

**ZAMBIA RAILWAYS AND THE ECONOMIC DEVELOPMENT OF
ZAMBIA, 1967-1991**

BY

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Fulfillment of the Requirements for the Degree of Master of Arts in
History**

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DECLARATION

I, **BEATRICE KAPANDA**, do declare that this dissertation was solely composed and written by me. Sources of information have been adequately acknowledged. This dissertation has not been submitted for a degree at the University of Zambia or any another university.

Signed.....

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APPROVAL

This dissertation by **Beatrice Kapanda** is approved as fulfilling the requirement for the award of the degree of Master of Arts in History by the University of Zambia.

EXAMINERS

NAME	SIGNATURE	DATE
1.....
2.....
3.....

DEDICATION

I dedicate this work to the memory of my dear late parents, Morgan Nonde Kapanda and Selita Mulenga Kapanda who never lived long to see my achievements in my education.

ACKNOWLEDGEMENTS

I give glory to God for my life and strength to work on this study. I am deeply grateful to my supervisor Mr. Friday E. Mulenga whose valuable advice, comments and suggestions made it possible for me to write this dissertation.

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I also wish to express my gratitude to the teaching staff in the Department of Historical and Archaeological Studies, especially Professor B. J. Phiri who co-ordinated our postgraduate programme, the late Professor M.C. Musambachime, Dr T.W.S. Kalusa, Dr W.S. Kalikiti, Dr E.K. Chiputa, Professor F.B. Musonda and Miss Dorothy Mwansa. Their comments and observations during my proposal presentation not only gave direction, but also gave me encouragement.

To the following institutions, Zambia Railways Archives, National Archives of Zambia, Zambia Consolidated Copper Mines Archives, United National Independence Party Archives and University of Zambia Library, my deepest appreciation for allowing me to consult the collections in their care.

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I finally wish to convey my heartfelt thanks to all those I interviewed and those who made comments on my work either positively or negatively as such comments improved my work.

ABBREVIATIONS

AAC	Anglo- American Corporation
AGIP	Azienda Generale Italian Petroli (Italian Oil Company)
B.R	Botswana Railways
BSA Co.	British South Africa Company
C.F.B	Caminho de Ferode Benguela Railways
C.F.M	Caminho de Ferro de, Mozambique
DRC	Democratic Republic of Congo
CNR	Canadian National Railways
CNDA	Canadian National Development Agency
FNDP	First National Development Plan
FRG	Federal Republic of Germany
GDP	Gross Domestic Product
MPTW	Ministry of Power, Transport and Works
MMD	Movement for Multiparty Democracy
NAMBOARD	National Agriculture Marketing Board
NCCM	Nchanga Consolidated Copper Mines
NCZ	Nitrogen Chemicals of Zambia
N.R.Z	National Railways of Zimbabwe
PSO	Public Service Obligation
RCM	Roan Copper Mines
RST	Roan Selection Trust Group TAZARA
Tanzania Zambia Railway Authority	UDI
Unilateral Declaration of Independence	UNIP
United National Independence Party	
USAID	United States Agency for International Development
URS	Unitary Railway System
S.A.T.S	South African Transport Services
S.C.Z	Societe National des Chemis de Ferode Benguela Railway

ZAMOX	Zambia Oxygen
ZIMCO	Zambia Industrial and Mining Corporation
ZRB	Zambia Railways Board
ZR	Zambia Railways
ZSC	Zambia Sugar Company

**OLD AND NEW NAMES OF SOME TOWNS REFERRED TO IN THE
DISCUSSION**

Old names

New names

Broken Hill

Kabwe

Zaire

Democratic Republic of Congo

Elizabethville

Lubumbashi

Northern Rhodesia

Zambia

Southern Rhodesia

Zimbabwe

Wankie

Hwange

ABSTRACT

The study has examined the history of Zambia Railways (ZR), its importance and performance in the economic development of Zambia from 1967-1991. It also examined the challenges that ZR faced during the same period. Historically, railway transport played a vital role in the economic activities of post-independence Zambia. Its capacity to transport goods in bulk has had a profound appeal especially in the major economic sectors of the country both locally and in foreign trade. Despite its crucial role in Zambia's economic activities little is known about ZR's importance and performance in the major economic sectors of Zambia. This has created a gap in the railway historiography of Zambia which this study attempts to fill. The study focused on the freight traffic as this is the major facility offered by ZR.

Both primary and secondary sources comprising numerical and textual data were used in achieving the objectives. Much of the information on which the study is based was derived from archival research, primarily in the ZR Archive in Kabwe, the National Archives of Zambia in Lusaka, and the United National Independence Party (UNIP) Archives in Lusaka, Zambia Consolidated Copper Mine (ZCCM) Archives in Ndola and Central Statistical Office in Lusaka

The findings of the study are that at the inception of ZR in 1967, the UNIP government made substantial investments in order to sustain it and improve its efficiency. The study argues that ZR's performance both locally and externally showed a steady rise in the first decade of its operations, but began to decline after 1976. The decline was mainly attributed to the world economic depression of the mid-1970s, which also affected ZR's major customers. Thus, the low production in the major economic activities of Zambia especially the mining sector which largely affected ZR's freight performance. The

downward trend continued well up to the 1991. ZR however, continued to dominate in the external trade transport sector, even in the face of heightened challenges from the road transport sector.

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CHAPTER ONE

INTRODUCTION

1.1 Historical background

Transport is a critical component of economic development in any nation. According to H. P. White and M. L. Senior, any economic progress would depend on the provision of transport facilities adequate for the level of economic development.¹ Adequate and efficient transport provides linkages between areas of production and markets, in addition to the facilitation of the movement of imports and exports in a country's economy.

Zambia is completely landlocked, and is also heavily dependent on trade with other countries. Therefore, information on transport routes is important to the understanding of the country's economy.² At independence the United National Independence Party (UNIP) government was quick to recognise the importance of developing the transport sector. This is clearly evidenced in the First National Development Plan (FNDP) 1966-70 which stated that "the functioning of the Zambian economy depended almost entirely on the transport routes to the sea".³ The government frequently claimed that development in this sector would inevitably bring prosperity to Zambia. The government thus designed policies in this field with the view to ensuring economic independence. Therefore, one of the objectives of the FNDP in 1966 was the development of the economic and social infrastructure which included roads and railways. Severally, the Government and the Party emphasised the importance of this industry. For instance, in 1975 it was stated that "transport was an essential service for the operation of the

¹ H.P. White and M.L. Senior, *Transport* (London: Longman, 1983), p. 101.

² M.B. Gleave, 'The Dar es Salam transport corridor: an appraisal', *African Affairs*, Vol. 91, no. 363 (1992), pp.249-267.

³ *Republic of Zambia, Economic Report* Three Finance Division, Office of the Vice President (Lusaka: Government Printers, 1968). See also R.M. Bostock, *The Transport Sector. Constraints on the Economic Development of Zambia*, 1971, p.327.

majority social and economical activities, industrialisation, trade, security and general administration of the country were all dependent on an efficient transport system”.⁴ In 1989 it was further reported that “Transport and Communications were fundamental pre-requisites to the process of socio-economic and political development”.⁵ Geoffrey Lungwangwa and Irene Sinyangwe also observed that:

Transport is an important service input to the other sectors of the national economy, both in bringing in raw materials and labour facilities production, and also in providing delivery service for the finished products.⁶

The main modes of transport in the immediate post-independence Zambia were rail, road, air and inland waterways. However, it was noted that most of the roads that were constructed in the period 1960-1970 were not well serviced by then.⁷ This therefore, was a big challenge to Zambia’s economy. For instance, it was reported that in 1968 the country had challenges in transporting imported goods through Dar-re-Salaam because the Great North road (known as the ‘Hell Run’) at times proved impassible. Furthermore, goods were frequently lost or damaged in transit.⁸ Road infrastructure began to improve after mid-1970s. Zambia Airways, which was established in 1967, was expensive and had a very low volume carrying capacity. As a result, railway transport which was capable of standing as a viable undertaking became an option for bulk movement of commodities.

Rail transport system moves goods in bulk over a long distance more than any other form of overland transport. It is also a well-known fact that if the railway infrastructure and

⁴ Republic of Zambia. Transport Statistics, 1975, p. i.

⁵ Republic of Zambia. New Economic Recovery Programme Fourth National Development Plan 1989-1993. January 1989. Office of the President, p. 236.

⁶ Geoffrey Lungwawa and Irene Sinyangwe, *Utilizing local Resources for Development* (Lusaka: The Professors World Peace Academy of Zambia, 1990), p. 178.

⁷ Hennie Masters, *Zambia Railways Traffic forecast study*. Netherlands Economic Institute. Rotterdam, June 1994, p. 5.

⁸ Douglass G. Anglin, ‘The Politics of transit routes in landlocked Southern Africa’, in Zdenek Cerenka (ed.), *Landlocked Countries of Africa* (The Scandinavian Institute of African States, 1973), p. 109.

rolling stock are well maintained they can reduce congestion, pressure on roads and consequently road maintenance costs. This can be linked to Benjamin Neumann's recent study which argues that rail transport, particularly for freight, can play a key role in the continent's development and that rail transport is cheaper than road transport, has a longer life span and a better carbon balance.⁹ Therefore, it became prudent for the government and its party to draw up a heavy programme for the expansion of the railways.¹⁰ In the same line John F. Due contends that:

Zambian leaders gave a higher important position to railways than roads in the national transport system because roads handle small amounts of traffic. To this effect the Zambian government regarded roads as supplementary to railway transportation. The use of roads for transporting copper exports was not adequate.¹¹

In this case, the UNIP government emphasised the use of Zambia Railways, which was wholly owned by the government of Zambia. It was set up to be the main carrier of especially minerals and supplies.¹² In this regard, rail transport was of great importance and advantageous to the Zambian economy which was copper-export oriented. A traffic wagon carried up to 10 times the volume of the largest trucking company, such as the Contract Haulage (CH) at that time.¹³

This study therefore, examined the importance of Zambia Railways (ZR) in the economic development of Zambia. In so doing, the study explored the factors that led to the establishment of ZR and the actions taken by the government to ensure its efficiency. It also assessed the performance of ZR transport in the economic activities of the

⁹ Benjamin Neumann, Private Sector and Development *MAGAZINE N' 09*/March 2011, p. 28.

¹⁰ *Zambian Review*, Vol. 6. No. 11 (July, 1969), p. 51. See also W.K. Nkowane, 'The Dynamics of Zambian Economy since independence: Selected Papers on Zambian Economic Development Planning Division, University of Zambia Seminar: November 1974, March 1975, p.10.

¹¹ John F. Due, 'The Problems of Rail Transport in Tropical Africa.' In *Journal of Developing Africa*, 13, 1979. pp. 385-386.

¹² Zambia Railways Corporate Information Pack- Corporate Planning Department, p.5.

¹³ Republic of Zambia. Fourth Railway Project, Staff Appraisal Report, December, 06, 1984. Annex 2 pages 4 of 5.

country. The study focused on the freight traffic as this was ZR's main goal. The period of study starts from 1967 which marked the formation of ZR after the dissolution of the Unitary Railway System which was jointly owned by Southern Rhodesia and Zambia. Additionally, it was a period when copper-export in Zambia was high. The study ends in 1991, which marked the end of the UNIP government which saw the formation of Zambia's first independent rail corporation. In November 1991, Movement for Multi-Party Democracy (M.M.D) came into power and embraced the policy of liberalisation and privatisation which brought about a lot of changes in the transport sector, some of which contributed to the reduction of ZR traffic.

As reported by the FNDP, Zambia developed as an integral part of Southern region, and its rail line was historically interlinked within the same region.¹⁴ Zambia is connected to the Atlantic and Indian Ocean Ports by long railway systems which pass through the former colonial and white dominated territories. Thus, the significance of Zambia Railways cannot be fully appreciated without making reference to the historical background of the railways in Southern Africa.

The rail age in Southern Africa was the period between 1890 and 1920.¹⁵ This was the period of massive construction of the railways by the colonial powers. When the colonial powers established their rule in Africa, they saw it wise to construct the railways in order to expand their economic control. According to Ayandele, and others:

It was only by building railways that transport costs could be reduced sufficiently to bring European manufactured goods into the heart of the continent and to take out of Africa mineral resources on a large scale for export.¹⁶

¹⁴ Republic of Zambia. *First National Development Plan 1966-70* (Lusaka: Office of National Development and Planning, 1966), p. 30.

¹⁵ B. E. D' Erlanger, *History of the Construction and Finance of the Rhodesia system* (London: Borup Mathienson, 1939), p. 5.

¹⁶ E. A. Ayandele, J.D Omer Copper, R.J Gavin and A.E Afigbo, *The Making of Modern Africa Vol. 2: The*

As a result of Cecil Rhodes' imperial desires to connect the Cape to Cairo, the railway line in Southern Africa was started in 1893 at Vryburg in South Africa and reached Bulawayo in Southern Rhodesia in 1904.¹⁷ In 1906 the line reached Broken Hill (Kabwe). Lead and Zinc was the impetus for extending the railway line to Broken Hill. Later, the line reached Ndola in 1909 and extended to Katanga to the north of Northern Rhodesia.

The existence of the rich copper deposits in Northern Rhodesia attracted more colonial investments in the rail transport in the area. Consequently, freight branch lines were constructed. These ran to the Copperbelt towns and from Ndola to Elizabethville (Lubumbashi) in Congo via Sakania and from there onto the Benguela Railway up to Lobito Bay in Angola. One branch line connected from Ndola to Luanshya, connecting to Roan Antelope copper mines which opened for traffic in 1929. In the same year another line was constructed which connected Mokambo to Mufulira.

From the above observations, it is correct to state that the rail lines pointed to areas in the interior where there were some mineral deposits that attracted investment. In line with this, Martin Bailey noted that railways were originally built in areas thought to have good prospects.¹⁸ This is a clear indication of the significance of the railways to the mining industry. Therefore, the development of mining and railways are closely related in many ways. Similarly, Mutukwa argues that "mineral prospects were sufficiently lucrative to warrant the investment needed to establish simultaneously a mining and a railway industry".¹⁹ Kenneth P. Vickery also observed the importance of the rail lines in

Late Nineteenth Century to the Present Day (London: Longman, 1971), p. 316.

¹⁷ Lilian Kasamba Kaoma Nanchengwa, 'A History of Public Road Transport in Lusaka, 1889-1987', M.A. Dissertation, University of Zambia, 1990. p. 15.

¹⁸ Martin Bailey, *Freedom Railway. China and Tanzania- Zambia Link* (London: Rex Collings, 1976), p. 11.

¹⁹ Kasuka S. Mutukwa, *Politics of the Tanzania-Zambia Railway Project: A Study of Tanzania- China- Zambia Relations* (Washington D. C: University Press of America, 1979), p. 25.

the colonial period and post-independence Central Africa by stating that, “the rail lines facilitated and again symbolised transformation of export-oriented economies, the legacy of which arguably remains the continent’s greatest economic reality”.²⁰ This observation indicates the significance of Zambia Railways in the transportation of minerals for export on which the country depended on economically.

1.2 Location and Extent of Zambia Railways

Zambia lies north of the Zambezi River in the southern half of the African continent. It is both large and landlocked, with a land area of 752, 618 kilometres².²¹ It shares borders with Zimbabwe and Botswana in the south, Namibia in the south west, Angola in the west, Democratic Republic of Congo (DRC) formerly Zaire in the north, Tanzania in the north east, Malawi in the east and Mozambique in the south east. The ZR system passes through Southern, Central and Copperbelt provinces intersecting the country almost into two halves. Along this line were grouped most of the country’s major economic activities such as commerce, industry, agriculture and mining sectors.

At inception, ZR comprised a main line of 848 kilometres. The line stretched from the Zimbabwe border in the south east of the country; extending northwards through Livingstone, Kalomo, Choma, Monze, Mazabuka, Kafue, Lusaka, Kabwe, Kapiri Mposhi and Ndola up to the border with the DRC (former Zaire) at Sakania. In addition, ZR operated some 186 kilometres of branch lines on the Copperbelt connecting most of the major mining towns as shown in map 1 on page 7. The other branch lines are in Southern province. These are Livingstone-Mulobezi branch line which is 168 kilometres

²⁰ Kenneth P. Vickery, ‘Railways, Railway outline and Industrial work discipline in the Rhodesias’ in Robert Ross, Marja Hinfelaar and Iva Resa (eds.), *The Objects of Life in Central Africa. The History of Consumption and Social Change, 1840-1980* (Boston: Rill, 2013), p.115.

²¹ Maters, *ZR Traffic Forecast study*, p. 4.

and the Choma-Masuku branch line with a distance of 65 kilometres. The headquarters was located at Kabwe in Central Zambia. Map 1 on page 7 shows the extent of ZR.

MAP 1: Location of Zambia Railways and Tanzania-Zambia Railway Authority (TAZARA)



Source: ZRL Archives

The ZR system is also part of the Southern African Railways network which to the north links up, via Societe National des Chemis de Fer Zarois (S.C.Z), with Caminho de Ferode Benguela Railway (C.F.B) to the Angolan port of Lobito. To the south it links, via National Railways of Zimbabwe (N.R.Z) with the following, Botswana Railway (B.R), South African Transport Services (S.A.T.S), Caminho de Ferro de, Mozambique (C.FM). Therefore, the landlocked nature of the country makes it a very important transport hub for the sub-region. In this regard, ZR has been viewed as one of the major hubs of contiguous railway system of Southern Africa.²²

Geographically, ZR was divided into three zones namely:

1. Southern- (Livingstone to Nega-Nega) transported agricultural products and coal.
2. Central-(Kafue to Kapiri Mposhi) included the nation's capital, Lusaka. This district contained food processing, industrial, chemicals and construction material and lead and zinc mining, of which ZR was the main transporter.
3. Northern-described as the Copperbelt, contains the mines, smelters, refineries. This was also a construction material and industrial base, including mechanical and equipment dealers. The Indeni Oil refinery and Ndola Lime and Ndola cement are also located in the Northern division.²³

The economic activities in these zones thus had an influence on the traffic of ZR. This study therefore, agrees with Sir Charles, the Commissioner of the East African Protectorate who wrote in 1901 that, “the prosperity of a railway depends on the prosperity of the country through which it passes ... in reality a railway is intimately connected with its surroundings”.²⁴

²² ZR Limited. Ten (10) Year Development Plan, Southern Transport and Communications (SATCC), January, 1990, p .13.

²³ ZR Marketing. Commercial Development and Planning. August, 1977, p. 3.

²⁴ Jack Ensoll, 'The Railway and the farmer', Vol. VIII. No. 8. *Journal of the East African Railways and Harbors*, (1969), p.183.

1.3 Statement of the Problem

Zambia Railways (ZR) was the first railway corporation and one of the largest transporting systems in post-independence Zambia. It had an important role in Zambia's social-economic development considering the fact that the country is landlocked. From inception both the Party and Government referred to it as the economic 'backbone' or "the life-line of the country along which a great variety of goods needed by a developing country flowed."²⁵ Therefore, when ZR was formed, the United National Independence Party (UNIP) government made substantial investments in the railways for its sustenance and effective operations. However, despite ZR's critical role in the country, scholars have spent little time assessing its performance in the country's economic development. Existing historiography on ZR has shown that very often, writers have only made reference to ZR without necessarily assessing its importance and performance in the country's economy.

This study is, therefore, an attempt to fill the gap by conducting a comprehensive study on ZR under the control of UNIP Government by assessing its performance in the economic development of Zambia. In this study economic development is discussed in the context of the economic activities of Zambia. The study's focus is on ZR's economic performance, which involves its contribution to the economy through effective transportation services.

²⁵ NAZ MCT 1/11/48 LOC 4339 Railways Public Relations Office. Railways Serve Zambia's Expanding Economy. See also Rail News 1977, The Chief Executive General Manager stressed the importance of ZR to the nations' main economic activities, p. 4.

1.4 Objectives

The study intended to:

1. Examine the establishment of Zambia Railways.
2. Assess the importance and performance of Zambia Railways on the economic development of Zambia.
3. Examine the challenges that were faced by Zambia Railways from 1967 to 1991.

1.5 Rationale

The rationale for undertaking this study lies in the fact that it is the first of its kind on ZR. Therefore, this study is justified because it will fill a gap in Zambia's historiography. The significance of ZR in Zambia's economic activities has received brief and insufficient examination by scholars.

It is also hoped that this study, which has raised a number of issues relating to ZR will provide valuable information and benchmark literature to scholars who may wish to carry out further studies related to the subject in question.

Understanding the importance of ZR in the economic development of Zambia would also help people in general and those in authority in particular, to appreciate the value of rail transport.

1.6 Literature Review

A survey of literature shows that a lot has been written on the railways both at international level and across the African continent. Some of these studies as discussed below have demonstrated that railway transport plays a crucial role in shaping the economic destiny of a nation. This study is largely informed by works done on the railways in other countries because very few studies have been conducted on ZR. These

few studies include the earliest articles on the railways of Central and East Africa done by John Due and the recent studies by Mobin Bulaya and Henry Sakala whose works mainly focused on the Concession period of the ZR from 2003-2011.

John's work is informative to this study in that it aids in appreciating the crucial role that rail transport plays in the economic development of a nation. John informs us that the railways in India played a critical role in the successful development of industries by providing cheap and speedy necessary transportation facilities for raw materials such as coal into factories and mines.²⁶ Similarly, John R. Kellet's study on the Victorian Cities argues that the railway system was the principal means of cheap and speedy transportation for moving raw materials from the mines to the manufacturing centres.²⁷ The two works were used to investigate the efficiency of ZR freight services in the mining industry.

A.M. O'Connor's work is of great help to this study, because it brings to the fore the importance of the railway facilities as factors influencing the distribution of economic activities in Uganda.²⁸ His work highlights the value of the rail transport to industrial sectors. He shows the significance of the railways in the agricultural sector specifically in the transportation of cash crops such as cotton and coffee.²⁹ He further contends that, rail transport played a significant role in the copper industry which was another major economic activity and stood third in value among exports.³⁰ This is an informative study from which this research benefited because it generally assesses the importance of rail

²⁶ J. John, *The Economics of Indian Rail Transport* (New Delhi: Allied Publishers Private Limited, 1963), p. 99.

²⁷ John R. Kellet, *The Impact of Railways on the Victorian Cities* (London: Routledge and Kegan Paul, 1969), p. 2.

²⁸ A. M. O'Connor, *Railways and Development in Uganda. A Study in Economic Geography* (London: Oxford University Press, 1965), p. vii.

²⁹ O'Connor, *Railways and Development in Uganda*. p. 33.

³⁰ O'Connor, *Railways and Development in Uganda*. p. 33.

facilities as a driving factor in economic growth. It explained the functions of the railways in the mining and agriculture sectors. The data in this study is directly relevant to our study in that O'Connor's findings were used to examine the effectiveness of ZR's performance in the major economic activities of Zambia.

There have also been studies undertaken to examine the significance and challenges of rail transport. These include the study by Daniel A. Amuwe and Jonathan Danladi on the Nigerian Transport sector. Their works show the significance of good transport in the development of a country.³¹ Internally, rail transportation was considered the oldest, the greatest carrying capacity and the cheapest mode of transportation for heavy traffic flows in Nigeria.³² Furthermore, Amuwe and Danladi argue that, like many other African countries the performance of the Nigerian railway system began to show a downward trend in performance after the first decade of its operations in the 1970s. Their work described the challenges faced by the railway system, citing poor infrastructure and poor track equipment as major problems.³³

R.T. Oganda made similar observations about the railways in Kenya. He argued that, shortages of locomotives and rolling stocks due to financial challenges were among the major challenges faced by the rail transport in Kenya.³⁴ Kenya railways, like other rail systems in Africa also faced competition from the road sector. He contends that, the completion of Mombasa-Nairobi road in 1968 intensified the rail-transportation competition.³⁵ The two works above were of importance to our study since they both

³¹ Daniel A. Amuwe and Jonathan D. Danladi, 'An Appraisal of the Nigerian Transport Sector: Evidence from the Railway and Aviation Sub-sectors, *Journal of Economics and Sustainable Development* .Vol. 4. No. 2013, p. 161.

³² Amuwe and Danladi, 'An Appraisal of the Nigerian Transport Sector', p. 162.

³³ Amuwe and Danladi, 'An Appraisal of the Nigerian Transport Sector', p.164.

³⁴ R.T. Oganda, 'Post-Independence Trends in Development of Transport and Communications' in William Robert Ochieng and Robert Maxon Laxon (eds.), *An Economic History of Kenya* (Nairobi: East African Educational Publishers Limited, 1992), p. 315.

³⁵ Oganda, 'Post- Independence Trends in Development of Transport and Communications'. 315.

highlighted the major challenges in the Nigerian and Kenyan railways, which are also our concern. The findings of the studies were used in addressing the challenges of rail transport. The studies also gave a comparative perspective on railways in Africa.

The study by C.G. Alan Best on Swaziland's railways system is of relevance to this study as it evaluates the railway's possible impact upon the country's primary and secondary industries.³⁶ He noted that, the railways provided a cheaper and more efficient means of transport for sugar, citrus and livestock products.³⁷ The study has also highlighted on the significance of the rail transport in the coal industry and has also given justifications for the construction of branch lines to connect to coal fields, which are also our concern. The analysis put forward by this study formed a useful framework for examining the significance of ZR's branch rail lines and sidings. The study further used the analysis to investigate the performance of ZR in the transportation of raw sugar from Nakambala Sugar Estate to the refinery companies.

The work of Bertha Zimba, Osei-Hwedie and Kwaku Osei Hwedie on the Tanzania-Zambia Railroad which examines the utility in the development of the economies of Zambia and Tanzania is also important to this study. Their argument is that, transportation is considered as a means of promoting development objectives.³⁸ To this effect, investment must be made in the sector. They further argue that, the railways served the Zambian copper industry since colonial days³⁹ and that after independence Zambia continued using the railways to transport her exports and imports. In addition, they observe that "TAZARA" which was constructed with a lot of enthusiasm and

³⁶ C.G. Alan Best, *The Swaziland Railways: A Study in Political-Economic Geography* (Michigan: Michigan State University, 1969), p. 7.

³⁷ Best, *The Swaziland Railways: A Study in Political-Economic Geography*, p. 205.

³⁸ Bertha Zimba Osei- Hwedie and Kwaku Osei-Hwedie, *Tanzania-Zambia Railroad (Tazara): An Analysis of Zambia Decision- Making in Transportation*. (Lusaka: Brunswick Publishing Corporation, 1990), p. 6.

³⁹ Hwedie, *Tanzania- Zambia Railroad (Tazara)*, p. 37.

expectations has not stimulated either industrial or agricultural development along the line of rail".⁴⁰ The work is critical to our study as it invokes our interest in the investments made by the Zambian government in ZR to enhance its efficiency. Like the works done by J. John discussed above it will help us examine the effectiveness of ZR's services in the mining industry.

Another work significant to our study is the one done by Kanduza who discussed how the rating system of Rhodesia Railways and the customs agreements during the colonial period negatively affected the settler maize and cattle farming along the line of rail in Northern Rhodesia.⁴¹ The rail rates were low in Southern Rhodesia thus, favoring the farmers in the territory. He observed that, agricultural products in particular maize, maize meal and beef were carried at lowest class rates. He further notes that, the RR was prompted to reduce rates as these facilitated exports and helped Southern Rhodesia farming industry. This study is of vital importance as it raises the question of ZR rates and tariffs on the commodities transported. This study will therefore, investigate how cost effective ZR rates and tariffs were.

Another work which was of much use was that done by Anthony H. Croxton,⁴² which gave a well detailed and clear description of the construction and development of the railways in Southern Africa. Croxton further states the significance of the railways in colonial Southern Africa. Equally, the work by Bailey argues that, access to the rail transport in Southern Africa was required for the exploitation of minerals and that the rail line in Northern Rhodesia which was extended to the copperbelt was the backbone of

⁴⁰ Hwedie, *Tanzania-Zambia Railroad (Tazara)*, p. 85.

⁴¹ A.M. Kanduza, 'The Impact of Rail Rates and Customs agreement on Settler farming in Northern Rhodesia, 1910-1939: The Case of Maize Cattle farming', M.A Dissertation, University of Zambia, 1979, p. 1.

⁴² Anthony H. Croxton, *Railways of Rhodesia: The Study of Beira, Mashonaland and Rhodesia Railways* (New Abbot: David and Charles, 1973).

the territory.⁴³ The two works provide an appreciable amount of information on the history of the railways in Southern Africa with specific reference to RR from which ZR broke off. It provides the basis of this study to make a follow up on ZRs' significance in the economic development of Zambia after 1967.

Furthermore, a number of works consulted have shown that the Unilateral Declaration of Independence (UDI) of Southern Rhodesia contributed to the formation of ZR. Among these works was that done by Richard L. Sklar, who contends that "the rapture of the established railway relations occurred after UDI as a result of Zambia's attempt to implement financial sanctions against Rhodesia."⁴⁴ Bailey shares the view⁴⁵ and further gives a glimpse of the effects of the UDI on the operations of ZR after 1973.⁴⁶ The works are valuable to this research as they provide data leading to the formation of ZR which is also our concern. The works also drew our attention to some of the ways in which ZR's freight services were affected by the UDI.

Mulenga's work is relevant to our study in that it provides insights into the genesis and dynamics of the African workers in Rail Rhodesia (RR). Mulenga argues that, Europeans by virtue of being Europeans were placed in supervisory categories over the African workers.⁴⁷ He observes further that skilled and semi-skilled jobs were reserved for Europeans.⁴⁸ It is from his work that this study obtains a clear understanding of why RR employed more Europeans than Africans. The study widened this research's perspective on the challenge of skilled manpower in ZR at its inception.

⁴³ Bailey, *Freedom Railways*, p. 11

⁴⁴ Richard L. Sklar, 'Zambia's Response to the Rhodesian Unilateral Declaration of Independence' in William Tordoff (ed.), *Politics in Zambia* (Berkeley: University of California, 1974), p.329.

⁴⁵ Bailey, *Freedom Railways*, p. 25.

⁴⁶ Bailey, *Freedom Railways*, p. 27.

⁴⁷ F. E. Mulenga, 'The Development of Worker Consciousness among the African Railway Workers in Zambia, 1953-1972,' M.A Dissertation, University of Zambia, 1987, p, 53.

⁴⁸ Mulenga, 'The Development of Worker Consciousness among the African Railway Workers in Zambia, 1953- 1972', p. 97.

This work also appreciates one of the recent studies undertaken by Mobin Bulaya on ZR. Though his study focuses on the period when ZR was put under Concession in 2003, it availed valuable information on the strategic importance of ZR and also briefly highlighted some of ZR's internal challenges.⁴⁹ This present research benefited from Bulaya's work as it also examines the challenges faced by ZR from 1967-1991. Bulaya's work also provides some of the important sources regarding ZR's operations.

John Due's articles on the railways in Central and East Africa particularly Tanzania, Zimbabwe, Zambia and Sudan were equally useful to this study. Due acknowledges the fact that the railways in Commonwealth tropical Africa were playing a significant role in the economies of the countries at the time of independence.⁵⁰ He further briefly shades light on the significance of ZR in the external trade of Zambia in the 1970s. Due's work is direct relevant to the present study because it provides some of the earliest sources regarding the railways in Central Africa and gives us a general overview of the significance of ZR in Zambia's economy. However, his works and later works on ZR do not delve into the history and neither do they seek to explain in detail the performance of ZR from inception both internally and externally. Due further noted the lack of information on ZR and economic development of Zambia in the railway historiography.⁵¹ This becomes the basis of our research to extensively examine the emergency of ZR and assess its performance on the Zambian economic activities.

⁴⁹ Mobin Bulaya, 'The Effectiveness of Rehabilitate-Operate-Transfer (R.O.T) Mode of Railway Concession: The Case study of Zambia Railways', MBA Dissertation, Copperbelt University, 2007, p.23.

⁵⁰ John F. Due, 'Some Observations on Rail and Road Transport in Commonwealth Tropical Africa' Transportation Research Paper "14" 392 University of Illinois at Urban- Champaign April 6, 1977, p.1.

⁵¹ Due, 'Some Observations on Rail and Road Transport in Commonwealth Tropical Africa', p. 32.

1.7 Methodology

This study employed qualitative and partly quantitative approaches as part of the latter analysis was based on statistical data, representing the tonnages carried by Zambia Railways.

The collection of data for this study was done between September 2014 and April 2015. Data was collected from both primary and secondary sources from various institutions. These comprised numeric and textual data. Initially, the research was conducted from the University of Zambia library where both the published and unpublished sources were consulted. The published sources consulted included books and articles, were as the unpublished were the dissertations and theses.

The published primary sources from the University library included Zambia Economic Annual Reports and those of the Ministry of Finance produced by the Bank of Zambia.

The second stage of the research was carried out at Zambia Railways Archives in Kabwe. Zambia Railways Archives being a new establishment, a few challenges were encountered. This is because a number of files were not indexed at the time of the research. It was difficult to find some numerical data especially for the first four years of ZRs' operations, possibly because the figures were not collected at the time. To this effect there are some gaps for 1967, in the narrative. Despite this challenge information was collected from a few files and largely from unpublished Zambia Railways documents such as marketing focus reports and World Bank reports. More information was also obtained from Zambia Railways Annual reports and the Rail news magazines.

Stage three of the data collection was done at the United National Independence Party (UNIP) Archives in Lusaka. From this archive, Ministry of Transport reports and UNIP secretariat files were consulted.

The fourth and last stage of the data collection was done at the Zambia Consolidated Copper Mines (ZCCM) Archives in Ndola. We consulted primary sources which included files on the mines, ZCCM magazines and newspapers. Research was also conducted at Central Statistical Office in Lusaka. The documents at Central Statistical Office provided us with official statistics on ZR's tonnages and other data pertaining to its operations. Finally, to supplement the primary and secondary data, an open-ended interview was adopted in which two former locomotive drivers and one Freight Traffic Sales Clerk who served ZR during the period under study were allowed to comment freely on the performance of ZR in the past. This was followed by data analysis and writing of the dissertation.

1.8 Organisation of the Study

The study is divided into five chapters. The first chapter is a general background, it is an over view chapter which points out the importance of transport in any developing country. It also shows the importance of the railroads and the background of the rail construction in Southern Africa. The second chapter looks at the establishment of Zambia Railways after the breakup of the Unitary System in 1967. It also highlights on the expansionists programmes put in place to ensure efficiency in the operations of ZR. Chapter Three examines the importance and performance of Zambia Railways facilities in the context of the economic activities of the country. The fourth chapter discusses the internal and external constraints faced by Zambia Railways between 1967 and 1991. The last chapter is the conclusion which summarizes the main arguments of the study.

1.9 Conclusion

This chapter highlighted the importance of transport in the development of any nation. It is noted that the railways were originally constructed by the colonial powers for their

own interests, both economically and politically. They preferred rail transport because it was a bulky carrier and cheap. The railways were mostly connected to mining areas with minerals such as copper, gold, zinc, lead and diamond. We further noted that, at independence UNIP government preferred rail transport because of its large carrying capacity. We also noted that academic work on ZR is limited. This leaves a very big gap in the historiography of railway transport in Zambia. In this regard, this study depended on works from other countries.

CHAPTER TWO

ESTABLISHMENT AND EXPANSION OF ZAMBIA RAILWAYS

2.1 Introduction

This chapter examines the establishment of Zambia Railways (ZR). In so doing the chapter attempts to show the importance of ZR and examines the measures that the United National Independence Party (UNIP) government put in place to sustain the organisation which was considered to be the backbone of the country. Therefore, the chapter argues that it was justifiable for the government to invest in the railways as it was left in a dilapidated state at the time of breakup of the Unitary Railway System (Railway system owned by Southern Rhodesia and Zambia from 1964-1967). Following Zambia's independence, the country needed an efficient railroad for copper exports and imports for the other growing industries in the country. The chapter further observes that ZR came to be one of the largest employers in the transport sector, during the UNIP era as it had a good number of workers in all the stations and sub-stations.

2.2 Background of Zambia Railways

Prior to the formation of ZR, "Rhodesia Railways (RR) served both Southern and Northern Rhodesia and the system was the Central African Federation's transportation backbone and largest single employer".¹ RR had been the main transporter of copper, fuel and supplies to and from the Copperbelt.² What is now ZR was formerly the North-Western region of RR, with Kabwe serving as the regional Headquarters. When the Federation of Rhodesia and Nyasaland was dissolved in 1963, the RR system came to be known as the Unitary Railway System. The System was jointly owned by the Southern and Northern Rhodesian governments. The two governments became equal partners in

¹ Kenneth P. Vickery, 'The Rhodesia Railways African Strike of 1945, Part 1: A narrative Account.' *Journal of Southern African Studies*. Vol.24, 3, (1998), pp. 545-560.

² ZCCM Archives ZR Miscellaneous. ZR Progress Report 1969.

the \$100 million investment.³ A solemn covenant in the form of an Agreement between the two countries provided for the organisation and operation of the Railways. Below is part of the agreement made between the two governments:

IT IS HEREBY AGREED

The Rhodesia Railways (here in after referred to as the Railways) will continue under the immediate control of a Board of management (here in after referred to as the Board), which will be responsible on behalf of the two Governments for the performance of the Railways functions.⁴

Despite this agreement, the Unitary Railway System was practically managed by the white administration based at the headquarters in Bulawayo. As Annette Pinkeny states:

Prior to 1967, all capital investments on the rail system concentrated on the Rhodesian side. Additional investments were made to RR with the Zambian copper providing a large portion of the revenues of the system.⁵

Richard L. Sklar adds that “the Zambian mining companies alone paid rates in excess of K2 million per month to RR for the export of copper”.⁶ The Northern Rhodesian portion of RR suffered deliberate and calculated neglect in the operating ration of the railway rising from 81.9% in 1964 to 106% in 1967.⁷

Following the independence of Zambia (Northern Rhodesia) in 1964, the operations of the Railways as a single entity became impossible. This was attributed to the differences between the whites in Rhodesia and the Zambian government over the running of RR.

The problem was exacerbated by the illegal Unilateral Declaration of Independence

³ N.A.Z. MCT1/11/48 Loc 4339 Railways Public Relations Office. Railways Serve Zambia's Expanding Economy 1966.

⁴ Rhodesia Railways Division of the Unitary System Vol. iii Appendices. Maxwell Stamp (Africa Limited) April 1967. See also Richard L. Sklar, 'Zambia's response to the Rhodesian Unilateral declaration of Independence', in William Tordoff, *Politics in Zambia* (Berkeley: University of California Press, 1974) Under the inter- governmental agreement, the two countries were equally responsible for the assets and liabilities of the enterprise. p. 227.

⁵ Annette Pinkney, "Final Report. Survey of the Transport-Communication Sector". Occasional Paper No. 12. University of Michigan. 20th January, 1972, p. 5.

⁶ Richard L. Sklar, 'Zambia's response to the Rhodesian Unilateral Declaration of Independence', p. 329.

⁷ *ZR Rail news*, Third Quarter 1978. p. 3.

(UDI) in 1965. A number of conflicts between the two governments continued to be experienced.

The study noted that pending the dissolution of the Central African Federation, Southern and Northern Rhodesia agreed to recognise the existing arrangements for the movements of their external trade over RR. The arrangement proposed “restrictions on moves by either party, likely to divert trade for RR”.⁸ This arrangement later had repercussions on the newly independent Zambia as the discussion which follows will show.

In October, 1965, it was reported that Rhodesia seized and held a \$ 150,000 consignment of equipment for the Zambian Army. In addition, on 18th December, 1965 by order of the Rhodesian Regime the movement of the petrol tank cars from Rhodesia to Zambia was prevented from doing so.⁹ Due to this action, the Rhodesians were denying Zambia transit traffic rights for Petroleum Oil which originated outside Rhodesia. The railway agreements placed Zambia in a vulnerable strategic position and allowed RR to take advantage of their monopoly of Zambian external trade.

The Zambian government which was in a hurry to develop the economy was prompted to embark on other means of transporting fuel into the country and exporting copper. “Zambia diverted copper exports away from RR by use of an air lift and road transport to Tanzania, via Malawi Railways to Lobito Bay”.¹⁰ To this effect, Ian Smith’s regime accused Zambia of breaking the inter-governmental agreement on RR by airlifting

⁸ ZCCM Archives 95. 4-19. 8F ZR Miscellaneous, Contingence Planning in Zambia. For Details on the agreements see also R. Doganis, ‘Zambia’s Outlet to the sea. A case study in Colonial transport Development’, *Journal of Economics and policy*, Vol. 1, no. 1, January (1967), pp. 46-51.

⁹ Times of Zambia, 1966.

¹⁰ NAHZ LOC 4309 MPTW /111/4/1 ZR. Seminar Conferences and Meetings. International Seminar on Modern Railway Operation and Traction, Berlin-Tegel, West Germany 21st May -16th June, 1970.

copper exports away from RR and transporting fuel through other countries other than Rhodesia.¹¹

Other than the repercussions of the Agreements discussed above, the Zambian government and the white dominated Southern Rhodesia government had different viewpoints particularly as regards the staffing and the management of the railway system. Racial policies in the Unitary Railway System were constantly experienced. Mulenga argues that “in spite of the 1960 advancement Agreement, colour and race were still at work and salaries and wages were fixed on this basis”.¹² For instance, in 1965 the Rhodesians serving in Zambia refused to work or train Zambians in line with Zambia’s intentions and policy of Zambianisation. It is reported that:

A meeting held on 8th November, 1965 between the Rhodesian and Zambian government centered its discussions around payments for costs associated with Zambianisation, training, and additional allowances payable to non-Zambian railway workers in Zambia. Zambia could not accept that she had to pay these costs alone. Rhodesia was against the matter going to arbitration and wanted immediate examination into ending the Unitary Railway System.¹³

Tensions continued between the Zambian government and the Smith regime over the running of the Unitary Railway System. Consequently, “Zambia’s economic development was affected because at the time Zambia’s economy was inextricably intertwined with Rhodesia’s economy”.¹⁴ The pattern of the colonial transport system in Rhodesia made it impossible to develop trade links with neighboring countries. The FNDP reported that “the transport routes to the south were already proving inadequate for the greatly increased traffic resulting from Zambia’s rapid economic development

¹¹ Times of Zambia, 31st March, 1966.

¹² Mulenga, “The Development of Worker Consciousness among the African Railway Workers in Zambia, 1953-1972”, p. 103.

¹³ Peter Arnold, *Zambian Review*, January 1969, p. 6.

¹⁴ Clarence Chongo, *The Impact of Rhodesia’s Unilateral Declaration of Independence (UDI) on Zambia’s Economic and Social-Political Developments, 1965-1979’*, M.A Dissertation, University of Zambia, 2009, p. 26.

since independence”.¹⁵ But Zambia’s vulnerable landlocked nature made the country to continue using the Southern route particularly for its external trade which passed through Rhodesia and the port of Beira in Mozambique.

In line with sanctions against the Smith regime, in April 1966, Zambia was obliged through the application of exchange control, to disallow the payment of K2 million a month to Rhodesia for rail services.¹⁶ Bailey argues that the Smith regime “claimed that this move was intended to deny their government an important source of funds”.¹⁷ The regime leaders, in particular Smith and Brigadier Andrew Dunlop, Minister of Transport in Southern Rhodesia further accused the Zambian government of political interference in the running of RR. The regime leaders also made a clear threat that the regime would destroy the joint operations of the RR unless Zambia co-operates. Brigadier Dunlop claimed that “Zambian Ministers were also refusing to meet the higher authority on the railways, thereby frustrating its proper functions”.¹⁸

These and similar actions clearly infringed the Agreement and the principles of joint ownership of the Unitary System quite apart from interference with the normal operation of the Railways which would have severe financial repercussions. The facts given clearly indicate that the converse is the case that political interference in Rhodesia had resulted in the Railways operating against the interests of Zambia.

The Zambian government noted that the effects of the UDI on the Zambian economy continued to plague the industrial sector during 1967. According to the annual reports of the Ministry of Commerce, “trade routes and capacity remained a major bottleneck resulting in the irregular supply of industrial equipment and raw materials which were

¹⁵ *Republic of Zambia*. First National Development Plan (FNDP) 1966-70, p. 30.

¹⁶ Arnold, *Zambian Review*, January 1969, p. 6.

¹⁷ Bailey, *Freedom Railway*, p. 28.

¹⁸ *Times of Zambia*, March 31, 1966.

not available locally.”¹⁹ Realising the dilemma, the Zambian government decided to take charge of the Zambian portion of the railway by breaking away from the Unitary System in 1967 to form ZR.

Zambia Railways Board (ZRB) was incorporated by the Act of 1967 which became effective on July 1st, 1967 to replace the Unitary System in Zambia.²⁰ It became a statutory Corporation under the provisions of the ZR Act.²¹

The basic transport policy objectives for the Zambian Government were to provide services which every citizen throughout the country could afford and to ensure uninterrupted import-export traffic flow.²² When ZR was established, its policy and set up became the responsibility of the Ministry of Power, Transport and Works (MPTW). This was in accordance with the ZR Act of 1967 Section 12, which states that “the Zambia Railways Board (ZRB) shall not exercise any of its powers without the prior consent and approval of the Minister, especially in any important question of rail policy....”²³

The formation of an independent ZRB was a landmark in Zambia’s mono-economy of copper export. The argument is based on the fact that:

The economic development in Zambia had been adversely affected by the lack of adequate transportation routes to and from the sea. The stresses and strains imposed by UDI and the process of disengagement from the Southern Rhodesian economy had been the root cause of the transport crises which Zambia was faced with during the first five years of independence.²⁴

¹⁹ Republic of Zambia. Annual Report of the Ministry of Commerce, Industry and Foreign Trade, 1967, p. 10.

²⁰ *World Bank Report No. 2541-ZA*. Zambia Third Railway Project Staff Appraisal Report November, 26, 1974, p. 7.

²¹ *ZR Rail news*, Fourth Quarter, 1976, p. 3.

²² World Bank Report No. 84/a ZA. Republic of Zambia. Agriculture and Rural Sector Survey File C Vol. iii, 20/10/1975.

²³ Zambia Railways ACT 1967 (No. 47 of 1967 as amended by No. 54 of 1970).

²⁴ Republic of Zambia. The Economic Report, Finance Division, Office of the Vice President, 1968, p. 166.

For this reason, the study argues that 1967 was an eventful year for Zambia's transport sector. Like the road transport, railway transport was given high priority, especially at bureaucratic level.

2.3 The role and objective of Zambia Railways

The significance of ZR in Zambia's economic development emerges in the sentiments expressed by President Kaunda in his address to Parliament in 1968 that, "the formation of Zambia Railways in 1967 represented a step forward in establishing the country's independence of action in the vital field of transport".²⁵ He further stated that, ZR formed an important section of the government's long list of achievements since independence.²⁶

The newly established railway system in post-independence Zambia continued to be the major link between the rich copper mines and the markets of the world. ZR became an important and vital branch of Zambia's national economy. It became the principle carrier of Zambia and continued to be referred to as the 'backbone of the country'. As stated in the ZR Act, the general aim of ZR was as follows:

To make available or to secure and organise provision of an efficient and satisfactory conveyance systems for freight and passengers by rail with due regard to the economy and safety of operation and take such steps as may appear necessary to the board to promote, improve or extend transport facilities and services by rail in the Republic for purposes of catering for the needs of the public, agriculture, commerce, industry and mining.²⁷

Despite its limited inland connections, ZR provided an advantage to the locations it passed through. The industries along the rail system made use of ZR's services. In 1969, 98% of the total number of industrial establishments was concentrated on the Copperbelt,

²⁵ UNIP Archives 1/3/1-15. *Republic of Zambia. Address to Parliament*. His Excellency, 2nd November, 1968.

²⁶ UNIP Archives 1/3/1-15. *Republic of Zambia. Address to Parliament*. His Excellency, 2nd November, 1968.

²⁷ Zambia Railways Act 1967, p. 8.

Central and Southern provinces where the ZR passes through.²⁸ Most of these industries relied on the same route for the smooth flow of imported machinery equipment, spare parts and other inputs needed to maintain their operations and especially the mining operations.

Nicholas Chanda a former locomotive driver for ZR was quoted as saying that:

During the same period ZR hauled a lot of goods coming into the country through the southern border. The destination of these goods was mainly Lusaka, Central and the Copperbelt provinces.²⁹

Zambia's continuous dependence on the railways was mainly attributed to the fact that copper mining and export continued to dominate the country's economy. Doganis adds that Zambia's dependence on the railways for carrying its minerals to the ports was inevitable because of the nature of its export trade and its distance from the sea.³⁰ Furthermore, in 1966 Bank of Zambia report stated that, copper was the major wealth of Zambia and that about 700,000 tones was to be exported each year.³¹ It is noteworthy that there was a sharp and sustained increase in the prices of copper³² in post-independence Zambia. According to the Mines report of 1974 the average price of copper at the London Metal Exchange in 1965 was \$541 by 1968 it shot up to \$611.³³ These observations are indicative of the fact that ZR was crucial to the economic development of the landlocked Zambia.³⁴

²⁸ Forwarded by His Excellency the President Dr K. D. Kaunda, p. 22.

²⁹ Interview. Mr. Nicholas Chanda, 07/02/2016. Kabwe.

³⁰ R. S. Doganis. "Zambia's Outlet to the Sea. A Case study in Colonial Development". *Journal of Transport Economics and Policy* .Vol. 1.No. 1. (1967), pp. 46-51.

³¹ *Bank of Zambia*, Report and statement of accounts for the year ended December, 31st 1966, p. 22.

³² K. D. Kaunda, *Zambia's Economic Revolution* (Lusaka: ZIS, 1968), pp. 36-37. See also Zambia: Restructuring in the Midst of crises. Vol.1. Forwarded by His Excellency Dr K.D. Kaunda, p.1 and 70.

³³ ZCCM Archives. Mining Year Book 1974.

³⁴ *Bank of Zambia*, Report and Statement of accounts for the Year ended December 31st 1972. p.28. See also ZRL 10 Year Development Plan Southern Africa, 1990.

ZR operations were not restricted to commercial lines with profit realisation as a specific target.³⁵ UNIP government policy was to ensure that ZR remained a service provider for the nation and an instrument for Zambia's development. Therefore, as a service provider ZR was also given the responsibility of operating non-profitable projects such as the passenger trains between Livingstone and Kitwe, and Mulobezi train which were not economically viable to raise its own funds that could service it. According to the 1975 ZR annual report, ZR took over the operations of Mulobezi branch line from Zambezi Saw Mills (1968) Ltd on 1stFebruary, 1973.³⁶ The role of Mulobezi train was to haul timber sleepers from the Saw Mills to Livingstone. These were later transported to the mines on the Copperbelt and also for the company's (ZR) use.

2.4 Investments in Zambia Railways

With a view to making the nation self-sufficient and economically prosperous, considerable importance was given to ZR. A.S Lubinda a former Public Relations Manager for ZR recalled that shortly after independence, "the Government of the Republic of Zambia felt that time had come to establish a transport system which would match the spirit of progression within the nation".³⁷ A more efficient rail transport could reduce the cost of moving copper to customers. In line with this, Annety Pinckney's argument is that the significance of the transport communication sector in determining a country's level of development makes investment in this sector inevitable.³⁸ Pinckney further explained that, landlocked mineral exporting countries of the Southern African region had invested heavily in rail transport because of its central importance for export.

³⁵ ZR Archives ZR 12th Annual Report and Accounts for the Year ended 31st March, 1983, p. 4. See also ZR Marketing Commercial Development and Planning August, 1977, p. 3. *ZR is a service organization directed to serve the national interest by providing efficient transportation.*

³⁶ ZR Archives ZR 5th Annual Report for the year ended 31st December, 1975, p. 19.

³⁷ UNIP Archives 121/4/8 ZR Manager Industrial Participation and Public Relations. File No. /8/19/1.

³⁸ Annette Pinkney, Final Report. Survey of the Transport- Communication Sector, p. 2

It was noted that, it was virtually impossible to operate the newly formed ZR as it did not have adequate facilities to maintain operations to the fullest.³⁹ The division of the railways was done without reaching the agreement on the division of the assets and liabilities. The sharing of assets was haphazardly done. ZR received assets that had already begun to deteriorate. The locomotives were coal steams then. In a desperate attempt to salvage ZR from total collapse, the Zambian government was obliged to invest in ZR as it was envisaged that the system would stimulate productivity, increase market integrations and generate employment for the Zambians.

Therefore, the government made some expansionists programmes for the entire railway system in order to improve efficiency and provide better services for the people. This of course came with a lot of costs. The sustenance of this new organisation in the transport sector could only have been made possible by financial assistance from government and foreign loans. ZR needed large injection of capital investment. However, the funds necessary to finance the organisation were not immediately available but UNIP government worked hard to serve and expand ZR. The organisation was under-capitalised at its inception. The Third National Convention on the State of the economy noted that:

In 1967, the Book Value of K70 million did not represent real tangible assets because K43 million of the same were retained in Rhodesia during the UDI.⁴⁰

Funding came mainly from government budgetary allocations, multi-lateral agreements and individual countries. The Zambian government with the help of donors such as the World Bank, Canada, Sweden and the Federal Republic of Germany gave financial

³⁹ *Zambian Review*.1966-67.July 1967, p. 4.

⁴⁰ Republic of Zambia. Report of Third National the state of the Economy, p. 29.

assistance to ZR.⁴¹ The crucial role of the transport sector necessitated the government to allocate a large portion of funds to the sector. The FNDP allocated K165,034,000 to Transport and Communications alone out of the total government capital investment and spending of K563,620,000.⁴²

When ZR was formed the government granted the Zambia Railways Board K9 million commercial loans.⁴³ The FNDP 1966-1970, under Public Capital Investment: indicates that ZR was allocated K19, 504,000 out of K215, 658,000 for infrastructure and transport.⁴⁴ In 1970, the ZR (Amendment) Act “provided the Board with a capital of ZK80.0 million, consisting of fixed and moveable assets, and capitalized loans, including loans owed by the unitary system and assigned to the Board”.⁴⁵ This was broken down as follows:

K35 million as permanent dividend capital, K35 million as redeemable loans and K10 million as capital reserves⁴⁶ Government subsidy was K3,000,000 and the long-term loan received was K 5,575,933.⁴⁷ With government authority ZR continued to get loans from various foreign institutions and local financial institutions such as Zambia National Building Society and National Provident Fund as shown in Appendix A.

In reviewing ZR’s progress the Third National Development Plan (TNDP) 1979-83 reported that:

⁴¹ ZRL, Ten (10) Year Development Plan, p. 11.

⁴² *Republic of Zambia, First National Development Plan (FNDP) 1966-1970*, p. 288.

⁴³ Richard L. Sklar, ‘Zambia’s response to the Rhodesian Unilateral declaration of independence’, p.332.

⁴⁴ FNDP 1966-70. Chapter 13.

⁴⁵ ZRL 10 Year Development Plan. Southern Africa Transport and Communications Commission. January 1990, p.17

⁴⁶ The Railways Act. (No. 47 of 1967 as amended by No. 54 of 1970).

⁴⁷ ZR Annual Report, for the year ended 31st December, 1971. p.25.

The infrastructural capacity of ZR had registered substantial improvement; the total length of the main line and branch lines had increased from 827 km in 1972 to 1,1104 km in 1972. The number of wagons had increased by 27% from 1,600 to 2,032.⁴⁸

To enhance efficiency of ZR the Government stated that “ZR would invest about K110 million during the TNDP period of which K46 million would be met from Government budget and the remaining K60 million from internally generated resources and loans”.⁴⁹ Government’s aim was to ensure that the system remained reliable and efficient.

S.H. Frankel cited in Kanduzi’s work wrote about capital investment in the railroads in colonial Africa. He argues that, the importance of railroads in the economic development of Africa is evidenced in the high proportion of investment made.⁵⁰ In Zambia too it can be argued that, governments’ investment in the newly formed ZR was crucial because the organisation had an important part to play when there was a heavy flow of traffic and where distances were long. In addition, recent studies such as those done on Zimbabwe National Railways⁵¹ have shown the significance of an efficient rail network in economics. They have further noted that, the World Bank’s support of the existing railway networks is often justified on economic grounds.⁵² Our finding is that Donor support to ZR continued through the following Projects: Third Railway Project from 1980-1986 and Fourth Railway Project from 1986-1988. The first and second railway projects were implemented by the RR in 1953 and 1958.

The primary objective of the Third Railway Project was to avoid deterioration in ZR’s operations and increase its utilization and thereby improving its effectiveness to handle the then expected

⁴⁸ Republic of Zambia. Third National Development Plan 1979-83, Office of the President, October 1979, p.273.

⁴⁹ Republic of Zambia. Third National Development plan, p. 279.

⁵⁰ Ackson M. Kanduzi, *The Political Economy of Underdevelopment in Northern Rhodesia 1918-1960. Case Study of Customs Tariffs and Railway Freight Politics* (London: Dalhousie University Press of America, 1986), p. 374.

⁵¹ Infrastructure and Growth in Zimbabwe. An Action Plan for sustained Economic growth, World Bank Group, 2011.

⁵² Private Sector and Development MAGAZINE No. 09/ March, 2011, p. 3.

growth in traffic. Included in the plan was a clause alluding to the fact that renovating the main line with concrete sleepers would enhance its efficiency. To achieve the objectives of this project the total foreign exchange cost was estimated at USD 130.2 million.⁵³

The Fourth Railway Project aimed at consolidating the objectives of the Third Railway Project. It was oriented towards improving utilization of existing assets.⁵⁴

Estimated expenditure for these projects is shown in Appendix B.

2.5 Development of Zambia Railways Management and skilled Manpower

The actual running of ZR was the work of the management of Zambia Railways Board (ZRB) which was empowered by the ZR Act of 1967. The ZRB consisted of the Chairman and eight other members, all of whom were appointed by the Minister of Power, Transport and Works.⁵⁵ The ZRB took over the man power of the Unitary System in Zambia and became responsible for the operations and ownership of all new assets acquired by the board.⁵⁶ At inception, ZR was wholly owned by the government of Zambia. The top most position was that of a General Manager which later changed to Managing Director. Though no term of office was specified for the position the reigns of the General Managers between 1967 and 1991 were short as illustrated below.

1. Mr. A.L. Lucarotti- Scottish- July1967-August 1968
2. Mr. S.F. Sidhom- Sudanese- 1968-1970
3. Mr. H.J. Fast- Canadian- 1970-1975
4. Mr. Hosea Soko- Zambian- 1975-1976
5. Mr. Anderson Mazoka-1976-1980
6. Mr. R. M. Veenis-1980-1982
7. Mr. Basil Monze - 1982-July 1984

⁵³ ZRL. Ten Year Development Plan, p. 33.

⁵⁴ ZRL. Ten Year Development Plan,p. 33.

⁵⁵ Zambia Railways Act 1967, p. 7.

⁵⁶ ZRL. Ten Year Development Plan, p, 15.

8. Mr. Emmanuel Hachipuka -1984- 1988

9. Mr.B.D. M'hango -1988-1992

With the breakup of the Unitary System, ZR suffered from desertion of expatriate staff before Zambians could be trained. Most of the expatriates decided to remain with RR and therefore, relocated to Rhodesia. The expatriates in question comprised management, supervisory and technical as well as operational staff of ZR. Bailey reports that out of 1000 skilled Europeans in Zambia only 157 remained in ZR.⁵⁷

The problem of lack of skilled manpower in ZR cannot be fully understood without making reference to the historical racial policies of Southern Rhodesia. The challenge at the inception of ZR is attributed to the anti-African training policies prior to 1967. Mulenga adequately covered this aspect and noted that, “the colonial regime did not want the advancement of Africans”.⁵⁸ For instance, it is noted that the main objective of setting up a Railway training school in Bulawayo was to train white men to the shameful exclusion of Africans.⁵⁹ This enabled the whites to take up higher skilled jobs in the railways. Therefore, Africans had no opportunity of learning anything which would have left Zambia with trained manpower at the break-up of the system in 1967. In most cases Africans in Northern Rhodesia were reluctantly admitted to two lower grades such as locomotive firemen and yard shunters. It is further noted that, out of 28,000 employees of RR only 6,200 were employed in Zambia of whom 4,500 were unskilled Africans.⁶⁰ This entails that RR system had devised a recruitment plan that ensured that skilled whites were kept off the northern part of RR as much as possible. RR made little effort to train and equip Africans in Northern Rhodesia. This created a critical challenge for a

⁵⁷ Martin Bailey, *Freedom Railway*, p. 25.

⁵⁸ F.E. Mulenga, 'The Development of Worker Consciousness Among the African Railway Workers in Zambia, 1953-1972', p. 62.

⁵⁹ ZR Rail news, 1977. p.7.

⁶⁰ NAH Archives LOC 4339 MCT 1/11/48. Railways General 1963-66.

newly formed ZR in 1967. A reliance on expatriates for managerial and supervisory positions was probably unavoidable at this stage. The situation was worsened by the fact that there were very few Zambians who were educated at independence. Martin Antony describes the lack of skilled man power in the early years of Zambia's independence as the biggest single constraint on Zambia's development.⁶¹

One of the first tasks undertaken by the first General Manager appointed by government Mr. A.L. Lucarotti (1967-68), was that of recruitment of adequately trained personnel to ensure continued operations. However, by 1968 the existing training facilities at Kabwe for skilled staff were far from satisfying the railway's manpower requirements therefore, the need was met by expatriate labour on contract and by sending the staff to other countries for training.⁶² This was done with the help of the government which designed policies to train Zambians with the view of sustaining ZR. Both the government and ZRB were determined to see this work out. There was a sign of breakthrough when Zambians began to be trained for various jobs.⁶³ About 100 Zambians were sent for training in East Africa Railways and Harbor Training school in various technical related fields of which the rolling stock and locomotive maintenance were given first priority.⁶⁴

Furthermore, a number of expatriates of various nationalities such as Austrians, English, Egyptians, Indians and Sudanese were recruited to fill up the vacancies created as result of the exodus of expatriates to Rhodesia.⁶⁵ The intensive recruitment of expatriates was an indication that ZR was handicapped in expertise suited to manage the organisation. The urgent need to train Zambians was further shown in the 1968 report by the Ministry

⁶¹ Martin Antony, *Minding Their Own Business: Zambia's Struggle against Western Control* (London: Hutchison, 1972), p. 49.

⁶² Republic of Zambia. Economic Report 1968, Finance Division Office of the Vice President, p. 166.

⁶³ ZR News letter, May, 1973 No. 5. p. 2.

⁶⁴ ZR News, 1987, p. 26.

⁶⁵ Zambia Railways Proposed Rehabilitation Programme 1986-1991, Corporate Planning Department, 8th November, 1985, p. 2.

of Labour which stated that the first year of ZR operations was fraught with problems in the technical and managerial sector among others problems.⁶⁶ Mr. Lucarotti's management was replaced in 1968 in a bid to improve the efficiency of the operations of ZR by asking the Sudanese Government to second some experienced railway personnel. To this effect, Mr. S.F. Sidhom was appointed General Manager (1968-1970) and other senior technical positions were filled up by the Sudanese who reigned up to 1970. Apparently, little improvement was seen in the operation of ZR as the expatriates spent time familiarising with local conditions. According to ZRB report,

During the reign of the Sudanese management ZR made a loss despite the K10,000,000 subsidy from government in 1970. The loss was attributed to inefficiency as well as sheer lack of responsibility and experienced rail men.⁶⁷

World Bank reported that as a result of serious operational losses the Zambian Government endorsed the termination of the Sudanese management.⁶⁸

To improve the efficiency and capacity, the Zambian Government took major steps in 1970. President Kenneth Kaunda requested for assistance from the Canadian Government. The Canadian National Railways (CNR) was approached by the Prime Minister of Canada through the Canadian National Development Agency (CNDA) to assist ZR in any way they could. Consequently, the CNR agreed to the request, and a contract was signed between ZR and the CNR for a period of five years from 1970-1975. In an effort to improve the efficiency of ZR, the Canadian administration worked closely with Zambian government. CNR was to provide aid to ZRB in the management, operation, maintenance, engineering, and marketing.⁶⁹ The Canadian Government

⁶⁶ *Republic of Zambia*. Ministry of Labour Annual Report of the Department of Labour for January, 1968, p. 9.

⁶⁷ ZR Archives ZRB Daily File 1.3.1F 43. See also ZR news, 1987, p. 4.

⁶⁸ World Bank. *A Profile of the Zambian Economy*, 1976. Lusaka.

⁶⁹ ZR Annual Report, 1971.P. 4. See also NAH LOC 4296 MCT 1/2/25. ZR Board Meetings, 1970.

provided ZRB with an interest free loan of Canadian Dollars 2.5 million (K1.76 million).⁷⁰

The era of the Canadian administration witnessed a heavy investment in both capital and human resource. The training of Zambians to improve the efficiency of ZR continued to be a fiscal necessity. The Permanent Secretary for Transport, Power and Works assured the government in 1970 that:

Five Zambians would be trained in Canada every year. He stated that the total amount involved in this arrangement would be K5,000,000, half to be paid by the Canadian Government as loan paid back in 50 years.⁷¹

This was important both for ZRB and the nation as it was envisaged that it would help in speeding up the modernization and Zambianisation policies. It is also important to note that, investments in the training of rail men did not come to an end after the reign of the Canadians, but became an ongoing process. This was one step towards the creation of a permanent work force to run ZR.

2.6 Employment

For operations and maintenance purposes ZR was divided into three Districts namely Northern, Central and Southern. Each of these Districts had administrative centres in Kabwe, Ndola and Livingstone. By the early 1970s the system had about 30 stations and 80 sidings. These comprised of general unskilled workers, technical supervisors and administrative staff.⁷² As at 30th June, 1973 the country had about 377,829 persons known to have been in employment,⁷³ of which 24,210 belonged to Transport and

⁷⁰ Bank of Zambia Report and Statement of accounts for the year ended December 31st, 1971, p. 25.

⁷¹ NAH LOC 4296 MCT 1/2/25. Board Meetings, 1970.

⁷² NAH Loc 4309 MPTW /111/41.ZR Seminars Conferences and Meetings, 1970.

⁷³ Ministry of Labour and Social Services. Annual Report of Department of Labour 1973, p. 4.

Communications.⁷⁴ In the same year ZR is reported to have had about 7,400 employees. This accounted for about 31% of the total employment in the transport sector. It would be correct therefore, to argue that ZR made a substantial contribution in creating employment for Zambians in post-independence Zambia. There was an increase in the number of workers for ZR as illustrated in Table 1.

Table: 1 Zambia Railways Staffing 1977-1979

	1977	1978	1979
Technicians/Engineers/Artisans Supervisors/Works Foremen	1,755	1,795	1,881
Drivers	178	189	203
Managers	24	20	20
Others	5,759	6,010	6,050
TOTAL	7,716	8,014	8,154

Source: Republic of Zambia, Office of the President, National Commission for Development Planning, Lusaka- Economic Report 1979.

The reduction in the number of non-Zambians and Canadian employees is an indication of the government's aim to Zambianise the positions as much as possible, thereby providing employment to Zambians. As stated in the five-year plan contract between Zambia and CNR, the Canadians agreed to 'Zambianise' the railways as much as possible.⁷⁵ This was a policy which encouraged Zambians to take over jobs previously done by the expatriates.⁷⁶ Charles Harvey argued that, the use of local people as much as possible in large companies was of economic interest of management because they cost less than expatriates.⁷⁷

⁷⁴ Republic of Zambia. Monthly Digest of Statistics. VOL.XV, Nos . 7 to 9 July/ September, 1979-C.S.O. Lusaka.

⁷⁵ ZR Annual Report 1971, p. 4.

⁷⁶ ZR Newsletter May, 1973. No. 5.2.

⁷⁷ Charles Harvey, Economic Independence. A view from Zambia. Development of Economics, UNZA, Lusaka, Zambia. P. 3

It was during the management of the Canadians that Zambians began to occupy positions previously occupied by expatriates. Positions given to Zambians included District Superintendent, Station Masters, Controllers, Shunters and mostly locomotive drivers. In 1975, Mr. Hosea Soko was appointed as General Manager for ZR by President Kaunda. He became the first Zambian General Manager for ZR. The World Bank however, reported that for Senior and Middle management levels and certain jobs requiring a high degree of technical proficiency the organisation continued to depend on expatriates.⁷⁸ For example, the 1984 ZR Appraisal Report reported that the total number of staff was about 8,400 of whom only 22 were expatriates holding specialised technical positions.⁷⁹ By 1990 the company had a total number of about 8,500 employees.⁸⁰

It is also important to note that effective 1st January, 1979 ownership of ZR was transferred to the Zambia Industrial and Mining Corporation Ltd (ZIMCO). Following the enactment of the Railway Act (No. 17 of 1982) which provided for the dissolution of the Zambia Railways Board (ZRB) “the operations of the ZRB was taken over by the Zambia Railways Limited (ZRL) with effect from April, 1984.”⁸¹ As a result, ZR ceased to be a statutory Board. This increased administrative freedom of management so that the organization could operate on commercial lines.

2.7 Equipment and Infrastructure

At the time of break-up of the Unitary System, ZR was given a meagre number of steam locomotive engines, wagons and coaching stock. For out of 403 steam locomotive engines which were jointly owned, Zambia obtained 87 and out of 13,000 wagons she received about 3,000 mostly in a bad condition and out of 672 coaching stock vehicles

⁷⁸ The World Bank. ZR Third Railway Project Staff Appraisal Report, November 26, 1979. p. 8.

⁷⁹ Republic of Zambia, 4th Railway Project. Staff Appraisal Report December 6th 1984, p. ii.

⁸⁰ ZRL 10 Year Development Plan. Southern Africa Transport and Communications Commission, p. 17.

⁸¹ ZR Archives. ZR Board. Annual Report and Accounts for the year Ended 31st March, 1984.

she managed to get only 70.⁸² About 70% of the physical assets were located in Rhodesia.⁸³ These statistics are an indication of ZR's helplessness at inception in 1967. Enormous investment and organisational effort were required if the operational performance was to be raised to levels needed to meet the country's pressing transport requirements. Thus, the most logical and efficient thing that the government did was to provide for a large capital outlay not only for the track, engines and rolling stock but also major workshops for many purposes as these are the well-known features of railway economics.⁸⁴

In order to increase and boost the rolling stock and locomotives holding the first General Manager Mr. A. F. Lucarotti ordered 500 short hoppers from Britain, 800 high sided iron, 30 petrol tank wagons from Japan and 26 Diesel Electric Locomotives from the USA. Short hoppers were small wagons mainly used for conveying ballast to track maintenance areas. High sided iron wagons had a high-volume capacity and were mainly used for transporting goods such as coal, maize, copper concentrates and sugar. As noted in the FNDP 1966-70, Diesel Locomotives were to be the property of the Zambian Government and the cost amounted to \$2.2 million repayable over a ten-year period at an interest of 5.5 percent.⁸⁵ In addition, eight tank wagons for transportation of concentrated nitric acid were purchased. Some of the ordered items like short hoppers and high sided iron wagons arrived in Zambia as early as 1968. The purchase of the equipment gave the second General Manager Mr. S.F. Sidhom a Sudanese national a good start.⁸⁶

⁸² ZR Rail News, Second Quarter, 1980, p. 2. See also Dr M.Q. Dalvi, Working Paper No. 1. Zambian Transport Policy: Main Issues, Approach and Options. UNDP/DTCD Transport Planning Project Transport Planning Unit Ministry of Power, Transport and Communications GRZ, May 1988, p. 6.

⁸³ Richard L. Sklar, 'Zambia's response to the Rhodesian Unilateral declaration of Independence', p. 332.

⁸⁴ NAH LOC 4339, File no. MTPG 1/11/48. R.R. Public Relations Office. Railways Serve Zambia's Economy.

⁸⁵ *Republic of Zambia, First National Development Plan (FNDP) 1966-70*, p. 40.

⁸⁶ ZR Third Rail news 1987, p. 26.

In 1973 ZR replaced the steam locomotives with the diesel locomotives. The decision to change to diesel locomotives was made due to the increasing difficulty in obtaining spare parts for the steam locomotives and to ease the handling of the increased traffic.⁸⁷ The steam locomotives were no longer being manufactured. Worse still, when sanctions were imposed in Rhodesia, the supply of spare parts for steam locomotives and wagons became increasingly difficult. Mr. D. J. Sanford ZR Senior Mechanical Engineer by then stressed that the steam locomotives were very difficult to maintain because Zambia had no facilities to do so.⁸⁸ Below are examples of the steam and diesel electrical locomotive engines of ZR.

Figure 1: Steam engine



Figure 2: Diesel locomotive



Source: ZR 9th Annual Report, Year ended 31st March, 1979.

Furthermore, when Zambia Railways started independent operations in 1967, the facilities for maintenance of locomotives and rolling stock were inadequate. According to Jonathan H. Chileshe all major repairs and overhaul of the equipment for ZR were done by the main workshop in Bulawayo.⁸⁹ The services however, were sometimes not done to the satisfaction of ZR and moreover, services were delayed. In addition, the UDI

⁸⁷ NAH MCT1/5/9 LOC 4309 ZR Seminars Conferences and Meetings 1968-71.

⁸⁸ NAH LOC 4305 MCT1/4/32.ZR Accident Reports. 1970.

⁸⁹ Jonathan H. Chileshe, *Third World Countries and Development and Options: Zambia* (New Delhi: Vikas Publishing House Pvt Limited 1986), p. 47.

activities affected the operations of ZR. The mining companies had to come in to render services in any way they could whenever it was needed. The workshop services, professional and technical advice from the RST Group of companies continued until the new Zambia Railways workshops were ready in 1972.⁹⁰

The government was however, determined to provide Zambia with modern railway and repair facilities without delay. Inevitably, in June 1968, a contract was signed between the Zambian Government and John Howard and Company of London to construct and equip the workshop complex.⁹¹ The workshops were constructed in Kabwe at the cost of K12 million and were officially opened by the then Minister of Transport, Power and Works Honorable Mr. F. Mulikita on 13th October, 1971. The Workshops were among the finest in the world.⁹² They were laid out and reasonably equipped with specialized and general purpose equipment for maintenance as well as manufacture of castings and components ranging from simple nuts and bolts to complicated items such as gears. It was hoped that the Workshops would enable the railways in Zambia to be entirely self-supporting thus severing reliance on the workshops at Bulawayo in Rhodesia. With the commissioning of the workshops ZR became self-sufficient. Other than the main workshops in Kabwe, there were other minor workshops located in Ndola, Kitwe and Livingstone.

The K12 million investments in the construction of the Workshops began to bear fruits because they played a crucial role in conserving the much needed foreign exchange.⁹³ The maintenance of locomotives and other rolling stock was one of the major

⁹⁰ ZCCM Archives 95.4-19.8F ZR Miscellaneous.1969.

⁹¹ *Zambian Review*.1970-71.October, Vol. 8. No. 149, p. 47.

⁹² *ZR Annual Report* for the year ended 31st December, 1971, p.8.

⁹³ *ZR Annual Report*, 1976 for the Year ended 31st December, 1976, p. 4.

contributions in the efficiency of railway operations. ZR annual report confirmed this by stating that:

About K120, 000 was saved because the workshops were able to make twelve explosive wagons by assembling some parts. Another saving of about K150, 000 in capital expenditure was achieved as the movement of sulphuric acid traffic was obtained by the particular fabrication of ten tank wagons in the main workshop.⁹⁴

In addition, about twenty one wrecked locomotives were completely rebuilt as at 1975. This was in addition to 301 wagons rebuilt during the period 1971-1975/6. In 1977, there was a saving of K904, 000 in capital cost and foreign exchange. This was made possible with the aid of donor support which continued to flow and sustain ZR. The workshops were able to manufacture about 226 wagons from the 150 high sided wagons on the under frames and bogies imported from Japan and 76 high sided wagons in knockdown kits imported from Sweden.⁹⁵ Sweden was one of the countries that were commended for the assistance given in the field of the railways, the first of which was in 1977 when it donated 185 wagons.⁹⁶ Another country which provided aid to Zambia Railways was the Federal Republic of Germany (FRG). For instance, in 1979 the two countries signed an aid agreement in which the FRG agreed to assist ZR to purchase U-20 Locomotives and spares manufactured by Krupp under license from General Electric Company of United States of America (USA).

⁹⁴ ZR Annual Report 1974 for the Year ended 31st December 1974, p. 7.

⁹⁵ ZR Annual Report 1977 for the year ended 31st December, 1977, p. 7. See also Republic of Zambia. Office of the Prime Minister. National Commission for Development Planning, Lusaka .Economic Report 1978.

⁹⁶ ZR Rail News Second Quarter, 1980, p.3

2.8 Branch lines and sidings

ZR's role in the local industries along the line of rail necessitated the construction of sidings and branch rail lines other than those on the Copperbelt. These rail lines were to link ZR and the industries along the main rail line. Apparently, construction of the rail lines needs intensive capital investment. Therefore, construction of the branch rail lines in Zambia was influenced by demand.

The government made another crucial decision by investing more money in the construction of a branch line in Southern Province. This was done with the hope of easing the transportation of coal as it was expected to remain the main source of energy for major industries in the country. In this case coal provided the base load which justified the construction of a branch line. Therefore, the construction of a rail line from Maamba to Choma was of importance to the development of the mines. The Third National Development Plan 1979-83 reported that, "the new rail spur from Choma to Masuku was designed to carry coal to the main line for transportation to the mining industry and other parts of Zambia".⁹⁷ Zambia Railways was also going to be a beneficiary as it was still using steam locomotives power which needed coal for its operations. Dr Kenneth D. Kaunda further stressed that:

The construction of the branch line would reduce costs considerably for coal, which at the time was transported by road to Batoka railway station and later to the main consumers and other centres in the Copperbelt.⁹⁸

Funds for the erection of the branch line were allocated to Ministry of Trade, Industry and Mines under the sub-heading of ZR, the rail spur itself would on completion be the

⁹⁷ Third National Development Plan 1979-83, Office of the President, p. 273.

⁹⁸ Foreword By His Excellence the President Dr K. D Kanuda , Economic and Social Development During The First National Development Plan. p. 21.

property of ZR. The total cost of the project is shown in the estimates as K3.272 million.⁹⁹

To enhance efficiency in the railway sector, government further engaged in the construction of railway sidings in major industrial towns such as Ndola, Lusaka, Livingstone Kabwe, Mazabuka and Livingstone. When ZR received traffic for the customers it was then shunted into lines leading to industrial sites for delivery. Once traffic was in the locality of the industry concerned they offloaded their consignment as quickly as possible and released the wagons back into service. Those who failed to offload their consignment within the stipulated period paid demurrage charges.

Bwana Mkubwa was one of the rail stations to which these rail sidings were connected. These ran from industries such as Copper Refinery, Chilanga Cement, Ndola Lime, Oil Refinery and Sugar Refinery. Bwana Mkubwa station was therefore, reported to have been one of the highest revenue generators for ZR and that it made on average K1.5 million per month.¹⁰⁰ In addition, about 250 miles of the main line from Ndola to Lubombo siding was re-aligned with heavier 91 lb, welded rail to enable heavier loads to be carried.¹⁰¹ Another important siding was at Mazabuka, it connected Nakambala Estate to the mainline. Mr. Nyambe former Station Master commented that this was also known as the “sweet line” as it was extensively used to transport raw sugar from the Estate and gave ZRL the revenue it required.¹⁰²

The following were some of the rail sidings commissioned in 1972 in order to serve commerce and industry; Fiat Motor Assembly siding- Livingstone, Timber Merchants of Zambia- Lusaka, Nitrogen Chemicals of Zambia (NCZ) Kafue, Ndola Lime Company-

⁹⁹ N.A.Z NCDP 2/17/8 Development Division. Transport of Coal. File No. DD/8/15/2.

¹⁰⁰ ZR Rail News, Second Quarter 1986, p. 10.

¹⁰¹ ZR Rail News, Second Quarter 1986, p. 11.

¹⁰² ZR Rail News, January- June, 2001, p. 26.

Lukanda siding to serve Indeco Glass factory- Kapiri Mposhi, Zambia Oxygen (ZAMOX) siding- Lusaka, Rokana Corporation siding- Bwana Mkubwa and Mutayo siding to serve farmers on ZAMNGLO Project.¹⁰³

2.9 Conclusion

The chapter has noted that ZR was essential to Zambia's economy as it was needed in exporting copper the main contributing commodity to GDP. This gave UNIP government the impetus to set up an investment policy to improve the system thus, serving it from total collapse. This was based on the fact that the efficiency by which mineral exports were handled and the cost of doing so had direct impact on the mining sector as well as on the revenue earning capacity of the economy as a whole. The government without exception placed strong emphasis on the importance of improved rail service and therefore, considerable World Bank and foreign donor aid was obtained to improve the system. Investments in the staff training project, equipment and infrastructure particularly, the workshops demonstrated hope of a bright future.

Investment in ZR was justified on the basis that it was a bulk carrier and a vital transportation system. The economic development of the landlocked Zambia was mostly dependent on the railways for exports and imports. In 1967 the railway network was the most developed land transportation system in Zambia.

¹⁰³ ZR Rail Annual Report, 1972, p.7.

CHAPTER THREE

ZAMBIA RAILWAYS: FREIGHT FACILITIES, SERVICES AND PERFORMANCE FROM 1967-1991

3.1 Introduction

From inception ZR was given a huge responsibility of transporting bulk goods for Zambia. It provided transport services to the country's principle industries such as mining, agriculture, manufacturing and commerce. It also played a significant role in the external trade of the country. This chapter attempts to assess the performance of ZR freight facilities internally and externally by focusing on the main commodities transported by the organisation. As a means of evaluating its performance on the country's economic activities, the chapter examines ZR's major freight traffic. To assess the performance of ZR, the study used the standard measure of performance for ZR which was "the total tonnages moved".¹ The first part of the chapter explains some of the major economic activities of Zambia and later examines the performance of ZR internally, while the second section focuses on the external traffic.

3.2 Zambia's major economic activities after 1964

Zambia's economy was and is still based largely on mineral products mainly copper, zinc, lead, cobalt, manganese and others. Historically, the performance of the Zambian economy has followed the fortunes of copper mining closely. Jacob M. Mwanza observed that "in 1964 the total value of domestic exports amounted to about K327 million, copper accounted for K302 million or nearly 92% and in 1966 copper's contribution was K466 million or 95%. In 1969, domestic exports were valued at K752 million and copper's contribution was K729 million nearly 97%. It was further reported that:

¹ Mobin Bulaya, "The Effectiveness of Rehabilitate-Operate-Transfer (ROT) Mode of Rail Concession. The Case of Zambia Railways," MBA Dissertation, Copperbelt University, 2001, p.79.

Until 1975 Zambia had one of the most prosperous economies in sub-Saharan Africa. Mining was the basis of this prosperity. Copper was virtually the only source of foreign exchange.²

However, the fall of copper prices which started in the mid-1970s and the excessive imports for both consumption and production undermined the economy.

Manufacturing was the second largest economic activity of the country accounting for nearly 20% of the GDP. This included production of chemical materials, tobacco, wood, paper, non-metallic materials and basic metals, processing of food, beverages, textile and clothing.³

Agriculture occupied a highly important position in the economy in terms of national well-being, numbers of people employed, and value of production. It contributed 17% to GDP in 1990, almost unchanged since the time of independence.⁴ It was reported to have been “the country’s second largest foreign exchange earner in 1967.”⁵ Sugar which is locally produced was also of increasing significance and underwent expansion of production capacity in the 1970s.

In the midst of all these activities the transport industry in particular, ZR which cuts across the heart of the country with an average carrying capacity of 8.5 million tonnes per annum⁶ was expected to meet the transport needs for raw materials, inputs, finished products and produce. Therefore, ZR served most of the areas in Southern, Lusaka, Central and Copperbelt provinces which encompassed most of the main line of the rail area. This was why the main line of ZR was reported to have been the backbone of the

² Forwarded by His Excellency Kenneth Kaunda, Zambia: Restructuring in the Midst of crisis. Vol. 1. p. 1.

³ ZRL. Corporate Plan 1988/89 to 1992/93. Corporate Planning Directorate, Kabwe, p. 24.

⁴ Maters Rotterdam, ZR Traffic Forecast study. Netherland Economic Institute. Rotterdam, June 1994, p. 2.

⁵ Economic Report iii Finance Division, 1968, Government Printers, Lusaka, p. 219.

⁶ Republic of Zambia. Action Plan for Energy, Transport and Communication Sectors. Interim Development Plan, July, 1987 to December, 1988.

country's transportation system.⁷ The determinant of ZR traffic was the overall level of economic activity and in particular, of the mining and agricultural sector.⁸

3.3 Local traffic

ZR was the prime mover of domestic traffic in volume terms. Domestic traffic involved the transportation of commodities from the Copperbelt to the southern part of the country and vice versa. Domestic traffic was divided into four main categories namely; Fuels-Chemicals, Agricultural Products, Minerals-metals and construction materials. Basically, coal, maize, livestock and sugar were moved from the Southern province to the north.

3.3.1 Mine commodities moved to and between the mines

The Copperbelt was where Zambia's major activities were happening. The copper mines (Luanshya, Mufulira, Chambeshi, Chililabombwe, Chingola, Nkana- Kitwe, and Bwana Mkubwa) were the single most important customer for ZR and generated the largest portion of the local traffic. The importance of the industry in the Zambia's economy required that there was always a steady flow of supplies for it to maintain the copper production levels. Very vital to the mines included lime stone and lime powder which was transported from Lusaka and Ndola Lime Company to the mines. The commodity used to rely totally on rail transport until 1975/76. Road transport was only used when wagons were not supplied on demand as there were no storage facilities to stockpile. ZR was also used in transporting ammonium nitrate from Nitrogen Chemicals of Zambia (NCZ) to Kafironda Explosives Limited in Mufulira, the only producer of explosives for the mining sector in Zambia.⁹ For safety reasons all explosives were moved by rail only

⁷ Maters, ZR Traffic forecast Study, p. 6.

⁸ *Republic of Zambia*. Fourth Railway Project. Staff Appraisal Report. December 06, 1984. Eastern Africa Regional Office. Transportation ii Division, p. 7.

⁹ Andrew Sardanis, *Zambia: The 50 Years* (London: I.B Tauris Publishers, 2014), p. 37.

in exceptional cases was the road transport used.¹⁰ Therefore, ZR further extended its services by delivering the commodity to all divisions of Nchanga Copper Consolidated Mine (NCCM) and Roan Copper Mine (RCM) major customers in Luanshya, Rokana, Chingola, Nkonkola and Mufulira. Some of the explosives were sometimes exported to Congo (Zaire) through ZR. ZR also hauled Iron pyrites from Nampundwe Mines (50 kilometres west of Lusaka) to the mines on the copperbelt.¹¹ Pyrite was a raw material needed to produce sulphuric acid.

The other major commodities transported to the mines were copper concentrates, anodes, ores, sulphuric acid and petroleum. The commodities were mainly used in the mines for copper production process.

3.3.2 Fuels and Chemicals

The major product in this commodity grouping was coal from Maamba Collieries, a prime requirement of the copper mines. Coal was reported to be the third most important source of energy in Zambia after electricity and petroleum.¹² The industries required huge volumes of coal in order to meet their production requirements. As a bulk carrier, ZR helped to meet these requirements through the provision of transport services. Before the opening of Maamba Collieries in 1969 coal was imported through rail transport from Wankie Collieries in Rhodesia the traditional source of supply for the mines at the time. However, the major challenge in the transportation of coal from Wankie was the insufficiency of ZR rolling stock. In discussing the difficulties faced by Zambia Railways Board (ZRB) on 18th December, 1967, Mr. Lucarotti the General Manager reported that coal which came from Wankie was entirely dependent on empty wagons

¹⁰ ZR Archives *Zambia Railways. Market Share and Distribution Study* Vol. ii 1980. Marketing Department

¹¹ ZCCM Archives 7:13.4F.Nampundwe Railway Siding Lusaka.

¹² Bank of Zambia, Report and Statement of Accounts for the year ended December, 31st 1981, p. 49.

coming from Zambia but even then the return flow was unpredictable.¹³ In spite of these challenges, management ensured there was a continuous transportation of coal into the country. For instance, the rate of 25,000 tonnes of coal per month from Wankie was being maintained and delivered to Rhokana and Mufulira.¹⁴ In the same year 1969 the AAC (Anglo-American Corporation) mines reported that “the industry’s requirement was 65,000 tonnes per month and the delivery of the commodity was very much a matter of railway operating conditions from time to time”.¹⁵ ZR’s share in the transportation of coal was above average.

Later, the rail transport problems precipitated by the Unilateral Declaration of Independence (UDI) in Rhodesia necessitated the opening of an open cast coal mine in 1969 at Maamba in Southern province with a target of about 60,000 tonnes per month.¹⁶ ZR became the main transporter of coal from the rail-head to major consumers¹⁷ namely; Chilanga Cement, Nitrogen Chemicals of Zambia (NCZ), Zambia Sugar Company (ZSC) and the mining industry. In addition, coal for Cold Storage, Premium Oil and Zambia Breweries was also transported by ZR. It is also important to note that ZR was also another important consumer of coal from Maamba Collieries and remained the second biggest consumer of coal until 1973 when the diesel locomotives were introduced,¹⁸ and gradually replaced the steam engines. The operations of the steam engines depended on coal. ZR steam engines consumed about 400,000 tonnes of coal annually thus, stimulating production. Generally, the performance of ZR in the transportation of coal was satisfactory. It was evidenced in the minutes of the Board Meeting of 1969 February that for the first time ever the tonnage of coal from the south

¹³ UNIP Archives. UNIP 8/3/33. 18th December, 1967 Minutes, Meeting at Kabwe.

¹⁴ ZR Market share and distribution study, Volume 2. Marketing Department, 1980, p. 2.

¹⁵ ZCCM Archives.17.5.7B, Railway Transport, October, 1967-1969.

¹⁶ ZCCM Transport. RC. Loc 175.5.713. October, 1967-69.

¹⁷ Bank of Zambia, Report and Statement of accounts for the year ended December, 31st 1978, p. 52.

¹⁸ ZR Rail news, First Quarter, 1988, p. 6.

exceeded the tonnage of general goods.¹⁹ Furthermore, the minutes of the Mines and ZR Liaison Committee in 1969 stated that Ndola copper Refineries received more than they were able to handle and the mines received enough quantities of coal.²⁰

By the end of the year, ZR had experienced fewer difficulties with coal trains. The commodity had been arriving in reasonable quantities. This satisfactory performance was again observed from the late 1971 to 1975. In 1971 coal traffic was about 563,143 tonnes, out of 812,100 tonnes produced in the year.²¹ In 1972 coal production was at its peak reaching 960,000 tones,²² of which ZR carried about 826,752 tonnes.²³ Consumption requirements for the customers were met in full and largely maintained at adequate levels.²⁴ After 1975 there was a steady decline of ZR's market share of coal movement due to insufficient rolling stock. In 1979/80 the actual total sales of coal was 590,000 tonnes of which ZR moved about 490,000 tonnes. Its share had declined to 55% due to ropeway break down at Maamba Collieries Limited.²⁵ The major cause of the breakdown was attributed to shortage of spare parts in view of foreign exchange constraints. The situation was further worsened by ZR's inability to move the commodity due to insufficient wagons.

Although ZR began to face a lot of challenges after 1980, it continued to play a significant role in the transportation of coal. Statistical data in Table 2 on page 53 indicates that the movement of coal was the 'bread and butter' of ZR, the tonnage carried were over half the total volume of local traffic. It was observed that "coal remained the

¹⁹ ZR Archives Reference MBS.F. February, 1969 Board Meetings.

²⁰ ZCCM Archives ZR and Mine Liaison Committee Minutes. 20/03/1969.

²¹ Bank of Zambia, Report and accounts statement for the year ended 31st, 1971, p.18.

²² Bank of Zambia, Report and statement of accounts for the year ended December 31st 1972,p. 24 See also Gladston G. Bonnicks, Around Zambia. *Country Assistance Review: Turning an Economy Around* (World Book Publisher, 1997), p. 54.

²³ Republic of Zambia. Transport Statistics 1975.

²⁴ UNIP /7/125/27-37. 171. 1972. See also ZR Annual Report 1974, p. 7.

²⁵ ZR Archives ZR Marketing Share and Distribution Study Vol. 2, 1980, p. 8.

main revenue earning segment in the local traffic contributing about 60% of total domestic traffic earnings”.²⁶

²⁶ ZR Marketing Share and Distribution Study Vol. 2, 1980, p. 2

TABLE 2: Analysis of the main railway traffic, 1975-1986 (tonnages).

	1975	1976	1977	1978	1979	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Copper Ores Concentrate	2,284,712	1,058,895	937,849	850,526	739,001	718,576	711,222	624,103	823,160	--	834,890
Coal	754,906	627,995	578,576	323,956	494,161	479,046	513,695	495,425	422,626	424,029	483,610
Maize	501,113	440,451	255,542	172,557	162,717	139,854	321,345	307,358	323,295	143,716	159,960
Wheat	--	--	--	--	45,374	40,840	57,240	8,826	20,306	51,021	--
Sugar	62,109	61,969	69,983	48,998	58,767	77,680	72,632	69,771	69,764	77,714	57,720
Stock Feeds	--	--	--	--	20,073	7,665	22,911	4,644	4,170	2,781	46 160
Fertilizer	121,600	89,600	--	23,350	31,743	45,040	224,574	136,029	87,234	32,056	54,660
Lime/Rock	410,885	358,407	240,579	220,939	259,966	294,200	361,608	279,282	333,011	37,400	381,270
Pyrites	24,692	34,738	15,470	--	29	--398	3,206	--	--	--	--

Source: ZR Facts and Figures. June, 1987.

The significance of ZR in the coal industry was reflected in the statement by Nganda Imotowan, Maamba Collieries Managing Director in 1986 when he stated that:

ZR was an artery in the company's operations. He further stated that, the success of the Collieries depended on the efficient haulage of coal to its markets. He noted that without ZR, the company's effort to increase production levels would have been in vain.²⁷

One would therefore, correctly state that the construction of the Choma-Masuku branch line was not in vain, it helped to ease the transportation of coal from the source to major consumers.

3.3.3 Fertilizer

Fertilizer was another important local commodity under the category of fuels and chemicals. The commodity was necessary to improve the productivity of Zambian agriculture. Internally, fertilizer was produced by Nitrogen Chemicals of Zambia (NCZ), a parastatal company established in 1967, located in Kafue.²⁸ The company produced ammonium nitrate for fertilizers and mining explosives. With the objective of achieving sustained increase in agricultural production, the government encouraged increased consumption of fertilizer. National Agriculture Marketing Board (NAMBOARD), the distributor of fertilizer was obliged to use rail transport wherever possible partly, because it was cheaper and also due to the general government policy.²⁹ The fertilizer depots were strategically located along the line of rail from where the farmers sometimes collected the commodity. As shown in Table 2, 1975 indicated a high traffic of ZR

²⁷ ZR Rail news, First Quarter, 1986, p. 6.

²⁸ Hennie Maters, Zambia Railways Traffic forecast study, Rotterdam, June 1994, p. 34.

²⁹ John Due, 'Some Observations on Rail and Road Transport in Commonwealth Tropical Africa', Transportation Research Paper "14" 392. University of Illinois at Urbana-Champaign. April 6, 1977, p. 22. See also Republic of Zambia. Third National Development Plan (TNDP) 1979-83. Office of the President. Bulk carrier transporting organizations such as ZR were expected to play a key role in transporting fertilizer.

distribution of local fertilizer, a trend that began to decline afterwards. In 1979 fertilizer output was about 50,000 tonnes of which about 31,000 tonnes were railed by ZR, Ammonium nitrate was 30,000 tonnes of which ZR share was 20,000 tonnes.³⁰ However, by 1981 fertilizer production at NCZ had declined to 20%. The reduced level of production was due to constant shut downs of the factory.³¹ This affected the local traffic on ZR. The low traffic was also exacerbated by the high competition between rail and road transport. To supplement the low production of local fertilizer the government imported 80% of the commodity in 1979,³² some of which was hauled by ZR hence the rise in traffic as illustrated in Table 2. Despite the challenges in its operations, ZR continued to be used in transporting this important commodity from the south and the north via Dar-es-Salaam.

3.3.4 Agricultural products

At independence the agricultural sector was characterised by a large number of subsistence farmers and a small number of large scale commercial farmers most of whom settled along the line of rail. Other than providing farming implements to farmers by government, the success of this sector also depended on bulky carriers of the products and this is the role which ZR played. Some of the farming products were maize, tobacco, groundnuts, cassava, cotton, wheat, and livestock among others. ZR's major agricultural traffic consisted of maize, maize meal, molasses, refined sugar, wheat, flour and livestock.

³⁰ ZR Archives ZR Marketing Share and Distribution Study, Vol. 2, 1980, p. 10.

³¹ Bank of Zambia, Report and statement of accounts for the year ended December, 31st 1981, p. 36.

³² Action Memorandum for the Assistant Administration for Africa, January 13, 1981, p. 59.

3.3.5 Maize

In the absence of the detailed survey of the total tonnages of maize received by ZR, our examination of ZR performance in the transportation of maize was mostly based on NAMBOARD intake as illustrated in Table 3.

TABLE 3: Maize intakes by NAMBOARD, 1970-1987

YEAR	METRIC TONNES	YEAR	METRIC TONNES
1970	124,400	1979	*600,000
1971	373,600	1980	382,988
1972	572,069	1981	693,328
1973	332,465	1982	502,288
1974	549,000	1983	530,640
1975	553,960	1984	571,230
1976	* 560,000	1985	636,267
1977	*640,000	1986	953,981
1978	*587,000	1987	656,643

Source: C.S.O. Republic of Zambia. Ministry of Finance. Economic Report 1975

**Lusaka, Bwana Mkubwa, Chambeshi, Choma depots*

Of all the cereal crops produced in Zambia, maize was by far the most important. It was produced on commercial as well as subsistence farms in nearly all parts of the country and was the most important staple food for Zambia. The aim of the government was to make sure that the country was self-sufficient and to this effect, maize like other bulky goods was to be transported by ZR because of the relatively lower unit cost per haulage. It is noteworthy noting that ZR had the largest share in the transportation of maize up to 1975. John Due acknowledged this when he stated that, “there was a substantial movement of maize, mostly from the Southern province to the Copperbelt”.³³

Maize, like fertilizer was a seasonal commodity therefore, its intake by NAMBOARD was inconsistent as reflected in Table 3. To this effect, ZR’s maize traffic in most cases

³³ John F. Due, ‘Some Observations on Rail and Road Transport in Commonwealth Tropical Africa’, p. 29.

was determined by the yields of a particular year. For instance, ZR maize traffic in 1970 was low as a result of the country's poor harvest.³⁴ It was reported that the 1970 maize harvest intake by the marketing organisation at 1,488, 000 bags compared with 2,791,000 bags in 1969 was far less than the annual requirement.³⁵

The deficit was met by importing maize of which two third was hauled by ZR. Due to high demand for the wagons to transport the imported maize and the number of wagons available for domestic service was reduced³⁶ subsequently affecting the transportation of other commodities.

In 1972, 1974 and 1975 NAMBOARD maize intakes improved as illustrated in Table 3, thus creating a great influence on ZR's internal maize traffic. In 1975 ZR's high market share of 90% was attributed to good weather conditions. In spite of the inconsistency in NAMBOARD intakes of maize, ZR had the largest share in maize transportation from about 1968 to 1975. In most cases, when there were high yields government gave directives to ZR to reserve wagons for the transportation of maize.³⁷ The high demand for the staple food therefore, prompted ZR to provide a special maize train every day which ran from Southern province to the Copperbelt.³⁸ This enhanced speedy distribution of maize.

In addition, D. Mulonda former Clerk in the Goods Department stated that, ZR hauled a substantial number of bags of maize for individual farmers with small consignments especially when yields were good. These were mainly farmers who lived along the line

³⁴ Bank of Zambia. Report and Statement of accounts for the year ended December 31st 1971, p. 9.

³⁵ Bank of Zambia. Report and Statement of accounts for the year ended December 31st 1971, p. 9.

³⁶ Bank of Zambia. Report and Statement of accounts for the year ended December 31st 1971, p. 18.

³⁷ ZCCM Archives R/3 Railways. T12. 7E. NCCM LTD Rokana Division Minutes of Mines/ZR Liaison Committee 22nd December, 1970.

³⁸ N.A.Z MPTW /111/4/1 ZR Seminar Conferences and Meetings, 1970.

of rail.³⁹ The government encouraged both subsistence and commercial farmers to use ZR due to its low tariffs.

Later after 1975 there was a downward trend pattern in maize traffic, as shown in Table 4.

Table 4: Decline in Zambia Railway’s maize traffic after 1975

PRODUCTION AND DISTRIBUTION	ZR SHARE
NAMBOARD. Marketing organisation for agricultural products Main depots at Lusaka, Bwana Mkubwa, Chisamba, Choma, Natuseko (Kabwe)	ZR share in the transportation of maize has fallen drastically since 1976. As can be seen ZR share has dropped from 90% in 1975 to 27% in 1979.
1975 = 560,000 Tonnes	500,000 tons (90%)
1976 = 640,000 Tonnes	441,000 tons (70%)
1977 = 550,000 Tonnes	256, 000 tons (47%)
1978 = 587,000 Tonnes	173, 000 tons (30%)
1979 = 600,000 Tonnes	163,000 tons (27%)

Source: Zambia Railways. Market Share and Distribution Study Vol. ii 1980. Marketing Department.

The sharp decline was mainly due to competition with the road sector, which had favorable transit times. In addition, the marketing of maize had been deregulated. Therefore, buyers began to purchase maize directly from the farmers and transported the crop by road to mills. Nevertheless, this did not leave ZR out of the market completely. In 1981 the government through NAMBOARD entrusted ZR to transport 3.2 million bags from Central and Southern Provinces to the Copperbelt and Northern Province through Tazara for onward transportation to maize deficit areas such as Northern Province. In order to speed up the process about 800 wagons were set aside to move all the maize.⁴⁰ However, by the end of September 1981, only about 1.7 million bags of

³⁹ Interview, D. Mulonda, Kabwe, 02/11/2015.

⁴⁰ ZR Rail news, Third Quarter, 1981, p. 5.

maize had been transported due to insufficient wagons.⁴¹ In 1985 it was reported that the company was handling about 300,000 tonnes of maize per annum, inclusive of the imported maize.⁴² Though there was a continuous downward trend in maize traffic, government continued to give directives to ZR to give maize haulage first priority over other commodities whenever there was high traffic. Due shared the same view and noted that the railways remained the dominant form of transport in the country.⁴³

Storage silos of the same design as shown in figure 3 were set up along the line of rail to which maize was transported before the wet season.⁴⁴ Some of the major rail stations which had storages included Kalomo, Choma, Mazabuka, Chisamba, Lusaka, Kabwe and Ndola at Bwana Mkubwa.

Figure 3: Natuseko storage in Kabwe



Source: ZR Annual Report 1972

⁴¹ Economic Report. National Commission for Development Planning 1981, p. 191.

⁴² ZR Rail news, First Quarter, 1985, p. 6.

⁴³ John F. Due, Trends in Rail and Road Transport in four African Countries. Zimbabwe, Zambia, Tanzania and Sudan. BERBR faculty Working Paper No. 937. College of Commerce and Business Administration. University of Illinois at Urbana- Champaign, February, 1983, p. 14.

⁴⁴ ZR Annual Report, 1974, p. 7.

The use of the storages allowed safe crop storage, an efficient input distribution and the movement of large volumes at once. The silos and mills therefore, justified the use of rail transport. In most cases ZR transported maize and wheat from the storages to National Milling companies where rail sidings were available. The finished products such as flour and mealie meal were later hauled by ZR to the main line in readiness for distribution to other parts of the country.

3.3.6 Sugar

In 1968, the Zambia Sugar Company (ZSC) was opened in Mazabuka. The factory is located at Nakambala, some 134 kilometres south of Lusaka. The maximum capacity of sugar production was 150,000 tonnes. Joy Kalyaya explains that “one of the factors for choosing Nakambala as a site for a new estate was the rail line”.⁴⁵ He further states that, “to ensure a more effective distribution system, ZSC opened depots both along the line of rail and in some nearby rural areas”.⁴⁶

The major activities of ZSC included the growing of sugar-cane at Nakambala estate and the processing of sugar at Nakambala and Ndola Sugar Refineries. Sugar is a bulky product and the transport factor was of rather greater significance in its production. From inception of the factory, ZR played a significant role in the transportation of sugar. Virtually, all the sugar was transported by ZR to about 1977. Molasses were transported to the Zambia Sugar Company’s Refinery at Ndola,⁴⁷ for further processing into refined sugar. Refined sugar was later transported mainly to large populated areas on the Copperbelt, Lusaka, Central and other provinces. Sugar molasses were consumed

⁴⁵ Joy Kalyaya, ‘A History of Nakambala Sugar Estate, 1964-84’, M.A Dissertation, University of Zambia, 1988, p. 9.

⁴⁶ Kalyaya, ‘A History of Nakambala Sugar Estate, 1964-84’, p. 29.

⁴⁷ Horizon Vol 10, No 6, June, 1968.

domestically by the livestock sector which was concentrated along the line of rail in the South and Central provinces while some of it was exported.

By 1980 there was a reduction in ZR share of the transportation of refined sugar as most of it was transported by the road sector to outlying areas and to local users. The reduction was mainly attributed to the insufficiency of container wagons and late deliveries of the commodities. However, it is noted that Sugar traffic was by far the most stable of all local traffic on ZR as shown in Table 2 on page 53.

TABLE 5: Zambia Railway's shares in the distribution of Sugar

Production	ZR share
Raw sugar produced at Nakambala and refined at Ndola Refinery Company	All of the raw sugar was hauled by ZR up to about 1977
Raw sugar 1980/81 Production was 90,000 <ul style="list-style-type: none"> • 80,000 to Bwana Mkubwa (for further transportation to Ndola Refinery Company) • 5,000 to Zambia Breweries in Ndola • 5,000 to Zambia Breweries in Lusaka 	ZR moved about 60,000 tonnes or two thirds of total tonnage
Refined sugar <ul style="list-style-type: none"> • Nakambala to Lusaka 27,000 • Nakambala to Choma 3,000 • Nakambala to Livingstone 5,000 • Ndola to Lusaka 5,000 • Ndola to TAZARA 5,000 TOTAL 45,000 	ZR moved only about 8,000 tonnes or 18%
Molasses <ul style="list-style-type: none"> • Nakambala to Lusaka 5,000 	ZR moved 80% of the commodity

Source: ZR Archives. ZR Market Share and Distribution Study Vol. ii. Marketing Department. 1980.

It is also worth noting that sugar traffic at Mazabuka enhanced the development of the Mazabuka station. Mazabuka emerged as one of the popular and most important stations on the ZR network. In 1984, when the ZR stations were classified, Mazabuka station fell

in category one.⁴⁸ It was further reported that the sugar traffic generated a million kwacha in revenue for the station per month..

3.3.7 Livestock

ZR also provided services for the transportation of livestock and stock feeds for the farmers along the line of rail especially those in Southern and Central Provinces. Livestock were not just hauled from major stations along ZR but also from small shunt stations especially Natebe, Senkobo, Makoli, and Sikaya in Southern province. Livestock included cattle, goats and chickens. Chickens were hauled in baggage vans attached to the passenger trains. The pick period for the ‘village chickens’ was between 15th and 30th of the month when they were rushed to the Copperbelt to coincide with the Miners’ pay days. Copperbelt and Congo (Zaire) had the largest markets for these commodities.

However, deaths of some heads of cattle on transit were recorded due to inadequate transportation facilities as ZR had no specified train for the animals. In order to offset the problem, ZR expeditiously introduced a livestock train on June 16th 1980.⁴⁹ According to the Mazabuka Station Master the arrangement soon began to yield better results. He stated that that:

Between June and September 1980, about 13835 heads were hauled, raising revenue of K88,339. In 1981 about 14245 was hauled between June and September 1981, raising revenue of K100,266. The introduction of the new train contributed in no small degree to alleviate the transportation pressure on the farmers. Most of the livestock was hauled to the Copperbelt where there was a high market demand.⁵⁰

⁴⁸ ZR Rail news First Quarter, 1987, p. 8.

⁴⁹ ZR Rail news, First Quarter, 1981, p. 5.

⁵⁰ ZR Rail news, Fourth Quarter, 1981.p. 21.

3.3.8 Other commodities

In addition, ZR transported timber to all divisions of NCCM and RCM from Zambezi Saw Mills in Mulobezi. According to ZR Market Share and Distribution Study conducted in 1980:

300 Cubic meters of timber was produced every month for distribution around the Copperbelt. Virtually all timber was transported by ZR up to 1976. Since then the share declined to 10%. Instead of about 20-25 wagons per week, ZR began to handle about 4 to 5 or none wagons per week.⁵¹

The above scenario is a clear indication that ZR traffic was also determined by the output of particular industries, more production meant more traffic for ZR. The following were some of the other customers for ZR.

CUSTOMERS

GOODS TRANSPORTED

AGIP	Gas Oil, Petroleum
BP (British Petroleum)	Inflammable fuel
Dunlop	Coal, machinery used in the manufacture of tyres
Bitumen	Products for tarring roads
ROP	Crude oil, coal
Rover (Z)	Machinery and components for motor vehicles

Generally, the local traffic carried by ZR increased by 10% during the period 1972-1975 but declined marginally in 1976.⁵² ZR report stated that:

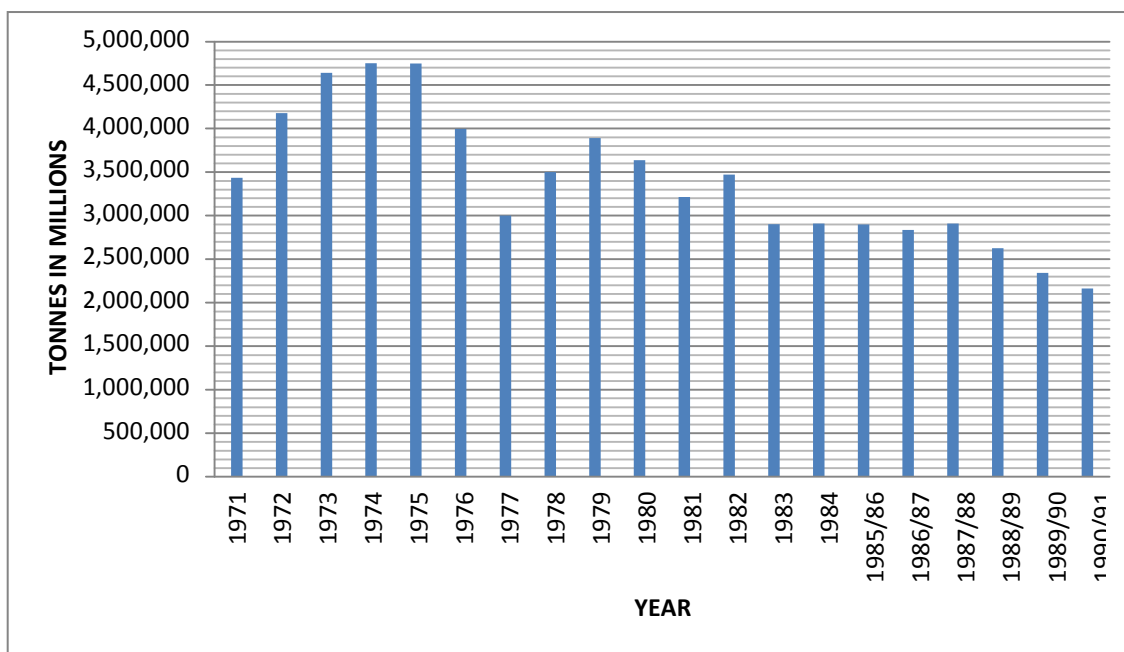
A loss of 2.5 million net tonnes from 1975 to 1977 was recorded. This was attributed to the cancellation of Konkola ore-haul between Nchanga and Chililabombwe in 1976 which accounted for approximately 1.2 million net tonnes in ores and concentrates. 1.3 million net tonnes was spread over all major commodities but was

⁵¹ ZR Market Share and Distribution Study Vol. 2. 1980.

⁵² Republic of Zambia. Third National Development Plan 1979-83. Office of the President. Office of the President, National Commission for Development Planning, 1979, p. 274.

nevertheless, most significant in agricultural goods were a reduction of 38% occurred.⁵³

Figure 4: Zambia Railways local traffic, 1971-1991



Source: ZR Archives reports, Central Statistical Office.

The graph above shows the pattern of fluctuations in local traffic. The fluctuations were in most cases as a result of insufficient rolling stock and low production in the local industries, which was attributed to the reduced economic activity in the country especially after 1975. This therefore, had a substantial impact on the utilisation of ZR’s freight services. In the early 1980s there was a downward trend up until the 1990s. Despite the change in the pattern of traffic ZR continued providing forward linkages between suppliers and consumers.

3.4 Export and Import Traffic

From independence, rail transport played a critical role in Zambia’s external trade. The study argues that ZR contributed significantly to the development of external trade which was and is still an important activity in the process of national development. The

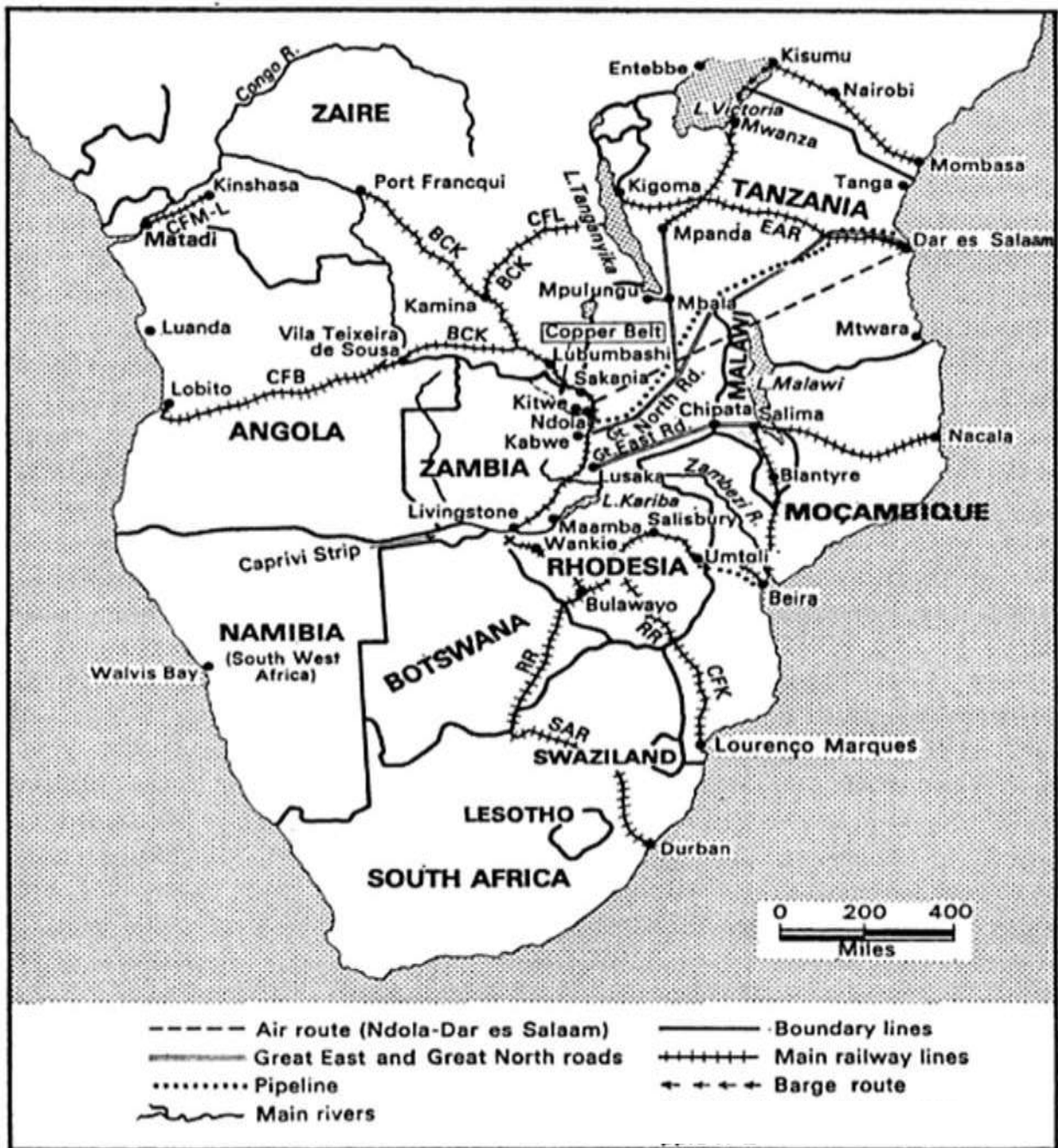
⁵³ ZR Archives ZR Report: Locomotive requirements, 1979.

importance of external trade was illustrated in the FNDP which stated that Zambia's economic potential could not freely develop unless she imported and exported goods, thereby facilitating the exchange of goods and services within and across the nation's borders.⁵⁴ The fact that Zambia is landlocked and has an export-oriented economy, trade with other countries could only be achieved by using the external routes connecting the country to the ports as shown in Map 2 on page 66.

Although ZR routes end on the southern (Victoria Falls) and northern (Sakania) borders, the system handled exports from areas of production to the borders. Mostly, ZR wagons were used to deliver the exports up to the ports and to avoid empty runs the same wagons were used to carry some imports into Zambia

⁵⁴ FNDP 1966-1970.

Map 2: Zambia's railways interconnections to the sea ports



Source: Richard L. Sklar, 'Zambia's response to the Rhodesian Unilateral declaration of Independence', in William Tordoff (ed.), *Politics in Zambia*. Berkeley: University of California Press, 1974.

White and Senior argued that it was economical for any developing nation to use rail transport for non-sensitive commodities, where distances were more than 500 kilometres.⁵⁵

Writing about the railways of the Gold Coast, Christian E. Tsey shares the same view

⁵⁵ White and Senior, *Transport Geography*, p. 138.

and states that, “railways make their most important contribution economically when hauling over long distances”.⁵⁶ Further analysis indicates that the railway transport which tends to have lower costs in long transport distances than road transport is a preferred mode of transport for copper due to its volume and weight.⁵⁷ Besides, the ship owners preferred rail transport due to its large carrying capacity as it helped them to serve on time spent at the ports. Below is the illustration of the summary of Zambia’s international routes with their distance in kilometres to the sea.

Distances from Ndola (originating station) to the sea.

-Dar es Salaam	1,986 km
-Beira	2,331 km
-Maputo	2,318 km
-Durban	2,970 km
-East London	3,170 km
-Cape Town	3,426 km

Source: Zambia Railways. Feasibility study on Electrification Traffic Report, Desconsult August 1981.

From independence, import and export routes were passing through Rhodesia to Beira, Angola along the Benguela Railways and Mozambique to Beira,⁵⁸ as shown in map 2. Up until the mid-1970s, ZR was extensively used to transport Zambia’s international trade goods.⁵⁹ ZR’s contribution to foreign trade was above 70%. This is attributed to the fact ZR was the only State rail system at the time. Besides, copper production and demand was high and most of the industries established in the first decade of Zambia’s

⁵⁶ Christian E. Tsey, ‘Gold Coast Railways: The Making of a Colonial Economy, 1879-1929’, PhD Thesis, University of Glasgow, 1986, p. 171.

⁵⁷ The World Bank. Ukaid. From the Department of International Development, July, 2011.

⁵⁸ Doganis, ‘Zambia’s Outlet to the sea. A Case study in colonial Transport Development, p, 46.

⁵⁹ Gael Raballand and Whitworth, ‘Should the Zambian Government Invest in Railways’. ZIPAR Working Paper No.3, p.2. See also Bank of Zambia. Report and Statement of Accounts for the Year ended 1971 December 31st, p, 43. The international railway carriage was handled entirely by ZR up to 1974 in October, 1975 when Tanzania- Zambia Railways Authority was opened, p. 43.

independence depended on imported machinery and equipment. ZR was therefore, geared to transport the country's exports and imports. Reference to Table 6 shows the relative importance of ZR in its early years of operations in the external trade. The organisation's high share in external trade continued up to 1972 before the closure of the southern border in 1973 as shown in Table 7 on page 71.

TABLE 6: Cargo traffic on Zambia's Foreign Trade Routes (tonnes), 1968-1969

Mode of transport	Imports				Exports			
	1968	%	1969	%	1968	%	1969	%
Road	994,174	40.9	441,756	18.9	267,669	29.1	281,196	29.4
By Rail	1,425,983	58.6	1,518,835	65.0	651,218	70.8	674,301	70.5
Pipeline	*	*	362,243	15.5	-	-	-	-
Others	12,577	0.5	13,870	0.6	564	0.1	1,298	0.1
Grand total	2,432,734		2,336,704		919,451		956,795	

*included in imports by road. Source: Republic of Zambia. Annual Statement of External Trade 1969. Central Statistical Office, Lusaka.

Copper was the most important export commodity in the category of export traffic because it was the most important foreign exchange earner for Zambia. It was transported from the Copperbelt to the ports in readiness for shipment to countries such as Japan, United States and Western Europe.⁶⁰ Other export commodities transported by ZR were cobalt, lead, zinc, refined sugar, sugar molasses and sometimes maize which in 1967 was reported to have been Zambia's second largest foreign exchange earner of which Kinshasa was the most profitable export market for maize.⁶¹

The main imported goods hauled by the railways were fertilizer, wheat, food stuffs, construction materials and maize in times of droughts or poor harvests in the country.

⁶⁰ R.S. Doganis, 'Zambia's Outlet to the sea. A Case study in colonial Transport Development', *Journal of Transport Economics and Policy*, Vol. 1 No. 1 (1967), p. 46. See also Republic of Zambia. Sixth National Development Plan, 2011, p. 8.

⁶¹ Republic of Zambia. Economic Report, Finance Division, 1968, p. 219.

For instance, between September 1970 and May 1971, over 2 million bags of maize had to be imported. The 1970 intake by NAMBOARD was at 135,000 tonnes which was far less than the⁶² annual national demand of about 500,000 tonnes.⁶³

From the onset ZR was used to transport copper of which its production in 1967 was about 675,000 tonnes.⁶⁴ In 1968 ZR managed to haul 396,000 tonnes of copper⁶⁵ with the latter years showing higher copper traffic. This resulted into high cash flow for the organisation. For instance, the 1971 ZR annual report indicated that the general goods and mineral traffic income totaled K20,290,653 an increase of K2,011,652 or 11.01% over 1970. The increase was due to high copper traffic.⁶⁶ Despite the extreme difficulties experienced in operating trains daily in the year due to lack of sufficient locomotives, ZR worked tirelessly to transport copper from the mines to the main ports.

Chanda added that:

ZR management strived hard to consider time and volume capacity in the provision of services, transportation of copper was always given priority as it was always chasing the good price at the London Stock Exchange Market. He further stated that ZR management charged crews that delayed the copper trains.⁶⁷

In 1972, another high traffic in copper was recorded due to high production. Bank of Zambia statistical report indicated that copper production in 1972 totaled about 698,000 tonnes an increase of 10.2% over 1971 and the highest level achieved since the last one in 1969.⁶⁸ ZR hauled about 500,500 tonnes of copper. Apparently 1972 was a good year for ZR. Frank M. Mwangilwa, ZR Senior Corporate Planning Officer in 1987, reported

⁶² Bank of Zambia, Report and statement of accounts for the year ended December 31st 1971, p. 9.

⁶³ A Profile of the Zambian Economy, UNDP, Lusaka, 1976, p.53.

⁶⁴ Bank of Zambia, Report and Statement of accounts for the year ended December 31st 1967, p.11.

⁶⁵ Statistical Year-Book, 1970, p. 79.

⁶⁶ ZR Archives ZR Annual report 1971, p. 15.

⁶⁷ Interview, Nicholas Chanda, Kabwe, 18/02/2016.

⁶⁸ Bank of Zambia, Report and Statement of accounts for the Year ended December 31st, 1972, p.16.

that, “in 1972 ZR experienced the highest productivity in the history of the company by handling a total of 6,794,000 net tonnes”⁶⁹ as reflected in figure 5 (graph on page 79)

In an effort to speed up transportation of copper from the mines ZR was prompted to institute a ‘through trains’ (trains which hauled one type of commodity stopped only at major stations) freight train per day from Ndola to Livingstone for the export of copper. Transportation of cargo from the Copperbelt to the south and vice versa reached its peak. ZR’s total share in international freight transportation was 1,775,000 tonnes. An average of eight trains daily was run in each direction. In addition, the General Manager by then Mr. H.J. Fast reported that the deficit of ZR as compared with 1971 was reduced by K1,452,886. The reduction was achieved in spite of the reduced government subsidy by K2, 000,000. The improvement was therefore, K3,452,286.⁷⁰ Up to 1973, a positive cash flow continued to be recorded. More significant is the fact that copper was exceptionally the major source of revenue for ZR and the national. The average performance of ZR before 1974 was mainly attributed to good performance in copper production.

The good performance was however, thwarted by the closure of the border between Zambia and Rhodesia on 9th January, 1973. Zambia’s conformity to the British declaration of sanctions on Rhodesia caused the Smith regime to close the border, thereby curtailing the country’s main and traditional export and import route. The implication was that movements of people and goods between the two countries were to stop from that date.⁷¹ In terms of business this meant a great loss to ZR and the nation.

⁶⁹ ZR Rail news July- September 1987, p. 26.

⁷⁰ ZR Archives ZR Annual Report, 1972, p.4.

⁷¹ Republic of Zambia. Second National Development 1972-1976.

The southern international route was ZR's greatest source of revenue ⁷² and the main trade route to the sea. According to ZR's annual report:

Zambia was no longer able to receive 900,000 tonnes of imports of 1972 total (excluding pipeline imports) or to export 430,000 tonnes of 1972 total exports over the southern route.⁷³ Goods tonnage handled in 1973 totaled 6.6 million against 6.8 million tonnes in 1972. The import-export traffic including traffic for Zaire reduced from 1.77 million tonnes to 1.10 million tonnes.⁷⁴

Statistics from Table 7 below indicate that before the closure, almost two thirds of Zambia's external trade used the Rhodesia route.

TABLE 7: Cargo traffic on Zambia's Foreign Trade Routes ('000 tonnes) 1970-1978

Routes	1970	1971	1972	1973	1974	1975	1976	1977	1978
Lobito to/Zaire-Rail	305	445	314	807	947	566	135*	132*	98*
Dar-Road	501	516	412	484	590	660	571	337	226
Dar-Rail	0	0	0	0	0	115	675	937	913
Mombasa-Road	0	0	0	113	172	24	34	4	0
Mozambique-via Malawi Road/Rail	24	38	46	150	135	195	119	59	71
Mozambique-via Malawi-Rail	0	0	0	0	0	40	93	9	33
South Africa-via Rhodesia Rail	1,691	1,438	1,331	40	0	0	0	0	136
Air and Other	8	9	8	78	62	61	30	65	52
TOTAL	2,529	2,446	2,111	1,672	1,906	1,661	1,657	1,543	1,529

*Exports to Zaire.

Source: Zambia Third Railway Project Staff Appraisal Report, November 26, 1979, World Bank Report No. 2541-ZA

⁷² ZR Rail news, Second Quarter, 1977, p. 2.

⁷³ Bank of Zambia, Report and Statement of accounts for the year ended December 31st,

⁷⁴ ZR Annual Report 1973, p.7.

ZR's financial viability was also affected. The earnings from goods traffic declined from K21,692,806 in 1972 to K15,544,485 in 1973 a reduction of K6,148,321.⁷⁵ In an effort to try and assist ZR overcome the problem, the Government funded the system with an amount of K7.4 million for operating expenses and capital replacement works.⁷⁶ The following year ZR received K6.8 million from government.⁷⁷

Consequently, it became inevitable for Government to shift to Benguela railway passing from the Zambian Copperbelt to the Zaire railway system out through Angola to the port of Lobito Bay. As reflected in Table 7, for a while the route became the most important export and import route. The route handled about 51.2% and 49.7% of Zambia's imports and exports in 1973 and 1974 respectively.⁷⁸ Due however, observed that, the re-routing had increased transport costs by an estimated K20 million (about U.S \$ 30 Million) in that year and K30 million in 1975, adding to inflationary pressures in Zambia,⁷⁹ which had been brought about by the increases in oil prices towards the end of 1973. Clearly, Zambia's participation in the economic boycott against the rebel colony threatened to cripple its economy because Rhodesia was the most viable transportation route for capital equipment and supplies critical to the mining industries much indispensable for the rapid economic development of the country.

Unfortunately, the Benguela route was later closed in 1975 due to a civil war in Angola. As a result, about 20,000 tonnes of Zambia's general cargo were trapped at Lobito Port

⁷⁵ ZR Annual Report 1973, p. 6.

⁷⁶ ZR Annual Report 1973, p. 13.

⁷⁷ ZR Annual Report 1974, p.6. For details on the impact of the border closure on Zambia, see Clarence Chongo 'The Impact of Rhodesia's Economic and Socio-Political Development 1965-1979', M.A Dissertation. University of Zambia, 2009.

⁷⁸ Bank of Zambia, Report and Statement of accounts for the year ended December 31st, 1975, p.39.

⁷⁹ John, 'Some Observations on Rail and Road Transport in Commonwealth Tropical Africa', p. 18.

until 1977.⁸⁰ This again put more pressure on ZR's operations and the nation. According to Bank of Zambia's report:

Both imports and exports fell during this period. The volume of total trade in 1975 which amounted to 2.5 million tonnes made up of 1.7 million tonnes of imports and 0.8 million tonnes of exports declined by 7.4% from the level of 2.7 million tonnes achieved in 1974.⁸¹

ZR's share in external trade declined from 1,775,000 tonnes in 1972 to 800,000 tonnes in 1975.⁸²

The closure of the Benguela route led to the re-routing of copper to Dar-es-Salaam through Tanzania-Zambia Rail Authority (TAZARA) which commenced its operations in 1976. Table 7 illustrates that Dar-re-Salaam rail and road routes became the most important. During this period a significant proportion of export and import commodities were handled by road transport through Tanzania and Malawi. It was noted that the growth performance for ZR turned low during this period. The ZR freight carried showed a drop of 4% over 1974/1975. Statistics in Table 8 demonstrate a comparison between the rail and road transport between 1972 and 1976.

⁸⁰ Bank of Zambia, Report and statement of accounts for the year ended December 31st, 1977, p.43.

⁸¹ Bank of Zambia, Report and Statement of Accounts for the Year ended 31st December, 1975, p.39.

⁸² Republic of Zambia. The Third National Development Plan 1979-83, Office of the President, National Commission for Development Planning, 1979, p.274.⁸² See also ZCCM Archives. Roan Consolidated Mines Ltd Annual Report, 1976, p.7.

TABLE 8: Modes of transport 1972 –1976 ('000 tonnes)

		ALL MODES	RAIL		ROAD		AIR	
		TOTAL	VOL.	%	VOL.	%	VOL.	%
1972	exports	854	636	74.5	218	25.5	-	-
	imports	1296	857	66.1	431	33.3	8	0.6
1974	exports	924	509	55.1	415	44.9	-	-
	imports	982	456	46.4	497	50.6	29	3.0
1976	exports	981	349	38.7	556	61.3	-	-
	imports	761	327	43.0	414	54.3	20	2.7

Source: *Transport and Communications Unit National Commission for Development Planning, 1978.*

The foregoing circumstances clearly show that the fluctuations in Zambia Railways traffic freight between 1973 and the late 1970s were attributed to some of the political events in the neighboring countries. The circumstances had a direct influence on the volume of external traffic on ZR.

Later in 1978 TAZARA freight traffic began to experience challenges. The Dar-es-Salaam port could not handle the intended level of capacity due to congestions. This impacted negatively on the mines because the port began to experience severe congestions which subsequently led to delays in clearing the stocks and movement of traffic.⁸³ NCCM reported that:

Transit time for copper movement from the mines to Dar-re-Salaam port increased from the normal eight days to 17 days in respect of road transport and 27 days for rail transport. Consequently, copper stocks at the mine reached a maximum of 27,000 compared to the normal stock of about 1,000 tonnes. The first half of the financial year ending March, 1979 indicated that the stocks of copper at the mine increased to 42,550 tonnes in October, 1978.⁸⁴

⁸³ ZCCM Archives Nchanga Consolidated Copper Mines Ltd. Annual Report and accounts Report for the Financial Year ended 31st March, 1978, p.1.

⁸⁴ ZCCM Archives Roan Consolidated Copper, Mine Ltd. Annual Report and Accounts Report for the Financial Year Ended 31st March, 1980, p. 8.

In addition, some 90,000 tonnes of fertilizer could not be transported into Zambia from Dar-es-Salaam. Inevitably, on 9th October, 1978 the President decided to re-open the Southern route in order to facilitate the expeditious movement of the country's exports and essential imports.⁸⁵ To enhance speedy movement of copper the government gave a directive to ZR to give copper first priority. According to the Minister's letter (Minister of Transport and Communications) dated 8th January, 1978:

A policy directive was issued to the General Manager ZR to cut back transport of maize by rail and maximize rail capacity in order to export copper. This directive was issued at the time when the export copper stocks were high on the Copperbelt.⁸⁶

Largely as a result of the opening of the border in 1978, there was a steady increase on the volume of both export and import traffic handled by ZR up to about 1983. Additionally, due to strikes on TAZARA, blowing up of the rail, bridges and roads leading to Zambian outlets to Tanzania and Botswana in 1979, traffic on TAZARA had virtually come to a standstill from October 1979.⁸⁷ It therefore, became inevitable for the Zambian government to divert some of the external traffic to ZR. It is worth noting that in 1979 the rail transport continued to dominate in the external trade which was 73.8% of the total trade. "ZR managed to haul 41%, consisting of 294,000 tonnes of imports and 343,000 tonnes of exports".⁸⁸ There was a continued availability of the south rail route through the port of East London. This discourse was shared by Howard Simon who reported that "in 1980 this longer and far more expensive route to the South African port of East London carried about half of Zambia's copper exports".⁸⁹ Almost the entire

⁸⁵ Republic of Zambia. Economic Report, Office of the Prime Minister National Commission for Development Planning, 1978, p. 78.

⁸⁶ UNIP 8/3/146-48, Secretariat.

⁸⁷ Republic of Zambia, Office of the President National Commission for Development Planning, 1980, p. 91 See also Bank of Zambia, Report and Statement of accounts for the year ended 31st December, 1979.

⁸⁸ Bank of Zambia, Report and Statement of accounts for the year ended 31st December, 1979, p. 34.

⁸⁹ Howard Simon, *A Country study* (Scandinavian Institute of African Studies, Uppsala Sweden, 1985), p.54.

tonnage of imports consisted of maize and fertilizer which had to be diverted from the port of Dar-es-Salaam which was severely congested and could not handle the increased demands made on it. The route was suitable for imports and exports because the ports in South Africa did not experience any congestion in comparisons to the port of Dar-es-Salaam. In addition, following Zimbabwe's independence transportation of imports and exports were eased due to good relations.

Therefore, ZR's Southern route increased in importance in handling Zambia's external trade commodities. For instance, in 1982 about 50% of Zambia's imports arrived along the southern route.⁹⁰ This improvement in performance continued into 1983 maintaining second position and commanding roughly about 43% share in external trade as shown in Tables 9 and 10.

Table 9: Zambia's import and export by various Routes 1981-1983 including import of crude oil

	1981		1982		1983	
ROUTES	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS
Lobito-Zaire	-	23738	134	25821	-	33405
Dar-es-salaam(road)	111717	123538	96383	103100	27029	25696
Dar-es-salaam(rail)	228415	306415	270794	351264	172470	318415
Malawi	3417	-	95	-	11070	371
Mozambique	14043	440	7897	-	1250	-
Kazungula	647	-	652	-	1816	20
Zimbabwe(road)	51697	-	43936	-	47607	-
Zimbabwe(rail)	322143	190058	335354	210374	284903	207019
Air Freight	12531	3972	11917	4940	6851	-
Other Routes	-	-	-	-	-	479
TOTAL	744610	648161	767162	695499	552996	585405

Source: Contingency Planning upto October 1983. B.O.Z Report 1983

⁹⁰ The Economist Intelligence Unit .Quarterly Economic Review of Zambia, No. 2, London. SWIANT, 1984, p. 18.

TABLE 10: Percentage share of Trade Routes in Zambia's Foreign Trade 1981-1983

ROUTE	1981	1982	1983
Lobito-Zaire	1.7	1.3	2.9
Dar-es-Salaam(Road)	16.9	13.7	4.6
Dar-es- Salaam(Rail)	38.4	42.5	43.2
Malawi	0.3	-	1.0
Mozambique	1.0	0.5	0.1
Kazungala	-	-	0.2
Zimbabwe(Road)	3.7	3.0	4.2
Zimbabwe(Rail)	36.8	37.3	43.2
Air freight	1.2	1.2	0.6

Source: Ministry of Power, Transport and Communications.

The above statistical observations show the importance of the southern route, through which a substantial amount of imports and exports, were transported by ZR. The imports coming through this route increased as a result of the relatively more operations of the southern ports and the general reliability of the southern routes compared to Dar-es-salaam route. This further shows that despite the establishment of TAZARA, ZR continued to have a market share in transporting import and export commodities especially copper. Similarly, R. Kawisha a ZR locomotive driver explained that:

ZR continued to transport copper from the Copperbelt mines to Old Kapiri Mposhi for onward transportation to Dar-es-Salaam port, in which both ZR and TAZARA wagons were used. He further stated that due to challenges at the Dar-es-Salaam port, ZR's southern route was preferred.⁹¹

In the mid-1980s there was a general poor performance in the transport sector in the country, which was attributed to the financial stringent years of the world economic depression.⁹²

⁹¹ Interview, R. Kawisha, 11/11/2015, Kabwe.

⁹² Republic of Zambia. Office of the President, National Commission for Development Planning. Economic

Thus, there is some evidence of sluggish and downward trend of ZR performance both externally and internally due to the decreasing environment in mineral production. According to Simon Howard “by 1984 copper production fell by 19%, cobalt by 19%, lead fell by 40% and zinc by 26%”.⁹³ The poor performance was the true reflection of what ZR had forecasted for the same period, that the system would depend mainly on the level of activity in copper mining and refining which would determine the level of exports and world price of copper which would influence the country’s export earnings and its ability to import goods that ZR would transport.

The economic experience had a negative impact on ZR. It can clearly be noted that copper production had a great influence on ZR traffic. Its major contribution to Zambia’s economic growth was in the sphere of the mining industry for both internal and export traffic. The effects of the economic depression among other factors subsequently, affected ZR finances. Emmanuel Hachipuka, the General Manager, confirmed the above account in 1984 when he stated that he inherited what he termed as “chaotic” and a very difficult company. As can be deduced from Table 11 on the next page, ZR incurred losses consecutively between 1980 and 1984 reaching the largest loss of K19.1million in the 1983/84 financial year.

Report, 1984, p. 238.

⁹³ Simon Howard, *Country Study*, (Uppsala: Scandinavia Institute of African Studies, 1985), p. 39.

TABLE 11: ZAMBIA RAILWAYS FINANCIAL REPORT, 1975-1986

DETAILED PROFIT AND LOSS ACCOUNTS FOR THE YEARS ENDED

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
RE VENUES												
Passengers	2,351	3,044	3,581	4,580	6,576	5,951	6,403	7,491	9,693	9,797	12,962	17,486
General goods and minerals	24,248	33,730	33,754	36,534	69,359	55,790	59,128	67,062	76,087	92,773	183,580	376,601
	112	141	151	107	275	285	243	191	450	723	1,270	
Mail	86	181	6	-	-	-	-	-	-	-	-	
Storage demurrage	1,292	944	1,622	2,621	3,583	2,624	2,413	2,639	2,921	4,261	5,561	9,604
OTHERS												
Catering	342	527	757	939	1,168	1,054	1,201	1,365	1,661	877	767	500
Staff rents	610	630	665	728	1,443	816	902	951	988	1,031	2,072	2,548
Miscellaneous	302	792	1,243	1,530	2,076	831	2,019	1,155	1,255	1,419	2,414	4,206
TOTAL INCOME	29,423	39,989	41,779	47,039	84,480	67,351	72,309	80,854	93,055	110,881	208,626	410,845
EXPENDITURE												
Administration charges	8,223	10,612	10,887	12,892	17,595	21,718	26,404	23,477	38,744	32,278	124,296	172,354
Operating and running costs	12,284	14,575	14,785	14,998	29,303	29,572	31,029	34,547	42,053	42,561	74,003	125,714
Maintenance and terminal costs	8,323	9,645	9,378	11,799	16,285	14,054	17,592	24,115	20,698	31,799	34,277	93,722
Goods handling	682	907	2,504	2,163	8,337	6,199	7,349	7,408	8,156	5,230	(32,062)	8,386
Catering	562	816	1,046	1,478	2,179	1,773	1,003	1,830	2,470	1,469	950	1,002
TOTAL EXPENDITURE	30,074	36,555	38,550	43,330	73,649	73,316	83,377	91,377	112,121	113,337	201,464	401,178
Profit/Loss before taxation	(651)	3,434	3,229	3,709	10,831	(5,965)	(11,068)	(10,068)	(10,523)	(19,066)	(2,456)	7,162
Less taxation	-	-	-	-	-	-	-	-	-		2,861	2,966
Profit/(loss)after taxation	(651)	3,434	3,229	3,709	10,831	(5,965)	(11,068)	(10,523)	(19,066)	(2,456)	4,301	6,701

(THOUSANDS OF KWACHAS)

SOURCE: Zambia Railways. Facts and Figures, June, 1987.

Furthermore, in 1985 the memorandum to the Board of Directors reported that:

The company had been financing its operations and expansion on borrowed capital resulting in a very high debt burden. ZR's debt position as at 31st March, 1984 stood at K152 million. Consequently, ZR incurred substantial losses due to heavy debt servicing and increase in working expenses compared to revenue. The working capital deficit increased from K1.9 million in 1981/82 to K25 million in 1984/85.⁹⁴

In 1986 all copper exports were switched away from the southern route to other routes leaving it with little imports. Other than the world economic problems, South African destabilisation activities such as the bombing raids on the Front-Line-States in 1986 had affected ZR's traffic. Thus, the political situation in the Southern African region affected the patterns for import, export and transit resulting in loss of traffic on the company's most profitable route.⁹⁵ The unsatisfactory performance was again experienced in 1987 to about 1989 when ZR handled an average of 4.8 tonnes of traffic annually.

The system continued operating in an environment of decreasing mineral production⁹⁶ into the 1990s when the economy was finally liberalized, and the mines privatized thereby increasing competition with the road transport. "In 1990 the actual performance of the company was less than 50% of its capacity due to poor condition of the basic infrastructure and low availability of locomotive and rolling stock".⁹⁷ Evidently, the poor performance of ZR in the 1990 and 1991 was confirmed by Frank Kangwa, Corporate Planning Manager in 1991, when he reported that:

The decline in traffic and the poor performance in 1990/1991 had been due to the general economic recession, poor track structure, unreliable locomotives and diversion of traditional railway traffic to foreign road transporter. The ever increasing international road competition gave rise to a further drop of 15% in the railway market

⁹⁴ ZR Archives Memorandum to the Board of Directors, February 1985.

⁹⁵ ZR Archives. Chairman's Report 31st, March, 1987.

⁹⁶ ZR Archives De Leuw, Final Evaluation ZR Project (Project No. 690-0231) United States Agency for International Development, Lusaka, Zambia, 1992.

⁹⁷ Republic of Zambia. Office of the President. National Commission for Development Planning, Lusaka, 1990, p.116 See also ZCCM annual reports for 1990 and 1991.

share of transportable commodities resulting in ZR recording low traffic haulage.⁹⁸

In 1991 the traffic handled remained below average. It decreased from 4.1 million in 1990 to 3.5 million tonnes. According to the Managing Director's Circular No. 1-1995 cited in Bulaya's work, the company's revenue accruing out of the declining traffic volumes reduced drastically while the cost of running the operations was on a perpetual increase.⁹⁹ Between 1990 and 1991 the losses reached K440 million (US \$ 15 million).¹⁰⁰

3.5 Transit Traffic

Like the Rhodesia Railways, independent ZR offered transit facilities. Zambia's landlocked nature made it inevitable for ZR to serve as a transit route for cargo from neighboring countries. The main customers were the Democratic Republic of Congo (Zaire), Zimbabwe (Southern Rhodesia) and South Africa. Part of their export and imports were handled by ZR to and from the ports of Benguela, Beira and the main port of South Africa.¹⁰¹ Transit traffic to and from DRC constituted a major market for ZR. Originally, Sakania border was the interchange point for Zaire traffic but was later moved to Ndola in 1985, an action which saw the station becoming very important.

The main goods from Zaire to South Africa were copper concentrates, cathodes, cobalt, and zinc/lead. From South Africa to Zaire, ZR transported maize, coal, coke and diesel fuel. Therefore, ZR linked the rail companies of these countries and provided revenue for the system and the nation at large. It was reported that:

⁹⁸ ZR Archives Rail news, First Quarter April-June 1991, p. 3.

⁹⁹ Bulaya, The Effectiveness of Rehabilitate- Operate (R.O.T) Mode of Railway Concessioning. The Case of Zambia Railways, p.3.

¹⁰⁰ Zambia. Prospects for Sustainable and Equitable Growth, Country Operations Division Southern African Department, Report No. 11570- ZA. 1993

¹⁰¹ Zambia. An Investment Guide to Zambian Opportunities and Conditions, 2011.

Transit traffic consisted almost entirely of cargo on South Africa-Zaire route, which until 1991 totaled 350,000-450,000 tonnes. South Africa/Zimbabwe- Zaire route handled mainly inputs for the copper mines in southern Zaire, mainly coal, copper coke and sulphur (produced in South Africa/Zimbabwe maize (from Zimbabwe/South Africa) and general cargo. Zaire- South Africa consisted almost entirely of copper exports, shipped via East London.¹⁰²

In 1971 the total traffic hauled for Zaire and South Africa was 326,212 tonnes out of the organisation's total freight traffic of 5,565,339 tonnes. In 1972 the traffic showed a slight increase of 1,321 tonnes, earning revenue of K3,020,000. This however, declined to K2,205,000 in 1973.¹⁰³ In 1974, ZR handled about 280,000 tonnes, from Rhodesia to Zaire with an increase in revenue of 15% over the previous year.¹⁰⁴ The revenue increased due to the revision of rates for coal and coke from Rhodesia to Zaire. In 1977 ZR hauled a total of 354,161 net tonnes of Zaire imports from South Africa and 301,834 net tonnes of Zaire exports via the southern route.¹⁰⁵ 1978 showed an increase by recording 707,415 tonnes which was higher than what was budgeted for. Furthermore, 1978-1980 indicated a satisfactory performance due to the opening of the border between Zambia and Rhodesia. It is noted that ZRs' good performance continued until 1983/84 when traffic became erratic.

Much of the revenue in the transit category continued coming from the DRC traffic. In 1985 Emmanuel Hachipuka the Managing Director reported that the transit facilities provided by ZR were bringing about 25-30 US dollars into the country.¹⁰⁶ He further reported that Zaire preferred to transport its copper through ZR because it was the cheapest route.

¹⁰² Maters, Zambia Railways Traffic forecast study, p.15.

¹⁰³ ZR Archives Fifty Second Meeting of the ZR Board 2.1.6. F13. 7.

¹⁰⁴ ZR Annual Report for the year ended December 1974, p.7.

¹⁰⁵ ZR Annual Report for the Year ended December 1977, p. 8.

¹⁰⁶ ZR Rail news, Third Quarter, July-September, 1985, p. 4.

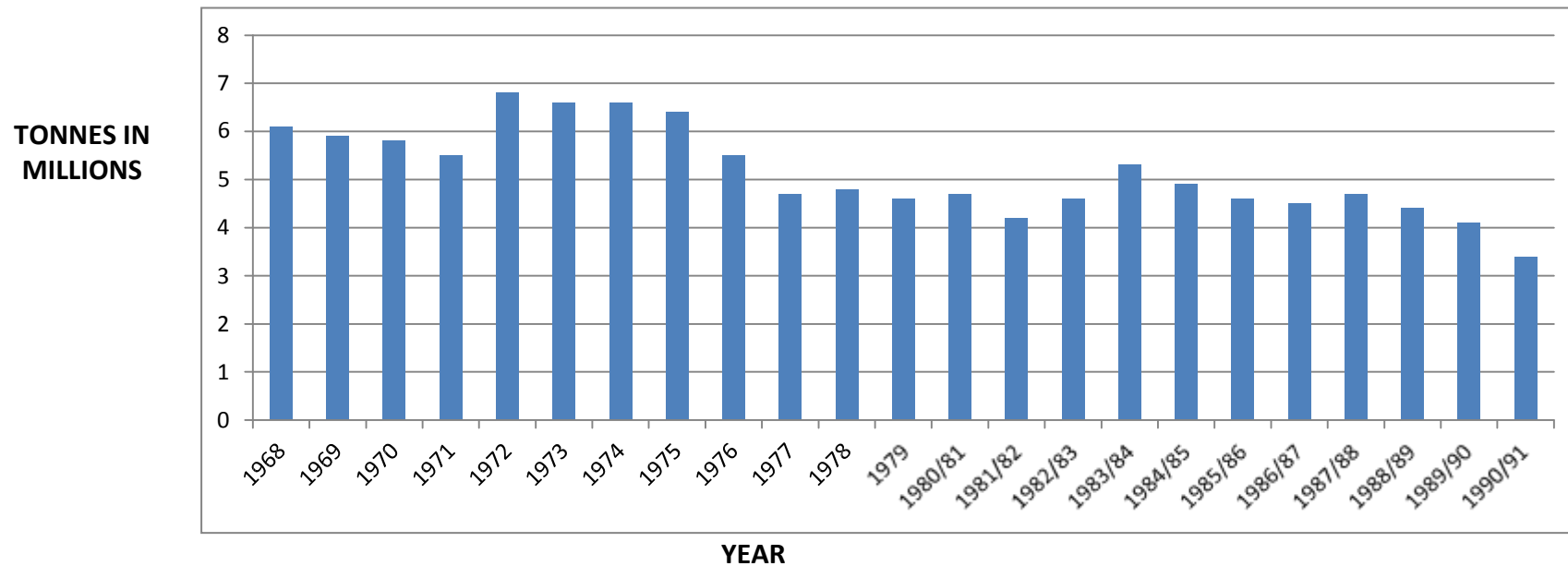
TABLE 12: Total freight goods traffic (million tonnes) 1968-1991. Designed carrying capacity per annum was 8.5 million tonnes

YEAR	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
TONNES	6.1	5.9	5.8	5.5	6.8	6.6	6.6	6.4	5.5	4.7	4.8

YEAR	1979	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
TONNES	4.6	4.4	4.2	4.6	5.3	4.9	4.6	4.5	4.7	4.4	4.1	3.4

Source: Compiled from ZRL, Facts and figures, June 1987 and Central Statistical Office data.

Figure 5: General performance of Zambia Railways freight traffic, 1968-1991



The foregoing graph is an illustration of ZRs' freight performance between 1968 and 1991. From 1967-1975, there was a trend to high output and from 1976-1989 there was a steady decline with fluctuations in performance and below average after 1989.

3.6 Tariffs

ZR charges for services were originally based on the principle of charging what the traffic could bear in the case of freight traffic and on Government policy.¹⁰⁷

Government policy ensured that ZR remained a service provider for the nation. To this effect, tariffs were subject to Government approval. One third of ZR's costs were subsidised, therefore the company was used as much as possible to transport essential commodities.¹⁰⁸ As noted in chapter two, the company had no autonomy to make profit. To this effect, tariffs were subject to Government approval.

The tariff system was basically a class tariff which historically was based on value of the commodities, following the principle that a "higher valued commodities were charged a higher tariff".¹⁰⁹ Commodities such as copper, coal (the fuel which was the life blood of the basic industries), mine inputs and foodstuffs were classified as essential commodities; therefore they were favored with low tariffs. Low-rated commodities were charged a special rate.

Basically, special rates were offered to major customers, such as the mines, Maamba Collieries, Zambia Sugar Company, Chilanga Cement, Ndola Lime Company, and agricultural products such as maize, and fertilizer. As at January, 1985;

Mine inputs such as copper Anodes, Cathodes and Starting sheets measured in full wagons from Chambeshi, Chingola, Mufulira, Ndola to Chililabombwe and Nkana/Kitwe were rated at 275 ngwee per metric tonnes per kilometer. Copper, Ingots, Wire bars for export full wagon from Bwana Mkubwa to New Kapiri was 756 ngwee per metric tonnes. The same commodities hauled from

¹⁰⁷ Swedish Consultancy Mission on Manufacturer of Railway wagons at Zambia Railways Workshops in Kabwe, April, 1978, p. 5.

¹⁰⁸ World Bank. Report No. 841 a ZA Republic of Zambia .Agricultural and Rural Sector Survey. Vol III, 1975.

¹⁰⁹ Maters, Zambia Railways Traffic forecast study, p.16.

Bwana Mkubwa to Victoria Falls Bridge were rated at 3112 ngwee per metric tonne.¹¹⁰

The special rates were significantly lower than the basic tariffs which were placed on higher valued goods.¹¹¹ The rate for maize transportation remained at a minimum.¹¹²

Farmers especially those based in areas through which ZR passed benefited from the cheap rail transport tariffs. Therefore, ZR's contribution to the prosperity of the major sectors of the economy came, for the most part, indirectly, through their cheapening of delivery costs thus, affecting substantial savings in working costs of the major customers. Lower transport costs partly increased the flow of agricultural commodities from surplus to deficit areas.

It is worth noting that despite increased operation costs, the tariff structure had remained unchanged since 1963, until 1975 when they were revised upwards to allow the system operate without Government subsidies.¹¹³ Later in 1986 the rates were revised but remained low compared with road transport rates.¹¹⁴ Details of some of the special rates as at 1975 are indicated in Table 13.

¹¹⁰ Zambia Railways Official Rail Tariff Books No. 1 and No. 2, 1982.

¹¹¹ Maters, Zambia Railways Traffic forecast study, p.16.

¹¹² Swedish Consultancy Mission on Manufacturer of Railway Wagons in Kabwe, April, 1987, p.16.

¹¹³ Bank of Zambia, Report and statement of accounts for the year ended December 31st, 1975.p.44.

¹¹⁴ ZR Archives ZRL. Chairman's Statement. Draft Annual Report and Accounts for the ended 31st March, 1986.

Table 13: Zambia Railways Special rates on some commodities

COMMODITIES	STATIONS	RATE
Coal	Masuku to Ndola	645ngwee per metric tonne
Cement	Ndola, Lusaka to all stations on ZR	8.2 ngwee per metric tonne
Copper Anodes, Cathodes,	Between the copper mining areas	1.19 ngwee per metric tonne
Copper Concentrates, Flux Ore	Between the copper mining areas	1.02 ngwee per metric tonne
Copper ore	Chililabombwe to Chingola	30 ngwee per metric tonne
Heavy fuel oil from Indeni refinery	Bwana Mkubwa to Mufulira Bwana Mkubwa to Nkana/Kitwe	2.69 ngwee per tonne 2.25 ngwee per metric tonne
Lead ingots, for export,(Kabwe to Lobito)	Kabwe Sakania border to Sakania border Lobito	414 ngwee per metric tonne

Source: Zambia Railways Limited Official Tariff book, 1975.

3.7 Conclusion

The chapter examined the performance of ZR both locally and externally. The preceding discussion has demonstrated that ZR played a significant role in the economic activities of Zambia. Virtually all the minerals and agricultural products such as maize, fertilizer, and sugar were transported by ZR before the mid-1970s. From the energy sector, the most important commodity transported by ZR was coal from Wankie before 1969 and locally from Maamba Collieries after 1969. The transportation of coal locally was encouraging as most of the industries continued to receive sufficient supplies until 1979/1980 when production at Maamba collieries began to decrease due to ropeway breakdown.

The chapter has also noted that ZR's performance in the country's major economic activities had never been consistent. At no time did ZR's freight traffic attain its designed average carrying capacity of 8.5 million tonnes per annum. Nonetheless, its performance

in the first decade recorded a satisfactory performance and above average. High production of copper provided ZR with high traffic. In addition, the good performance of the major industries along the railway line had an influence on ZR's traffic. The study further noted that political problems in the neighbouring countries had impacted negatively on the operations of ZR, specifically when the southern border closed in 1973-1978. During this period ZR traffic fluctuated. From 1982 to about 1984, there was a steady rise in traffic, there after performance declined into the 1990s. The decline was mainly attributed to the decline in copper production. Also the economic problems the country underwent, in consequence affected the performance of most of the economic activities. This subsequently affected ZR freight traffic. However, this did not render ZR out of the market; it still remained the dominant transporting company especially in external trade.

CHAPTER FOUR

CONSTRAINTS IN THE OPERATIONS OF ZAMBIA RAILWAYS, 1967-1991

4.1 Introduction

In this Chapter an attempt is made to investigate the major challenges Zambia Railways (ZR) faced in its operations between 1967 and 1991. The chapter argues that despite being government's preference for the transportation of the country's major commodities, ZR operated under very difficult conditions from its inception. It was hit by both internal and external constraints. Some of the internal problems were as a result of the negligence of the Federal Government and later failure of the RR management to develop the line to the north of Rhodesia. The study further argues that the poor economic performance of the country after the mid-1970s greatly affected the development and performance of the company. Moreover, government's intervention especially in the implementation of tariffs and the allocation of traffic between ZR and TAZARA constrained the operations of ZR.

4.2 Internal challenges

As noted in the previous chapter, ZR's designed average carrying capacity was to move a tonnage of 8.5 million tonnes per annum. This however, was very difficult to attain because of many hurdles faced by the company. The most prominent among the other problems plaguing ZR between 1967 and 1991 are discussed below.

4.2.1 Old infrastructure

In 1967, the primary rail infrastructure in Zambia was taken over from the Unitary Railway System in a condition that needed immediate replacement or rehabilitation due to old age or technological obsolescence.¹ The normal average replacement period for

¹ ZR Archives ZRL, Finnish International Development Agency, FINNID. Final Draft Report. Feasibility Study

wooden sleepers was fifteen years.² However, this was not the case with ZR as most of the sleepers remained unchanged. This affected the speed of the trains.

As noted in chapter two the Federal Government in Rhodesia concentrated on improving the line in Rhodesia where the headquarters were situated and neglected the Zambian (Northern Rhodesia) side. Infrastructure such as the rail lines, bridges and other assets were neglected. This became an obstacle to the operations of ZR as large sums of money were required to maintain the track in poor condition. John Due reported that “the rail has had difficulties in handling the available freight traffic ever since its formation from Rhodesia Railways”.³ Similarly, in 1987 E. Hachipuka, the Managing Director, mentioned that the worn-out wooden sleepers on the Zambian line had not been replaced for over fifty years.⁴ He further contended that ZR’s problems were as a result of past oversights and general lack of interest by the Federal rail authorities and subsequent short-term contractual managements before indigenous Zambians took over the running of the company.⁵ This implied that very little was done to improve the rail line during the management of RR and the early management teams of ZR. Moreover, even some successive management teams neglected the already aged truck and did little to invest in the track rehabilitation, leading to further deterioration.

Before 1981, the last time most of the line was repaired on wooden sleepers with heavier rails was between 1960 and 1961.⁶ To this effect, as far as gauge holding was concerned the old aged sleepers were not able to perform well. Consequently, several accidents

on Supply of Railway Wagons, Plancenter Ltd. January 1989, p. 6.

² Draft Annual Report and Accounts for the Year Ended 31st March, 1988.

³ John, F. Due, ‘Trends in Rail Transport in Four African Countries Zimbabwe, Zambia, Tanzania, Sudan’. Faculty Working Paper No. 937, College of Commerce and Business Administration. University of Illinois at Urbana-Champaign. February 1983, p. 16.

⁴ ZR Archives ZR Rail news, First Quarter January- March 1987, p. 3.

⁵ ZR Archives ZR Rail news, First Quarter, January-March 1987, p.2.

⁶ ZR Archives ZRL Operating Problems affecting ZRL, Office of the Managing Director, 2nd December, 1994, p. 2.

were experienced, as noted in chapter two. The problem was exacerbated in 1973 when Zambezi Saw Mills at Mulobezi came under the defunct Rucom industries which could not meet ZR annual sleeper requirements. For instance, in 1977 only 30,000 sleepers against the requirement of 100,000 sleepers per year only were supplied by Zambezi Sawmills.⁷ It therefore, became prudent for the organisation to impose speed limits to prevent accidents.

By the late 1980s, the speed had been limited to as low as 60 kilometres per hour and some sections had extremely low speed restrictions of about 15 to 20 kilometres per hour on lengths varying from 1 km up to 13 kilometres.⁸ This resulted into train delays which affected transit times. These speed limits were unpalatable to the country's economy which was already depressed by the world recession. Evidence has shown that in 1980:

The internal movement of essential supplies such as coal, cement and other bulky commodities were affected by the poor performance of ZR. Consequently, there was an increased dependence on the more expensive road transport.⁹

The restrictions on speed limits continued to be one of factors affecting the company's performance. It is, however, worth noting that removing the speed restrictions would have caused more damage to the rail line, consequently increasing costs for the company. Towards 1988, it was reviewed that the worst portion was between Kafue and Kabwe where stretches of the track adding up to 80 kilometres had the worst track structure on account of rotten wooden sleepers.¹⁰ By 1990, the poor condition of the track had not just resulted into accidents but also longer trains turn-round time (locomotives and wagons

⁷ ZR Archives ZR Annual Report, 1977.

⁸ Republic of Zambia. Sixth National Development, 2011-2015/20, p. 57. See also Republic of Zambia. National Commission for Development Planning, 1990, p.114. The performance of the transport sector in real terms continued to decline. Much of this negative growth rate was attributed to the worsening condition of the infrastructure especially in the railways.

⁹ Nchanga Consolidated Copper Mines Limited (NCCM), Annual Report and Accounts for the financial year ended March, 1980, p.14. See also ZCCM Annual Report, 1984. 'Internal traffic movements, especially of bulk cargo such as concentrates, lime, heavy fuel oil coal and maize were adversely affected by reduced capacity on ZR resulting from operational breakdowns and derailments', p. 12

¹⁰ ZR Archives Draft Annual Report and Accounts for the Year Ended 31st March, 1988, p. 10.

kept en-route for many days) which was estimated at fourteen days. The deterioration in ZR's infrastructure in turn had a negative impact on other productive sectors of the economy such as the mines and some industries along the line of rail and the quality of services for the public at large. This inefficiency in the rail sector made companies to opt for road transport.¹¹ In an effort to improve the condition of the track "a stretch of 112 kilometres between Mookamunga and Mwela in Southern Province received attention through the World Bank sponsored Third Railway Project. This involved the laying of long welded rails with concrete sleepers".¹²

The figure below illustrates the dilapidated sections of ZR main truck.

Figure 6: A dilapidated section of ZR.



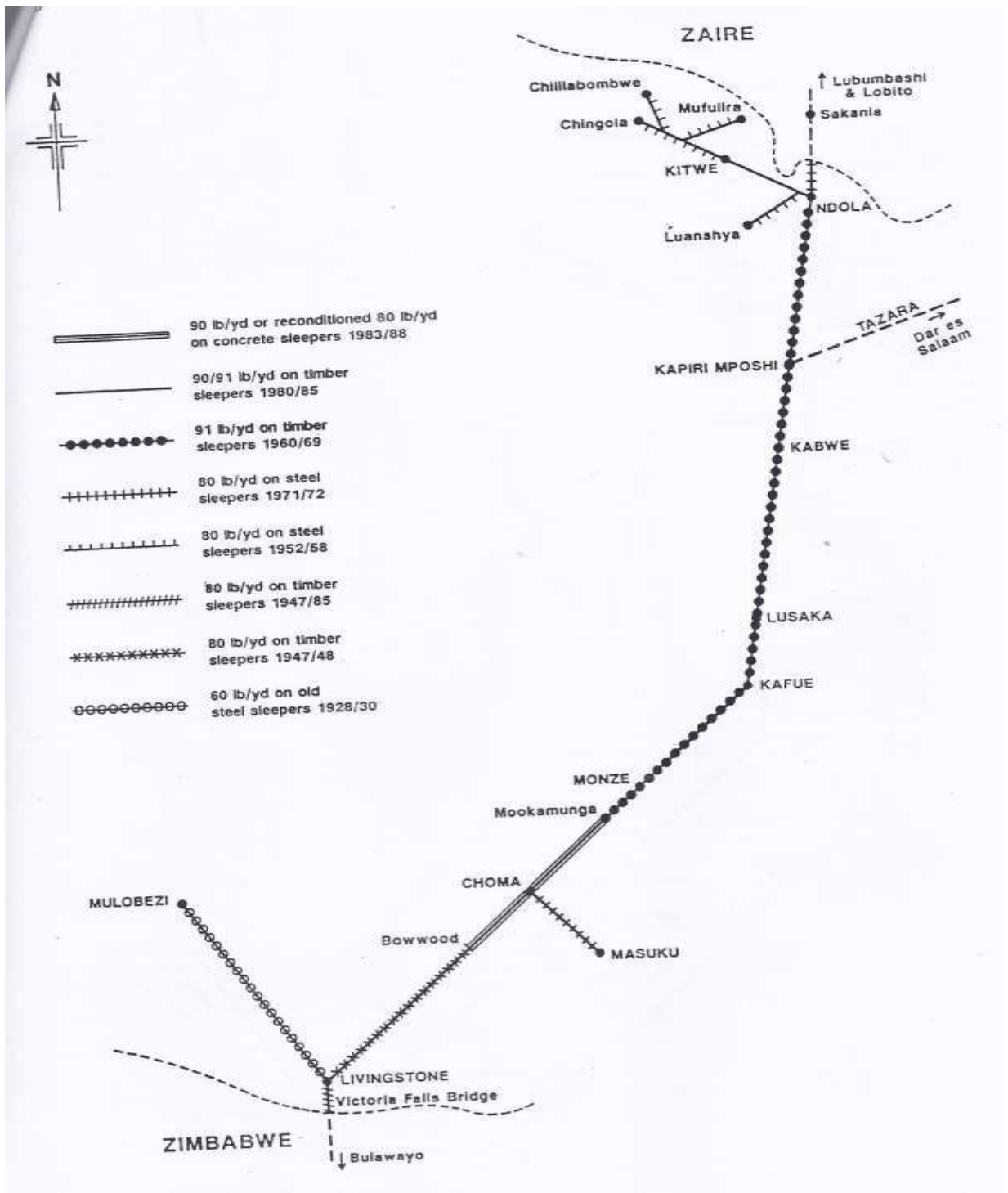
Source: ZR Rail news, Third Quarter 1987.

Sections of the rail line received attention at different times. Some of them remained unattended to until the Third and Fourth Railway Projects in the mid-1980s, thereby making the line more prone to accidents. See figure 7.

¹¹ Republic of Zambia. Economic Report of 1991, Office of the President, p.53.

¹² ZR Archives. ZRL Operating Problems, p.2.

Figure 7: Rehabilitation of Zambia Railways track done at various times, 1967-1991



Source: ZRL. 10 Year Development Plan. SATCC January, 1990.

4.2.2 Rolling stock

Besides the old poorly maintained track, low availability of locomotives and other rolling stock had been the main causes of decline in service levels of ZR. From the onset, we noted that ZR depended on unreliable equipment inherited from the Unitary Railway System. This therefore, became another major concern. This involved locomotives and wagons for both freight and passenger traffic.

4.2.2.1 Locomotives

The performance of the railway system very much depends on the locomotives performance which depends on the management of locomotive maintenance. According to the Swedish Consultancy Mission report:

The most serious immediate bottleneck faced by ZR was the low availability of locomotives. Out of the 75 locomotives owned by ZR, an average of 25 was not available due to overhaul and repairs, 5 locomotives were used for passenger traffic and 12 for shunting services. Only, 33 locomotives were left for the freight purposes.¹³

In 1969, the effects of the unsatisfactory locomotive power made it inevitable for the Copperbelt railway region to ask for unplanned assistance from the Kabwe diesel locomotive shop which in turn meant insufficient motive power to lift the increased tonnage piling up at Kafue.¹⁴ As a result in 1971 it was difficult to operate the trains during the first nine months of the year, due primarily to lack of locomotive power. To this effect a road haul of coal was initiated in the first three months of the year.¹⁵

The problem was further exacerbated by lack of spare parts to repair the rolling stock. In the same year it was further observed that the 75 locomotives were capable of moving about 8 million tonnes per year, but due to lack of spare parts and lubricating oil, only

¹³ ZR Archives Swedish Consultancy Mission on Manufacture of Rail Wagons at ZR Workshops in Kabwe, April 1978, p. 7.

¹⁴ ZR Archives ZR Board meetings 1969, Ref. MBS.F.

¹⁵ ZR Archives ZR Annual Report 1971, p. 5.

between 40 and 50 locomotives were being used of which some developed failures in transit without completing a journey.¹⁶ E. Hachipuka confirmed this in 1987 when he stated that the “company continued to run trains hauled by locomotive engines which developed failures after covering, only 30 kilometres or even less”.¹⁷ About K1 million was required per year to keep all locomotives in good condition. The shortage of spare parts for locomotives continued to inhibit the smooth operations of ZR in the 1980s through to the 1990s, thus some locomotives were left to deteriorate. Eventually, the situation was compounded in that it became a long slow process to raise the condition of a fleet which had been allowed to deteriorate when supplies of spare parts was not available. Between 1987 and 1991, ZCCM annual reports indicated that the bottlenecks in the transport sector were associated with the inefficient locomotive power which affected the movements of exports and inter-mine metallurgical materials.¹⁸ In 1985, Peter Nkonkomalimba, Director of Traffic and Marketing for ZR at the time lamented that:

The shortages of spare parts was so serious that trains were changing locomotives three or four times just over short distances like between Lusaka and Kabwe. He further stated that even when locomotives were sent to local sheds for repairs, they usually got stuck for long periods owing to the unavailability of certain specialized components which must always be imported.¹⁹

It therefore, became prudent for ZR to ask for assistance from other regional rail companies specifically South African Transport Services (SATS). About ten locomotives were hired from SATS during the first half of the eighties. By 1991 the number of the hired locomotives further increased to 22.²⁰ The hiring of locomotives had its own implications in terms of costs especially that ZR was making minimal profits and in

¹⁶ ZR Rail news, Third Quarter September- December, 1978, p. 3.

¹⁷ ZR Rail news, First Quarter, January-April, 1987, p. 2.

¹⁸ ZCCM Annual Report, 1988, p.14 and Annual Report, 1991, p.13.

¹⁹ ZR Rail news, Third Quarter July- September, 1985, p.2.

²⁰ Republic of Zambia. Action Plan for the Energy, Transport and Communications Sectors. Interim National Development Plan, July to December 1988, Ministry of Power, Transport and Communication, 1987, p. 9.

some years losses were incurred. As at 1990/91 the cost of hiring Spoornet locomotives unit was 2,876 Rands per day (US \$1,027).²¹ Besides, the Company had always to deal with the aspect of demurrage charges every year. Table 14 shows the number of locomotives hired by ZR from 1980-1991.

TABLE 14: Spoornet locomotives hired by Zambia Railways

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Locomotives	11	09	01	08	08	08	07	12	13	21	24	22

Source: Final Evaluation. ZR Project (project No. 690-0231) United States Agency for the international Development Lusaka, Zambia De Leuw, Cather International ltd, Zambia railways records.

4.2.2.2 Wagons

About 3000 wagons inherited from Rhodesia Railways were aged 30 and 60 years. These wagons were generally referred to as “Unitary Railway System” wagons acquired between 1925 and 1954. Clearly, this was costly to the company because the economic life of a wagon is estimated at 40 years. The wagons were mechanically unsound and unreliable.²² This problem had become so serious that a relative number of accidents were associated with the inadequate, unreliable rolling stock.

In 1978, the Swedish Consultancy Mission on the Manufacture of Railway Wagons predicated that “ZR’s shares of the transport market in the next five years would further erode in favour of the tracking industry if it did not increase its capacity”.²³ ZR later embarked on the programme of scrapping off and replacing some of these wagons. According to the Safety Department, ZR experienced more train accidents in the year ending March, 1982/83. Refer to Table 15 for statistical information on the accidents.

²¹ De Leuw, Final Evaluation Zambia Railways Project (Project no. 690-0231) United States Agency for International Development Lusaka, Zambia, June 1992, p.2.

²² ZR Archives ZRL. Corporate Plan 1991/92- 1995/96, Office of the Managing Director, p.3.

²³ ZR Archives Swedish Consultancy Mission on manufacture of Railway Wagons in Kabwe- Workshops, April, 1978, p.19.

TABLE 15: Statistical Report on ZR accidents, 1982-1984

REGION MAIN LINE			YARD		SIDINGS		TOTAL	
	1982/83	1983/84	1982/83	1983/84	1982/83	1983/84	1982/83	1983/84
NORTHERN	88	82	104	114	58	59	250	225
CENTRAL	109	126	73	52	57	69	239	247
SOUTHERN	124	92	66	55	20	26	210	173
TOTAL	321	300	243	221	135	154	699	675

Source: ZRL Report-Annual Report 1983/84

Furthermore, the World Bank report of 1987 predicted serious bottlenecks in the next five years, if nothing was done to replace the scrapped wagons. According to the Finnish International Development Agency (FINIDA) report of 1989 on ZR wagons, forty five percent of the fleet of wagons were stated to be unserviceable and would be scrapped in the near future.²⁴ The effects were noted in the period between 1987 and 1988, when the system experienced sixty five accidents on the mainline. “Forty were derailments of which eight were due to the rolling stock deficiencies, twenty one were due to track deficiencies and eleven were on account of poor operating habits by train crews”.²⁵ The accidents added more pressure to the finances of ZR. Picture on the next page in figure 8 shows one of the accidents experienced on the main line as early as 1967. The accident took place on 10th September, 1967, at Kaniki near Ndola causing a loss of a number of innocent lives and damages on the track.

²⁴ ZR Archives, ZR and Finnish International Development Agency, FINNIDA- Draft Final Report- Feasibility Study on Supply of Railway wagons, Plancenter Limited January 1989, p.3.

²⁵ ZR Archives ZRL First Quarter Report 1987-1988, Financial Year. Office of the Managing Director, Corporate Planning.

Figure 8: Accident on the mainline at Kaniki, Ndola in 1967



Source: Report of the Board of Inquiry into the Railway Accidents on Kalibu on 1st September, 1967, and Kaniki 10th September, 1967. Ministry of Transport and Communication, 1968.

The office of the Managing Director continued to report that wagon fleet of ZR remained a source of concern to the company. Maintaining the old wagons was very expensive. Recent studies have indicated that frequent unavailability of appropriate wagons among other challenges has also impacted negatively on the performance of rail transport within SADC.²⁶ This study shares the same view by arguing that ZR's operations suffered as a result of low availability of main-line wagons. This reduced service capacity in the export of copper and internal transport of important commodities considerably. In order to enhance efficiency, ZR had to hire wagons from neighbouring countries.

From the foregoing discussion, it is clear that an extensive investment in the national rail line was very important in order to contribute adequately to the nation's goals. In 1985 Chief Mechanical Engineer, Jitendra Sondhi, reported that ZR needed between K15 million and K25 million worth of spare parts every year to keep its locomotives and

²⁶ L.K. Van Niekerk and E.P. Moreira, *Regional Integration in Southern Africa: Overview of recent Developments*, 2001, p. 18.

rolling stock in good conditions.²⁷ To this effect the United States Agency for International Development (USAID) granted ZR a sum of US \$5 million for the rehabilitation of locomotives in 1986.²⁸

4.2.3 Traffic shared between Zambia Railways and Tanzania-Zambia Railway Authority (TAZARA)

When TAZARA was established in 1975 Government policy was to maximize the use of the route for both export and import traffic. The government directive was that 60% of metal exports were to be transported by TAZARA, thus reducing ZR share in this market from 34% to 16%.²⁹ This development, in addition to the pressures caused by the closure of the border in 1973, was disadvantageous to the operations of ZR. Commenting on the issue in 1981, Stanley Lankenby, former Assistant Freight Services Manager, bemoaned lack of proper government policy in the rail sector when he stated that:

The financial problems that ZR was facing were not of its making, but were a result of the company's inability to force cabinet to allocate more tonnes of copper to the southern route. He further stated that this reduced traffic, thereby reducing revenue for ZR.³⁰

The allocation of more traffic to TAZARA which had an average capacity of 5 million tonnes per annum was another source of worry. To this effect the management of ZR had to work hard to persuade the mines and the government to rationalize copper traffic allocation so that ZR share could be sizeable in order to avoid inevitable subsidies.³¹ This however, did not help much because of the unstable political situation prevailing in southern Africa as a result of the UDI and lack of government standing policy in the transport sector, among other things. For example, in the late 1984 a directive was given

²⁷ ZR Archives ZR Rail News, Third Quarter, 1985, p. 5.

²⁸ ZRL Report to the Parliamentary Select Committee on Social Services: The constraints on providing passenger train services and the possibility of rehabilitating steam locomotives, 20th June, 1986.

²⁹ Central Statistical Office. Republic of Zambia. Economic Report, 1983, p. 200.

³⁰ ZR Archives ZR Rail News, Fourth Quarter, 1981, p.6.

³¹ ZR Archives ZR Rail news, Third Quarter, 1978, p.4.

to run all copper exports through Dar-es- Salaam, thereby reducing ZR export traffic and increasing the number of empty runs to the south.³² There was more import traffic on the southern route, therefore, to pick up these imports ZR had to empty run to Livingstone. This proved costly on its operations. Despite the delays and congestions experienced at Dar-es-Salaam port a substantial amount of copper was hauled by TAZARA. Therefore, ZR operations continued to be affected by the unequal allocations of traffic. For example, the financial challenges of 1986/87 were attributed to the intensive use of TAZARA route for major exports and imports. The diversion of transit traffic further worsened ZR's inability to generate revenue.³³ A number of ZR wagons were used in clearing copper and other cargo trains between New Kapiri Mposhi and Mpika on TAZARA system. This inhibited ZR's operations internally.

4.2.4 Competition with the Road Sector

Another drawback to the operations of ZR was the growing competition from the road sector. By 1982, it was evident that the monopoly of ZR in the transport sector had ceased.³⁴ ZR lost a big share of its market to the trucking industry. The construction of roads after the mid-1970s and the changes in road haulage industry weakened the monopolistic position of ZR in the transport sector. Apart from the poor reliability of ZR, its decline in the monopolistic position was also attributed to the inadequacies in the transport policies, as noted above. Companies such as the Contract Haulage Limited, Bulk Carriers Limited and Zambia-Tanzania Road Services were encouraged to transport local commodities and export-import goods which included copper, the main commodity transported by ZR.

³² ZR Archives ZR First Quarter Report 1983/84, Financial Year. Office of the General Manager.

³³ ZR Archives ZRL. Chairman's Report 1986/87, p. 7.

³⁴ ZR Archives Corporate Plan 1981/1982. Fourth Edition, March 1981, p. 3.

In 1985, ZR traffic between the South African border and the north was reported to have greatly declined due to lack of regulation in the road sector.³⁵ Gael Raballand and Alan Whiteworth pointed out that, the unreliable rail services were simply not competitive following the privatisation of the mines which preferred to export via road transport.³⁶ In the late 1980s a number of Truck Companies were formed, whose flexibility of providing door to door services offered stiff competition to ZR. Substantial tonnages of local, import, export and transit traffic continued to be hauled by road. The other problem was that rail transport generally is highly capital intensive as compared to road mode which is less capital intensive and has more flexible operating characteristics.

4.2.5 Government's control of rail rates

There was a substantial government involvement in the operations of ZR. From its inception the charges were regulated by the Government, whose policy was to ensure that charges remained as low as possible. However, this seemed contrary to the Government desire of seeing ZR raising funds for the maintenance of the infrastructure.

This was evident in the President's speech of 1970 which in part read that:

While ZR is a service institution, Government wants it to make enough money at least to support itself....We must aim at making profit out of the operations of the rail system....We have to buy new locomotives every year to replace the wrecked ones.³⁷

The stringent control of rates by Government for a long time inhibited the growth of ZR finances. This was evidenced in the Annual Report of 1973 which reported that:

the tariffs for carriage of goods traffic, except for adjustments in rates for coal in 1971 had not been revised since 1963. An application was made to the Government for upward revision of tariffs and a decision thereon was still awaited.³⁸

³⁵ ZR Archives M.S. Shankaya, ZRL Proposed Rehabilitation Programme, 1986-1991, p. 13.

³⁶ Gael Raballand and Alan Whiteworth, ZIPAR Working Paper: No. 3. Should the Zambian Government Invest in Railways, p. 1

³⁷ ZR Archives ZRB-Daily File, 1.3.1F 43. Press Release No. 4/70, 1970, p. 4.

³⁸ ZR Archives ZR Annual report, 1973, p. 7.

The tariff structure was finally revised upwards in July 1975.³⁹ M.Q. Dalvi argued that:

The situation was not conducive to the generation of internal resources required to finance even the domestic component of its investment programmes, let alone the servicing of external loans. He further argues that, the Company could not embark upon worthwhile investment programmes without having recourse to the national exchequer for subvention.⁴⁰

Despite the incorporation of ZR into ZIMCO in 1982, Government's control in fixing rates was still observed. This contributed to the poor financial performance of some years. For instance, the poor performance of 1985/86 financial year was attributed to the low tariff structure⁴¹ and in the 1986/87 financial year the effected rates remained lower than road transport rates.⁴² Tariffs were not regularly reviewed to take into account inflation and the increasing operating costs. As a matter of fact, the subsidies provided by the Government to cover certain capital and replacement works had stopped in 1975.

In addition, the running of the passenger and Mulobezi trains as social services did not help in bringing profit to ZR. The losses incurred from the two services were offset by the revenues from the freight traffic. In 1977, ZR operations on Mulobezi line earned about K69, 000 against operating and capital expenses of about K364,000.⁴³ By 1987 the revenue earnings had declined to as low as K0.4 million per annum compared to annual expenditure of K2 million.⁴⁴

According to the ZRL Committee on Social Services:

³⁹ Bank of Zambia , Report and statement of accounts for the year ended December 31st , 1974, p. 44.

⁴⁰ M.Q. Dalvi, *Zambian Transport Policy: Main Issues, Approach and Options*, May, 1988, p.8.

⁴¹ ZR Archives ZRL. Corporate Plan, 1988/89-1992/93.

⁴² ZR Archives Annual Report and Accounts for the Year ended 1986/87.

⁴³ ZR Archives ZR Rail news, Second Quarter, April-June, 1978, p.21.

⁴⁴ ZR Archives ZR Rail news, Third Quarter, July-September, 1987.p.27.

ZR operated the passenger trains under very difficult circumstances, while at the same time incurring substantial operating losses. As a result, these services were sustained by very heavy cross-subsidisation from freight earnings, thereby constraining efforts to improve performance.⁴⁵

For example in 1985/86 the expenditure on the operations of the passenger train services was K21 million and the revenue earnings was K14 million, in 1986/87 the projected expenditure was K54 million and the projected revenue earnings was K20 million.⁴⁶ In 1988 the revenue earnings from passenger train traffic was K2.3 million, which was below budget. This is evidence enough to show that the two services were a drain on ZR finances. The contributions from the passenger services towards maintenance costs were very low and none from Mulobezi branch line. The passenger train services operated at a loss for many years because the Government set passenger train tariffs at levels below the cost of providing the services

4.2.6 Signals and Telecommunications

Reliable and efficient communications were and are still essential in the daily operations of ZR. Signals and Telecommunications ensured safe and efficient operations of trains. ZR depended on the original Centralized Train Control (CTC) which was installed between 1961 and 1963. This had an effective range control of about 150 kilometres, with four control centres located at Livingstone, Monze, Kabwe and Ndola. In due, course the open-wire truck channels were congested and offered a poor quality of speech. The line was also vulnerable to vandalism. This was evident in a letter dated May 1980, to the Ndola District Governor when A.S Lubinda, Public Relations Manager, complained about vandalism on the ZR track. He lamented that:

⁴⁵ ZR Archives Report to the Parliamentary Select Committee on Social Services. The Constraints on providing passenger Train Services and the possibility of Rehabilitation Steam Locomotives, 20th June, 1986. p.9.

⁴⁶ ZR Archives Report to the Parliamentary Select Committee on Social Services, p. 10.

Interference to the system has reached alarming proportions, ZR management solicits for your assistance to sensitize communities to guard jealously ZR property. He further indicated that the previous meetings held to sensitize the public on the significance of the system had begun to show signs of improvements.⁴⁷

Besides, its reliability decreased and spares were no longer available. To this effect, the system was replaced in 1986 with a single control centre at Kabwe.⁴⁸ However, vandalism rendered the equipment out of action thereby making trains to operate under very difficult conditions. It was further reported that the new CTC system was more prone to damage by lightning and other natural effects than the old one.⁴⁹ Frequent interruptions on the system caused disruptive effects on trains and communication systems, subsequently leading to delays of the trains.

4.2.7 Unskilled manpower

ZR was also faced with the challenge of unskilled manpower especially in the mechanical, electrical and civil engineering fields. There had been a shortage of staff with adequate training and experience in traffic operations. . It can be argued that the lack of skilled man power in the newly established rail system contributed to the accidents that occurred in the first year of its operations. The accidents were evidence enough to prove ZR's urgent need for more skilled manpower. "There were about 455 accidents that occurred on the ZR truck between 1st July, 1967 and 30th June, 1968. Of these, 324 were derailments, 131 were collisions, level crossing accidents or signals passed at danger".⁵⁰ These consequently resulted into the organisation's inability to keep coal moving to the mines. Additionally, there were accidents that occurred between 1st

⁴⁷ UNIP Archives UNIP 121/4/8.ZR File No. SGP 8/19/1. 1980.

⁴⁸ ZR Archives Shankaya, ZRL Proposed Rehabilitation Programme 1986-1991, Corporate Planning Department, p. 8.

⁴⁹ ZR Archives ZR Rail news, Third Quarter, 1985, p. 5.

⁵⁰ ZR Archives Zambia Railways Board Daily File .1.3.1F 43. See also Toronto Globe and Mail, 11, October 1968, p. 2.

July, 1968 and 30th June, 1969. There were about 370 derailments, 103 were either collisions or level crossing accidents.⁵¹

In 1978, analysis on manpower indicated that ZR was in acute need of skilled electricians and other important artisans.⁵² This staffing problem adversely affected the works of the most critical section of the company. This implied that ZR continued relying on expatriates who came to work on contracts. In 1986, it was reported that the company had no training facilities for senior management and technical specialists.⁵³ To avert the problem the management continued sending its staff for training overseas. Government's desire was to ensure that all positions were Zambianised.

4.2.8 Maladministration

The challenges in ZR were further complicated by malpractices by some top leaders in the railway system. Incidences of tribalism, corruption and theft were reported. This is clearly evidenced in the 1978 Commission of Inquiry into the affairs of ZR. The Commission of Inquiry stated that "tribalism was practiced on a very large scale, through appointments, promotions, and the exercise of discipline and in showing hostility and harshness to members of other tribes".⁵⁴ It was also noted that certain tribes were entrenched in certain departments on ZR.⁵⁵ Promoting tribesmen could have meant giving critical positions to people who were not qualified, thus worsening the challenge of unskilled manpower. Further, corrupt practices such as these put more pressure on the system which was under-capitalised.

⁵¹ ZR Archives Zambia Railways Board Daily File .1.3.1F 43. 1970.

⁵² Swedish Consultancy Mission on Manufacture of Railway Wagons and ZR Workshops in Kabwe, April 1978, p. 3.

⁵³ ZR Archives Shankaya, ZRL Proposed Rehabilitation Programme 1986-1991, p.5.

⁵⁴ Republic of Zambia. Commission of Inquiry into the affairs of Zambia Railways, 1978, p. 59.

⁵⁵ Republic of Zambia. Commission of Inquiry into the affairs of Zambia Railways, 1978, p. 13.

Incidences of tribal conflicts were noted as early as 1970 especially between Tongas, lozis, and Ngonis. These tribes in most cases accused each other of practicing tribalism especially in the areas of discipline and promotions. Some of the strikes were also attributed to tribalism and sacking of workers indiscriminately and without observing the disciplinary procedures. These strikes subsequently resulted into loss of man-days.

The Inquiry further reported on the ways in which ZR's property had been privately appropriated and incidences of theft by top leaders in the system. Commodities such as cement, fertilizer and diesel were reported to have been stolen in large quantities "The most prominent case of theft involved allegations that A. Mazoka the General Manager of ZR had been involved in the theft of cattle from the Zambia Railway".⁵⁶ Such practices greatly affected the operations of ZR, as customers began to lose confidence in the security of ZR's services.

4.3 External challenges

Apart from the internal challenges, ZR's operations were further thwarted by the external problems which were exogenous in nature, of which there was little, if anything that ZR or the Government could do to overcome them.

Since mid-1970s, the world went through a period of economic recessions. This trend had adverse effects on the world economy. In the case of Zambia, exports and imports remained depressed. A. Tetteh Kofi mentioned that between 1974 and 1975, most African countries lost substantial revenue of which Zambia, Kenya and Democratic Republic of Congo were the most hit because the prices of their main commodities declined.⁵⁷ According to Bank of Zambia "in 1974 the price of copper fell from K1,326.00 per ton to

⁵⁶ Commission of Inquiry into the affairs of Zambia Railways, 1978, p. 48.

⁵⁷ A. Tetteh Koffi, 'Peasants and Economic Development: Populist lessons for Africa' *The African Studies Review*, 20, 3. (1977), 91-119.

K793.00 in 1975”.⁵⁸ This was a big blow to Zambia’s economy. The mining industries which experienced depressed markets, declining prices and high production costs, subsequently affected the performance of many companies in the country due to the limitations of foreign exchange. The low economic activities in the country therefore, directly affected the performance of ZR. For instance, ZR could not buy spare parts for the locomotives and the rolling stocks due to lack of foreign exchange. Emphasising the significance of copper, Molteno and Tordoff observed that “foreign exchange, government revenue and the general level of economic activities in Zambia were particularly dependent on the output and the price of copper”.⁵⁹

As a result of a sharp drop in copper production after 1980,⁶⁰ the effects of the world recession continued to be felt throughout the 1980s. In 1983, the country was faced with critical shortage of foreign exchange which adversely affected output and capacity. By July 1983, the kwacha depreciated by about 40% which further put pressures on local firms including ZR.⁶¹ The inflation rose to 36% from 20% in 1984. ZRL Chairman’s report indicated that “the sharp fall in the value of the kwacha against foreign currencies, subsequent to the introduction of foreign exchange auctioning increased the company’s operating costs substantially”.⁶² The shortage of foreign exchange in turn led to the postponement of maintaining and rehabilitating of infrastructure. According to ZRL Survival Plan “it became exceedingly difficult for the government to fulfill its commitment to ZR”.⁶³ This affected ZR’s rehabilitation programmes.

⁵⁸ Bank of Zambia, Report and Statement of Accounts for the Year ended December 31st 1975.

⁵⁹ Robert Molteno and William Tordoff, ‘Independent Zambia: Achievements and Prospects: in William Tordoff (ed.), *Politics in Zambia* (Manchester University Press, 1974), p.379.

⁶⁰ Gladson G. Bonnik, *Zambia Country Assistance Review: Turning an Economy Around* (World Bank Book Publications, 1997), p.46.

⁶¹ ZR Archives ZRL Marketing Department, 1983/84.

⁶² ZRL Archives ZRL Draft Annual Report and Accounts for the Year Ended 31st March, 1985.

⁶³ ZRL Archives ZRL Survival Plan 1st April, 1985-31st March, 1988.

The company continued to operate under very difficult conditions. The dependency of ZR on imported equipment and spare parts culminated into ZR's inability to carry out rehabilitations, maintenance and investment programmes. Delayed maintenance and deferment of replacement of capital equipment, resulted into further deterioration of equipment and infrastructure. In addition, increase in fuel prices had resulted in massive increase in the railways operation costs. ZR consumed over 40 million litres of fuel annually; the shortage of diesel further put more pressure on its operations.⁶⁴

In 1987, a tariff increase was effected on both freight and passenger services. This was done in an effort to help the company generate enough revenue to offset the high cost of borrowing, increase in operating costs and to cushion the effects of inflationary pressures. Apparently, little improvement was recorded.

The above noted challenges were indeed unpleasant to the operations of ZR. Action was taken to improve the efficiency of the life line of Zambia. With exceptional support from World Bank, ZR carried out two projects namely; Third Railway Project from 1980-1986 and the Fourth Railway Project from 1986-1990.⁶⁵ (Highlighted in chapter two)

4.4 Conclusion

The chapter attempted to investigate some of the major constraints that inhibited the smooth operations of ZR between 1967 and 1991. The chapter pointed out that the operations of ZR were influenced by both internal and external problems. Internally, the poor infrastructure and insufficient rolling stocks which were historical in nature were the major challenges faced by ZR. Very little was done to improve the situation as the railways required huge sums of funds for maintenance. The study further noted that due to

⁶⁴ Republic of Zambia. Central Statistical Office. Economic Report, 1984, p. 242.

⁶⁵ Ten Year Development Plan, Southern African Transport and Communications Commission, January 1990, p.33.

low tariffs on a number of commodities, ZR could not make major improvements on its infrastructure without the support of donors. Externally, the major cause of ZR's problems was the world recession which had negative effects on almost all companies in the country. The fall of copper prices and less demand at the world market implied unsatisfactory performance of Zambia's economy. Less copper exports culminated into low traffic for ZR, subsequently less revenue. Furthermore, the shortage of foreign exchange made it difficult for the company to purchase spare parts for the locomotives and rolling stock, thus limiting service capacity for the company.

CHAPTER FIVE

CONCLUSION

5.1 Summary

This study's aim was to examine the importance of Zambia Railways (ZR) in the economic development of Zambia from 1967-1991. In order to do this the study set out to examine the establishment of ZR and further assessed the importance and performance of ZR freight facilities in the economic activities of Zambia. The study also examined some of the challenges that ZR faced from 1967-1991.

The study noted that the railways in colonial Africa were designed primarily to serve specific imperial economic objectives. This set the background to the study by examining the construction of the railway from South Africa into Zambia (Northern Rhodesia). It has been established that Rhodesia Railways (RR) which was under the Federal government became a joint Unitary Railway System between Southern and Northern Rhodesia after the dissolution of the Central African Federation in 1963. Later, due to the independence of Zambia and political differences with the Smith regime after the UDI, the Zambian government was prompted to break away from the joint Unitary Railway System in 1967 to form its own independent railway system called ZR.

Additionally, the study noted that on its formation, ZR had to do deal with the immediate problems of unskilled manpower, poor equipment and lack of proper infrastructure. However, the government was very optimistic that ZR would reinforce production of both local and external markets. In this regard, the study advanced several steps taken by the government to sustain the newly independent and first railway transport organisation which was always referred to as the 'backbone of the nation'. At the inception of ZR, the Zambian government and donor aid helped the system to serve it from total collapse as it

began its operations with insufficient equipment, poor track and unskilled manpower. Some of the major works made at fostering good performance of ZR included the bringing in of the Canadian management whose efforts were mainly seen in technical and financial aid. Investments were made in the construction of the new workshops in 1971, a new branch rail line from Maamba to Choma in 1969, and the introduction of diesel locomotives. Investment in ZR was justified on the basis that it was a bulk carrier and vital when we consider that to an important extent, the economic development of the landlocked Zambia was dependent on the railways for exports and imports.

In assessing the importance and performance of ZR facilities on the economic activities of Zambia, the study drew a number of conclusions. The first was that from 1967-1975, ZR was relatively used both locally and externally. The main local commodities were the mining inputs, coal, industrial materials and agricultural commodities, while the major export commodity was copper. Despite the insufficient rolling stock and the deteriorated railways, the study concluded that the trend in Zambia Railway's freight traffic was above average both locally and externally from 1967-1975. This was due to high production and export of copper. More so, there were no major competitors, thus ZR enjoyed a monopoly. The international railway carriage was handled entirely by ZR up to 1975, as it was the only railway company before the establishment of TAZARA, which commenced its operations in 1976.

The study however, noted that the political situations in neighboring countries such as Southern Rhodesia and Angola in the early 1970s affected the operations of ZR and the nation's economic activities. For instance, the closure of the southern border in 1973 implied that no import and export goods were transported by ZR through the southern route until 1978 when it was re-opened. The civil wars in Angola in 1975 also disrupted

the operations of Benguela route which handled most of the imports and exports after the closure of the southern route. Therefore, the tonnages carried by company decreased.

In 1976, TAZARA was opened for operations and became the second rail system in the country. In spite of this, the study concluded that the significance of ZR was still maintained both locally and externally even after the inception of TAZARA. Shortly, Dar-es-Salaam port began to experience congestions which affected the transportation of the country's exports and imports. In the late 1978, it was clear that Zambia could not avoid using the southern route in foreign trade. The export and import commodities were diverted to the southern route. ZR still had a large share in the external trade. It continued to maintain the second position in the transport sector.

There was, however, a down turn trend pattern of traffic with fluctuations in ZR performance after 1975. It was noted that the above trend was a consequence of the world economic recession of the mid-1970s into the 1980s. The fall of copper prices after mid-1970s adversely affected the operations of ZR. The limitations of activities of many industries in the country limited the traffic for ZR. After 1980, ZR incurred a lot of losses and debts continued to accumulate. ZR could not purchase spare parts for the equipment and for the rehabilitation of the infrastructure. Consequently, the line continued to deteriorate. This implied poor rail services. Towards the late 1980s, local enterprises began to opt for road transport than rail transport. From 1989-1991 the performance drastically reduced to below average. The total traffic reduced to as low as 3.5 million tonnes in 1991.

Furthermore, the study established that in an effort to achieve the goal of ZR as a service provider, the government ensured that the tariffs remained as low as possible, especially for mining materials and agricultural commodities, especially maize.

Other than the results of the world economic recessions highlighted above, the study has further concluded that from inception, ZR operated under the weight of many challenges. Internally, the major bottlenecks were the old infrastructure and insufficient rolling stock. These problems were historical in nature. We noted that the Federal government did not do much to develop the Northern Rhodesia rail section. Therefore, ZR inherited these problems in 1967 and they remained chronic in the operations of the company. The maintenance of the infrastructure added more costs to the already stressed finances of ZR, which was also running PSOs such as the passenger and Mulobezi trains.

The study also observed that the government had no clear standing policy on the operations of ZR. This was clearly noted in terms of traffic allocations between ZR and TAZARA. After 1975, more traffic began to be allocated to TAZARA. Later, in the late 1970s ZR began to face competition from road traffic companies. The government did not put up a deliberate policy to protect the railway sector from 'encroachment' by the road sector. The government continued losing colossal sums of money every year in maintaining public roads which were damaged by uncorrelated weights of both local and foreign trucks. Bulk goods should have been restricted to rail transport in order to serve roads from damage by uncorrelated weights by both local and foreign trucks.

The final conclusion is that ZR, like the other railways in other countries as shown in the literature, played a critical role in the economic activities of Zambia. Despite the fluctuations in performance the organisation provided good services to its customers. Due to the landlocked nature of the country and its dependence on the export-import economy, the external trade of Zambia was inextricably interwoven with ZR's development and performance. ZR remained the dominant mode of copper exports.

Despite its critical role in Zambia's economy it is, however, clear from the historiography of Zambia that the history of Zambia Railways and its performance in the economic activities of Zambia have largely remained untold. However, some scholars such as John Due tried to bring to light ZR's significance in Zambia's economic activities. Other scholars such as Mobin Bulaya and Henry Sakala looked at ZR in the light of the Concession period when it was Railway System of Zambia (RSZ) from 2003-2012.

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APPENDICES

APPENDIX A

I. NOTES ON ACCOUNTS-31ST DECEMBER 1974

LONG TERM LOANS

	1974	1973
	K	K
Guaranteed by the government of the Republic of Zambia		
Nippon Sharyo Kaisha Limited (5.5%)	514,938	629,369
Rheinstahl Henschel (5.5%)	825,792	894,272
Hitachi Limited (5.5%)	570,413	674,125
Export-Import Bank of U.S.A (6.0%)	1,981,038	2,214,968
General Electric Company (6.0%)	138,281	230,468
Nissho- Iwai Company Limited (6.5%)	1,676,760	1,868,594
Export Development Corporation (6.625%)	789,474	876,623
TOTAL	6,496,696	7,384,414
Secured by mortgage or agreement to mortgage Buildings, plant and machinery		
Zambia National Building Society	287,513	289,984
Grindlays Bank International (Zambia) Limited	25,516	58,516
Zambia National Provident Fund	1,000,000	1,000,000
TOTAL	1,313,029	1,348,500

Source: ZR Archives. ZR Annul Report 1974

II. NOTES ON ACCOUNTS- 31ST December 1977

Long Term Loans

	1977	1976
	K	K
Guaranteed by the Government of the Republic of Zambia		
Nippon Sharyo Seizo Kaisha Limited (5.5%)	207,181	429,628
Thyssen Henschel (5.5%)	454,525	627,828
Hitachi Limited (5.5%)	312,956	454,280
Export-Import Bank of U.S.A. (6.0%)	1,377,194	1,893,746
Nissho-Iwai Company Limited and Nichimen Company Limited (6.5%)	1,739,509	1,768,598
Nichimen Company Limited (8.0%)	3,225,123	—
Export Development Corporation (6.625%)	534,721	721,154
Osterreichische Lander bank (6.0%)	648,593	—
TOTAL	8,499,802	5,895,234
Secured by mortgage or agreement to mortgage on buildings, plant and machinery		
Zambia National Building Society	216,145	231,503
Zambia National Provident Fund	<u>2,000,000</u>	<u>1,250,000</u>
TOTAL	2,216,145	1,481,503

Source: ZR 7th Annual Report for the year ended 31st December, 1977.

APPENDIX B

THIRD RAILWAY PROJECT 1980-1986

Total foreign exchange cost- USD 130.2 million. This was financed by the following donors

1. IDA(USD 40.0 million),
2. EEC Special Action Fund (ESAF USD 5.0 million)
3. OPEC Fund (USD 4.5 million)
4. KFW (USD 23.3 million)
5. SIDA (USD 13.0 million)
6. Japan (USD 16.3 million)
7. ADB (USD 9.7 million)
8. EEC (USD 8.4 million)
9. UK (USD 10.0 million)

The project included the following components:

- a. renovation of 112, kilometers of track, construction of a concrete sleeper plant and extension of loops.
- b. Replacement of the Kafue Bridget
- c. Installation of a new CTC system
- d. Improvements to the telecommunications systems, including train and mobile radio communications, expansion the telephone exchange network
- e. Ten new U20C locomotives
- f. Rehabilitation of four U20 locomotives and motives spare parts
- g. 915 new goods wagons
- h. Equipment for and improvements to workshops and sheds

THE FOURTH RAILWAY PROJECT 1986-1988

The project was estimated to cost USD 83.1 million of which USD 66.8 million were in foreign exchange to be financed by the following:

1. IDA (USD 20.0 million)
2. ABD (USD 20.0 million)
3. SIDA (USD 5.2 million)
4. Kfw (USD 1.6 million)
5. Belgium (USD 4.0 million)
6. ZR/GRZ (USD 11.0 million)

APPENDIX C

CURRENCY EQUIVALENTS (PERIOD AVERAGES)

	K1	US\$1
Prior to 1973	K0.71428	US\$1.40 00
1973	0.64889	1.5411
1974	0.64346	1.5541
1975	0.64346	1.5541
1976*	0.71332	1.4019
1977	0.78895	1.2675
1978*	0.81255	1.2307
1979	0.79233	1.2621
1980	0.77598	1.2887

WEIGHTS AND MEASURES

1 metric ton	=	2,207.5 pounds
1 kilogram	=	2.2075 pounds
1 bag maize	=	90 kilograms
1 bag fertilizer	=	50 kilograms

APPENDIX D

SOME OF THE MAJOR COMMODITIES TRANSPORTED BY ZAMBIA RAILWAYS, 1967-1991



Sulphuric Acid

Steel Coils



Coal



Maize Meal



Cement



Sugar



Copper Plates



Maize

