http://www.jstor.org/stable/j.ctt8112c)
- Weightman, G. (2008). *The Industrial Revolutionaries: The Creators of the Modern World, 1776 -1914*. Atlantic Books.

## **UNIT 4: The Era of Modern Transport Systems (1920 – Present)**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 The Growth of the Road Motor Transport
  - 3.2 The Expansion of the Air Transport Services
  - 3.3 The Transformation of the Railway Transport
  - 3.4 Maritime Transport and Container Shipping
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

This unit, which is the fourth in this module, concludes our discussion on the evolution of transport. It focuses on the development in the arena of transport between 1920 and the present. The period has often been referred to as the era of modern transport systems. It is marked by a number of developments and these include: the introduction and widespread use of air transport; the re-engineering of the previously-invented internal combustion engine; the adoption of the assembly line as the dominant form of industrial and automobile production, which made the production of automobile much easier and less cumbersome; the invention of super-fast and rapid trains; massive growth of maritime transport and the globalisation of trade as well as advancements in information and communication technology, which culminated in the use of personal computers and the internet. As a result of these developments, transport now reached the era of individual accessibility, portability and global coverage.

## **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

1. Discuss the major developments in the evolution of transport in the 20th century, particularly as from 1920.
2. Identify the major modes of transport widely employed and they have transformed in course of the century.
3. Explain the major factors responsible for the widespread use of personal or private means of transport.
4. Describe the various vehicles employed in transport during this period.

## **3.0 MAIN CONTENT**

### **3.1 The Growth of the Road Motor Transport**

The twentieth century witnessed a rapid growth of the road motor transport all around the world. This growth was the result of three remarkable developments of the early twentieth century: the improvement of the internal combustion engine (a modified version of the fuel engine invented in the 1860s and modified by Daimler in 1876); the invention of the pneumatic tyres by Dunlop as from 1888, which permitted the production of portable, door-to-door transport automobiles such as cars, buses and trucks; and the progress in road construction technology, which resulted in the construction of modern highways all across Europe, America and indeed the entire world in the course of the twentieth century. Without any doubt, these developments contributed to the growth and widespread use of the motor road transport in the twentieth century.

Another development of this period that had great implication for motor road transport, and other forms of transport is the adoption of the assembly line as the dominant form of industrial production. The man who popularised this model in automobile production was Henry Ford, a pioneer American automaker. Ford wanted to make a car that many people from all walks of life could afford. The only way to do this was to improve the assembly line methods, which he did. He broke the Model T's assembly into eighty-four steps, and

trained each of his workers to do just one. Ford achieved his goal with his car called Model T in 1908 which he sold for 850 dollars.

In 1913, the American car maker Henry Ford began to use the assembly line to make his car. An assembly line is a method of producing a large number of anything within a short time. This is also known as mass production. It made cars much quicker and cheaper to make and buy. By 1916, he was able to sell the same car for 400 dollars as he was to cut the assembly line time from twelve and a half hours to one and a half hours. Ford sold over fifteen million cars from 1908 to 1927.

To portray the exponential growth of the motor transport during the first half of the twentieth century as a result of the mass production assembly line brought about, this statistics will suffice. In 1904, about 17,810 vehicles were in use in Britain but this increased to 265,182 in 1914. The outbreak of the World War I retarded this progression and it was not until after the war in 1918 that motor transport rapidly expanded. Hence, the number of vehicles in Britain grew from 330,518 in 1918 to 952,432 in 1922. This process of expansion continued, sometimes less rapidly throughout the 1920s and 1930s. By 1939, there were about 3 million vehicles in Britain alone.

Cars have developed a lot since then. Some of the first further developments were additions such as the electric ignition and brakes for all four wheels. Today, cars are far more advanced. Whereas the first car could travel at about 5 kilometres per hour, cars nowadays can now drive faster than 200 kilometres per hour. The first recorded long drive in a car in Britain was in 1895, and it was just over 90 kilometres long. Today, cars travel for thousands of kilometres at a go. Some of the expensive cars have CD players, computer screens, televisions, air-conditioners and even fridges. Some of the most popular brands of motor vehicles are produced by Ford, General Motors, Toyota, Mercedes Benz etc. manufacturing automobiles in all parts of the world, using their subsidiaries. But no matter how luxurious or simple, motor vehicles have become one of the most important ways to travel, especially in the cities. In most parts of the world, a lot



of people have their own vehicles, while others commute by taxis or public buses, which are really large vehicles.

There are many motor road vehicles that ply the roads such as personal automobiles (jeeps, saloon cars, convertible, sport cars, land cruisers etc.) motorcycles and scooters, bicycles, tricycles, lorries, tankers, vans, buses and trolleybuses that many people are worried about congestion and the effect of this on the environment and on our health. Many people think we should walk, cycle or use public transport in the future instead of commuting by personal cars. Public transport such as buses, trains, metros and trams are a much more efficient use of fuel because they can carry lots of passengers at once. Transport has changed and it will change some more in the future. Perhaps we will all get to travel into space! But walking and cycling might be the most popular ways to travel in the future as we all try to stay fit and healthy and look after our planet.

### **3.2 The Expansion of the Air Transport Services**

The start of the twentieth century was truly the dawn of a new era in the history of transport as two American brothers, Orville and Wilbur Wright, pulled off the first propelled flight in 1903. In essence, they invented the world's first airplane. Eleven years after this flight, the World War I broke out. Planes had by then developed quite a bit and they became widely used in the war. Most of the planes had been made from wood and canvass. After the war, people started to make them from aluminum. Planes became faster and could fly farther. In 1919, passengers were able to fly internationally for the first time. This flight was between London and Paris. Around the same time that the Wright brothers were taken flight, French inventor Paul Cornu started developing a rotorcraft. On November 13, 1907, his "Cornu" helicopter, made of little more than some tubing, an engine, and rotary wings, achieved a lift height of about twenty seconds. With that, Cornu would lay claim to having piloted the first helicopter flight.

In 1927, Charles Lindbergh became the first person to fly across the Atlantic Ocean without stopping. He flew from New York to Paris in about thirty-three hours. His plane

was called 'The Spirit of Saint Louis.' With this flight, aviation became a more established industry, attracting millions of dollars of private investment almost overnight, as well as the support of millions of Americans. In the 1930s, the jet engine was invented in both Britain and Germany. Today, jet engines are still being used.

The 1920s and 1930s witnessed the expansion of regional and national air transport services in Europe and the United States of America. During this period, flight was a luxury only few people could afford. More so, only a small minority could afford foreign travel. The post-World War II period was, however, the turning point for air transport as the range, capacity and speed of aircrafts increased as well as the average income of the passengers which enabled increased number of people to afford the luxury, speed and convenience of air transport. The first commercial jet plane, the Boeing 707, was put into service in 1958. This revolutionised the international movement of passengers, marking the end of passenger transoceanic ships.

Meanwhile, air transport experienced remarkable improvements in the late 1960s and early 1970s as high speed aircrafts, such as Boeing 747 and Concorde, were introduced (although Concorde was finally retired in 2003). In 1986, a landmark was recorded when a plane called Voyager completed the first non-stop, around-the-world flight without refueling. Another major milestone in aviation industry took place in March 2018 when the first direct flight between Perth, Australia and London reduced to 17 hours a trip that once took twelve and a half days. Airbus and Boeing, the world's major large passenger aircraft manufacturers, have dominated the airline supply industry with their established brands, Boeing 7-series and Airbus A-series of jets.

What's next for air transport? This question is what mankind is grappling with at the moment. This will probably be commercial suborbital space flight. There are also efforts to design and manufacture supersonic jets. These are cutting-edge and technologically-superior aircrafts that are faster than sound. Supersonic flight will make the world smaller

and faster to access. It will increase opportunities for passengers to experience the world, to manage their global operations, to explore investment or enjoy and learn a different culture. At the moment, these are still in the future and at first will inevitably be very expensive but it will eventually become cheap enough for ordinary people to afford.

### **3.3 The Transformation of the Railway Transport**

Railway has been a popular form of transport since the nineteenth century. When the first steam train was built in 1804, people worried that the speed would make rail passengers unable to breathe or that they would be shaken unconscious by the vibrations. However, by the 1850s, passengers were travelling at previously unthinkable speed of 50 miles per hour (80km/h) or more. Rail transport became cheap, and people who had never been on a journey before could now afford to make trips by trains. Places that had once seemed far apart suddenly felt much closer together, because people and goods could move between them in hours rather than days. In some places, new towns sprang up besides the tracks.

Railway transport has undergone fundamental and far-reaching transformation in the course of its evolution. Perhaps, the biggest and most dramatic change in railway and in fact; modern industry itself was the multi-purpose application of steam, which saw the birth of the first fully operational steam locomotive by Richard Trevithick in 1804. Electric railways came next in 1837, with the first invention in Scotland by a chemist called Robert Davidson in Aberdeen. His design ran on batteries which he later worked into a larger locomotive called the *Galvani*. While it was tested on the Edinburgh and Glasgow Railway in September of 1841, limited power of its batteries scuttled the project. The *Galvani* was later destroyed by railroad workers who viewed the alternative technology as a potential threat to their livelihoods.

With the advent of diesel-powered trains in the 1930s and the following decades, the expansion of infrastructure for electric-powered trains slowed. Eventually, however, diesel and electric power would be combined to create several generations of electro-

diesels and hybrids that employed the best of both technologies and would go on to become the standard for many railway lines.

In the 1960s and the 1970s, there was considerable interest in the possibility of building passenger trains that could travel much faster than conventional trains. From the 1970s, interest in an alternative high-speed technology centred on magnetic levitation, or maglev, in which cars ride on an air cushion created by the electromagnetic reaction between the onboard device and another embedded in its guide way. The first high-speed electric “bullet trains” began running between Tokyo and Osaka in 1964. Named after their bullet-shaped noses, these 12-car trains were the world’s fastest, capable of going 131mph (210km/h). Passengers enjoyed smooth, quiet travel and aircraft-style seats. It was the first rail road specially built for fast intercity trains. Slower trains were not allowed on the tracks.

Since then, many high-speed trains have been built around the world, including in Spain, France, Germany, Italy, Scandinavia, Belgium, South Korea, China, the United Kingdom and Taiwan. The United States has also discussed installing a high-speed rail between San Francisco and Los Angeles and on the East Coast between Boston and Washington D.C. The most prominent of these super-fast, rapid trains include the first commercial maglev system built in Shanghai, China in 2003 and has an operational speed of 440 kilometres per hour and the TGV system installed in France in 2007 with a speed reaching just over 574 kilometres per hour, a world record for trains.

Even more advancements in these machines are in the developmental stages, including the Hyperloop tube train, projected to reach speed close to 700 miles per hour, which completed its first successful prototype test run in 2017. With news of trains that will one day run underwater, trains powered by hydrogen and trains that can drive themselves, the future of rail travel looks bright, and we for one can’t wait to see what is going to happen next.

### **3.4 Maritime Transport and Container Shipping**

The existence of reliable water transport has played a significant role in the development of human society over the centuries. For many thousands of years, mankind has shipped goods across the oceans, from one land to another. Think of the great seafaring peoples in history; the Phoenicians, Egyptians, Greeks, Romans, Portuguese, Spanish, Dutch, British and many more. Sailing the world looking for new treasures, they brought home and traded food, jewels and materials that their countrymen had never seen. The merchant and naval fleet of Great Britain during the Industrial Revolution was instrumental to her emergence as an economic and imperial power of the 19<sup>th</sup> and 20<sup>th</sup> centuries, with an empire that spanned one-third of the entire globe. Undoubtedly, maritime transport has been crucial to the economic and political advancement of most nations throughout history.

Three developments in the transport industry in the 20<sup>th</sup> century brought about great decline in maritime transport be it inland, coastal or overseas. First is the popular use of motor road transport. Second is the emergence of the newly-improved and rapid railway transport, which made the conduct of inland waterways and coastal transport operations less appealing. This is because the two transport modes were far more flexible, comfortable and time saving. In the same vein, the introduction of commercial air service revolutionise the international movement of passengers, marking the end of passenger transoceanic ships.

However, the second half of the twentieth century witnessed massive development in information and communication technology, the incredible industrialisation of the West and the globalisation of trade. During this period, the world witnessed an unprecedented boom in world exchange of goods and services, with the resultant effect of an unparalleled boom of international sea trade. However, the basis of the world trade system of the twentieth was consolidated in the nineteenth century: it was the flow of industrial goods from Europe to the rest of the world and the flow of raw materials to Europe from the rest of the world.

One innovation that brought about a revolution in the way maritime freight transport or shipping was carried was the use of containers, which increased flexibility, reduced transshipment costs and delays and increased the quantity of freight moved at local, regional and international levels. The idea of using some kind of shipping container was not completely new. Boxes similar to modern containers had been used for combined rail and horse-drawn transport in England as early as 1792. However, in 1955, Malcolm McLean, a US-based conveyance businessman from North Carolina, USA, bought a steamship company with the idea of transporting entire truck trailers with their cargo still inside. He realised that it would be much simpler and quicker to have one container that could be lifted from a vehicle directly on to a ship without first having to offload its contents.

As a result, cargo containers were fashioned in a bid to simplify the long-drawn and inefficient processes involved in shipping of cargo through sea routes. The long process meant that freight had to be suitably separated or dismantled before it could be put on a ship. His ideas were based on the theory that efficiency could be vastly improved through a system of “intermodalism”, in which the same container, with the same cargo, can be transported with minimum interruption via different transport modes during its journey. Containers could be moved seamlessly between ships, trucks and trains. This would simplify the whole logistical process and, eventually, implementing this idea led to a revolution in cargo transportation and international trade over the next fifty years. As containerised operations have increased alongside technological developments, cargo shipping as it stands today would not be possible without containers.

#### **4.0 CONCLUSION**

Without any doubt, the future of transport is bright. Already we are in the so-called ‘jet age’ – the era of modern transport systems. However, efforts are already being made to come up with much faster, supersonic and environmentally-friendly transport systems. Some of these innovations have been tested and currently being put to service in the developed countries of the world. The history of our evolving transport and the mystery

of its future will be in our hands, hearts and minds. May our compelling desire to know the universe, lead us onward and outward to those new and broader transport horizons of tomorrow.

## **5.0 SUMMARY**

This unit examined transport and developments in the transport industry in the contemporary. It put into focus the developments in the motor road transport with regard to its popular and widespread use. It x-rayed the introduction and expansion of air transport services in the twentieth century. In this unit, we considered the transformation of the railway transport from the sluggish, steam-powered locomotive to the electric-diesel hybrids and the rapid and fast-paced “bullet trains”. Finally, the introduction of containers into the maritime transport and its impact of global trade were brought into perspective. Finally, in each section we interrogate what the future of each of the mode of transport holds and from what is being done at the moment, the future of transport and travel is promising and very bright.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Account for the growth of motor road transport from the beginning of the twentieth century.
2. Why do you think passenger transoceanic transport declined in the twentieth century?
3. What were the major developments in the evolution of railway transport in the course of the twentieth century?
4. How did the introduction of container shipping revolutionise global maritime trade?
5. Account for the expansion and widespread of air transport in the twentieth century.

## **7.0 REFERENCES/SUGGESTED READING**

Barker, T. (1985). “The International History of Motor Transport.” *Journal of Contemporary History*, 20 (1), 5 – 19. Retrieved on 12<sup>th</sup> of July, 2020 from [www.jstor.org/stable/260488](http://www.jstor.org/stable/260488)

Bellis, M. (2020). “The History of Railroad Technology”. *ThoughtCo*, Retrieved on 11<sup>th</sup>

- of July, 2020 from [www.thoughtco.com/history-of-railroad-4059935](http://www.thoughtco.com/history-of-railroad-4059935)
- Harlaftis, G., and Theotokas, I. (2015). "Maritime Business During the Twentieth Century: Continuity and Change" *Law Explorer*. Retrieved on 12<sup>th</sup> of July, 2020 from [www.lawexplores.com/maritime-business-during-the-twentieth-century-continuity-and-change](http://www.lawexplores.com/maritime-business-during-the-twentieth-century-continuity-and-change).
- Onokala, P.C. (2015). *Transportation Development in Nigeria: The Journey So Far and the Way Forward*. Inaugural Lecture delivered at the University of Nigeria in September, 2015.
- Paris, C., Di Fonzo, T., and Llama, L. (2018). "A Brief History of Shipping". *The Wall Street Journal* 24<sup>th</sup> January, 2018.
- Stacey, J. (2018). "A Brief History of the Railway". Retrieved on 14<sup>th</sup> of July, 2020 from [www.raildiscoveries.com/the-discovery-blog/2018/september/a-brief-history-of-the-railways/](http://www.raildiscoveries.com/the-discovery-blog/2018/september/a-brief-history-of-the-railways/)



## **Module 3: Historical Development of Transport Infrastructure in Nigeria**

Unit 1: The Development of Water Transport in Nigeria

Unit 2: The Development of Road Transport in Nigeria

Unit 3: The Development of Railway Transport in Nigeria

Unit 4: The Development of Air Transport in Nigeria

### **UNIT 1: The Development of Water Transport in Nigeria**

#### **CONTENTS**

1.0 Introduction

2.0 Objectives

3.0 Main Contents

3.1 Nature and Characteristics of Water Transport

3.2 The Development of Inland Waterways in Nigeria

3.3 The Development of Ports in Nigeria

4.0 Conclusion

5.0 Summary

6.0 Tutor-Marked Assignment

7.0 References/Further Reading

#### **1.0 INTRODUCTION**

The focus of the module, which is the third in this course guide, is the historical development of transport infrastructure in Nigeria. It is divided into four units meant to portray the development of water, road, railway and air transport in Nigeria respectively. The development of these transport infrastructures reached their apogee during the era of colonial rule in Nigeria. As a result, they have often been referred to as the colonial transport system. The preoccupation of this unit, the first of the four in this module, is the development of water transport in Nigeria. In carrying out this task, attention will be paid

to the nature and characteristics of water transport, the development of inland water transport in Nigeria, as well as the development of ports and overseas transport and trade. To give some historical flavour, the period covered in our discussion will general span pre-colonial, colonial and post-colonial eras.

## **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Appreciate the level of the development of water transport during the pre-colonial period in Nigeria.
- Identify the different inland waterways and their development during the pre-colonial, colonial and post-colonial period
- Understand the development of modern seaports and overseas transport in Nigeria.
- Discuss how water transport has fared and the challenges that led to its decline in Nigeria today.

## **3.0 MAIN CONTENTS**

### **3.1 Nature and Characteristics of Water Transport**

Water transport is one of the oldest forms of conveying people, goods and services from place to place. It involves travelling or conveying of goods and passengers by the use of boats, canoes, ships, steamers, yachts and ferries through lagoons, oceans, seas and inland waterways. Inland waterways refer to the bodies of water available for transport within a nation and these include streams, rivulets, rivers, canals, lakes and creeks. In essence, water transport is categorised into two: inland water transport and ocean transport. Ocean transport simply refers to the movement of passengers and goods across the high seas.

Water transport possesses a number of advantages over other modes of transport. This is due largely to the fact that water transport offers the most economical, energy efficient and environmental-friendly means of transporting all types of cargo from place to place. It is the safest means of transport and also offers cheapest rates in areas where water exist naturally. This facilitates commerce, promote wealth creation, poverty alleviation, and

create job opportunities within such regions. The ancillary sector of canoe and boat building industry generates employment through active engagement of the youths in welding and fabrication process. Finally, the cost of utilising shipping ports and labour facilities which are essential prerequisites for water transport development are quite economical.

### **3.2 The Development of Inland Waterways in Nigeria**

Nigeria is blessed with impressive networks of rivers and their tributaries. The seaboard of Nigeria has the most extensive network of waterways in Africa. The two major rivers in Nigeria, River Niger and River Benue, dissect the country into east, west and north sections. The two rivers run into each other at Lokoja, Kogi State and flow into the Atlantic Ocean. Although both rivers flow outside of the country, approximately 1440 kilometres of the River Niger and 960 kilometres of River Benue flow within Nigeria. In Northern Nigeria, Sokoto and Kaduna are some of the major tributaries of the River Niger while Gongola and Katsina Ala are some of the major tributaries of River Benue. In north-eastern Nigeria, Hadejia River and others flow into the Lake Chad. Other major coastal rivers in south-western Nigeria include Ogun, Osse and Oshun, while the coastal rivers in south-eastern Nigeria include Cross River, Imo River, Ebonyi River and other tributaries of the Niger River such as Anambra and Mamu Rivers.

For centuries before the advent of the Europeans and the establishment of colonial rule, the peoples of Nigeria depended largely on these networks of rivers and waterways for the transport of goods and people. However, this enterprise was fraught with a lot of dangers. First, most of these rivers are only navigable during the rainy seasons. Indeed, many of the rivers dried up or did not have enough water volume for navigation during the dry seasons. Second, the rivers were often affected by the tropical rain and thunderstorms which caused the rivers to overflow their banks, caused sand to block their opening on the coast, and caused uprooted trees to obstruct free movement of canoes. Finally, the network of rivers were limited in scope and confined mainly to the southern half of the country and to a few regions in the north along the Niger and the Benue. The

obvious limitation of the waterways meant that people in many other areas of the interior had travel several miles on foot before they could reach the waterways.

This was pretty much the state of transport system in Nigeria when the British established their first foothold in Nigeria in 1860. Although the British government realised the need to improve the transport if their economic interests were to be served, they did not do enough to improve it significantly between 1860 and 1900. The inland waterways continued to be the only effective means of transport around the coastal areas and further along the route of the Niger and Benue Rivers. These were used by the British administrative officers in the course of their duties, and a few traders also found them useful in transporting bulky export products (e.g. palm products) down to the coast, and in supplying imported goods to the people of the interior. The missionaries found the waterways very helpful in their task of spreading the Christian faith. From about 1880, the Royal Niger Company operated a number of steam launches on the Niger River, connecting the northern portion of the country with the coast. As commercial activities increased, the number of canoes plying the waterways also grew, particularly towards the end of the 19th century.

The year, 1900, was significant for the development of inland waterways in Nigeria. This is so because that year the British took direct political control of Nigeria having revoked the Charter of the Royal Niger Company a year before. The development of the inland waterways was mainly concerned with improving the major rivers and their tributaries. After 1900, various schemes were introduced; most concentrated on clearing snags on the waterways and in some cases, rivers were deepened and widened. The regular dredging of some rivers was undertaken and explosives were often used to clear obstructions. The main rivers and their tributaries were kept open for navigation. In order to break the monopoly of the trading companies, particularly the Royal Niger Company, governments of Northern and Southern Nigeria started mail and cargo services to help all merchants alike by conveying a limited quantity of merchandise up the Niger in government vessels.

By 1945, a stiff competition had occurred between inland water transport on one hand and motor road transport and railway on the other. The volume of foreign trade traffic for Nigeria's transport system increased after the Second World War, but river transport enjoyed the least prosperity. Between 1946 and 1957, road transport and rail tonnage increased by about 17.5 per cent and 6.4 per cent per annum respectively, while river transport increased by only 4.1 per cent per annum. Apart from the competition from both the railways and motor road transport, one other important constraint upon increased river transport was the limited capacity of the rivers themselves, due to physical defects and lack of artificial improvements. Perhaps the most important project considered in connection with navigation on inland waterways was the construction of a multipurpose dam on the Niger at Kainji. It was thought that by constructing a system of locks on it navigation could be considerably improved.

### **3.3 The Development of Ports in Nigeria**

At the initial stages of European commercial activities, there were scattered small trade activities along the coastline such as Lagos, Gwato, Forcados, Koko, Burutu, Akassa, Brass and Calabar among other, each with a very limited hinterland. However as the penetration and subsequent control of the interior continued new trade routes were established and consequently, some ports such as Gwato, Brass, Koko, Forcados and other declined in importance and became extinct while other ports such as Lagos, Warri and Port Harcourt became dominant. However, the increase in the volume of trade in the aftermath of the World War II meant that the Nigerian ports had to handle more traffic, particularly cargo. It also meant that harbour facilities had to be improved in order to cope with this increased traffic. The ports in order of importance were Lagos, Port Harcourt, Sapele, Burutu, Warri, Calabar and Degema.

The Lagos port had two sets of harbours – those at Apapa on the mainland and the customs quay on Lagos Island. Apapa was served by rail and was used for up-country cargoes, while the customs quay, which was road-served only, was used for Lagos cargo. Both the Apapa and the customs quay areas were extended by the reclamation of land

from the lagoon. The modern quay at Apapa, with improved harbour facilities was opened by Queen Elizabeth II on her visit to Nigeria in 1956. The Port Harcourt port was approached by the Bonny river and lies about forty-one miles from the sea. The importance of this port increased after the establishment of the cement industry and the exploration for petroleum oil in the area it served.

The Warri port was some twenty-five miles above Forcados on the Warri river. The channels of this river were also shallow and demanded great care when used by vessels. The Calabar port was some forty miles distant from the Fairway buoy, and five miles above the main entrance to the Cross river. The approach as in others, was difficult and dangerous, but ships of twenty feet draught could enter at high tide. The port of Degema was situated on the Sombriero river but could only be reached via the Bonny river. The most significant features of these ports were the narrow passages leading to them, the shallow rivers on which vessels had to sail and the problem of dredging in order to keep them open as much as possible.

The development of modern seaports in Nigeria was linked to the establishment of Nigerian Ports Authority in 1954. The NPA became responsible for the provision, improvement and maintenance of harbour facilities and services in all ports. Since then, Nigerian ports have played a dominant role in the country's international trade. However, the port system has continually been under stress and suffered from serious port congestion in the 1970s when other ports such Tin Can Island port and Roll-on/Roll-off (RORO) port in Lagos were established. Some of the major seaports in Nigeria today include: Lagos Port Complex and Tin Can Island Port in Lagos, Delta Port Complex in Warri, Calabar Port, Rivers Port at Port Harcourt, and Onne Ports.

In spite of this, the Nigerian ports continued to suffer other unfavourable conditions such as use of old and dilapidated haulage facilities in handling cargoes as well as fixed tariffs and quotas by the government. The reaction of port users to these unfavourable conditions was the use of alternative ports along the coast of West Africa such as the

Cotonou Port in the Republic of Benin, Lome Port in Republic of Togo, Accra Port in Ghana and Douala Port in Cameroon and others. Presently, much of the traffic that would have used Nigerian ports are diverted to other ports along the coast of West Africa in spite of the Port Reform in 2003 aimed at revitalising the Nigerian ports since the ports infrastructure are long overdue for expansion and modernisation.

#### **4.0 CONCLUSION**

Without any doubt, the inland waterways still have a lot to offer particularly at the time when there is crisis of mobility and general lack of effective means of transport in the country. The roads are generally bad with craters and potholes all over, making accidents and loss of lives commonplace. Thieves, kidnappers and robbers in uniforms are now the kings of the roads. The railway system is in a state of coma. With the exception of few places, the rails are generally rusty and decadent as a result of neglect and disuse. With these state of affairs in the transport sector in the country, water transport, if properly planned and executed, will no doubt ease the difficult situation. For the ports, government should make efforts to reform and reposition them for efficient services. Administrative bottlenecks, unnecessary interference by government, bribery and corruption, tribalism and nepotism etc. are serious issues government must looked into and eradicate for maximum efficiency and productivity of the seaports.

#### **5.0 SUMMARY**

The development of ports and inland waterways in Nigeria has a long and chequered history. It began in the period preceding the advent of the European merchants and traders on the coast of West Africa. During this period, the different indigenous peoples of Nigeria had developed their transport and communication systems around the impressive and widespread network of rivers. However, inland navigation was constrained by two major factors: the seasonality of the rivers and the obstructions to movement caused by rapids and fallen trees. These challenges were the preoccupation of the British government at the beginning of colonial rule in 1900. Several initiatives taken from this period was mainly geared toward the expansion, dredging and opening up of

rivers to navigation. However, the popularity of motor road transport and railway as from 1945 sealed the fate of inland water transport in Nigeria. Water transport in Nigeria then took the form of overseas transport as the traffic of international trade increased. Modern seaports emerged in Nigeria to cater for this volume of trade. Today, the ports of Nigeria particularly the Lagos Port and Tin Can Island are under stress and strain. There is need for the government to reposition and modernise them for effective services.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Describe the significance of inland waterway to trade and commerce of the pre-colonial period in Nigeria.
2. What was there no significant improvement in the transport system between 1860 and 1900 in Nigeria?
3. What were the initiatives taken by government to develop inland waterways between 1900 and 1945?
4. Account for the development of seaports in Nigeria.

## **7.0 REFERENCES AND SUGGESTED READING**

- Onokala, P.C. (2015). *Transportation Development in Nigeria: The Journey So Far and the Way Forward*. Inaugural Lecture delivered at the University of Nigeria in September, 2015.
- Olukoju, A. (1996). "Transportation in Colonial West Africa" in G.O. Ogunremi and E.K. Faluyi (eds), *An Economic History of West Africa Since 1750*. Ibadan: Rex Charles.
- Ekundare, R.O. (1973). *An Economic History of Nigeria, 1860 – 1960*. London: Methuen & Co Ltd.
- Falola, T., and Ogunremi, S.A. (1986). "Traditional, Non-mechanical Transport System" in T. Falola and S. A. Olanrewaju (eds), *Transport Systems in Nigeria*, Foreign and Comparative Studies/African Series XLII, New York: Syracuse



## **UNIT 2: The Development of Railway Transport in Nigeria**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 The Development of Railway Transport in Nigeria
  - 3.2 The Impact of Railway on Colonial Nigeria
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
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### **1.0 INTRODUCTION**

This unit focuses on the development of railway transport in Nigeria. It is noteworthy that at the beginning of the British colonial rule in the second half of the nineteenth century, the transport system in Nigeria was limited to the waterways, footpaths and bush tracks that had been developed centuries before. The inadequacy of these modes of transport in view of increased economic activities brought about by the British colonial enterprise necessitated at first the repositioning of the existing transport system, and later the introduction a new system which is the railway. The railway became very important in the British agenda of economic exploitation and plundering of the Nigerian colony.

### **2.0 OBJECTIVES**

At the end of this unit, student should be able to:

- Appreciate the importance of waterways, footpaths and bush tracks played as means of transport during the pre-colonial era in Nigeria.
- Understand the political and economic situations that made the development of railway in Nigeria inevitable.

- Explain the challenges that confronted the British colonial administration in the development of railway in Nigeria and how they surmounted.
- Discuss the impact of the railway revolution on both the colonial administration and the indigenous people of Nigeria.

### **3.0 MAIN CONTENTS**

#### **3.1 The Development of Railway Transport in Nigeria**

The development of railway in West Africa was inspired by the magical effect that railway had had on the progress of the industrial revolution in Europe as well as the economic miracles of North America, India and Australia. This effect was so great that railway was described as “the White Hope of the 19th century.” The clamour for railway development in West Africa was started by private interests as from the middle of the 19th century. For example, John Whitford, who travelled extensively in West Africa between 1853 and 1875, published an account of his travels in which he suggested the construction of a railway from Lagos to Lokoja. However, it is not known whether his proposal was communicated to the Colonial Office in London.

Between 1870 and 1893, a number of proposals were put forward by British firms for concessions from the British Government to undertake railway projects in Nigeria. One such application came in 1880 from Frederick Barry, a London businessman, for permission to build a line from Lagos to Abeokuta. These propositions did not secure official support for a number of reasons. First, the early railway schemes were not well defined. Second, these schemes were capital intensive and their promoters, for the most part, were mere enthusiasts who formulated grandiose plans but lacked financial capacity to execute them. Finally, the British government was undecided on its political commitments and economic role towards West Africa until after the 1884/85 Berlin Conference was held. As a result, until the last decade of the nineteenth century, railway projects in Nigeria failed to take off.

By the early 1890s, the British government began to realise the importance of railway to British colonial enterprise in Nigeria. This change of attitude by the British colonial government was influenced by a number of reasons. First, there was the heightening of imperial rivalry among the European powers and they were required to effectively occupy and administer their colonial acquisitions. Railway was a good proof of effective colonial occupation. Second, railway was desirable as it could facilitate easy and quick despatch of the military to quell resistance by Africans in the on-going colonial conquests. Third was the desire to expand British trade through the opening up of the interior of Nigeria as new markets for the British manufactured goods. In addition, the development of railway was necessary to reach the produce centres of the hinterland of Nigeria that were not readily accessible through the waterways. More so, the bulky nature of both import and export commodities which cannot be transported by the existing waterways as well as the absence of good roads and unavailability of haulage road vehicles made the railway construction desirable. Finally, it was hoped that railway will strengthen administrative control of the colony and ensure more flexible movement of colonial administrative personnel.

The construction of the first Nigerian railway between Lagos and Ibadan commenced in March 1896 by the British government. However, the progress of construction was significantly handicapped until 1898. A number of factors were responsible for this. First, it was difficult to raise enough foreign capital to supplement local revenues for the finance of the railway project. Second, there was the problem of transporting the rail equipment to Nigeria, as shipping to and from West Africa took time. Third, it was difficult to recruit skilled labour in the United Kingdom for the supervision of the construction work. However, by the close of the 19th century the railway construction, on gauge of 3 feet 6 inches, had progressed steadily along the Lagos-Ibadan route. Whereas Ota, a distance of 20 miles from Lagos, was reached in September 1897, Abeokuta at sixty miles was reached in April 1899. By the end of 1900, the whole one hundred and

twenty three (123) miles from Lagos to Ibadan had been completed and ready for opening the following year.

As early as 1900, there were proposals that the railway be extended beyond Ibadan. Sir Fredrick Lugard, the Governor of Northern Nigeria, was particularly eager to see the extension of the railway to the northern part of the country, and stressed its economic and military importance in view of the French policy on her territories around Nigeria. He recommended that the Lagos railway be extended to Ilorin and ultimately to Kano, and that a new eastern line be given urgent consideration. After much pressure, the government agreed to the extension of the line to the North and two possible routes were considered: one from Lagos via Fiditi, Oyo and Ogbomoso, and the other from Lagos via Oshogbo. The latter was approved, and work began immediately. The railway line reached Oshogbo in 1907, Jebba (on the River Niger) in 1909 and Kano, 711 miles inland, in 1911. On 1 January 1912, the railway route from Lagos to Kano was officially opened.

Meanwhile, before the Lagos railway was extended to Northern Nigeria, work had already started on some internal lines in the area. The first of these lines was between Zungeru and Kaduna, linking the seat of the Northern government at Zungeru with River Kaduna, from where goods and passengers could travel via the Niger River to the coast. This line, which was 12 miles of 2 feet 6 inches gauge, was laid in 1901. It was extended to cover 22 miles in 1902. The Bauchi Light Railway, which was started in 1911, was completed as far as Bukuru in 1914, thus serving the tin-mining area of Northern Nigeria. In 1912, the railway of Northern Nigeria was amalgamated with the Southern Nigeria railway. Before then, they had been managed by two separate administrative bodies.

The idea of an Eastern line was kept in abeyance until the discovery of coal in commercial quantity at Enugu in 1909. The challenge here was that of finding the cheapest and shortest route by which coal from Enugu could reach the coast. It was proposed that a railway line be constructed from Enugu to Onitsha on the River Niger,

from where coal could be brought to Lagos by boat. This proposal was later jettisoned in favour of a more ambitious and expensive system stretching through Eastern Nigeria and joining the existing Western system in the North. The Eastern railway line ran from Enugu to Port Harcourt due to the presence of a deep sea harbour from where the mineral could be evacuated. Work began on its construction in 1913, and by 1916 work had been completed between Port Harcourt and Enugu. The project suffered a temporary setback during the World War I but work resumed in 1920. The Eastern railway line was constructed northwards through Makurdi and Jos, joining the Western line at Kaduna in 1926. The Western and Eastern lines formed the national grid of the railway system in Nigeria.

### **3.2 Impact of Railway on Colonial Nigeria**

The development of railway in Nigeria had both positive and negative impact on the British colonial administration as well as the people of the colony. The colonial administration benefited immensely from the development of railway in the following ways:

- 1. Consolidation of British Colonial Political Control:** The British realised early enough that their economic interests in Nigeria might never be fully accomplished if they did not exercise full political control on the colony. Hence, the development of railway was equally geared towards achieving this purpose. Railways a means of transporting soldiers for quelling rebellion and colonial administrators during the colonial period. This in effect helped to strengthen the colonial control of the British on the Nigerian colony.
- 2. Evacuation of Primary Products:** The main objective of the colonial enterprise in Nigeria was the evacuation of the cash crops and primary resources vastly available in the country. In line with this objective, railway systems were designed to link the sea ports with the major produce centres of the hinterland of Nigeria. In addition, the advantage that railway has over traditional transport in terms of cheaper costs and the

tonnage of the products which can be transported at once to the coasts promoted British economic hegemony.

- 3. Stimulation of Export Production:** Railway played a major role in colonial emphasis on export production in Nigeria. It practically ripped open the interior parts of Nigeria beyond the reach of navigable rivers and other forms of cheap transportation. In this manner, centres of production were opened up; and in the face of a ready market at the coast export production was greatly stimulated. An example of this, as Gavin and Oyemakinde noted, was Kano, where the arrival of railway set off a sudden and massive upsurge in groundnut production for exports. This was replicated in other areas where important cash crops and mineral were found in Nigeria.
- 4. Source of Internally Generated Revenue:** Though considered a project that is capital intensive, the railway soon proved to be a veritable source of revenue for the British colonial government. For instance, the Southern Nigeria line, according to Crowder, was built at the enormous cost of £13,000 a mile, compared with only £3,800 for the Northern line, and yet by 1913 was showing a net surplus of over £250,000.

The impact of the railway development in Nigeria was not only felt by the British colonial administration; the indigenous people also felt the impact of the railway revolution in Nigeria in the following ways:

- 1. Urbanisation:** The advent of railway consolidated the position of existing towns and commercial centres, caused the decline of others especially those which did not develop road links with the railways and led to the emergence of new towns and markets at railway junctions and stations. It is noteworthy that most urban centres that emerged during the colonial period were found around railways. These locations became the focal points of trade and new frontiers of economic opportunities, attracting local traders from immediate and distant communities. Without doubt, railway contributed to the urbanisation process of such towns as Sango-Ota,

Abeokuta, Ilaro, Oshogbo and Ilorin in the West; Kaduna, Kano, Jos and Kafanchan in the North; Port Harcourt, Umuahia, Aba, Enugu, Otukpo and Makurdi in the East.

2. **Supply of Manufactured Goods:** Railways served the two purposes of the evacuation of primary resources from Nigeria to Britain and the supply of the British manufactured goods to the hinterland of Nigeria. As a result of this, many railways stations and proximate towns played hosts to several stores belonging to the multinational companies like the United African Company (UAC), Patterson Zochonis (PZ) and John Holts. These companies were outlets through which European manufactured products could be supplied into the interior of Africa.
3. **Growth of Internal Commerce:** Railway helped in stimulating commercial activities in that production of food crops for local markets was greatly enhanced. Farmers no longer incur losses as a result of bad networks of roads which made the movement of farm products to markets very difficult. Fast and reliable transport means perishable goods such as tomatoes, potatoes, vegetables etc. gained access to markets, either near or distant, on time. The same goes for cash crop, which were consumed locally.
4. **Inter-Group Relations:** Another important impact of railway in Nigeria is the emergence of towns and commercial centres that attracted a population that was made up of other ethnic groups, thereby fostering interactions and inter-group relations. Influx of people of different ethnic background promoted inter-ethnic marriages and cultural exchanges. In many towns in Yorubaland, there is always a quarter reserved for Hausa immigrants known as *Sabon Gari*. The same goes all groups throughout Nigeria.
5. **Spread of Western Education and Christianity:** Cultural exchanges that the development of railway afforded through the movement of goods and services by people aided the spread of Christianity and Islam through the country. It is important to know that part of the people who worked assiduously for the construction of rail roads were the evangelists who wanted to spread their Christian faith in the interior part of the country. When the railway started operations, it contributed immensely to

the movement of the missionaries to the interior part of Yorubaland and the Eastern part of the country. The missionaries carried out their mission works by establishing mission houses and schools through Nigeria. This was the beginning of the spread of Western education in Nigeria.

- 6. Job Opportunities:** It is on record that railway in Nigeria was the major employer of labour in Nigeria during the colonial period. Hence, it afforded employment for people who were not able to engage themselves in farming activities. Between 1912 and 1955, the estimate figure of employee with the Railway Corporation lingered around forty-two thousand in Nigeria (42,000). Apart from this, indirect jobs were created by this sector with large number of private lock-up shops built along railway terminus servicing the workers and passengers. The wages derived from the employment opportunities it offered improved the standard of living of the people.

In spite of the positive impact of the development of railway in Nigeria, which has been examined above, the introduction of railway transport was not without its negative implications. First is the environmental degradation that it caused. For the most part, the rail tracks were laid and made to pass through thick forest areas, which meant that forests were cleared for the track to be laid. Again, in order to prevent a situation where big trees were felled into the tracks by heavy rains and windstorms during rainy seasons, the perimeter of the track areas were equalled cleared. Moreover, before coal was discovered in Enugu, timber was the only source of fuel, hence, the railways greatly contributed to the rapid deforestation that took place in the early colonial period in Nigeria.

Second, the railway caused a lopsided development in the transport sector and the emergence of new centres of commercial activities. The railway drastically drew away traffic from the waterways to itself, thereby bringing the previously prominent trading ports into serious decline. For instance, the Eastern line diverted trade from the ports of Calabar, Opobo and Oguta to its terminal at Port Harcourt; the Western line, from Warri and Badagry to Lagos. Third, another negative effective of the railway system was in terms of both human and material costs. Indeed, Crowder observed that the railway were



built over previously uncharted country, through thick forests, over different hill ranges, and were often marked by the gravestones of workers.

Moreover, there was a huge financial strain that railway construction brought about. As the British government was not eager to invest heavily in their colonies as a result of the policy of self sufficiency, funding the huge project became a herculean task. Ralph Austen submitted that “the great financial burden of railway construction in tropical Africa was felt first through the role it gave the state in planning transport and second, through the pressure it put upon African revenue.” Finally, the railway policy was not geared towards the development of the indigenous economy but towards strengthening of the metropolitan economy. The railway in Nigeria and indeed in the whole of colonial Africa clearly depicted the centre-fringe relationship that existed between the colonial powers and the colonial territories.

#### **4.0 CONCLUSION**

The development of the railway in Nigeria was primarily intended to facilitate British grand plan to maximally exploit and evacuate primary products as well as the natural resources of the country. However, as the railway served this purpose, it also had enormous impact on the indigenous people of Nigeria. Some of these included: inter-group relations, the emergence of urban centres across the country, growth of internal commerce, supply of European manufactured products, spread of Western education, cultural values and religion, the emergence of a new class of educated elite, job opportunities and cheaper cost of transport. The negative impact included the degradation of the environment and the ecosystem brought about by railway construction, the material tolls and loss of human lives and finally, the economic implication of railway on the Nigerian economy as it was veritable means of the evacuation of the material resources of the country.

## 5.0 SUMMARY

This unit examined the development of railway transport in Nigeria. Railway construction in Nigeria started towards the close of the nineteenth century. This is understandable because the British government was undecided on what its political and economic obligations were concerning its colonial territories in West Africa. However, the 1884/85 Berlin Conference and intensified rivalry and competition among the European colonial powers made the British government more involved in the affairs of Nigeria. One of the consequences of this increased and direct involvement is the development of railway, which was meant to served economic interests of Britain.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. What were the challenges the British faced in the development of railway transport in Nigeria?
2. Why was the railway transport desirable to the British colonial government?
3. What are the effects of the railway revolution in Nigeria?

## 7.0 REFERENCES/FURTHER READING

Crowder, M. (1976). *West Africa Under Colonial Rule*. London: Hutchinson.

Ekundare, R.O. (1973). *An Economic History of Nigeria, 1860 – 1960*. London: Methuen & Co Ltd.

Obiakor, N.J., and Agajelu, A.C. (2016). “British Colonial economic Policies and Infrastructure in Nigeria: The Rail Transport Example, 1898 – 1960”. *IGWEBUIKE: An African Journal of Arts and Humanities*, Vol. 2 (3), 12 – 26.

Olukoju, A. (1996). “Transportation in Colonial West Africa” in G. O. Ogunremi and E. K. Faluyi (eds.), *An Economic History of West Africa Since 1750*. Ibadan: Rex Charles.

Omosini, O. (1971). “Railway Projects and British attitudes Towards the Development of West Africa, 1872–1903.” *Journal of the Historical Society of Nigeria (J.H.S.N)*, Vol. V, No 4, 491-507

## **Unit 3: The Development of Road Transport in Nigeria**

### **CONTENTS**

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- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 The Development of Road Transport in Nigeria up to 1920
  - 3.2 Road Transport in Nigeria, 1920-1945
  - 3.3 Road Transport in Nigeria, 1945-1960
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The preoccupation of this unit is the development of road transport in Nigeria. The development of road and motor road transport followed the British colonial agenda, which was the two-pronged objective of the exploitation of the human and natural resources vastly available in the country and creation of an outlet for the sale of European manufactured goods. Early roads constructed in Nigeria during the colonial period developed from the footpaths and bush tracks that crisscrossed the entire Nigerian landscape during the pre-colonial era. Thereafter, as a result of increasing commercial and expansion of the economy as well as the arrival of all sort of road vehicles, road development was intensified as from the 1920s. By 1960, motor road transport had become the most important means of transport in Nigeria. To foster good understanding of the subject, the unit has been adequately delimited into three; each looking at developments within specified period between 1861 and 1960.

## **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Appreciate the important role footpaths and bush tracks played as a means of transport during the pre-colonial era in Nigeria.
- Explain how these local footpaths and bush tracks were transformed into a more modernised transport networks.
- Understand the effect of railway on development of road transport in Nigeria.
- Discuss major initiatives and policies that were undertaken to develop road transport in Nigeria.

## **3.0 MAIN CONTENTS**

### **3.1 The Development of Road Transport in Nigeria Up to 1920**

According to Olubomehin (2012), the development of road transport in Nigeria took place within the wider context of British economic policy in Nigeria. The colonial economic policy was based on the notion that a colonial territory existed primarily for the benefit of the metropolitan country. In other words, the colony was expected to supply the raw material needed by the industries in the metropolis and at the same time serve as an outlet for the disposition of the manufactured products of the imperial country. Hence, Nigeria as a colony was expected to provide not only the basic raw materials for the industries in Britain but also serve as market for the sale of European manufactured goods. In order to achieve this objective, the British realised, at the turn of the nineteenth century, the need to develop a modern transport systems in the area to replace the traditional means of transportation which had existed in the area since the pre-colonial days. This was what prompted the development of modern transport infrastructure. It began with the railway and later on, road transport was introduced.

The transformation of roads and motor transport in Nigeria began with the need to build feeder roads for the newly constructed railways. The feeder roads were meant to provide enough passenger and cargo traffic for the new railways. The progress of their development, therefore, followed closely the gradual construction of railway lines. The

fact that motor vehicles were introduced into Nigeria in the first decade of this century also helped to quicken their development. Between 1900 and 1915, road transport services were established by the Nigerian railway on the following feeder roads: Ibadan-Oyo (33 miles), Oyo-Iseyin (27 miles), Oshogbo-Ogbomosho (37 miles), Bukuru-Ropp (22 miles) and Zaria-Maska (25 miles). In addition, the government maintained the following cart-roads in Northern Nigeria: Zungeru-Zaria (64 miles), Zaria-Kano (86 miles) and Loko-Keffi (73 miles).

In 1905, the government embarked on road development projects in many areas in the interior bordering the coastal ports. The roads which were constructed in that year, outside the Lagos area, included the Ibadan-Oyo road, which was of great importance both for administrative and commercial purposes, being a feeder road to the railway which passed through Ibadan, and the Ogbomosho-Oyo road, connecting the remoter interior with Oyo. Between 1905 and 1910, the following were constructed: Ikirun-Illa, Oshogbo-Ilesha, Benin-Agbor, Onitsha-Awka, Adukpani-Uwet, Uwet-Itu, Warri-Benin, Awka-Udi, Agba-Okpanan and the Lagos-Agege road. Some road-metalling was also undertaken in Southern Nigeria. The bridges on these roads were constructed with timber materials and concrete. Though they were the best that could be built to meet the urgent needs of the country, they were unreliable, and with the growth of traffic in later years they had to be repaired or replaced frequently.

By the end of the first decade of the nineteenth century, motor vehicles had been introduced and some indigenous businessmen provided motor transport services. Increasing number of bicycles and motorcycles were also used on the dusty roads. The motor transport services were available only at major towns in the South and they ran at irregular times, depending on how soon the lorries had enough passengers and loads to carry. The lorries generally lack good and comfortable seating, unsuitable for transport fragile and precious items and were usually overcrowded. More so, the attitude of the lorry drivers was generally rude and unpleasant and untarred roads were slippery and dangerous, particularly during the rainy season. In view of these hazardous conditions,

and the fact that not many people could afford to pay the fares, the human portage system increased with the development of better footpaths.

At the level of government, both the native authorities and provincial administrations were involved in the development of roads. They constructed roads, where they never previously existed and carried out maintenance of already existing ones. Road construction was much easier in the savannah and semi-desert areas of the North than it was in the forest areas of the South. The local authorities maintained most of the roads through community efforts. In 1914 and 1920 the total mileage of roads maintained by local authorities was about 21,000 and 22,000 respectively in Northern Nigeria, and about 1,400 and 3,000 respectively in Southern Nigeria.

### **3.2 Road Transport in Nigeria, 1920 - 1945**

The World War I and the economic depression that followed brought a drastic cut in road development project. However, in 1923, government renewed its efforts to link more areas with better roads. It was at this time that the roads between Lagos, Ibadan, Ijebu-Ode, Ilesha and Akure to Ondo, Benin and Sapele were constructed on a permanent basis. The Western Provinces were joined with the Eastern Provinces by a road via Asaba to Onitsha. In the North, a road link between Keffi and Wamba was also completed in 1923. By 1926, the government was responsible for some 2,950 miles of road, which were maintained by the Public Works Department. The same year a fresh plan was drawn to reorganise the road system and to build new roads, including the breaking-down of the road system into trunk 'A' and 'B' and minor roads.

Trunk 'A' roads were mainly those constructed and maintained by the Public Works Department of the government, and comprised the trunk and main produce routes. The surfaces of these roads were of tar-sprayed macadam, tar-sprayed gravel or laterite gravel. Trunk 'B' roads constituted roads of lightly-gravelled surfaces maintained by the native or local authorities with the help of local rulers. The minor roads were mainly earth roads, which were maintained exclusively by the local chiefs. The bridges and

culverts on trunk 'A' roads were of permanent construction made of steel and cement, while those of trunk 'B' roads were of a semi-permanent nature. The bridges on the minor roads were mainly of timber and their culverts were of light construction. After this plan was made, work began on the projects, but the depression of the late twenties and the early thirties forced the government to cut drastically its expenditure on road-building. Between 1930 and 1934 many roads were abandoned and those which continued to be used were badly in need of repairs.

Throughout the 1920s and 1930s, the motor transport services continue to develop as more people could afford to buy lorries, which were used mainly for carrying agricultural export produce from the interior to the coast. The few passenger services that were provided continued to be badly organised. There were very few motor-servicing stations, but the lorry drivers, who had little or no training as mechanics, tackled unexpected breakdowns with enormous skill and courage. In 1932, the Nigerian Motor Transport Union was formed to organise and regulate motor transport services. The union instructed all members to observe all traffic regulations, discourage overloading and over-speeding. Union inspectors were kept on strategic roads to check the condition of vehicles and enforce all these objectives. The union was successfully for a few years but as corruption crept in gradually, the inspectors became less insistent on the observance of the union rules.

As is well-known, the World War II began in 1939 and lasted till 1945. During this period, road construction was undertaken by the government primarily to suit military requirements. One such road extended from Jos to Maiduguri and the Fort Lamy; the last 90 miles were built on a low embankment across a plain of black cotton soil. The road carried a large amount of the military traffic serving the French base at Fort Lamy. Another important road built about the same time was the Funtua-Zungeru road. A number of other roads were built to help in the campaign for increased export production during the war.

### **3.3 Road Transport in Nigeria, 1945 - 1960**

After the World War II, a considerable programme of road construction was undertaken under the Colonial Development and Welfare Scheme, and also under the Nigerian government's economic development schemes. The first road financed by the Colonial Development and Welfare Fund was that from Lagos to Ikorodu, joining the road to Shagamu, Ijebu-Ode and Ibadan, and this began in 1945. The following roads were also constructed: Mokwa-Kotangora, Yola-Wukari, Ijebu-Ode-Benin and the Calabar-Mamfe road. By early 1949 a road was completed from Enugu to Mamfe in the Cameroons. The Mokwa-Kotangora road provided a new north-south route which avoided the Kaduna river ferry at Bida; and it was later linked with the main trunk road at Kano. The government's post-war road construction programme was based on an estimated requirement of 40,000 miles of good roads throughout the country.

Before 1952, trunk roads 'A' and 'B' were the responsibility of the Public Works Department based in Lagos. But this year, regional public works departments were established and assumed responsibility for trunk 'B' roads. The pattern of the road system which developed was that trunk 'A' roads, which were constructed and maintained by the federal government, were in the form of a rigid framework on which the rest of the road system was built. The basic components of the trunk 'A' system were two roads running from the ports of Lagos and Port Harcourt to the northern boundary, and four east-west roads – two south of the Niger-Benue system, and two north of it. This system linked the federal and the regional capitals with other large towns and ports, and also provided communication between Nigeria and the neighbouring countries.

The trunk 'B' system connected provincial and divisional headquarters and other large towns with the trunk 'A' system. Trunk 'B' roads were controlled by the regional governments and maintained by local authorities with the assistance of grants from the regional government: these varied between twenty-five to hundred per cent of the cost of maintenance and construction. Most of the other roads, which did not come under either system carried local traffic and acted as feeders to the trunk roads. These were also



constructed and maintained by the local authorities, but without grants from the regional governments. In 1946, the total road mileage was 25,433, and this increased to 28,042 in 1950. By 1960, the total road mileage was 41,065, of which 5,434 miles were tarred and 35,631 miles were of gravel or earth. In 1960, the road mileage increased to approximately 6,000 miles of trunk 'A' and about the same mileage of trunk 'B', with approximately 160,000 miles of local roads. Many of the local roads, particularly in the Eastern Region, were constructed and maintained by voluntary community labour.

Between 1946 and 1954, there was motor-transport 'mania' in the southern half of the country. As a result of the great boom in the export trade, which began after the second world war and lasted until 1954, an increasing number of people bought lorries and operated transport services. Available records indicate that in 1946, 1,413 commercial vehicles were registered, and by 1950 the number had risen to 2,898. The upward trend continued, and in 1956 and 1960, 7,184 and 7,879 were registered respectively. The result was that the number of commercial vehicles soon surpassed the volume of the export products to be transported. There was a general deterioration in the standard of the service provided by most transporters, and a number of them incurred great losses and went out of business. An increasing number of taxi-cabs were operated in a few major cities. Neither the road transport system nor the taxi-cab services were organised on a local or national scale; consequently, the economic waste of cut-throat competition could not be eliminated.

In addition to the purely commercial road transport system, the Nigerian Railway Corporation operated a motor feeder service, mainly in the groundnut and cotton-growing areas of Sokoto. It also operated a passenger service between Gusau, Sokoto and Birnin Kebbi, and by 1960 it employed a fleet of sixty-two lorries and twenty trailers. The road transport system provided employment for a number of Nigerians, as it was the usual practice for a licensed driver to engage some apprentices, who accompanied him on his journeys and who learnt to drive by watching him, occasionally being allowed to drive themselves. This went on for a period of between six and twelve months before the

apprentice, on attaining some driving competence, was sponsored by the master-driver to take an official driving test. To every commercial vehicle, there were at least four apprentices.

The most important industry which grew out of the road transport system was that of motor repairing. Originally, the few Nigerians who began to provide this service obtained their training and experience while in the service of either the government (e.g. Public Works Department) or a commercial firm (e.g. UAC Motors). They, in turn, trained a number of apprentices to handle simple mechanical faults in vehicles. There are no statistics to show the total number of people employed in the road transport system. However, if one assumes that to every commercial vehicle there were four people employed, including the driver, and that there were at least two mechanics, then it can be estimated that in 1960 about forty-seven thousand (47,000) people were employed.

#### **4.0 CONCLUSION**

From the foregoing discussions, it can be seen that the development of motor road transport grew in leaps and bounds during the period of colonial rule in Nigeria. It transformed from the hitherto traditional system of footpaths and tracks into something of a modern system. Although, it helped to facilitate the evacuation of the natural resources and the exploitation of the wealth of the region; it equally created opportunities for indigenous participation in the colonial economy. In fact, the establishment of the Nigerian Motor Transport Union (NMTU), an umbrella body for owners and operators of commercial vehicles in 1932, showed the extent of indigenous participation and initiative in the colonial transport sector. This, as well as the expansion of the economy, particularly the increasing volume of exports and imports and the construction of better roads, made motor transport business viable and it continued to compete effectively with the railways as from the end of the second world war in 1945 to the attainment of independence in 1960.

## **5.0 SUMMARY**

This unit examined the development of roads and motor road transport in Nigeria. As a kind of prologue, the unit presented the state and condition of the sector at the threshold of the colonial rule in Nigeria. It then proceeded to analyse the development of roads, which at first was meant to serve as feeder-roads to railway stations. But as from the 1930s and particularly from 1945, motor road transport began to compete effectively with railways to the extent that the government in its bid to rescue the fortunes of the railway introduced certain measures to reduce the competition. These included restrictions of commercial vehicles on the routes considered to be parallel to railroads and the doubling of the licences for commercial transporters. These measures failed to reverse the downward fortunes of the railways, and due to the resilience of the Nigerian transporters motor road transport became a burgeoning industry, with close to fifty thousand employees as at independence in 1960.

## **6.0 TUTOR-MARKED ASSIGNMENT**

1. Examine the factors responsible for the late development of motor road transport in Nigeria.
2. To what extent did the two world wars contribute to the growth of motor road transport in Nigeria?
3. Discuss the rail-road competition and measures taken by the colonial government to rescue the declining fortunes of the railway.
4. It has been said that road transport in Nigeria developed on the heels of the problems that bedeviled the railway. Do you agree?

## **7.0 REFERENCES/SUGGESTED READINGS**

Ekundare, R.O. (1973). *An Economic History of Nigeria, 1860 – 1960*. London: Methuen & Co Ltd.

Hawkins, E.K. (1958). *Road Transport in Nigeria: A Study of African Enterprise*.

London: Oxford University Press.

Hay, A.M. (1971). "The Development of Road Transport in Nigeria, 1900 – 1940." *The Journal of Transport History*, 95-107.

Olubomehin, O.O. (2011). *Road Transportation in Western Nigeria, 1900-1960: Its Role, Nature and Impact*. Saarbrücken: Lambert Academic Publishing.

Olukoju, A. (1996). "Transportation in Colonial West Africa" in G. O. Ogunremi and E. K. Faluyi (eds.), *An Economic History of West Africa Since 1750*. Ibadan: Rex Charles.

## **Unit 4: The Development of Air Transport in Nigeria**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Air Transport in Nigeria: The Pre-1960 Era
  - 3.2 Air Transport in Nigeria: The Post-1960 Period
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  - 3.3 Challenges Facing Air Transport in Nigeria
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
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### **1.0 INTRODUCTION**

This unit is the last of the four units in the module. Its focus is the development of air transport and the aviation industry in Nigeria. Air travel is a relatively recent phenomenon in Nigeria as the first aircraft, a British Royal Air Force aircraft, landed in Nigeria in 1925. This was less than twenty years after the Wright brothers' first powered flight in 1903. Though the first flights into Nigeria were purely for military and strategic operations, they gradually assumed the character of a civilian operation in the decades that followed. In this unit, discussion shall centre on the historical development of the aviation industry in Nigeria.

## **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Appreciate the development of the aviation industry and air transport in Nigeria since 1925, when the first aircraft landed in Nigeria..
- Understand the circumstances that led to the arrival of the first sets of flights into Nigeria.
- Discuss major initiatives and policies that were undertaken to develop air transport during the colonial and post-colonial periods in Nigeria.
- Explain the impact of the development of air transport and the aviation industry in Nigeria.

## **3.0 MAIN CONTENTS**

### **3.1 Air Transport in Nigeria: The Pre-1960 Period**

The first recorded flight of an aeroplane into Nigeria was in 1925, when a British Royal Air Force (RAF) fighter aircraft landed on a polo ground in Kano. This was as a result of a crisis between the British colonial government and the residents of Kano. The mission of the crew was to carry out surveillance of the riotous situation. After this flight, the RAF made regular flights to Kano and Maiduguri from Sudan, where they had stationed a squadron. This was later extended to cover all the West African colonies. As from 1930, many English companies made attempts to establish commercial flying in Nigeria and West Africa in general. As a result, many exhibition flights were made to Lagos, Port Harcourt, Calabar and other parts of Nigeria. However, there were no meteorological equipment, radio aids or even landing grounds. Many of the pioneering aircraft had to land on open fields, roads, and dry river beds for refuelling.

Realising the need for aerodromes, the British colonial government invited British civil engineers to fashion a chain of landing grounds between Lagos and Kano. Consequently, landing facilities were established in Lagos, Ilorin, Minna, Jos, Kaduna, Kano, Bauchi, Yola and Maiduguri. However, ample notice had to be given before these could be used

so that necessary preparations and safety measures could be undertaken. At the same time, sites for seaplane bases were provisionally selected at Lagos, Forcados, Calabar, Port Harcourt, Onitsha, Lokoja, Makurdi and Jebba. At the end of 1935, an Air Services Development Committee was set up by the Nigerian government to look into the possibility of establishing regular air services in the country. Following the recommendations of the committee, six 'all-seasons' aerodromes were constructed and fully equipped at Lagos (Apapa), Oshogbo, Minna, Kano and Maiduguri.

In 1935, plans were made for the Imperial Airways (UK) to start airmail services between the United Kingdom and West Africa as part of a regular service between the United Kingdom and South Africa. The following year, a weekly air service was established between Khartoum and Lagos under the scheme. Efforts were also made for a regular weekly service from Lagos to Accra, Takoradi and ultimately Freetown, connecting with the service between Khartoum and Lagos, which would be operated by Imperial Airways and would form part of the Empire Air Mail Scheme.

The outbreak of the World War II in 1939 forced the British Imperial government to encourage Nigeria and other West African territories to speed up development for air transport services, mainly for strategic reasons. The construction of aerodromes was actively pursued during the war and plan made to build additional landing grounds. Many of the runways of the existing landing grounds were widened and lengthened as military aircraft required greater space for landing and take-off.

The establishment of the West African Airways Corporation (WAAC), by an Order in Council, in 1946 was a watershed in the development of commercial air transport in West Africa and Nigeria in particular. The WAAC, a public corporation, was to operate air services between and within the British West African colonies (Ghana, Nigeria, Sierra Leone and Gambia). Its operations were supervised by the West Africa Air Transport Authority (WAATA), which had powers to legislate and execute policies. WAATA's supreme body consisted of the Governors of colonies, with the Governor of Nigeria as

the presiding officer. The corporation started operation in 1947 and by the end of that year had extended services to the main population centres in Nigeria. There were services between Lagos, Benin, Port Harcourt, Calabar and Enugu.

On attainment of independence, Ghana pulled out of WAAC in 1958 and formed the Ghana Airways Limited. The Nigerian government acquired the shares of the corporation from Ghana. As a result, WAAC was renamed WAAC (Nigeria) Limited, with Nigeria government owning fifty-one (51%) per cent; the British Overseas Airways Corporation (BOAS) owned thirty-three (33%) per cent and Elder Dempster sixteen per cent (16%) of the total shares.

## **3.2 Air Transport in Nigeria: The Post-1960 Period**

### **3.2.1 The Birth of Nigerian Airways and the Era of Regulation**

On May 1, 1961, the Nigerian government bought over the shares of WAAC (Nigeria) Limited from the BOAC and Elder Dempster and renamed it Nigerian Airways. The Nigeria Airways grew steadily during its first eight years, operating domestic flights to then existing five international airports from Lagos to Kano, Sokoto, Maiduguri and Port Harcourt. It also operated sub-regional flights to such West African countries' capitals including Abidjan, Accra, and Robertsfield in Liberia, Freetown and Banjul. In addition, the Nigeria Airways operated on the international routes on joint arrangements with other airlines, specifically, the British Airways to the United Kingdom, Amsterdam and the United States of America. The Nigeria Airways scheduled flights were actualised with a fleet consisting two Boeing 707, two Boeing 737, three F28, five F27, one Astec plane and subsequent acquisition of jets to cope with the rising level of business and economic developments.

It is necessary, at this juncture, to examine the policy directions that determined the practice of civil aviation in Nigeria from 1960 onwards and their effects on Nigerian Airways. The first major policy decision by the Nigerian government at independence was the establishment of an indigenous airline to serve the needs of the few air



passengers in Nigeria. Throughout the 1960s and up to the mid-1980s, government efforts were directed towards the need to regulate the new and fast-growing industry. This ushered in an era of close monitoring, control and regulation of the aviation industry by government. Moreover, government had a negative attitude towards private participation in the airline industry because of what it described as the financial incapacity of private investors. This is encapsulated in the Civil Aviation Act of 1964, which was a replica of the U.K Civil Aviation Act. Thus, government control of the aviation industry was strict and total from the 1960s to the 1980s.

In 1979, the military government of General Olusegun Obasanjo contracted the Nigeria Airways to KLM, the official Dutch Airline, which managed the affairs of the national carrier for two years. Before then, the Dutch had become major stakeholders and played prominent roles in the development of the aviation industry in Nigeria. This decision was greeted with a lot of criticisms and heated controversies and their tenure aggravated the financial problems of the airline. Before their arrival, the airline owed a debt of £5 million, but at their departure in 1981, the airline's profile stood at £22 million. Although heavily indebted, the airline was at its peak and it was only a question of time before it started experiencing further downturns.

### **3.2.1 The Era of Deregulation of Civil Aviation in Nigeria**

The dismal performance of the Nigerian Airways coupled with its high debt profile as well as the general economic downturn brought about by the implementation of the structural adjustment programme further compounded the fortunes of the national carrier as from the mid-1980s. By this time, it was clear that government policy of strict and total regulation of the airline industry could not be continued. Hence, the period of deregulation and opening up of the Nigeria's aviation industry had commenced. The new policy led to unrestricted competition among intending operators leading to the proliferation of small airlines. Consequently, twenty-five (25) private airline operators were licensed in the industry. They were authorised to operate non-scheduled passenger and cargo air services within and outside Nigeria. Soon, three domestic operators, Okada

Airlines, Kabo Air Travels and Gas Air were upgraded from the status of non-scheduled operators to scheduled operators. Kabo and Okada were later granted permission to operate international routes.

By 1994, the number of licensed private airlines rose to twenty-eight out of which fourteen catered for passengers while seven operated cargo services and the remaining seven operated chartered flights. In 1995, the Aviation Development Company (ADC) and Bellview Airlines were granted permission to operate international routes. Also, by 1995, the number of licensed air operators had increased to one hundred and forty-four. The emergence of private airline operators successfully broke the state monopoly by running commercial air operation on most domestic routes. However the deregulation of air transport, especially its implementation has never been an easy process, as the industry still experiences state interventions with respect to air fare. The entrance of new airline operators brought in new challenges and new responsibilities. Thus, deregulation brought with it the need to ensure high safety standards.

Between 1978 and 1984, a number of new airports with modern facilities were built in Enugu, Yola, Port Harcourt, Sokoto, Kaduna, Jos, Calabar and Ibadan, bringing the number of airports in the country to fifteen. By 1988, about seventy-eight landing fields existed in the country, out of which thirty-eight were privately owned and operated mainly by oil companies, and by the year 2000, there were nineteen airports staffed and operated by the Federal Airport Authority of Nigeria (FAAN). Some of the prominent airlines currently operating in Nigeria include Arik Air, Air Peace, Aero Contractors, Dana Air, Ibom Air and Med-View Airline

Many institutions and bodies have been set up to oversee and regulate the affairs of the aviation industry in Nigeria. The Nigerian Airspace Management Agency (NAMA), established by Decree No. 48 of 1999, is responsible for formulating and implementing policies for the effective management of Nigeria's airspace. The Nigerian Civil Aviation Authority (NCAA) established by Decree 49 of 1999 is responsible for providing aviation

safety and economic regulatory services that are consistent with international standards. The Federal Airport Authority of Nigeria (FAAN) is responsible for taking care of the physical structures within all airports in Nigeria.

### **3.3 Challenges Facing Air Transport in Nigeria**

The following factors have over the years militated against the growth and provision of efficient air transport in Nigeria.

1. **Absence of coherent air transport policy:-** The National Transport Policy has indicated the need to take measures to bring co-ordination, coherence and rationality into the transport network. The early history of transport development in Nigeria was marked by attempts at coordination. However, such attempts were virtually abandoned in later years. The result of this with regards to aviation is the demise of the Nigerian Airways. If there was an operational, coherent policy, major airports in the country should have been modernised long time as many of the airports were built in the 1970s with old architectural design.
2. **Overstretched and decaying facilities:** Most of the facilities provided at the nation's international airports in Lagos and Kano are undeniably overstretched and not fashionable. Facilities such as toilets, seating, lifts, power supply, air-conditioning system, conveyor belts etc are often in bad shape. This gives the country bad image as airports are the first port of call for foreigners.
3. **Corruption and Bad Management:** No other sector has suffered more neglect, corruption and bad management like the transport sector and more particularly aviation industry in Nigeria. Corruption and bad management led to the decline and eventual collapse of the Nigerian Airways in 2004. For instance, in 1979, the Nigerian Airways had twenty-nine functional and well-maintained aircraft in its fleet, but in 1999, only two were left functional.
4. **Poor Security:** Security is generally poor in and airports in Nigeria. There is no solid perimeter around most of the airports in Nigeria. The lack of perimeter fencing allow grazing by the runway of some airports in the country. For example, in 2005, an Air

France flight crashed on cows on the runway of Port Harcourt International Airport, killing seven of them and damaging the landing gear of the aeroplane. There are frequent cases of pick pocketing, load snatching and bare-faced robbery in and around airports in the country.

5. **Closures of Airports:** Nigeria is notorious for perennially closing airports. These closures are often attributed to repairs and maintenance that are expected to last few months but stretches beyond stipulated period. For example, the Port Harcourt International Airport was closed down for repairs between August 18, 2006 and December 18, 2007. This is for a routine the airport authorities said would last for four months. This however lasted for sixteen months.
6. **Intermittent Air Accidents:** There are intermittent air crashes which damages the safety record of airlines in the country. This also discourages passengers to be afraid of travelling by air as air crashes are fatal. For example, in October 2005, one hundred and seventeen people were killed when Bellview Airlines Boeing 737 bound for Abuja came down shortly after take-off from Lagos. In December of same year, a Sosoliso Airlines DC-9 crashed in Port Harcourt International Airport, killing all one hundred and three people on board.

#### **4.0 CONCLUSION**

The aviation industry in Nigeria is no doubt growing in leaps and bounds. From the era of government regulation and strict control in the 1960s to the period of deregulation as from the late 1980s, the industry has become one of the largest and most competitive in Africa. However, it is observed that excessive regulation by government is one of the major challenges of the aviation in the country. The overbearing attitude of government official, draconian directives and policies of the regulatory institutions, corruption, administrative bottlenecks are prominent features of Nigeria's aviation industry. To curb these challenges and foster development of air travels in Nigeria, government should desist from over regulating the aviation industry through its numerous institutions.

Private airline operators should be given opportunities to contribute their own quota to the development of the industry.

## **5.0 SUMMARY**

In this unit, we have focused our discussion on the development of air transport in Nigeria. It has been established that air travel is a nineteenth-century phenomenon which has gone through several stages to get to where it is today. Discussions have dwelled on the construction of landing facilities in the pre-1960 period and subsequently proliferation of airports around the country today. Discussions also touched the establishment of the Nigerian Airways, which enjoyed monopoly in Nigeria from 1960 till around late 1980s. We have seen the various policies implemented by successive administrations in the country and how that has helped the aviation industry in Nigeria. Attention has also been paid to the regulatory institutions that oversee the conduct of air travel in the country. Finally, challenge confronting was examined.

## **7.0 TUTOR-MARKED ASSIGNMENT**

1. Why was the establishment of the West African Airways Authority (WAAC) considered a watershed in Nigeria's aviation industry?
2. "The history of the Nigerian Airways is the history of the aviation industry in Nigeria between 1961 and 1980." Discuss.
3. What would you say are the challenges facing the aviation industry in Nigeria today?

## **8.0 REFERENCES/SUGGESTED READING**

Akpoghomeh, O.S. (1999). "The Development of Air Transportation in Nigeria, 1936–

1987." *The Nigerian Geographical Journal* Vol. 7 (2), 50 – 63.

Ekundare, R.O. (1973). *An Economic History of Nigeria, 1860 – 1960*. London: Methuen & Co Ltd.

Ogbeidi, M. (2006). "The Aviation Industry in Nigeria: A Historical Overview." *Lagos*

*Historical Review*. Vol. 6, 133–147.

Onokala, P.C. (2015). *Transportation Development in Nigeria: The Journey So Far and the Way Forward*. Inaugural Lecture delivered at the University of Nigeria in September, 2015.

## **MODULE 4: AN OUTLINE OF TELECOMMUNICATIONS IN NIGERIA**

Unit 1: Telecommunications in Pre-Colonial Nigeria

Unit 2: Telecommunications in Colonial Nigeria

Unit 3: Telecommunications in Post-Colonial Nigeria

### **UNIT 1: Telecommunication in Pre-Colonial Nigeria**

#### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Telecommunications in Pre-Colonial Nigeria
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

#### **1.0 INTRODUCTION**

Communication and transportation are related and intertwined for a number of reasons: first, they are important indices of socio-economic progress and development; second, they are means or processes of overcoming distance and spatial barriers; they constitute the major means of determining the nature and scope of interaction within and between distinct societal groupings, national or sub-national and finally; they are both substitutes and complements, that is, it might be possible that sufficient advancement in communication could be substitute for transport. For instance, one could telegraph, phone, fax or mail a customer or a friend rather than paying a personal visit. Transport involves carrying or moving of goods and people from place to place, while communication involves the passing of news and information from one person to another. Transport involves such modes as roads, water, air and railway, while communication

involves the use of telephone, telegraphs, email, fax, newspaper, radio, television etc. It is against this background that this module, the last for this course, interrogates the development of telecommunications in Nigeria. However, this unit focuses on the modes of communications in Nigeria during the pre-colonial period.

## **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Identify the various methods of communication in the traditional societies in Nigeria.
- Highlight the defects and shortcomings of these traditional means of communication.
- Determine whether these traditional communication methods were effective or served their purpose within the context of the society in which they develop.

## **3.0 MAIN CONTENTS**

### **3.1 Telecommunications in Pre-Colonial Nigeria**

The different peoples that inhabited the areas that later became Nigeria had long developed various communication media to spread information before the intervention of science and technology and its latest strand, the information and communication technology (ICT). The methods used at that times were limited and could not be used to spread information across a wide geographical area. These communication media included the use of talking drums, town criers, symbols, fire and smoke, gunshots (often fired with gunpowder).

Generally, the talking drum made of animal skin was used to send messages comprising series of sentences, cognomen (oriki) and/or proverbs at a time. It was used as a medium of broadcasting information or news over long distances. Such message ranged from the announcement of festivals, warnings about invasion by enemies, information on weather conditions to impending public meetings and important court verdicts. Flute was another important means of communication. Made from wood or bamboo pipe or, specially-made small round calabashes, the notes sounded on such flutes carried messages for distances of up to a mile. The fact that villages and farms were isolated and that life was generally



quiet in them made flute an effective means of communication. However, these methods of communication had their inherent shortcomings. In heavily vegetated areas the messages often suffered disturbances, usually leading to difficulties in the accurate interpretation of drum and flute messages to villages, hamlets or towns that are too far apart.

The use of town criers for the purpose of spreading important announcements in villages, hamlets and towns was very popular in the pre-colonial period. Town criers were usually palace attendants and workers who took information and messages from the local kings, chiefs or elders and spread them around with the use of gongs in the early hours of the morning or in the evenings when residents are at home. This is because the people would have gone to their farms or markets and might not get the information passed during the day. The use of symbolic objects or materials was another form of traditional communication. Generally, the objects or materials used were easy to interpret, but there were instances when the ordinary use of the object could not give sufficient indication of the intended message. In such situations, metaphoric meanings were employed to read the messages.

It was customary in Yoruba areas to send pepper to a person to signify that he had been bereaved. When a child was born, the usual message was a new bathing-sponge sent to the father or to the relatives. If there was famine in any area, the distress message was the chaff. It must be said that 'object messages' were most effectively used for common and anticipated news or events. It was sometimes difficult to understand some messages. For example, it would be difficult to understand the exact message when pepper and bathing-sponge were sent together to the same person. It could mean that while a child had been born; another person had died in the family. It could also mean that the mother of the newly-born had died during childbirth or shortly after birth.

Another important method of passing information and spreading news in the traditional societies was the use of fire and smoke. Fire and smoke were used to send messages to

people in other hamlets, settlements or villages. These were set on elevated landforms such as hills, rocks, and nearby mountains. As the fire smouldered and smoke ascended, they sent certain messages out and the people to whom they were intended or to whom it might concerned understand them. Gunshots, particular those fired with gunpowder, were also another veritable means of indigenous communication. In some traditional communities, gunshots powered by concentrated powder were used to announce the passing of important and notable personages. For instance, such gunshots announced the demise of kings, chiefs, chief hunters and powerful priests. At the sound of such gunshots, the villagers were, in some communities, required not to go to their farms that, just to mourn with the bereaved and comfort them with condolence visits.

Finally, social functions such as ceremonies, town/village meetings, age-grade gatherings, market-day and union convergence served the important purpose of information diffusion and news dissemination. These gatherings were used to diffuse information from one person to another. At individual level, they provided the opportunity for side talks and gossips: “have you heard this?”; “have you heard that?” All these were communication media in time past and they were effective. The only challenge was that they could not be used for too many people.

#### **4.0 CONCLUSION**

It would be seen from the foregoing that the different ethnic nationalities that lived on the African continent had developed traditional methods of communication and information dissemination before the advent of the Europeans and establishment of colonial rule in the continent. This is particularly so with the peoples of Nigeria whose communication technology and methods are steeped in their cultural practices such as the use of drumbeats, smoke, symbolic messages etc. The colonialists or their apologists may be quick to point out that these methods were primitive and backward. It must however be noted that the indigenous communication technology served their purpose considering the kind of society that developed at that time and the fact that messages sent were well encoded and decoded by the people involved.

## 5.0 SUMMARY

This unit examined communication during the pre-colonial period. It presented the various means of sharing and sending messages, information and news among people, kingdoms and empires. It also pointed out the weaknesses of the different methods. One shortcoming that stands out is the fact that these communication media were not suitable for mass communication that is, sharing information to so many people at the same time. However, in view of the kind of societies and social milieu of the period, it could be submitted that these media of information sharing served their purpose. They however became inadequate and ineffective during the colonial period.

## 6.0 TUTOR-MARKED ASSIGNMENT

1. Identify the different communication media employed in the traditional societies of Nigeria.
2. Discuss the weaknesses or shortcomings of these communication methods
3. How would you react to the view that the indigenous communication methods were primitive and undeveloped?

## 7.0 REFERENCES/SUGGESTED READING

Andah, B.A. (1992). *Nigeria's Indigenous Technology*. Ibadan: Ibadan University Press.

Aziken, L.C., and Emeni, C.A. (2020). "Traditional Systems of Communication in

Nigeria: A Review for Improvement." Available online at <https://pdfs.semanticscholar.org/fc9b/deabc6c9d46bfa8116f3fcd6f3610a88b739.pdf>  
Accessed on Monday, 5th August, 2020.

Ekundare, R.O. (1973). *An Economic History of Nigeria, 1860 – 1960*. London: Methuen & Co Ltd.

Enang, W. (2019). "History of Communication in Nigeria" *Proguide.ng*.

<https://proguide.ng/history-of-communication-in-nigeria/>

## **UNIT 2: Telecommunications in Colonial Nigeria**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
- 3.1 Telecommunications in Colonial Nigeria
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The preoccupation of this unit is the development of telecommunications in colonial Nigeria. It seeks to investigate the efforts of the British in developing an effective means of communication Nigeria in spite of the towering challenges that confronted them in terms of the geographical massiveness of the country and the overarching need to establish constant communications with the colonial outposts in the interiors of Nigeria, most especially the northern part of the country. It must be emphasised that the first attempt at establishing modern methods of communication was made from this period.

### **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Highlight the modern system of communication established by the colonial government.
- Understand the challenges that confronted in its efforts the colonial government and how the challenges were confronted.
- Discuss how these communication media were more superior to the traditional methods of communication

### **3.0 MAIN CONTENTS**

#### **3.1 Telecommunications in Colonial Nigeria**

The modern system of communication – the postal system, telegraph and telephone – was introduced into Nigeria by the British administration. After the initial challenges of lack of funds, topography and rough terrain coupled with widespread illiteracy among the local, a general post office was established in Lagos. The extensive use of canoes in the coastal areas and the inland water ways, the development of government built roads, which began in 1883 and the construction of the railways which started in 1896 - all contributed to the gradual development of the postal system. As the railways extended slowly into the interior, post offices were established along the route, but only in important places. By 1900, the postal services in southern Nigeria were handled by sixteen post offices, namely, the general post office in Lagos and Old Calabar, eight district post offices, four sub-post offices (performing only postal work) and two postal agencies.

The spread of Western education, through the activities of the missionaries, helped considerably to introduce letter-writing and the habit of sending letters. The number of post offices increased steadily and by 1934, Nigeria had about one hundred and ten offices and forty-two agencies. These services provided by the early post offices varied: some were established for selling stamps, with letter-collection boxes provided for posting letters; very could deal in postal and money orders. After 1934, however, very few post offices were established. Indeed, between 1934 and 1940 only one was established. By 1945, there were one hundred and thirteen post offices in Nigeria. The number of postal agencies, on the other hand, increased considerably: from forty-two in 1934 to 161 in 1940, and 298 in 1945.

The post second world war period witnessed dramatic advancement in postal services as a result of increasing government expenditure. In 1946, there were one hundred and twenty-five post offices and three hundred and thirty-one postal agencies in the country. The number of post offices rose to one hundred and thirty-four in 1950; while the number

of postal agencies increased to four hundred and twenty in 1950 and to one thousand in 1960. Between 1953 and 1960, the postal services underwent reorganisation and repositioning. A number of modern post offices were built to replace the old buildings, introduction of new and quicker methods of handling mails, and the intensification of staff training schemes. New facilities were introduced, for example, stamped envelopes and books of stamps. The result of the reorganisation was noticeable in the internal mail services, where they resulted in an acceleration of mails by as much as forty-eight hours in some part of the country.

It must be added that the government also developed the telephone systems in the country. By 1929, the Lagos-Ibadan telephone trunk was completed and a new telephone exchange was installed at Abeokuta. Telephone exchanges were also installed at Aba, Port Harcourt and Bukuru. By 1934, there were twenty-one telephone exchanges in Nigeria. The figure rose to forty in 1940, and to fifty-nine in 1945. Trunk telephone services were available in a number of principal centres including, Lagos-Abeokuta-Ibadan, Port Harcourt and Aba, Jos and Bukuru, Victoria, Buea and Tiko in the Cameroons. Early in 1950, the first carrier telephone trunk circuit was put into service between Lagos and Oshogbo, and this was followed almost by extensions to Kaduna and Enugu thus making it possible for people in Lagos and the regional capitals to talk to each other by telephone. In November 1950, the first automatic exchange was opened at Port Harcourt and in October 1953 the second automatic exchange was opened in the Lagos area.

In 1951, the government decided to provide transmission paths for major trunks by a network of very high frequency radio stations connecting the important centres of the country. These were to replace the overhead lines, which usually followed the railway and were subject to a high rate of fault incidence. The first very high frequency (VHF) multichannel link was opened in 1953 between Lagos and Ibadan, with twelve telephone channels. So rapid was the development of trunk services in modern telecommunication systems that the demand between Lagos and Ibadan necessitated the installation of ultra

high frequency (microwave) equipment, which could provide up to two hundred and forty channels on one path. Three such paths were brought into service on 1 January 1960, providing facilities for telephone subscribers in Lagos and Ibadan to dial each other direct. The introduction of VHF (and later, UHF) circuits did not render superfluous the overhead lines, the capacity of which, on the contrary, increased by the installation of more carrier channels, which gave communication between intermediate centres and which also supplemented the VHF network. Additional overhead lines were constructed using, in many cases, poles made from local timber.

The modern telegraphic system was introduced along with fixed phone lines and developed rapidly soon after 1946. In that year, there were sixteen transmitting offices, the main ones being one in Lagos, Kaduna and Enugu. They were interconnected, so that a breakdown on one line could interrupt traffic, and landlines were also supplemented by wireless channels. There were fifty-nine telephone exchanges. However, more were introduced between 1946 and 1950, and telegraph services were also extended to cover more areas. It was generally more convenient to telephone than to telegraph, but an important development between 1950 and 1960 was the introduction of two types of special service, the 'private wire' and the 'telex', in different parts of the country. By means of the private wire, a business subscriber was directly and permanently connected by teleprinter with, for example, his branch office in another town. An international telex service was introduced and controlled by a UK private firm called Cable and Wireless Ltd whereby any telex subscriber could obtain connection to any other telex subscriber in most parts of the world through the Lagos telex switchboard.

In 1950, virtually all transmissions were by morse key, and telegrams were handwritten. However, by 1960 nearly all the major circuits used teleprinters, which automatically printed the telegram at the distant point, and the passage of traffic was further accelerated by the introduction of torn tape relay equipment at Lagos and at regional capitals.

#### **4.0 CONCLUSION**

As discussed in this unit, the colonial government was interested in establishing contacts and communications with its outposts in the interiors of Nigeria. This was in order to further administrative ease and convenience. As a result, three methods of communication were developed during the colonial period. These were postal services, telegraph and telephone. These communication media were further developed and their use gained widespread acceptance as the colonial period progressed. At independence in 1960, these telecommunication modes had become entrenched in the everyday life of many people in the country.

#### **5.0 SUMMARY**

This unit examined the development and growth of telecommunications during the colonial period in Nigeria. It presented major advances and milestones in the development of postal services, telegraph and telephone communications in colonial Nigeria. The success of this endeavour helped to facilitate colonial administration and further the interests of the imperial British government in Nigeria. It is worthy of note that the establishment of telephone lines aided other forms of communication in Nigeria such as the radio, television and internet. However, since the modern communication methods were also made use of by the local people, it helped to foster unity, intergroup relations and cohesion among the different ethnic nationalities that made up the Nigerian state. In fact, the colonial innovations were greatly put to use by the nationalist and helped in no small way to liquidate colonial rule in Nigeria.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

1. What were the systems of communication established by the colonial government?
2. In what ways were these communication systems more effective than the traditional methods?
3. Highlight the growth and widespread use of postal services in Nigeria.



## 7.0 REFERENCES/SUGGESTED READING

Arikpo, O. (1967). *The Development of Modern Nigeria*. Harmondsworth: Penguin

Books.

Crowder, M. (1968). *West Africa under Colonial Rule*. London: Hutchinson.

Ekundare, R.O. (1973). *An Economic History of Nigeria, 1860 – 1960*. London: Methuen

& Co Ltd.

Tersoo, A. (2018). “History of Telecommunications in Nigeria.” Available online at URL

<https://www.legit.ng/1146671-history-telecommunication-nigeria.html>

## **UNIT 3: Telecommunications in Post-Colonial Nigeria**

### **CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 The Era of Government Control and Regulation
  - 3.2 Deregulation and the era of GSM
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

### **1.0 INTRODUCTION**

The concern of this unit is the development of telecommunications in post-colonial Nigeria. It is interesting to note after independence in 1960, the colonial ideas and vestiges still continued to loom large in the telecommunication sector. For instance, the British colonial administration had set up a department of post and telegraph (P&T) in 1908. This department was never scrapped or proscribed after independence. In fact, the department was put under the Ministry and was still responsible for overseeing communication sector of the country. This however changed when the National External Communications (NET) was set up to oversee external telecoms services. The establishment of the Nigerian Telecommunications Limited (NITEL) still sustained the government domination and tight-fisted control of the sector up until 2001, when deregulation was implemented. This led to the influx of mobile operators and opening-up of the sector.

### **2.0 OBJECTIVES**

At the end of this unit, students should be able to:

- Explain the major strides recorded in Nigeria's telecommunications industry after independence.
- Describe the significance of NITEL in government's agenda to development the telecoms industry in Nigeria
- Understand the challenges that confront NITEL that made the liberalisation of that sector of the economy desirable.
- Demonstrate the advent of the Global System of Mobile Communication (GSM) and its phenomenal growth.

### **3.0 MAIN CONTENTS**

#### **3.1 The Era of Government Control and Regulation**

Shortly after the attainment of independence in 1960, there was a need for the expansion of telecommunication network to meet the need of the fledging commercial and industrial growth of the young nation. With a population of roughly forty-five million people, Nigeria only had about 18,724 phone lines for use. This translated to a tele-density of about one telephone line per two thousand people. The telephone network consisted of one hundred and twenty-one exchanges of which one hundred and sixteen were of the manual (magneto) type and only five are automatic. Between 1960 and 1985, telecommunication services in Nigeria became commercialised and was controlled of the Department of Post and Telecommunications (P&T), under the Ministry of Communications. In the early 1980s, the Nigerian External Telecommunications (NET) was established to take care of external telecommunication services while the P&T was in charge of internal network.

By January 1985, the erstwhile Post and Telecommunications division merged with the NET to form Nigerian Telecommunications Limited (NITEL), a government-owned limited liability company. The objective of establishing NITEL was to harmonise the planning and coordination of the internal and external communications services, rationalise investments in telecoms development and provide accessible efficient and

affordable services. Regrettably, it was unable to meet the growing demands for telecommunications services by Nigerians. As earlier mentioned, at independence in 1960 the country had 18,724 telephone lines. Up until 2001 when the sector was deregulated, NITEL could not expand the installed capacity beyond 700,000 lines, thus limiting access to information and communication technology in Nigeria.

In addition to this, NITEL, the only national monopoly operator in the sector, was synonymous with epileptic services and bad management, which made telephone, back then, to be unreliable, congested and expensive and customer-friendly. As a result of the deficiencies and mounting complaints from Nigerians, the Nigerian Communication Commission (NCC) was established by Decree 75 of 1992. This was a step towards reforming and liberalising the telecommunication sector. The reforms include separation of the policy-making body from industry regulator and networks operators or service providers which started in 1996. Despite the huge potentials offered by the Nigerian telecoms market, progress was slow due to political uncertainties and perceived policy inconsistencies as NITEL still continued to retain monopoly over voice telephony in both national and long distance international calls.

### **3.2 Deregulation and the Era of GSM**

The establishment of the Nigerian Communications Commission (NCC) heralded the deregulation of the telecommunication sector in Nigeria as prescribed by Decree 75 of 1992. The Decree helped to liberalise terminal ends equipment and gave room for competition and private sector participation. The deregulation meant that the NITEL regime, which was characterised by epileptic and poor communication service, was over. The liberalisation of the sector ushered in the first Global System of Mobile Communication (GSM) operator and the award of the first Digital Mobile License (DML) in 2001. Since then, the sector has witnessed an unprecedented surge in investments (with over \$18 billion in investments from 2001 to 2015). The entry of new operators has also deepened the competition in the sector with the teeming subscriber base being better for it. Initiatives such as ‘number portability’ have also enriched

consumer experience by limiting hassles to accessing better services on a better preferred network.

It must be noted that the target of the NCC for the telecommunication industry was, among others, attainment of tele-density (number of telephone lines in relation to population) of 1.25% by the year 2008. Prior to this, Nigeria had the unenviable record as the world's third lowest, after Mongolia and Afghanistan, with a tele-density of 0.73% before 1999. However, the advent has brought about dramatic increase in the total number of lines from 866,782 in 1999, to over sixty million lines in 2008. Today, there are more than one hundred and fifty million mobile subscribers in Nigeria and many telecommunication companies. The most famous mobile networks in 2020 are MTN Nigeria (this company acquired Visafone in 2016), Airtel Nigeria, Glo Mobile and 9Mobile (formerly Etisalat).

The Communications Commission in Nigeria allowed selling internet service to citizens in 1996. It provided thirty-eight companies with a license to offer such services. The first firm to start the internet era was Linkserve Limited. This company turned out to become the first ISP (abbreviation stands for internet service provider) and is still one of the leading firms in the market. The Internet is still developing. It is mainly available in big cities with good infrastructure. But there is a non-governmental company, Nigeria Internet Group (NIG exists since 1995) that wants to provide all Nigerians with full internet access in all the corners of the country. The 1999 study showed that there were approximately one hundred thousand users of Internet in Nigeria. Just think of this. This number was over ninety-one million in 2017, according to Nigerian Communications Commission. The growth is so rapid and it will definitely continue in 2018. Some of the most popular internet providers in Nigeria today are IPNX Nigeria Limited, Smile Nigeria, CobraNet Limited, Swift Network Limited and Spectranet Nigeria.

#### **4.0 CONCLUSION**

A cursory look at the history of the telecommunication industry in Nigeria will reveal that the industry is very viable and has great potentials to contribute meaningfully to the growth and development. How it has grown and transformed from 1886 when telegraphic cables were run to link London to Lagos up until now is very phenomenal. It is hoped rather than stifle the growth of the industry through unnecessary and overbearing government regulations, the progress recorded thus far will be harnessed effectively for the further growth of the sector and economic development of the country

#### **5.0 SUMMARY**

This unit focused on the development and growth of the telecommunication sector of the Nigerian economy. It examined the period of government control and regulation of the industry between 1960 up till the 1980s when NITEL was founded. It submitted that the period was generally marked by inefficiency and poor services. As a result, the revocation of NITEL's monopoly and liberalisation of the telecommunications industry became inevitable. The coming of the Global System of Mobile Communication (GSM) as a result of the deregulation exercise in 1999 brought about a revolution of unparalleled impact of both the industry and the Nigerian economy in general. Nigeria is today a big market and a hub for telecommunications in West Africa.

#### **6.0 TUTOR-MARKED ASSIGNMENT**

1. Account for the growth of the telecommunications industry in the post independence period in Nigeria.
2. To what extent is NITEL central to government's agenda in the development of the telecommunications industry from 1985?
3. Examine the advent of the GSM era and its contributions to Nigeria's economy.
4. Would you say that the emergence of the Nigerian Communications Commission (NCC) and its regulatory role is responsible for the drastic growth of telecommunications in Nigeria?

## 7.0 REFERENCES/SUGGESTED READING

Arikpo, O. (1967). *The Development of Modern Nigeria*. Harmondsworth: Penguin

Books.

Tersoo, A. (2018). “History of Telecommunications in Nigeria.” Available online at URL

<https://www.legit.ng/1146671-history-telecommunication-nigeria.html>

Essays, UK. (2018). “Review of the Nigerian Telecommunications Industry.” Retrieved

from <https://www.ukessays.com/essays/business/review-of-the-nigerian-telecommunications-industry-business-essay.php?vref=1>

Ige, O. (2002). “Evolution of the Telecommunications Industry”. Retrieved from

[https://www.ncc.gov.ng/archived/speeches/telecomevolution-olawale\\_ige170402.pdf](https://www.ncc.gov.ng/archived/speeches/telecomevolution-olawale_ige170402.pdf)