A HISTORY OF RHOKANA/ROKANA CORPORATION AND ITS NKANA MINE DIVISION, 1928 – 1991

BY

HYDEN MUNENE

SUBMITTED IN FULFILMENT OF THE REQUIREMENTS IN RESPECT OF THE DOCTORAL DEGREE IN AFRICA STUDIES, IN THE CENTRE FOR AFRICA STUDIES, IN THE FACULTY OF HUMANITIES AT THE UNIVERSITY OF THE FREE STATE

FEBRUARY 2018

SUPERVISOR: PROF. I.R. PHIMISTER

CO-SUPERVISORS: DR. D. VAN ZYL-HERMANN

DR. D. MONEY

Declaration

I hereby declare that this thesis, submitted in accordance with the requirements for the award of the doctoral degree in Africa Studies in the Faculty of Humanities, for the Centre for Africa Studies at the University of the Free State is my original work and has not been previously submitted to another university for a degree. I hereby authorise copyright of this product to the University of the Free State.

……………………………   Date: ……………………

Hyden Munene

Abstract

This dissertation is a detailed historical account of the corporate structure, labour relations and profitability of the Rhokana Corporation and its Nkana mine. Thematically and chronologically organised, it starts with the discovery of viable ores on the Copperbelt in the late 1920s, which attracted foreign capital from South Africa, Britain and the United States of America, prompting the development of the Nkana mine and the formation of the Rhokana Corporation in the early 1930s. The study concludes with the re-privatisation of the Zambian mining sector in 1991. It draws heavily from primary data housed in the Mineworkers' Union of Zambia, National Archives of Zambia, United National Independence Party Archives and Zambia Consolidated Copper Mines Archives, as well as interviews with key players in the Zambian copper mining industry. In doing so, the thesis contributes to the historiography of the political economy of the copper industry in Zambia. While the subject's existing historiography has examined themes of corporate structure, labour relations and profitability in isolation and for relatively short periods when assessing the development of the Northern Rhodesian/Zambian mining sector, this thesis combines all three themes in Rhokana/Nkana's history, investigating them over a long time period in order to construct a detailed historical perspective.

The dissertation argues that Rhokana for a time was the most important mining entity in the Northern Rhodesian/Zambian mining industry. Rhokana was both an investment firm on the Copperbelt and a mining company through Nkana mine. The Corporation was consulting engineer to the mines owned by Rhodesian Anglo American Corporation on behalf of its parent company, the Anglo American Corporation of South Africa. It also invested in certain of the mines owned by the Rhodesian Selection Trust. Rhokana contributed significantly to the development of the copper industry in Zambia. Its corporate and labour policies influenced the Copperbelt as a whole. Employing the largest labour force in the mining sector, Rhokana spearheaded the labour movement on the Copperbelt. Its Nkana mine was also the largest producer of copper in the Northern Rhodesian mining industry between 1940 and 1953, and contributed hugely to the war economies of Britain and the United States of America. Throughout its history, Nkana was also a major source of cobalt. After nationalisation of the mining sector in 1970, Rhokana surrendered its investments in the wider copper industry, but remained central to the Copperbelt's smelting and refining operations, owning the biggest metallurgical facilities in the industry. Through all of this, Rhokana's corporate strategy evolved over time, as the Corporation cooperated with key stakeholders in the copper industry in order to safeguard its operations and profitability.

Key Words: Rhokana/Rokana, corporate structure, labour, copper, profitability, Northern Rhodesia (Zambia)

Abstrak/Opsomming

Hierdie verhandeling is ‘n gedetaileerde historiese weergawe van die korporatiewe struktuur, arbeidsverhoudings en winsgewendheid van die Rhokana Korporasie en sy Nkana myn. Dit is volgens temas en kronologiese gebeure gerangskik, dit begin met die ontdekking van lewensvatbare erts op die Copperbelt rif in die laat 1920's, wat buitelandse kapitaal gelok het vanuit Suid Afrika, Britanje en Amerika. Dit het die ontwikkeling van die Nkana myn en die totstandkoming van die Rhokana Korporasie in die vroeë 1930's tot gevolg gehad. Die studie sluit af met die aankondiging van die privatisering van die Zambiese myn sektor in 1991. Die verhandeling steun swaar op die primêre data wat gehuisves is by, onder andere, die Mynwerkers Unie van Zambië, die Nationale Argiewe van Zambië, die Verenigde Nationale Onafhanklike Party Argiewe en die Zambiese Gekonsolideerde Koper Myn Argiewe. Daar is ook gebruik gemaak van onderhoude met sleutel persone wat betrokke was by die Zambiese Koper myn industrie in die relevante tydperk. Hierdie tesis dra by tot die historiografie en die politieke ekonomie rondom die Koper myn industrie in Zambië. Die bestaande historiografie wat beskikbaar is bespreek die volgende temas, korporatiewe struktuur, arbeidsverhoudings en indivuele winsgewendheid wanneer hulle die ontwikkeling van die Noord Rhodesia/Zambiese myn sektor asseseer. Hierdie tesis kombineer die drie temas in die bespreking van die Rhokana/Nkana geskiedenis en ondersoek hulle oor ‘n lang tydperk om ‘n duidelike histioriese prespektief te vorm.

Die verhandeling argumenteer dat Rhokana die belangrikste myn entiteit in die hele Noord Rhodesia/Zambië myn industrie was. Rhokana was ‘n beleggings maatskappy en ook ‘n Copperbelt myn maatskappy wat Nkana besit het. Die Rhokana Korporasie was die konsulterende ingenieur vir al die myne wat deur die Rhodesian Anglo American Korporasie besit is, namens sy ouer maatskappy, die Anglo American Korporasie van Suid Afrika. Rhokana het aansienlik bygedra tot die ontwikkeling van die koper industrie in Zambië. Die arbeids beleide en die koproratiewe beleide wat Rhokana geimplimenteer het, het die Copperbelt as ‘n geheel beinvloed. Die Nkana myn was die grootste produsent van koper in die Noord Rhodesisiese myn industrie tussen 1940 en 1953, en het grootliks bygedra tot die oorlog ekonomie van byde Engeland en Amerika. Regdeur die geskiedenis van Nkana was die myn die grootste produsent van cobalt in die Copperbelt distrik. Na die myn genationaliseer is in 1970, het Rhokana sy belegging in die koper industrie verloor, maar het nog sentraal gebly as die grootste verskaffer van smeltoonde en verfynings werke vir die Copperbelt myne, omdat dit nog steeds die grootste fasiliteite besit het. Rhokana se korporatiewe strategie het ook oor

tyd verander, omdat die myn met ander sleutelbelanghebbendes saamgewerk het om die veiligheid en winste van die bedrywighede te verseker.

Sleutel Woorde: Rhokana/Rokana, korporatiewe structure, arbeid, koper, winsgewendheid, Noord Rhodesia (Zambië)

Table of Contents

Acknowledgements

I express my heartfelt appreciation and gratitude to the effort and influence of the following individuals and groups of people for their invaluable support during my three year stay at the University of the Free State. I owe a great debt to Professor I.R. Phimister, whose supervision and funding was crucial for this research study to be completed. A special thank you is also due to my co-supervisors, Dr. D. Van Zyl-Hermann, and Dr. D. Money, for their encouragement and guidance during the course of this research. Their scholarly counsel contributed greatly to this study. I am also grateful to Mrs. Ilse Le Roux, the Office Manager, and Ms. Tarisai Gwena, the Assistant Manager of the International Studies Group (ISG), for their administrative support. I am also grateful to my colleagues in the ISG for their motivation and support. Here I wish to single out Victor Gwande for reading through all the draft chapters of this thesis even when he had his own thesis to focus on.

I am also indebted to the various institutions and individuals who assisted me during my field work. I am thankful to the Interviewees (see Appendix III), for their cooperation and information. The following institutions deserve a special mention for their cooperation and support; Mineworkers' Union of Zambia Headquarters; National Archives of Zambia; Secretariat of the First Zambian President; United National Independence Party Archives; and the Zambia Consolidated Copper Mines Archives. It is from these sources that this thesis was crafted.

More importantly, I owe a great debt of gratitude to my wife, Machendu Mufinda; Dominic Munene and all my other siblings; my sisters-in-law, Buzandi Mufinda and Lorraine Mufinda, for their unwavering support, understanding and tolerance in many ways during the study period. Even in times of despondency and discouragement they strengthened me to work hard.

Above all, glory is to the enabling power of the Almighty God whose hand worked through many ways in seeing me through this study.

Dedication

I dedicate this work to my wife and children, Chipego and Israel, for enduring all the lonely times.

List of Tables

List of Figures

Notes on currencies and weights utilised in this study

Before 1967, the currency was the pound sterling. In November that year, the Zambian Government introduced a new currency, the kwacha. Between 1968 and 1991, the government devalued the kwacha against the sterling and United States dollar several times in line with inflationary levels. During the colonial era and in the first years of independence, copper production was measured either in long tons or short tons. After nationalisation, the metric ton (tonne) system was introduced. In this study, these measures are utilised accordingly unless otherwise specified. The relevant annual exchange rates and conversions are provided in the table below.

Year	Currencies and their Exchange Rates		
1968	K1.00	US$1.40	£0.59
1969	K1.00	US$1.40	£0.58
1970	K1.00	US$1.40	£0.58
1971	K1.00	US$1.40	£0.55
1972	K1.00	US$1.40	£0.60
1973	K1.00	US$1.55	£0.67
1974	K1.00	US$1.55	£0.66
1975	K1.00	US$1.55	£0.77
1976	K1.00	US$1.26	£0.74
1977	K1.00	US$1.32	£0.69
1978	K1.00	US$1.21	£0.65
1981	K1.00	US$1.19	£0.53
1982	K1.00	US$1.09	£O.61
1983	K1.00	US$0.84	£0.58
1984	K1.00	US$0.62	£0.43
1985	K1.00	US$0.43	£0.35
1986	K1.00	US$0.15	£0.10
1987	K1.00	US$0.11	£0.07
1988	K1.00	US$0.13	£0.07
1989	K1.00	US$0.10	£0.06
1990	K1.00	US$0.04	£0.02
1991	K1.00	US$0.02	£0.01

Measurements for Weights		
Tons (Tonnes)	**Pounds Avoirdupois**	**Kilogrammes**
1 Short Ton	2,000 Ibs	907.2 kg
1 Long Ton	2,240 Ibs	1,016.1 kg
1 Metric Ton	2,204.6 Ibs	1,000 kg

Table compiled from ZCCM 11.1.1F, *Zambia Consolidated Copper Mines Limited: Annual Reports*, 1982–91; *Mining Mirror*, 19 March 1976; P. Daniel, *Africanisation, Nationalisation and Inequality: Mining Labour and the Copperbelt in Zambian Development* (London: Cambridge University Press, 1979), xvii. Note: There are no exchange rate figures for the years 1979 and 1980 from the annual reports utilised.

List of Abbreviations and Acronyms

AAC – Anglo American Corporation of South Africa

AMAX – American Metal Climax

AMC – American Metal Company

AMU – African Mineworkers' Union

ANC – African National Congress

ASARCO – American Smelting and Refining Company

BBCs – Boss Boys' Committees

BSA Company – British South Africa Company

CIPEC – Inter-Governmental Council of Copper Exporting Countries

CODELCO-Chile – Corporation Nacional del Cobre de Chile

COMEX – Commodity Exchange

CV – Copper Ventures

EPT – Excess Profits Tax

FYPIP – Five Year Production and Investment Plan

GDP – Gross Domestic Product

GRZ – Government of the Republic of Zambia

HEP – Hydro-Electric Power

IFIs – International Financial Institutions

IMF – International Monetary Fund

IWF – Industrial Workers' Federation

LME – London Metal Exchange

MASA – Mines African Staff Association

MEMACO – Metal Marketing Company

MET – Mineral Export Tax

MINDECO – Mining Development Corporation

MMD – Movement for Multiparty Democracy

MOSSA – Mines Officials Salaried Staff Association

MUZ – Mineworkers' Union of Zambia

MUZ HQ – Mineworkers' Union of Zambia Headquarters

NAZ – National Archives of Zambia

NCCM – Nchanga Consolidated Copper Mines

NRANC – Northern Rhodesia African National Congress

NRMWU – Northern Rhodesia Mineworkers' Union

RAA/Rhoanglo – Rhodesian Anglo American

RCBC – Rhodesia Congo Border Company/Concession

RCM – Roan Consolidated Mines

RLI – Rhodes-Livingstone Institute

RST – Rhodesian/Roan Selection Trust

SAMU – South African Mineworkers' Union

ST – Selection Trust

TAZARA – Tanzania-Zambia Railways

TR – Tribal Representatives

UCAA – United Central Africa Association for Central Africa Federation

UDI – Unilateral Declaration of Independence

UMHK – Union Miniere du Haunt Katanga

UNIP – United National Independence Party

UPP – United Progressive Party

USA – United States of America

WB – World Bank

WCs – Works Committees

ZAMANGLO – Zambian Anglo American Corporation

ZCCM – Zambia Consolidated Copper Mines

ZCI – Zambia Copper Investment

ZCTU – Zambia Congress of Trade Unions

ZIMCO – Zambia Industrial and Mining Corporation

ZIT – Zambia Institute of Technology

Glossary

Concentration – A milling process of separating and saving valuable minerals from gangue to form a concentrate.[1] A concentrate is a product containing the valuable metal and from which most of the waste material in the ore has been eliminated.[2]

Mine Development – To open up ore body by sinking shafts, driving drifts and installing requisite equipment to begin operations.[3] It also involves construction of infrastructure on the mine necessary for efficiency operations.

Mineral Exploration – The prospecting, diamond drilling and other work involved in searching for ore.[4]

Flotation – A milling process by which some mineral properties are induced to become attached to bubbles and float, and others to sink.[5] This is done in order to separate valuable minerals from worthless gangue.

Leaching – A chemical process used in milling for the extraction of valuable minerals from ore.[6] This process is mainly utilised when processing oxide ores which are mixtures compared to sulphides which are compounds. Sulphides from the Copperbelt did not require the leaching process hence were cheaper to treat.

Metallurgical facilities – Refers to concentrating or milling, smelting and refining plants used to isolate the copper and cobalt from their associated elements.[7]

Mineral – A naturally occurring homogenous substance having definite physical properties and chemical composition and, if formed under favourable conditions, a definite crystal form.[8]

Mineral Claim – A portion of mining land or concession held under the law.[9]

---

[1] P.W. Thrush (ed.), *A dictionary of Mining, Mineral, and Related Terms* (Washington: US Department of the Interior–Bureau of Mines, 1968), 246.
[2] *Mining Mirror*, 3 October 1975.
[3] Thrush, *A dictionary of Mining, Mineral, and Related Terms*, 313.
[4] *Mining Mirror*, 14 November 1975.
[5] *Ibid.*, 20 February 1976.
[6] *Ibid*.
[7] *Ibid.*, 31 October 1975.
[8] *Ibid.*, 14 November 1975.
[9] *Ibid.*

Mineral vein – These are mineral deposits which occur in veins or vein-type structures in the form of fissures that extend for considerable distances.[10] Many of Canada's deposits occurred in mineral veins, and very few of this type were found on the Katanga and Copperbelt.[11]

Mining – Refers to the 'science, technique, and business of mineral discovery and exploitation'.[12]

Ore – A rock carrying mineral values which can be extracted and marketed at a profit.[13]

Ore grade – Is normally expressed as a percentage of the metal content of 'ore by weight of the ore mass'.[14] The 'volume of an ore mass determines the cost of mining it' while the 'grade determines the relative profitability'.[15] In this study, ore grade refers to the quality of ore reserves and ore milled in terms of copper and cobalt contents, and how these affected labour productivity, finished production and overall profitability.

Ore reserves – The ore body that has been sufficiently developed either by means of drifts and raises in it, or crosscuts through it to show the necessary grade and tonnage.[16]

Oxide ores – These were mixed ores containing a binary compound of oxygen and other elements such as iron.[17]

Refining – A process of removing impurities from smelted metal, to the high standard required before sale.[18]

Rock – A combination of minerals.[19]

Smelting – The extraction of metal from its ores or concentrate by heat processes using the reverberator furnace, converter, anode furnace and casting wheel.[20]

---

[10] *Ibid.*, 17 October 1975.
[11] *Ibid*.
[12] Thrush, *A dictionary of Mining, Mineral, and Related Terms*, 715.
[13] *Mining mirror*, 9 January 1976.
[14] T.R. Navin, *Copper Mining and Management* (Arizona: University of Arizona Press, 1978), xix.
[15] *Ibid*.
[16] *Mining Mirror*, 9 January 1976.
[17] W.G. Garlick, 'How the Copperbelt orebodies were formed', *Horizon*, 1, 8 (1959), 17.
[18] Navin, *Copper Mining and Management*, xx; Roan Selection Trust (hereafter RST), 'Mining has a language all its own', *Horizon*, 4, 3 (1962), 30.
[19] *Mining Mirror*, 19 September 1975.
[20] RST, 'Mining has a language all its own', 30.

Stope – An excavation in a mine from which ore is being or has been extracted.[21] Rhokana utilised the stoping method of mining at Nkana.

Sulphide ores – These are ores containing a compound of sulphur and other elements.[22] They were found on the Copperbelt and much easier to treat than oxide ores.

[21] *Mining Mirror*, 23 January 1976.
[22] *Ibid.*, 31 October 1975.

Chapter One: Introduction

1.1 Introduction

This study examines the history of Rhokana Corporation and its Nkana mine between 1928 and 1991. In this period, it analyses three themes; corporate structure, labour organisation and profitability, previously they have been considered separately. In order to conceptualise these themes in Rhokana/Nkana's history, the study relates them to the political economy of several successive periods: the Great Depression, 1929–1939; Second World War and its aftermath, 1940–1949; Korean Crisis, 1950–1953; Central African Federation, 1954–1963; first years of independence, 1964–1969; and nationalisation, 1970–1991. After nationalisation of the mining sector, Rhokana was changed to Rokana. The Corporation's name was also changed to Rokana/Nkana Mine Division. The names will be used interchangeably depending on context and time. The purpose of this chapter, however, is to explain the scope of the study.

Section 1.2 explores the early history of Rhokana Corporation and its Nkana mine in order to provide a background to this study. Section 1.3 makes reference to a number of studies that have examined various aspects of Rhokana Corporation and the other Copperbelt companies before and after colonial rule in Zambia. The focus of this thesis on Rhokana/Nkana is justified under section 1.4. The aim of this thesis is to provide an encompassing account of the three major themes in Rhokana's history and to identify the continuity and change in these factors over a wider period which shaped the Corporation's strategy. Section 1.5 outlines the methodological approach in which the study has been undertaken. The thesis benefited from a combination of secondary sources, archival material and interviews. The design of the thesis is outlined in section 1.6.

1.2 Background, 1895–1927

The Rhokana Corporation was one of several companies in the Northern Rhodesian/Zambian mining industry controlled by the Anglo American Corporation (AAC) of South Africa.[23] Its Nkana mine, situated 378 kilometres from the capital Lusaka, was the largest copper producer on the Northern Rhodesian/Zambian Copperbelt as early as 1932.[24] Before 1957, Nkana was

[23] Anglo American Corporation (hereafter AAC), 'Company Histories No. 3: Rhokana Corporation', *Optima*, 1, 3 (1951), 22.

[24] Zambia Consolidated Copper Mines (hereafter ZCCM) 3.8.2F, *Rhokana Corporation Limited: Directors' Report and Statement of Accounts for the Year ended 30th June, 1932* (London: Rhokana Head Office, 1932), 5.

also the only mine on the Copperbelt producing cobalt.[25] The Copperbelt (see maps on figures 1.1 and 1.2), was not only among the richest copper fields in the world, but also one of the most powerful agents of social change in Africa.[26] Nkana-Kitwe is the geographical centre of the great Copperbelt mining complex.[27] Whereas, in the late 1920s the sprawling Copperbelt areas supported just over 1,000 Africans in scattered villages, 30 years later in 1960, the Copperbelt was home to 260,000 Africans and some 40,000 Europeans.[28] Nkana-Kitwe accommodated 87,000 of the Copperbelt's 300,000 population.[29] The history of Rhokana and its Nkana mine, thus, is closely linked to the development of the Copperbelt as a whole.

Nkana is one of the oldest copper mines discovered on the Copperbelt.[30] When the Litunga, King of the Lozi people of Barotseland, granted mineral rights to the British South Africa (BSA) Company, which eagerly sought to find a Second Rand, in 1890 the Copperbelt was:

> a sparsely inhabited, narrow strip of country, about 80 miles long, in the north-central section of the country [Northern Rhodesia]. About 4,000 feet above sea level and approximately 13° south of the equator. The rocky, infertile soil discouraged productive farming. The infertility, however, was compensated for by the rich mineral deposits, particularly copper ore, which had been worked by the local Lamba people since the seventeenth century.[31]

The BSA Company was quick to grant prospecting rights to any interested company soon after securing the mineral rights from the Litunga.[32] Prospecting on the Rhodesian Copperbelt evolved in two phases.[33] The first phase, from 1895 to 1919, and the second from 1920 to 1928. The first phase was dominated by prospectors financed by two groups; Edmund Davis's Bechuanaland Exploration Company and Robert Williams's Tanganyika Concessions

---

[25] T. Howard and T. Scannell (eds.), 'Cobalt: A Hard to Win Metal of the Modern Age', *Horizon*, 5, 10 (1963), 24.
[26] A. Paton, 'African Advancement: A Problem of both the Copperbelt and Federation', *Optima,* 5, 4 (1955), 105.
[27] AAC, 'Nkana-Kitwe: Twin Town of Copper', *Optima*, 11, 2 (1961), 68. Nkana-Kitwe is the original name of the town currently called Kitwe on the Copperbelt.
[28] AAC, 'Nkana-Kitwe: Twin Town of Copper', 68.
[29] *Ibid*.
[30] A.J. Bancroft, *Mining in Northern Rhodesia: A Chronicle of Mineral Exploration and Mining Development* (Bedford: The Sidney Press Limited, 1961), 144–5; L.H. Gann, *A History of Northern Rhodesia: Early Days to 1953* (London: Chatto and Windus, 1964), 122.
[31] J.L. Parpart, *Labour and Capital on the African Copperbelt* (Philadelphia: Temple University Press, 1983), 13.
[32] B.W.E. Alford and C.E. Harvey, 'Copperbelt Merger: The Formation of the Rhokana Corporation, 1930-1932', *The Business Review*, 54, 3 (1980), 331.
[33] Bancroft, *Mining in Northern Rhodesia*, 54–78; F.L. Coleman, *The Northern Rhodesia Copperbelt, 1899–1962: Technological Development up to the end of the Central African Federation* (Manchester: Manchester University Press, 1971), 6–26.

Limited.[34] Prospectors found low grade copper oxide ores on the hook of the Kafue River and Kansanshi in 1899, and at Bwana Mkubwa and Roan Antelope in 1902.[35] It is, however, not clear who pegged the Nkana prospect. In an article published in the *Horizon* in April 1962, Orlando Balagwanath, one of the first prospectors on the Copperbelt, claimed that he and Frank Lewis pegged what became known as Nkana mine in 1901.[36] He further argued that the discovery of Nkana triggered wider explorations, induced him and Lewis 'to send William Collier and J.J. Donohoe up there… [where they]…pegged Roan Antelope and Bwana Mkubwa'.[37] J.A. Austen and W.E.A. Fowler, who were also pioneers on the Copperbelt, claimed to have pegged copper outcrops on the south bank of the Wusikili stream in the Nkana area in 1905.[38] What is not disputed is the fact that, the Nkana copper deposits were pegged in 1910 by Moffat Thomson, 'a Government District Commissioner based at Ndola, whose Government duties entailed a certain amount of travelling throughout the territory'.[39] He named the deposits "The Nkana Claim", after Chief Nkana of the Lamba people.[40]

Low grade oxide ores, coupled with inadequate technology to treat them profitably prevented the large scale development of Nkana and the other Copperbelt mines until after the end of the First World War (1914-1918).[41] This, together with the BSA Company policy of granting prospecting rights to small companies and individuals resulted in Nkana being changed through many hands.[42] Among the original holders of the Nkana claim were the Susman Brothers, of Livingstone, pioneers in Northern Rhodesia who disposed of them in 1913 for £900.[43] The Nkana Claim was largely ignored until in the 1920s when the Bwana Mkubwa Company, Copper Ventures/Rhodesia Congo Border Company (CV/RCBC) and AAC undertook serious development and intensive drilling.[44] By then, the BSA Company changed its policy of

---

[34] For a brief background of Edmund Davis and Robert Williams and their companies' relationship with the British South Africa Company, see, Gann, *A History of Northern Rhodesia*, 120.
[35] Gann, *A History of Northern Rhodesia*, 122.
[36] Rhodesian Selection Trust (hereafter RST), 'A Founder of the Copperbelt Looks Back', *Horizon*, 4, 4 (1962), 33.
[37] *Ibid*.
[38] Bancroft, *Mining in Northern Rhodesia*, 145.
[39] G.W. Silavwe, *Management of Human Resources in the Copper Mining Industry in Zambia* (Ndola: Mission Press, 1995), 20.
[40] AAC, 'Nkana-Kitwe: Twin Town of Copper', 68.
[41] S.J. Cunningham, 'Nationalisation and the Zambian Copper Mining Industry' (PhD Thesis, University of Edinburgh, Edinburgh, 1985), 37–9.
[42] AAC, 'Nkana-Kitwe: Twin Town of Copper', 68. For detailed understanding of the trends in BSA Company mineral rights policy between 1907 and 1922, see Alford and Harvey, 'Copperbelt Merger: The Formation of the Rhokana Corporation', 332; P. Slinn, 'Commercial Concessions and Politics during the Colonial Period: The Role of the British South Africa Company in Northern Rhodesia 1890-1964', *African Affairs*, 70, 281 (1971), 374.
[43] AAC, 'Nkana-Kitwe: Twin Town of Copper', 68.
[44] *Ibid*. For further details on the formation the Bwana Mkubwa Company in 1920 by Edmund Davis; CV in 1921, comprised on Bwana Mkubwa, Minerals Separation and Chester Beatty's Selection Trust; the winding up of CV

granting concessions to small companies. The Chartered Company issued prospecting rights over much larger concessions to multinational companies with adequate financial and technical resources which brought an end to the speculative nature of mining in the previous years. In return, the Chartered Company would not only receive royalties on any minerals extracted but also have some 'fully-paid shares in any production companies formed in return for a concession'.[45] The result was further discovery of high grade copper sulphide ores, averaging 4%, running into millions of tons at Nkana in 1927.[46] Because of the discovery of rich copper deposits at Nkana, it led to the merger of the Rhokana Corporation following closer association of the operations of the Bwana Mkubwa Company (1910), RCBC (1923), and Nchanga Consolidated Copper Mines (NCCM) Limited (1926).[47] The rapid development of the Nkana mine and the merger involving these companies after 1928 forms part of this study's investigation.

in 1923 and the formation of RCBC; formation of NCCM, and; entry of AAC into the Northern Rhodesian mining industry, see variously: T. Gregory, *Ernest Oppenheimer and the Economic Development of Southern Africa* (London: Oxford University Press, 1961), xvii, 22-9 and 385–406; Alford and Harvey, 'Copperbelt Merger: The Formation of the Rhokana Corporation', 332–3; A.D. Roberts, 'Notes towards a Financial History of Copper Mining in Northern Rhodesia', *Canadian Journal of African Studies*, 16, 2 (1982), 348; Cunningham, 'Nationalisation and the Zambian Copper Mining Industry', 43.

[45] J.G. Phillips, 'Roan Antelope: Big Business in Central Africa, 1890-1953' (PhD Thesis, University of Cambridge, Cambridge, 2000), 73.

[46] AAC, 'Nkana-Kitwe: Twin Town of Copper', 68.

[47] AAC, 'Company Histories No. 3: Rhokana Corporation', 22.

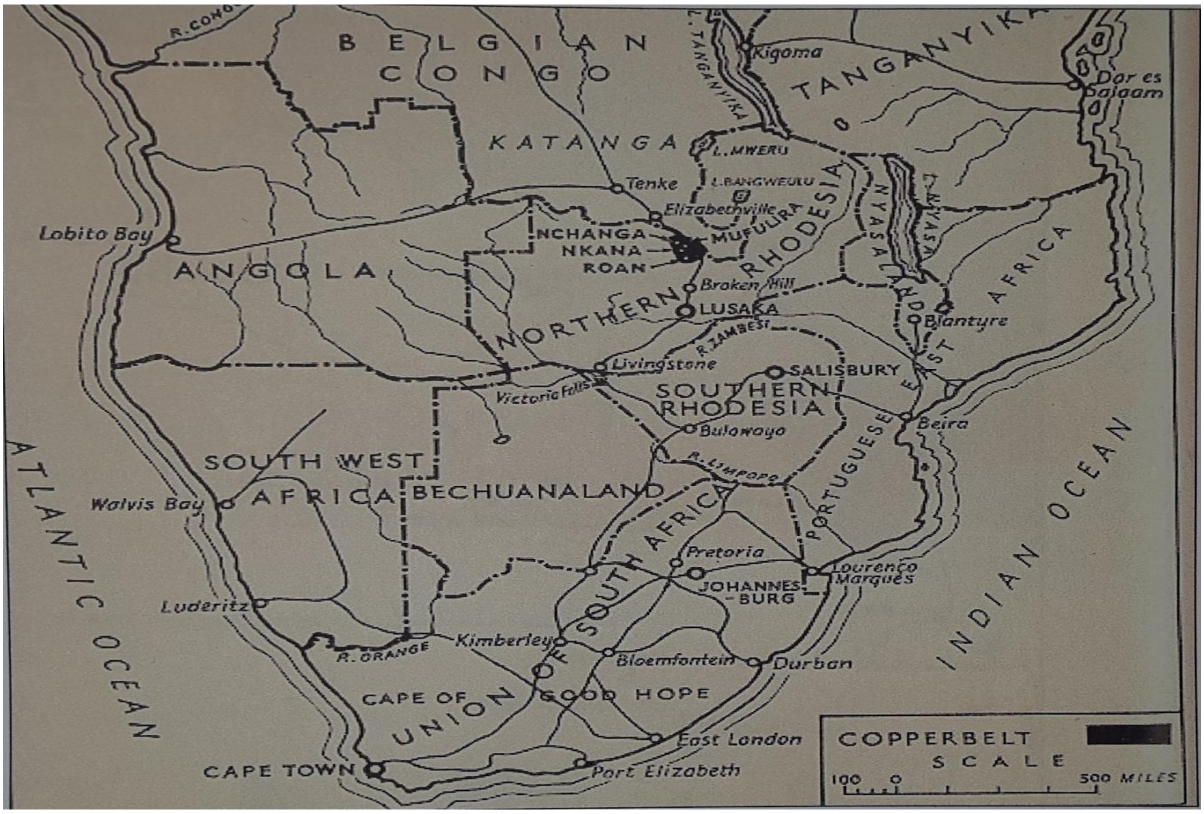


Figure 1.1: Map of Northern Rhodesia and Southern Africa showing the position of Nkana and the other Copperbelt mines before independence. Source: J.G. Phillips, 'Roan Antelope: Big Business in Central Africa, 1890-1953' (PhD Thesis, University of Cambridge, Cambridge, 2000), 33.

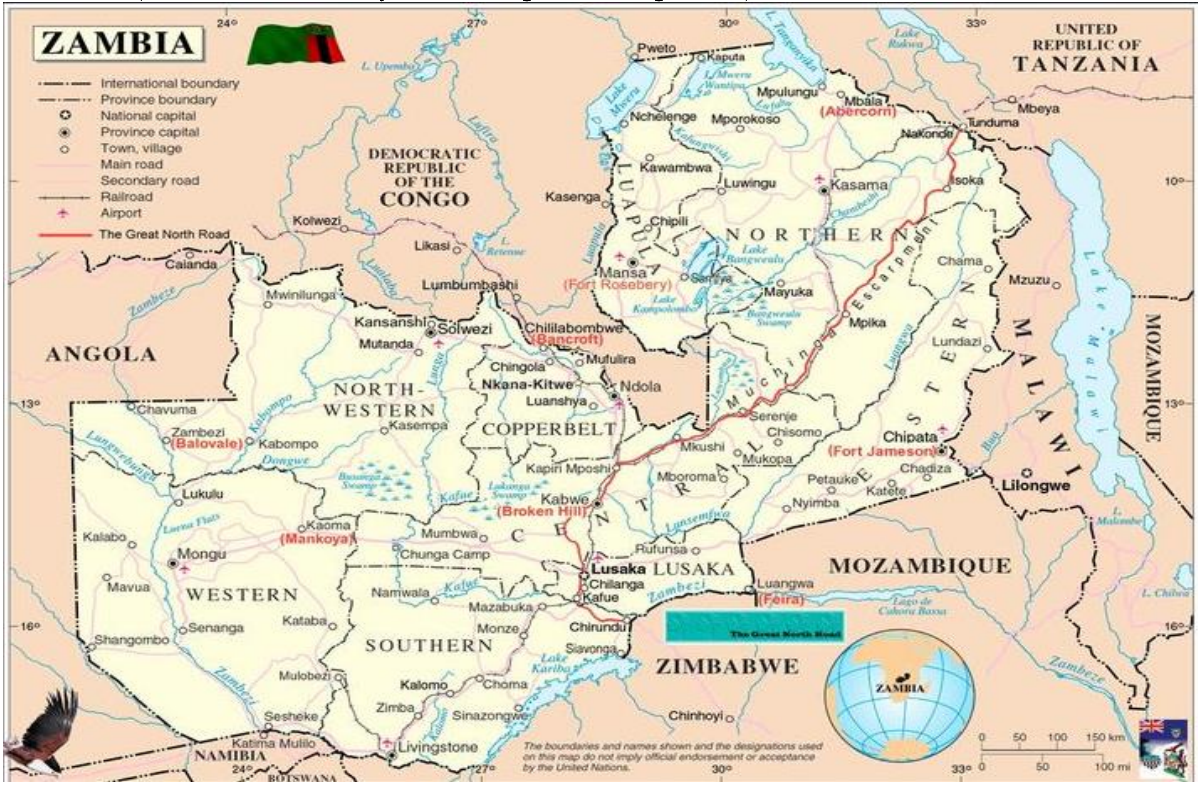


Figure 1.2: Map of Zambia in Southern Africa showing Nkana-Kitwe town, the Copperbelt and other areas, after independence. https://www.pinterest.co.uk/americaikos/zambia/. Accessed on 26 October 2017.

1.3 Literature Review

Any number of scholars have written on the history of the Northern Rhodesian/Zambian mining industry. These can succinctly be categorised into three groups: colonial writers of the 1930s to the early 1960s; post-colonial scholars of the late 1960s to 1980s; and contemporary historians of the past two and half decades. Owen Letcher explored Nkana and Roan Antelope's role in the development of the Copperbelt's infrastructure, while the region's mines received considerable coverage in J.M. Davis's interdisciplinary study of the impact of western society on Central Africa's indigenous peoples.[48] Davis examined the problems posed for the future of Africans by the development of the Copperbelt mines. He observed that, from their first boom in 1930, the Copperbelt mines were dependent on abundant supplies of unskilled African labour recruited from all over Southern Africa. He also observed some differences in the labour policies of Nkana and Roan Antelope. Between 1928 and 1932, Roan Antelope and Mufulira encouraged the growth of a stable resident working force while management at Nkana feared that stabilisation of African labour for more than two years would lead to detribalisation. The government and the mining companies feared that detribalisation would lead to worker consciousness and militancy. Thus, Rhokana adopted the South African practice of employing more single men than married ones. Single men worked for a short period of time and retained to the villages. Davis's insights are utilised when assessing the emergence of the dual labour structure at Nkana and in the other Copperbelt mines between 1928 and 1931.

These writers were followed by anthropologists affiliated to the Rhodes-Livingstone Institute (RLI), which was established in 1937.[49] The RLI was established following the 1935 strike by African miners on the Copperbelt.[50] It was observed that one of the major causes of the strike was the lack of contact between the government and the African workers. The Institute worked in collaboration with chiefs, District Commissioners, labour officials and compound managers

---

[48] O. Letcher, *South Central Africa* (Johannesburg: African Publications, 1932); J.M. Davis, *Modern Industry and the African: An Enquiry into the Effect of the Copper Mines of Central Africa upon Native Society and the Work of the Christian Missions* (London: MacMillan and Co., 1933).

[49] RLI scholars included: M. Gluckman, *Economy of the Central Barotse Plain* (Livingstone: RLI, 1941); G. Wilson, *An Essay on the Economics of Detribalization in Northern Rhodesia* (Livingstone: RLI, 1942); L.A. Saffrey, *A Report on some Aspects of African Living Conditions on the Copperbelt of Northern Rhodesia* (Lusaka: Mimeo, 1943); J.C. Mitchell, *The Kalela Dance: Aspects of Social Relations among Urban Africans in Northern Rhodesia* (Manchester: Manchester University Press, 1956a); A.L. Epistein, *Politics in an Urban African Community* (Manchester: Manchester University Press, 1958); H. Powdermaker, *Copper Town Changing Africa: The Human Situation on the Rhodesian Copperbelt* (New York: Harper and Row, 1962). For further details about the RLI, see A. Tembo, 'The Rhodes-Livingstone Institute and Interdisciplinary Research in Northern Rhodesia (Zambia), 1937–1964', *Strategic Review of Southern Africa*, 36, 1 (2014), 90–9.

[50] Tembo, 'The Rhodes-Livingstone Institute and Interdisciplinary Research in Northern Rhodesia (Zambia), 1937–1964', 91–2.

in investigating and advising Government about the welfare of Africans in the territory. RLI anthropologists focused on questions of urbanisation, industrialisation and social transformation on the Copperbelt. Like Davies, they noted that the impact of investment capital on Nkana and the other Copperbelt mines by the multinationals touched the social and economic aspects of African miners who were getting low wages at the expense of making huge profits for the mine owners. Even so, participation in the industrial process had changed the attitudes and behaviour of African workers who, as discussed later in this study, fought for better conditions of service through wildcat strikes. Lewis Gann, also affiliated to the RLI, devotes considerable space to the development of the Copperbelt whilst concerned with the general history of Northern Rhodesia.[51] Gann offers a concise description of the role played by explorers financed by Edmund Davis and Robert Williams in prospecting ventures on the Copperbelt between 1899 and 1918 (see section 1.2).[52] In a latter publication, he focused exclusively on the corporate history of the Copperbelt mines between 1923 and 1952.[53] He links the Copperbelt mines to the global mining industry, and concluded that they emerged competitive during the Great Depression and the Second World War vis-à-vis their established counterparts in the USA and Latin America because of being low-cost producers.

Besides RLI anthropologists, T.D. Guernsey, Austen Bancroft and Theodore Gregory are among the earliest scholars that have surveyed the mining history of the Copperbelt from various perspectives.[54] Guernsey's study provided a concise introduction to early prospecting on the Copperbelt. Bancroft contributed to an understanding of the development of the Copperbelt mines by noting the importance of technological innovations.[55] Bancroft not only 'had the intimate knowledge of his subject consistent with being an explorer by nature and an omnivorous reader of historical accounts' but was also actively involved in 'mineral exploration in the Rhodesias, Nyasaland and Bechuanaland' between 1927 and 1940.[56] His study shows that scientific methods adopted during and after the second phase (1922–1928) of mineral prospecting and exploration in Northern Rhodesia accelerated the development of the Copperbelt mines. Gregory emphasises the entrepreneurship skills of Ernest Oppenheimer, and

[51] Gann, *A History of Northern Rhodesia*.
[52] *Ibid*., 117–24.
[53] L.H. Gann, 'The Northern Rhodesian Copper Industry and the World of Copper: 1923–1952', The Rhodes-Livingstone Journal, 18 (1970), 1–18.
[54] T.D. Guernsey, 'Summary of Early Prospecting in Northern Rhodesia', Transactions of the Institution of Mining and Metallurgy, 63 (1954), 1–9; Gregory, *Ernest Oppenheimer*.
[55] Bancroft, *Mining in Northern Rhodesia*.
[56] *Ibid*., 5.

the business activities of the AAC in the Southern Africa region. He further notes that AAC, through the shrewdness of Oppenheimer, became the biggest investor in the Northern Rhodesia mining industry.

Robert Baldwin and Francis Coleman are among the first set of post-independence scholars to analyse the role and development of the Northern Rhodesian mining sector.[57] Baldwin analysed the role of the copper industry in the economic development of Northern Rhodesia. Central to his study is that copper formed the core of the Northern Rhodesia's economy as an export. Coleman builds on Bancroft's assessment of technological development on the Copperbelt mines. For Coleman, the period from 1950 to 1960 witnessed significant technological advances, particularly the use of front-end-loaders and trackless loaders to remove overburden and ore in opencast and underground operations.[58] According to Coleman, mechanisation improved production of the mines. His study gives valuable insights into the effect of mechanisation on labour productivity at Nkana and Nchanga. John Phillips criticised both Bancroft and Coleman for concentrating their discussion on mines owned by the AAC, and largely ignoring Rhodesian Selection Trust (RST) holdings.[59] With the exception of the works of Bancroft and Coleman, all the other studies discussed above are general histories of the copper industry in Northern Rhodesia.

A significant number of scholars emerged in the 1970s and 1980s examining specific issues in the mining sector in Zambia before and after independence. These have separately explored a wide range of topics with regards to mine ownership, mineral rights, capital, labour strategies, profits and taxation in the Northern Rhodesian/Zambian copper industry. A good number of these studies focussed on labour when examining the growth, expansion and profitability of the Copperbelt mines. Henry Meebelo's study provides detailed information on primary resistance to colonialism in Northern Rhodesia between 1893 and 1939.[60] Meebelo argued that some educated African miners and religious movements such as the Watch Tower Movement and the Mbeni Dance Society played a vital role in influencing workers at Nkana, Mufulira and Roan Antelope to strike in 1935.[61] Ian Henderson also examined articulation of African grievances in the Copperbelt strikes of 1935 and 1940, as well as the pressures which resulted

[57] R.E. Baldwin, *Economic Development and Export Growth* (Berkeley and Los Angeles: University of California Press, 1966), 29–39; Coleman, *The Northern Rhodesia Copperbelt, 1899–1962*.
[58] Coleman, *The Northern Rhodesia Copperbelt, 1899–1962*, 162.
[59] Phillips, 'Roan Antelope', 6.
[60] H.S. Meebelo, *Reaction to Colonialism: A Prelude to the Politics of Independence in Northern Zambia, 1893-1939* (Manchester: Manchester University Press, 1971).
[61] *Ibid*., 133–85, 254–64.

in the formation of the African Mineworkers' Union (AMU) in 1949.[62] His study is useful when analysing the role of African workers at Nkana in the formation of the AMU.

Charles Perrings's three studies are seminal in using the theory of proletarianisation on the Copperbelt mines' development.[63] He argued that, the emergence and subsequent history of the African mine labour, protests and organisation on the Copperbelt between 1935 and 1966 were the result of the proletarianisation of black labour, itself one of the major factors underpinning the productivity and profitability of the Copperbelt mines. The term proletarianisation originates from Karl Marx's theory of capitalism and initially refers to the process of creating a class of workers (the proletariat) who sold their labour to factory and business owners (the bourgeoisie) or the owners of the means of production.[64] Proletarianisation is often characterised by downward social mobility; a shrinking market for skilled individuals and the middle class who are pushed into the working class and low-wage employment. Using a Marxist perspective, Guy Mhone analysed the evolution of the dual (European and black) labour structure in the Copperbelt mines between 1929 and 1969.[65] He argued that proletarianisation and discrimination based on race and class were introduced by the mining companies to maximise profits. Africans performed the hardest and difficult work despite being cheaper than European workers. European workers, however, provided needed expertise in technical, managerial and supervisory jobs, mainly because of being more skilled than Africans. This was not unique to the Copperbelt.[66]

George Chauncey and Jane Parpart employed a gendered approach when analysing the role played by women in the copper industry during the colonial era in Zambia.[67] They argued that

---

[62] I. Henderson, 'Labour and Politics in Northern Rhodesia, 1900-1953: A Study in the Limits of Colonial Power' (PhD Thesis, University of Edinburgh, Edinburgh, 1972), 103–68.

[63] C.A. Perrings, 'Consciousness, Conflict and Proletarianization: An Assessment of the 1935 Mineworkers' Strike on the Northern Rhodesian Copperbelt', *Journal of Southern African Studies*, 4, 1 (1977), 31–51; C.A. Perrings, *Black Mineworkers in Central Africa: Industrial Strategies and the Evolution of an African Proletariat in the Copperbelt 1911–1941* (New York: Africana Publishing Company, 1979); C.A. Perrings, 'A Moment in the Proletarianization of the New Middle Class: Race, Value and the Division of Labour in the Copperbelt, 1946–1966', *Journal of Southern African Studies*, 6, 2 (1980), 183–213.

[64] Today the term is used to describe the ever-growing size of the working class, which results from growth imperative of a capitalist economy. For further details, see M.P. Kelly, 'Proletarianisation, the Division of Labour and the Labour Process', *International Journal of Sociology and Social Policy*, 8, 6 (1989), 48–64.

[65] G.C.Z. Mhone, *The Political Economy of a Dual Labour Market in Africa, 1929–1969* (London and Toronto: Associated University Presses, 1982).

[66] Majority of European mineworkers in the Belgian Congo, Southern Rhodesia and South Africa were employed in skilled jobs.

[67] G. Chauncey, 'The Locus of Reproduction: Women's Labour in the Zambian Copperbelt, 1927–1953', *Journal of Southern African Studies*, 7, 2 (1981), 135–64; J.L. Parpart, *Labour and Capital on the African Copperbelt* (Philadelphia: Temple University Press, 1983); J.L. Parpart, 'The Household and the Mine Shaft: Gender and Class Struggles on the Zambian Copperbelt, 1926–1964', *Journal of Southern African Studies* 13-1 (1986), 36–56.

African women, though not employed on the mines, were allowed to stay in the compounds in order to stabilise labour, and to relocate the social reproduction of labour to the Copperbelt. Stabilisation of labour improved the productivity of African workers, as they learnt from experience over the years. The politics of African Advancement in the 1950s, and Zambianisation after independence in 1964 are also prominent topics on labour and profitability studies of the Copperbelt. Elena Berger analysed the nexus of capital, labour and profitability of the Copperbelt mines during and after colonial rule (1929-1974).[68] She noted that the advancement of Africans into semi-skilled and other comparable jobs done by some European workers enhanced the profitability of the mines during the Great Depression, since the wages of the former were by far lower than those of the latter. She suggested that the Copperbelt mines could have made more profit if they had advanced Africans into skilled jobs done by the majority of European workers.

Robert Bates, Michael Burawoy and Phillip Daniel have analysed the interplay between the government, trade unions and the copper industry in Zambian development during the first years of independence and nationalisation (1964 – 1975).[69] These studies show that the new government had three major tasks with regard to labour in the copper industry and the results were less satisfactory. First, the government failed to eliminate the monopoly status of Europeans while securing adequate African skilled labour. The second task of expanding mineral output while Zambianising the labour force with average wage increases proved difficult. African workers got agitated by that political independence did not bring about equal wages and better conditions of service compared with those of European workers. This partly explains why Government's third task of mobilising or influencing mineworkers to support national development failed.

There is another body of literature focussing on relationship with the Zambian Government, corporate structure and ownership of the mines, and less on labour. A book edited by Mark Bostock and Charles Harvey, provides documentation not only of nationalisation of the mining

[68] E.L. Berger, *Labour, Race and Colonial Rule: The Copperbelt from 1924 to Independence* (Oxford: Clarendon Press, 1974).
[69] R.H. Bates, *Unions, Parties and Political Development: A Study of Mineworkers in Zambia* (New Haven and London: Yale University Press, 1971); M. Burawoy, *The Colour of Class on the Copper Mines: From Advancement to Zambianisation* (Manchester: Manchester University Press, 1972); P. Daniel, *Africanisation, Nationalisation and Inequality: Mining Labour and the Copperbelt in Zambian Development* (London: Cambridge University Press, 1979).

industry in 1969 but also of the development of this sector since 1895.[70] The development of the copper industry and the end of private enterprise in the sector in 1969 forms part of this investigation. Anthony Martin wrote on the early years of the government's struggle for economic control and triggered a critique of Zambia's new political leadership.[71] Using an economist perspective, he addressed the effects of power-relations on corporate strategy and organisation. Additionally, Martin examined the formulation and implementation of policies laid down in Zambianisation, Mulungushi and Matero reforms of 1968 and 1969, respectively. He praised the earlier policies before Mulungushi reforms as liberal and, therefore, felt it was necessary for economic development, and condemned the reforms thereafter, predicted economic doom for Zambia. The study was an exercise on political economy and, therefore, paid very little attention to the technical side of development theory.

There are also similar studies that discussed the impact of partial nationalisation on the corporate structure of the copper industry in Zambia. Richard Sklar's work is a case in point wherein he studied the impact of multinationals on the domestic policies and foreign relations of a developing country.[72] He focused on three broad objectives of Zambian policy – economic independence, social equality and Southern Africa liberation. With regard to the nationalisation policy, he argued that the multinationals cooperated fully and loyally with the government, despite many unfavourable external and internal conditions. Simon Cunningham's book addressed the various strategies of both the NCCM and Roan Consolidated Mines (RCM) and their impact on Zambia's political economy.[73] Phillips praised Cunningham's assessment of the appropriateness of nationalisation that it was, 'thorough and adept at portraying the various techniques employed by the Selection Trust and Anglo American in capitalising their operations, and of placing their financing within the global financial market'.[74] In line with Martin's prophecy, Cunningham observed that the post-nationalisation period did not see the dynamic development that was hoped for, partly due to over-reliance on foreign capital and investment.

[70] M. Bostock and C. Harvey (eds.), *Economic Independence and Zambian Copper: A Case Study of Foreign Investment* (New York: Praeger Press, 1972).
[71] A. Martin, *Minding Their Own Business: Zambia's Struggle against Western Control* (London: Penguin Books, 1975).
[72] R.L. Sklar, *Corporate Power in an African State: The Political Impact of Multinational Mining Companies in Zambia* (Los Angeles: University of California Press, 1975).
[73] S.J. Cunningham, *The Copper Industry in Zambia: Foreign Mining Companies in a Developing Country* (New York: Praeger Publishers, 1981).
[74] Phillips, 'Roan Antelope', 7.

A few scholars of the Copperbelt existed in the 1990s. Malcolm McPherson offered a direct critique of nationalisation in Zambia.[75] He contended that between 1976 and 1991, economic reforms were often abandoned not only due to the effects of the global recession but also mismanagement and the adoption of off-beam policies by the government.[76] For example, devaluation of currency without a real increase in domestic production and heavy borrowing from the World Bank and International Monetary Fund.[77] But he was non-commital on whether nationalisation was wrong or not, though he blamed the government for taking long to introduce effective reform. James Ferguson, discussed the personal and social problems of workers on the Copperbelt and noted that their social life was undermined by the effects of the global recession after mid-1970s, a decline in revenue from copper sales, and the resultant low wages against rising inflation.[78] Beyond this literature, John Craig's thesis examined the changing role of state enterprise during nationalisation and the first years of privatisation in Zambia (1968-1998).[79] He noted that nationalisation proved to be commercially and financially unstable, resulting in the 'adoption of a strategy of comprehensive privatisation'.[80]

Academic interest revives in the 2000s, examining both old and new issues of the Zambian mining industry. Some contemporary historians have engaged post-colonial scholars in their arguments, while others have focused on completely different aspects of the industry. Phillips's study analysed the corporate structure, strategy and profitability of Roan Antelope mine during the colonial era between 1890 and 1953.[81] His findings were that Roan's structure and strategy evolved over time to safeguard its operations in response to the changing political and economic situation in Central Africa. Phillips's thesis is the only major study of an individual mine on the Copperbelt, and it proved relevant to the present study focusing on another individual mine in the same region, Nkana.

---

[75] M.F. McPherson, *The Sequencing of Economic Reforms: Lessons from Zambia* (Amsterdam: Ministry of Foreign Affairs Development Corporation, 1995).
[76] *Ibid.*, 6.
[77] *Ibid.*, 7-9
[78] J. Ferguson, *Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt* (Berkeley: University of California Press, 1999), 6–7. For further details about social life of workers on the Copperbelt and how Ferguson studied it, see his articles: J. Ferguson, 'Mobile workers, modernist narratives: a critique of the historiography of transition on the Zambian Copperbelt [part one]', *Journal of Southern African Studies*, 16, 3 (1990), 385–412; J. Ferguson, 'Mobile workers, modernist narratives: a critique of the historiography of transition on the Zambian Copperbelt [part two]', *Journal of Southern African Studies*, 16, 4 (1990), 603–21.
[79] J.R. Craig, 'State Enterprise and Privatisation in Zambia 1968–1998' (PhD Thesis, University of Leeds, Leeds, 1999).
[80] Craig, 'State Enterprise and Privatisation in Zambia 1968–1998', iii.
[81] Phillips, 'Roan Antelope'.

Foster Sakala's dissertation also focused on Roan when exploring the role of women in labour stabilisation on the Copperbelt between 1930 and 1964.[82] A follow up to Chauncey, Parpart and Sakala's studies was Bbole Dandule's work whose major focus was on the role of African women in the labour movement on the Rhodesian Copperbelt between 1935 and 1964.[83] She criticised Parpart for suggesting that women on the Copperbelt were invisible, especially in the 1935 African mineworkers' strike, and produced evidence indicating that women at Nkana, Mufulira and Roan were actively involved in all the labour protests. She observed that African women did not only chant slogans against mine management and the Colonial Government, but were also involved in organising most protests in solidarity with men. She further argued that married men were forced to fight for better conditions of service because they were pressured by their wives.

There are also studies linking business and politics in Central Africa. Larry Butler and Andrew Cohen focussed on, among other topics, the corporate policies adopted by Anglo American and RST in response to political change in the Central African Federation.[84] They demonstrated that big businesses supported Federation of Nyasaland, Northern Rhodesia and Southern Rhodesia, at least initially. Butler's main argument is that RST collaborated with nationalists in the demise of the Federation, therefore, this Company supported decolonisation. In contrast, Cohen contended that big businesses delayed decolonisation of the Federation. Their studies are useful in contextualising the role of the Rhokana Corporation in the political economy of the Federation of Rhodesia and Nyasaland.

While engaging Butler and Cohen, to mention but a few, Ian Phimister's article criticised the historiography for mistakenly emphasising the Roan Selection Trust management's self-glorifying role in fighting white racism and promoting African Advancement in the mining

[82] F. Sakala, 'The Role of Women in Labour Stabilisation at Mufulira Mine, 1930–1964' (MA Dissertation, University of Zambia, Lusaka, 2001).
[83] B. Dandule, 'Women and Mineworkers' Struggles on the Zambian Copperbelt, 1926–1964' (MA Dissertation, University of Zambia, Lusaka, 2012); Chauncey, 'The Locus of Reproduction: Women's Labour in the Zambian Copperbelt, 1927–1953'; Parpart, 'The Household and the Mine Shaft: Gender and Class Struggles on the Zambian Copperbelt, 1926–1964'.
[84] L.J. Butler, *Copper Empire: Mining and the Colonial State in Northern Rhodesia, c. 1930–1964* (New York, Palgrave Macmillan, 2007); L.J. Butler, 'Business and British Decolonisation: Sir Ronald Prain, the Mining Industry and the Central African Federation', *The Journal of Imperial and Commonwealth History*, 35, 3 (2007), 459–84; A. Cohen, 'Business and Decolonisation in Central Africa Reconsidered', *The Journal of Imperial and Commonwealth History*, 36, 4 (2008), 641–58; This article is incorporated in a later publication, A. Cohen, *The Politics and Economics of Decolonization in Africa: The Failed Experiment of Central African Federation* (London and New York: I.B. Tauris, 2017).

industry.[85] He examined issues of corporate profitability and observed that 'the Companies had declared themselves in favour of abolishing the colour bar but had taken that position explicitly on economic and not on ethical grounds'.[86] In line with Berger, Phimister's argument is that the African Advancement agreement was not born out of a moral obligation of the mining companies, but due to the abrupt increase in African and European wages and other operating costs, coupled with the fall in copper prices in the late 1950s. Rhokana and the other Copperbelt companies thought they would reduce costs by advancing Africans into comparable jobs done by Europeans and paying them less wages than the latter's. Duncan Money's recent study criticised the existing historical literature for concentrating on 'the lengthy, torturous and ill-tempered negotiations over African advancement', but missed 'negotiations over virtually everything', from wages to issues such as the colour bar.[87] In addition, the historical literature does not discuss the crucial role played by Rhokana and the other Rhodesian Anglo American (RAA) operated mines in pursuing the African Advancement policy, a contribution which this current study seeks to make.

Miles Larmer's work examined the role of mineworkers in industrial action and politics after independence and during nationalisation of the mining sector in Zambia between 1964 and 1991.[88] Larmer criticised the historical literature depicting Zambia's mineworkers as an apolitical without a progressive political role. He contended that mineworkers played a variety of political roles with a significant impact on post-colonial political development in Zambia. His dissertation in particular, with a detailed historical background, demonstrates that Zambia's mineworkers were the precursor to African nationalism in the colonial era and formed the opposition base to the post-colonial state. Patience Mususa's thesis looked at social life on the Copperbelt after privatisation of the Zambia Consolidated Copper Mines Limited in 1997.[89] She argues that the removal of subsidies in line with Structural Adjustment policies worsened the life of mineworkers on the Copperbelt.

---

[85] I.R. Phimister, 'Corporate Profit and Race in Central African Copper Mining, 1946-1958', *Business History Review*, 85, 4 (2011), 749–74.
[86] *Ibid*., 765.
[87] D. Money, 'No matter how much or how little they have got, they cannot settle down: A social history of Europeans on the Zambian Copperbelt, 1926-1974' (PhD Thesis, University of Oxford, Oxford, 2016), 291–2.
[88] M. Larmer, 'Zambia's Mineworkers and Political Change*, 1964–1991*' (PhD Thesis, University of Sheffield, England, 2004); M. Larmer, 'Zambia's Mineworkers and the Labour Movement's Resistance to the One-Party State, 1973–1981', *South African Historical Journal*, 56, 1 (2006), 154–76; M. Larmer, 'The Hour Has Come at the Pit: The Mineworkers of Zambia and the Movement for Multi-Party Democracy, 1982–1991', *Journal of Southern African Studies*, 32, 2 (2006), 293–312.
[89] P.N. Mususa, 'There Used Bo Be Order: Life on the Copperbelt After the Privatisation of the Zambia Consolidated Copper Mines' (PhD Thesis, University of Cape Town, Cape Town, 2014).

Patricio Meller and Anthony Simpasa compared the nationalisation of mining in Zambia and Chile.[90] They observed that the major reason behind nationalisation in both nations had to do with the belief that foreign companies undertook investment and production decisions which served their interests and not the host nations'. They noted substantial differences in the paths taken by both copper industries once there was a change of Government, especially in Chile. The impact of privatisation of the mining sector in Zambia after 1991 is also well documented.[91] A few of these scholars have compared nationalisation and privatisation, and concluded that the revenues that flowed into the government's coffers were not much different under either state or private ownership.[92] John Lungu examined the evolving mining tax regime in Zambia with little historical context.[93]

1.4 Justification

This study finds the existing historiography on mining in Zambia problematic in terms of content and periodization. It makes two major criticisms. Firstly, very few scholars have particularly linked corporate structure, labour relations and profitability to individual mines on the Copperbelt, or have treated these three themes together. B.W.E Alford and C.E. Harvey produced a superb study of Rhokana's financial strategies but it is very narrow in scope, as it covers a short time period (1930-1932), and they do not mention labour in their study.[94] As mentioned above, Phillips's dissertation is the major study focusing on an individual mine, but only goes up to 1953.[95] Literature dealing with the hitherto scattered themes of corporate structure, labour organisation and profitability dwindles between 1954 and 1991. Secondly, despite a growing number of scholars examining either corporate structure or labour organisation in the Zambian mining sector in the colonial era, during nationalisation and privatisation, few detailed studies exist for the period between 1980 and 1991. Additionally,

---

[90] P. Meller and A.M. Simpasa, 'Role of Copper in the Chilean and Zambian Economies: Main Economic and Policy Issues', Global Development Network Working Paper Series No. 43 (New Delhi: GDN, 2011).
[91] See, for example, N. Simutanyi, 'Copper Mining in Zambia: The Developmental Legacy of Privatisation', Institute for Security Studies (ISS) Paper Series No. 165 (Pretoria: ISS, 2008), 1–16; A. Fraser and M. Larmer (eds.), *Zambia, Mining and Neoliberalism: Boom and Bust on the Globalized Copperbelt* (New York: Palgrave Macmillan, 2010); A. Whitworth, *Explaining Zambian Poverty: A History of (Non-Agriculture) Economic Policy Since Independence* (Islamabad: John Wiley and Sons Limited, 2014); J. Sikamo et al., 'Copper mining in Zambia – history and future', *The Journal of the Southern African Institute of Mining and Mettallurgy*, 116 (2016), 491–6.
[92] J. Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime', *Southern Africa Resource Watch*, 8 (2009), 1-28; Simutanyi, 'Copper Mining in Zambia: The Developmental Legacy of Privatisation'; Meller and Simpasa, 'Role of Copper in the Chilean and Zambian Economies: Main Economic and Policy Issues'.
[93] Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime'.
[94] Alford and Harvey, 'Copperbelt Merger: The Formation of Rhokana Corporation', 331–58.
[95] Phillips, 'Roan Antelope'.

the literature discussing the profitability of individual mines on the Copperbelt remains sparse and, therefore, incomplete.

The present study on Rhokana Corporation and its Nkana mine, partly responds to Andrew Roberts and Phillips's call for someone to undertake a corporate study of an individual mine on the Copperbelt that would synthesise the themes, tie them together and try to explain them in a wider and deeper perspective.[96] In this regard, this study intertwines three major themes (corporate structure, labour relations and profitability) in Rhokana/Nkana's history, and addresses them in a single narrative over a long period (1928–1991), in a perspective wider and deeper than those so far adopted. This offered a comprehensive investigation which 'prompted to delve deeper and reach[ed] more refined conclusions' about the economic performance of Nkana and other individual mines on the Copperbelt.[97]

Studies closest in scope to the current scholarship are the works of Phillips and Gregory, though they only go up to 1953 and 1961, respectively.[98] By contrast, this study covers the period of private ownership (1928 – 1969) and state ownership (1970 – 1991). The history of Rhokana is studied through these developments, and these developments are reflected through the case study of Nkana. 1928 is a natural starting point for this study because the first shaft was sunk at the Nkana mine during this period. The cut-off date of 1991 is appropriate for two reasons. 1991 marked the end of nationalisation, privatisation was announced, and the government stopped supporting ZCCM. This was followed by a transition period of six years (1991 – 1997). Politically, the one-party system was replaced by multi-party democracy followed by fresh economic politics.

Broadly, this dissertation seeks to answer one major question as it endeavours to explain the origins and development of Rhokana/Nkana: How did trends in the national, regional and global political economy changed Rhokana/Nkana's corporate structure, labour organisation and profitability between 1928 and 1991? To answer this question, the study traces the corporate history of Rhokana/Nkana between 1928 and 1969. It also analyses how nationalisation, Zambianisation, the world recession and trends on the market interconnected to affect Rokana/Nkana's development under the Nchanga Consolidated Copper Mines (NCCM) Limited, 1970–1981. It further examines the extent to which entrepreneurship,

[96] Roberts, 'Notes towards a Financial History of Copper Mining in Northern Rhodesia', 347; Phillips, 'Roan Antelope', 9–10.
[97] Roberts, 'Notes towards a Financial History of Copper Mining in Northern Rhodesia', 347.
[98] Gregory, *Ernest Oppenheimer*; Phillips, 'Roan Antelope'.

technological deployment, financing, organisational structure, labour relations, trends on the market and company strategy interconnected to affect Rokana/Nkana's performance under the Zambian Consolidated Copper Mines (ZCCM) Limited, 1982 – 1991.

The case study of Rhokana/Nkana Mine Division was selected for a number of reasons. The Rokana/Nkana Division has been in continuous operation since 1928 and during nationalisation (1970 – 1991) operated three underground and three open-pit sources.[99] Between 1931 and 1969 the Rhokana Corporation was both a mining firm and an investment company on the Copperbelt, generating more profit for its owners (AAC) and tax revenue for the government.[100] It controlled the Nkana mine and owned shares in the other mines, on behalf of the AAC, who were consulting engineers to the BSA Company, Rhokana, Nchanga and later on Bancroft. The Nkana mine produced both copper and cobalt and utilised various concentrating techniques.[101] Among the Copperbelt mines, Nkana was most prominent in production especially between 1940 and 1953 and, therefore, contributed more to the war economies of Britain and the USA through the sale of copper and cobalt. In 1934, RST and AAC chose to build the first copper refinery at Nkana and in the 1950s Rhokana was the first to construct an electrolytic cobalt plant and treated cobalt for all the mines up to the early 1970s.[102] Thus, Rhokana had financial interests in other mining and metallurgical operations apart from Nkana mine. Although Rhokana lost its interests in the other mines during nationalisation, the Division owned the largest mining and metallurgical facilities on the Copperbelt, which proved vital to the mining, smelting and refining operations of other mines owned by the NCCM, RCM and ZCCM.[103] Additionally, Henderson and Parpart have demonstrated that the Nkana Mine Division was the centre of the labour movement on the Northern Rhodesian Copperbelt.[104] It can be seen that the Rhokana/Nkana Division offered the best prospects for the future of the copper industry, and its operations were generally representative of the mining sector in Zambia. Thus, an intimate knowledge of operations at

---

[99] ZCCM 4.10.2E, *History of ZCCM Limited: Birth of a Giant*, A Paper by B.K. Shamutete, 1992, 18–19.
[100] ZCCM 11.1.1F, *Nchanga Consolidated Copper Mines Limited* (hereafter *NCCM Limited*)*: Annual Reports*, 1971–81; ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1931–44; ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1946–69.
[101] *Mining Mirror,* 26 March 1982.
[102] Butler, *Copper Empire*, 22.
[103] *Mining Mirror,* 26 March 1982.
[104] Henderson, 'Labour and Politics in Northern Rhodesia, 1900-1953', 103–68, and 174–88; Parpart, *Labour and Capital on the African Copperbelt*, 54–158.

the Rhokana/Nkana Division provided an insight into the mining developments over much of the twentieth century in Zambia.

1.5 Researching Mining History in Zambia: Some Methodological Reflections

The methodological approach in this thesis is mixed; both qualitative and quantitative. The research utilised and corroborated various sources to cater for their limitations. The narrative of this thesis is constructed from a number of sources that include archival or primary documents, as well as interviews/questionnaires. Archival documents were sourced from the National Archives of Zambia (NAZ) in Lusaka, the Zambian Consolidated Copper Mines (ZCCM) Archives in Ndola, Mineworkers' Union of Zambia (MUZ) Headquarters in Kitwe, and United National Independence Party (UNIP) Archives in Lusaka.

While Zambia's mining industry can be examined using international and overseas archives, this study finds scholarly reliance on these archives alone problematic and limited, in terms of their scope. There are two major criticisms. Firstly, it is clear from the literature reviewed, that archives in Britain and the United States of America (USA) have much more detailed information on the RST's group of companies than they do on the RAA's subsidiaries. In the case of RAA, however, its parent company, AAC, has historical records and information in their library in Johannesburg, South Africa. Researchers have been unable to access its documents because AAC, as a multinational Corporation, is secretive and conservative. By contrast, Selection Trust (ST) archives are easy to access because the Company ceased to exist and the personal papers of key figures of the Company are available. This study did not utilise records in Britain and the USA because they are not useful for this research focussing on one of AAC's subsidiaries; they contain ST/RST and American Metal Company (AMC) papers. Besides, the study is not entirely focusing on the relationship between the mining companies and the Colonial Government, hence it did not utilise primary sources held in the National Archives of Britain at Kew, and the Bodleian Library. Secondly, although archives in Zimbabwe, Britain, and the USA contain detailed information about the Zambian mining industry during the colonial era, their holdings dwindle rapidly so far as the period after independence is concerned. However, archival data on both groups of companies is available in Lusaka and on the Copperbelt itself, for the period before and after independence, making a possible comprehensive analysis of the copper industry trends.

Yet, very few studies on the Zambian mining industry have benefited from the primary material held in the MUZ Headquarters and the UNIP Archives. Even the latest studies have only utilised a few of the records held in these local archives.[105] If one uses the records from the four archives, a more holistic history of the Zambian mining industry, consolidating the hitherto scattered themes of corporate structure, profitability and labour organisation can be written. By utilising the four archives, it is possible to cross-check and corroborate information from similar and different material to determine their reliability and accuracy. At this juncture, it is necessary to describe the holdings in the four archives and their usefulness to this study.

1.5.1 National Archives of Zambia (NAZ)

The NAZ has two main sections, the Archives Library and Collections Section. This study utilised documents in the Archives Library. At the time of this research, the Collections Section was being restocked. The NAZ mainly contains archives up to the imposition of one-party state in 1972. On mining history, the Archives Library contains a wealth of published and unpublished materials in the form of memoranda, minutes, reports, series, notes, correspondence papers and letters, periodicals and miscellaneous documents. This study benefited from files belonging to the Ministry of Lands and Mines with information from the late 1920s to 1950s. Most of these documents are in the form of reports of the Mines Department and statements on production and sales returns of the respective mining groups (BSA Company, RST, RAA and Rhodesia Broken Hill Development Company). These records are useful when relating the Copperbelt mines' corporate structure and labour organisation to mining legislation, mineral production, exports, revenue, taxation, and the price of base metals.

There are also press-cuttings from foreign and local periodicals such as *Hansard (Legislative Debates)*, *Bulawayo Chronicle*, *Northern News*, *Sunday News*, *Financial Times*, *Economist*, *The Times*, *Copperbelt Times*, *Central African Post* and *Metal Bulletin*, covering the period from 1932 to 1955.[106] These periodicals contain data connecting the corporate profitability of Rhokana, the Copperbelt and Kabwe mines to trends in the global copper industry. The major issues highlighted include: prices of metals on the London and New York markets; metal output and revenue for copper, cobalt, zinc and lead; profits and dividends of individual mines; and technological development.

---

[105] See, for example, Dandule, 'Women and Mineworkers' Struggles on the Zambian Copperbelt, 1926–1964'; M. Santebe, 'The Colonial Government and the Great Depression in Northern Rhodesia: Administrative and Legislative Changes, 1929–1939' (MA Dissertation, University of Zambia, Lusaka, 2015); B. Mufinda, 'A History of Mining in Broken Hill/Kabwe: 1902–1929' (MA Thesis, University of the Free State, Bloemfontein, 2015); Money, 'No matter how much or how little they have got, they cannot settle down'.

[106] National Archives of Zambia Ministry of Land and Mines (hereafter NAZ ML) 8/4/4, Labour and Mining Mineral Production Press Reports, 1948–55.

In addition to the press-cuttings identified above, the NAZ Library contains a number of newspapers before and after Zambian independence. They include: *Northern News* (1947–1965); *Central African Post* (1948–1965); *Broken Hill Observer* (1958–1968); *Mutende News* (1936–1952); *Livingstone Mail* (1943–1968); *The Eagle* (1952–1961); *Zambia Daily Mail* (1965 to date); and *Times of Zambia* (1966 to date). These newspapers contain useful information on old and new developments in the Zambian and global copper industries. The most critical of these newspapers are the *Central African Post*, *Northern News* and its successor *Times of Zambia*. They record issues such as labour protests, African advancement, Zambianisation and nationalisation of copper mining and other industries. Some of the above local and international newspapers are utilised when discussing labour relations at Rhokana and the Corporation's contribution to the economies of the Colonial and Federal Governments between 1932 and 1963.

Many scholars utilised records categorized under the Ministry of Labour and Social Services with information on labour aspects covering the period from the 1930s to 1960s. However, there exists a considerable number of unpublished primary records, which are under-utilised. The documents are useful when analysing trends in labour policies of stakeholders in the mining sector, notably; the government, mining companies, and trade unions. The records contain information about the role played by workers of specific mines in the labour movement on the Copperbelt. Specific issues documented include the formation of the Northern Rhodesia Mineworkers' Union (NRMWU), African Mineworkers' Union (AMU), labour disputes, colour bar, employment of coloureds and women, African advancement, and Zambianisation. This study utilised some of these documents when analysing the Zambianisation policy in relation to the employment of foreign Africans in the mining industry; an issue which is less discussed in the historiography. It engaged correspondence papers of the Nkana African Mineworkers' Union between 1948 and 1962 to discuss the role of African workers at this mine in the formation of their union. It also utilised reports of the Zambianisation Committee to explore Government policy on labour organisation in the first years of independence.

The NAZ contains reports published by the government, such as the Report on Unemployment in Northern Rhodesia, 1932-1933; the Copperbelt Regional Report of 1959; and the United Nations Economic Survey Report of 1964. These documents can be used to examine the status of the Zambian economy since 1932. The United Nations Economic Survey Report of 1964 was useful when examining the contribution of Rhokana and the Copperbelt companies to the

Federal economy. Equally relevant are reports of various inquiries into labour disputes in the mining industry such as: Russell Commission Vols. I and II, 1935; Forster Commission, 1940 and 1954; Dalgleish Commission, 1947; Branigan Commission, 1956; Morison Commission, 1962; Whelah Commission, 1963; and the Brown Commission, 1966. These reports are relevant to historians researching the role of mineworkers in industrial actions and politics on the Copperbelt, because they contain testimony from workers and trade union leaders. In this regard, some of these reports proved useful when analysing the role of workers at Nkana in particular and on the Copperbelt mines in general in the emergence and subsequent history of African mine labour protest and organisation between 1935 and 1968.

It can be seen that records at the NAZ contain a wealth of material on labour organisation in the colonial era and first years of independent Zambia. Very few material exists on corporate structure and profitability of individual mines. Therefore, much of primary data on corporate structure and profitability of Rhokana Coprporation and its Nkana mine was sourced from the Zambia Consolidated Copper Mines Archives.

1.5.2 Zambia Consolidated Copper Mines (ZCCM) Archives

One cannot research the history of mining in Zambia without utilising the ZCCM Archives. The holdings of ZCCM is comprised of the Mine Archives, Library and Museum. It was established by the mining industry in 1982, following the merger of NCCM and RCM, into a single company, the ZCCM Limited.[107] The ZCCM documents contain information dating back to the late pre-colonial era. There exists a wide range of material like annual reports of the mining companies and magazines not found in the other archives under discussion. One of the most useful parts of the ZCCM collection is that it contains internal RAA and AAC correspondence not found anywhere else. The majority of the material is in the form of annual, quarterly, monthly and special reports of respective groups of companies and divisions, notably RAA, RST, BSA Company, NCCM, RCM, Rhokana Corporation, and ZCCM between 1928 and 1991. This study relied heavily on annual reports of Rhokana Corporation, NCCM and ZCCM between 1930 and 1991. These provided valuable data especially on trends in production, copper prices, cost and value of sales, net profits and dividends. This data was utilised in assessing corporate profitability of Rhokana Corporation and its Nkana mine. It should be noted, however, that Rhokana Corporation's reports only cover the period between

[107] *Mining Mirror,* 30 March 1985.

1930 and 1969. Thereafter, much of the information about Rokana/Nkana in the first phase of nationalisation from 1970 to 1981 was sourced from NCCM reports. Compared to RCM reports, NCCM reports have little information about corporate profitability of its mines this period. By comparison, ZCCM reports have much more information about productivity of individual mines on the Copperbelt between 1982 and 1991. The ZCCM archives also have a large number of files on labour organisation with a huge amount of correspondence about labour and with trade unions.

Mining yearbooks from 1955 to 1985 offered supplementary information to annual reports. These evolved through a succession of different titles: *Northern Rhodesia Chamber of Mines Yearbooks* (1955–1964); *Copperbelt of Zambia Mining Industry Yearbooks* (1965–1969); *Mining Development Corporation (MINDECO) Mining Yearbooks* (1970–1972); and *Zambia Mining Yearbooks* (1973–1985). They contain statistical data which can be used to analyse corporate profitability and labour organisation of the Zambian copper industry and individual mines. However, for a comprehensive understanding one needs to corroborate information from mining yearbooks and reports. All of these yearbooks were utilised in this study, especially statistical data comparing labour strength, emoluments, production, value of metals and taxes for Rhokana and the other Copperbelt companies.

Apart from the government sanctioned reports indicated in the previous section, special reports include surveys sponsored by the World Bank (WB) and International Monetary Fund (IMF) in the late 1970s and 1980s. Their reports show the influence of the two financial lending institutions in the Zambian mining industry, and the impact this had on operations of Nkana and other individual mines. There are other special reports on the progress of African Advancement and Zambianisation of labour in the copper industry between 1964 and 1992. Furthermore, there are reports and files on parliamentary questions/debates over Government policies on labour organisation and profitability of the mines between 1985 and 1998. These documents have been used when examining progress of the Zambianisation of labour at Nkana and in the other Copperbelt mines, as well as employment of women/females and foreign (alien) African labour.

Other materials are newspapers and magazines. The *Mining Mirror* (1972–1991) became the only major newspaper produced by the mining industry following nationalisation of the sector. It replaced independent periodicals such as *Rhokana Copper Miner* (1951–1962); *Nchanga Weekly* (1962–1966); *Broken Hill Observer* (1958–1968); *Nchanga Magazine* (1951–1957);

Horizon (1959–1970); and *Optima* (1951–1970). These periodicals contain company reports and statements as well as editorials and opinions from specialists in the sector. They can be used to analyse global and regional political and economic trends and their impact on corporate organisation and profitability of the Copperbelt mines between 1951 and 1991. Some information from *Horizon*, *Optima* and *Mining Mirror* was utilised in discussing various aspects of corporate profitability in Rhokana/Nkana's history between 1951 and 1991.

There are also press-cuttings from international and local periodicals. Apart from those already referred to, the *Northern Rhodesia Advertiser*, *Rhodesian Mining Journal*, *South African Mining Journal*, *Financial World*, *Investors' Guardian*, *City Press*, *Foster and Turner Advertising Service*, *Daily Telegraph and Morning Post*, *Daily Mail* and *Investors' Chronicle* are all available. They provide information on corporate organisations, profitability and labour relations in the mining industry between 1935 and 1958, not only in Northern Rhodesia but also in the Belgian-Congo, Southern Rhodesia, South Africa, Canada, Chile, and the United States. Topical issues include the mineral rights of the BSA Company, labour disturbances in 1935 and during the 1950s, as well as African Advancement in the Copperbelt mines. There are also miscellaneous unpublished documents from 1932 onwards, with detailed information on labour relations, production and the sale of metals, shareholders' interests and the nationalisation of the mines. Accordingly, the majority of these records have been used.

1.5.3 Mineworkers' Union of Zambia Headquarters (MUZ HQ)

Another major source of information for this study was the Mineworkers' Union of Zambia Headquarters (MUZ HQ). MUZ, initially known as the Northern Rhodesia African Trade Union, was formed in 1949 to represent the interests of African miners.[108] Until 1991, MUZ was one of the most powerful trade unions in Africa. Record keeping at MUZ HQ began in 1973 when its Research Section was established and placed under the leadership of the Vice Secretary General.[109] Very few files especially from the colonial period survive as most of them were destroyed by a major fire in the late 1970s. Even so, the MUZ HQ provided additional information for this study such as Mines Joint Industrial Council Papers, ZCCM and Zambianisation Committee reports covering the period between 1976 and 1991. These records were useful when examining corporate profitability and Zambianisation of labour at the Nkana

[108] Following all studies, the Northern Rhodesia African Trade Union will be referred to as the African Mineworkers' Union (AMU).
[109] *Times of Zambia*, 27 July 1973.

Division and in the mining sector in general in this period. Very few scholars have used these files.

1.5.4 United National Independence Party (UNIP) Archives

The United National Independence Party (UNIP) ruled Zambia from 1964 to 1991. As mentioned elsewhwere above, Zambia was a one-party state during this time, so the Party archives contains Government papers. The UNIP archives were constructed in 1977.[110] There are two main categories of files in the UNIP Archives. One inventory consists of files looking at the history of Northern Rhodesia (later Zambia) and the African National Congress (ANC), while the other focuses on the role of the UNIP. The catalogue of the two inventories have been digitised for easy reference. Generally, the files of the ANC cover the period during the nationalist struggle up to the introduction of a one-party state (1952 to 1972). The series of the United National Independence Party cover the period from 1960 to 1991. The majority of the UNIP files contain information related to political and economic policies of the Party and its Government. Only a few of these files are utilised in this study. The files utilised fall in the category of speeches made by President Kaunda on issues pertaining to state participation in the Zambian economy during nationalisation. Generally, UNIP archives contain less information about corporate profitability of the mining companies.

1.5.5 Interviews/Questionnaires

The interview/questionnaire explored the impact of nationalisation of mining from 1970 to 1991.[111] Since the archival record, especially on individual mines, is sparse for this period, the researcher attempted to supplement the archive with interview material. Interviews were conducted and questionnaires administered after perusing through archival materials to probe certain information. The open-ended questionnaires which were used as interview guides were distributed before the interviews were conducted to help the respondents familiarise themselves with the questions (see appendices I and II). The questionnaire/interview guide and the interview were all in English.

The research benefited from a total of 43 respondents (See Appendix III). Respondents included former management and ordinary level employees in the copper industry and Nkana

[110] M.C. Musambachime, 'The Archives of Zambia's United National Independence Party', *History in Africa,* 18 (1991), 291–2.
[111] This study was approved by the Ethics Clearance Committee of the University of the Free State on 1 August 2017. The ethical clearance number is UFS-HSD2017/0228.

mine. The Office of the First Republican President in Lusaka (contact cell phone number +260977748705), the MUZ HQ in Kitwe (contact cell phone number +260966921445), and the ZCCM Archives in Ndola (contact cell phone number +260976389380), put me into contact with some respondents who also connected me to others. High profile people were identified through the Office of the First Republican President. Former workers at Nkana were accessed through the ZCCM Archives and the MUZ HQ. Respondents were chosen to participate in this research because they worked in Government and/or in the mining industry during the period when nationalisation took place in this sector. Their knowledge and experience regarding nationalisation is central to this research. Respondents chose the time and place that they felt was comfortable and convenient for the interview. Most of them were interviewed near their homes. Each interview lasted for not more than an hour.

Effort to interview Dr Kenneth Kaunda, the first President of Zambia between 1964 and 1991, proved futile as he was unwell to be interviewed at the time of this research. However, four high profile people were interviewed. These are Francis Kaunda, Andrew Sardanis, Kankasa Chibesakunda and Charles B. Muchimba. Kaunda (not related to former President Kenneth Kaunda) and Sardanis held high positions in the government and the copper industry between 1965 and 1991 in Zambia and were the key informants in this study. In addition, both were and still are, close friends of Kenneth Kaunda. Kankasa is one of the first female politicians in Zambia, was once High Commissioner for Kenya and Member of the Central Committee of UNIP during nationalisation. Muchimba joined the copper industry in the late 1980s and is the current Director of Research of the fragmented MUZ. Apart from Muchimba who stays in Kitwe, the other three live around Lusaka.

The former ordinary mineworkers who were consulted worked at Nkana and stay around Kitwe. These included workmen, drivers, stick handlers, machine operators, section supervisors, electricians/artisans, section inspectors, timbermen, training officers, plumbers, loaders, spanner men, mine policemen and insurance officers. The respondents were happy to be involved in this study, especially because there have been very few such undertakings in their life. This worked to the advantage of the researcher, as the study invoked deep-seated emotions among respondents about nationalisation and its impact. Despite interviews being viewed as less factual over a long period such as the one studied, they bring to the fore views of the voiceless, such as workers, whose individual opinions are less represented in archival sources.

1.5.6 General Limitations of the Sources

The records contained in the four archives above cover a wide range of mining industry themes. They are particularly valuable when it comes to questions of mine ownership, industrial relations and economic performance of the sector. Most of the records cover the period between 1895 and 1998. As indicated above, the major weakness of the material from these four archives is that their information on individual mines dwindles after 1970. For example, data on finished production at Nkana and other NCCM-controlled mines between 1970 and 1981 is not recorded in the Company's reports. Similarly, overall profitability of individual mines between 1970 and 1991 could only be related to their parent companies, NCCM, RCM and ZCCM. Limitations of sources make it hard to examine profitability of individual mines on the Copperbelt during nationalisation. This limitation in the sources is probably due to a focus on the performance of these parent companies after nationalisation as opposed to their subsidiaries. Thus, this study tried to cover up this gap in archival sources by engaging some information from interviews.

1.6 Themes and Structure of the Study

As mentioned above, this study explores three major themes in Rhokana/Nkana's history: corporate structure, labour organisation and profitability. As observed by Sklar, 'the first care of a commercial company is the security of its investment; the second is the realisation of profits for the owners'.[112] Effective corporate organisation and sound labour relations are important for the security of any business venture. Corporate structure refers to the organisation system of a business firm. There are two major issues related to the corporate organisation of the Rhokana Corporation. These are the corporate system and 'whether the firm organised itself in a way that enhanced its effectiveness and profitability'.[113] When discussing the corporate structure of Rhokana/Nkana, this study considers the Corporation's relationship with the parent companies AAC and RAA, as well as its cooperation with RST, NCCM and ZCCM. It also examines Rhokana/Nkana's corporate strategy and business interactions with other internal and external companies, International Financial Institutions (IFIs), as well as its response to shifts in Government policy. It demonstrates that cooperation with key stake holders in the national, regional and global copper mining industry was vital for the Corporation's security and profitability.

[112] Sklar, *Corporate Power in an African State*, 96.
[113] Phillips, 'Roan Antelope', 27.

Labour relations on the Copperbelt were changed not only by the emergence of a segregated labour force in the early 1930s but also by 'a skilled and cohesive African working class and the formation of the AMU [African Mineworkers' Union] in 1949'.[114] Together with labour organisation, was infrastructural development and the provision of basic services for the community.[115] The Copperbelt companies developed roads and provided services such as education, housing and health in their compounds. This partly affected their profitability. Social relations, experience and the political role of the African labour force on the Copperbelt have been studied by a number of social historians including those mentioned under section 1.3. This study is concerned with the role of management at Rhokana/Nkana and its African and European workers in the labour movement on the Copperbelt, as well as the impact of labour relations in general on production and profitability of the Company.

Profitability in the mining industry depended largely 'on the production cost and the price level'.[116] Sklar said that profit is simply the difference between value of sales and cost of sales. In the case of Rhokana and the other Copperbelt companies, cost of sales comprised of mining, labour, treatment and overhead costs at the mine, as well as transport and other charges for exporting copper to buyers in Europe, USA and Asia.[117] In the global copper industry, social and technical conditions of mining determine variations and changes in the cost of production.[118] By contrast, the copper price 'is extremely sensitive to fluctuations in demand and supply'.[119] The cost of sales and price level are both sensitive to trends in the national, regional and global political economy. Other factors which affect production and profitability are entrepreneurship and managerial tendencies, nexus between technology and overall corporate goals, and growth strategies (horizontal and vertical).[120] In the case of Rhokana which was both a mining firm and an investment company, major factors directly related to its profitability included: extent of horizontal and vertical integration, growth and diversification;[121] quantity and quality of ore reserves and ore-milled; utilisation of machinery

---

[114] Sklar, *Corporate Power in an African State*, 97.
[115] *Ibid*.
[116] Phillips, 'Roan Antelope', 73.
[117] ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme to meet the Situation*, 6 December 1956, Tables 7 and 9; ZCCM 11.1.1F, *ZCCM Limited: 1990 Annual Report* (Lusaka: ZCCM Head Office, 19190), 44.
[118] Sklar, *Corporate Power in an African State*, 73.
[119] *Ibid*.
[120] For detailed information about the importance of these factors to a mining firm, see Phillips, 'Roan Antelope', 12–31.
[121] Horizontal integration/growth/diversification entails the acquisition of additional shares in other mines/properties to increase company assets. Vertical integration/growth/diversification entails controlling the

and technology, sources of fuel and power; modes of transport; cost of sales; price of metals on the market, which affect value of sales; economic downturn and inflation. Taxes, surcharges and dividends, which have significant effects on gross and net profits are also analysed. These factors are discussed appropriately, that is, highlighted in the period their influence mattered most in Rhokana/Nkana's history.

Much light has been shed on the Copperbelt with regards to mine ownership and mineral rights, investment, labour strategies, production, technology, taxation, profits, and the relationship between copper mining and economic growth in Zambia. Yet, there has been less attempt to synthesise these themes in a single narrative over a long period, so that they could usefully be seen in a detailed perspective than those so far adopted. Besides, and as stated elsewhere above, less has been done on the economic performance of individual companies on the Copperbelt. Therefore, these factors are intertwined and examined chronologically in Rhokana/Nkana's corporate history between 1928 and 1991 in five chapters. This chapter is followed by Chapter Two which traces the formation of the Rhokana Corporation and rapid development of the Nkana mine between 1928 and 1931. It proceeds by examining Rhokana's productivity and financial performance during the Great Depression (1932-1939), Second World War and in the immediate aftermath (1940-1949), and the Korean War (1950-1953). In addition, the chapter covers the emergence of the dual (African and European) labour structure at Nkana in particular and in the Copperbelt in general. The chapter goes up to the end of the Korean Crisis and the beginning of the Central African Federation.

Rhokana's corporate strategy and profitability during the Federation of Rhodesia and Nyasaland (1954-1963) and in the first years of independent Zambia (1964-1969), is the focus of Chapter Three. The chapter also discusses the politics of African Advancement and Zambianisation in the mining sector and Rhokana's response to these new policies. Introduced by the Copperbelt mines in the mid-1950s, African Advancement was a policy of advancing African workers into certain jobs and positions previously reserved for Europeans.[122] African Advancement was superseded by Zambianisation. Zambianisation was a policy introduced by the government after independence and was meant to replace expatriate European and foreign (alien) African workers by Zambians or locals in technical, managerial and supervisory

---

steps in the process of production (extraction, concentration, refining) and trade links to attain a monopoly, efficiency and self-sufficiency in the industry. See Phillips, 'Roan Antelope', 29–30.

[122] T.D.A. Etheredge, 'Zambianisation on the Copperbelt', *Optima*, 19, 4 (1969), 183.

positions in the mining and public sectors.[123] The historical literature discussed in section 1.3, related employment of locals and Zambianisation to Africanisation. By contrast, this study distinguishes employment of locals and Zambianisation from Africanisation; relates the former to indigenisation of labour in the industry. The chapter ends in 1969 because after this year, the government nationalised the mining industry.

Chapter Four looks at the impact of nationalisation and acceleration of Zambianisation on the Rokana/Nkana Mine Division under NCCM (1970–1981). Gavin Keeton and Mike Beer define nationalisation as 'the acquisition of privately owned enterprises by a Government, with or without compensation'.[124] The Zambian Government took the path of partial nationalisation with compensation. Nationalisation was not unique to Zambia. Several countries in Africa and Latin America nationalised their mining sector after independence.[125] The chapter will discuss the impact of the new mining structure, including the change of Rhokana's name to Rokana. As indicated elsewhere above, after 1981 RCM and NCCM and their mines were merged into a single company.

With the formation of a large single company, the ZCCM, Government attempted to consolidate nationalisation and Zambianisation between 1982 and 1991. Thus, Chapter Five focusses on Rokana's corporate profitability under the ZCCM. It also examines the impact of the global economic downturn, inflation and austerity measures dictated to the ZCCM by the IFIs. The thesis concludes on the eve of the reprivatisation of the mining industry under the new Government of the Movement for Multiparty Democracy (MMD). Chapter Six provides a conclusion of the main points from the four substantive chapters.

---

[123] *Ibid*., 182–4.
[124] G. Keeton and M. Beer, 'MIASA Position on State Participation in Mining', Paper for the Mining Industries Association of Southern Africa (Johannesburg: MIASA, 2011), 1.
[125] *Ibid*., 22–48.

Chapter Two: Rhokana/Nkana; Problems and Challenges, 1928–1953

2.1 Introduction

This chapter explores key aspects of Rhokana's history in the period between the Great Depression and the formation of the Central African Federation. Corporate profitability as well as its contribution to the war economies of Britain and the United States of America (USA) are both examined. In terms of labour organisation, the chapter traces the emergence of the dual labour structure and the role of workers at Nkana in the labour movement on the Copperbelt. The chapter argues that Nkana was the most important mine in the Northern Rhodesian mining industry in terms of production, hence it was strategic to the war economy of Britain and the USA.

2.2 The Financial Origins of Rhokana Corporation and the Early Development for Nkana mine, 1928–1931

2.2.1 Development of corporate structure

The discovery of sulphide ores averaging 4% in the 1920s prompted the development of Nkana mine.[126] The Nkana North Shaft was sunk early in 1928, while shaft sinking began at the Central Orebody and Mindola underground the following year.[127] Similarly, development work began to accelerate at Roan Antelope, Mufulira and Nchanga.[128] These four Copperbelt mines attracted capital from South Africa, Britain and the USA. A consortium of eight companies from Britain and South Africa funded the development of Nchanga mine, including the Anglo American Corporation (AAC), Johannesburg Consolidated Investment Corporation, British South Africa (BSA) Company, Minerals Separation and Rio Tinto.[129] Further integration occurred when the Selection Trust (ST) and American Metal Company (AMC) formed the Rhodesian Selection Trust (RST) in May 1928. The AAC followed suit by floating Rhodesian Anglo American (RAA) in December of the same year.[130] RST controlled Roan Antelope and two-thirds of Mufulira. RAA was a holding company for AAC shares in the Rhodesia Congo Border Company/Concession (RCBC), Nchanga and Bwana Mkubwa, the majority

[126] AAC, 'Nkana-Kitwe: Twin Town of Copper', 68.

[127] AAC, 'Company Histories No. 3: Rhokana Corporation', 22. In the 1930s and 1940s, the Nkana mine extracted its Copper from these three shafts. The Mindola open-pit was opened in the late 1950s.

[128] R. Brooks, 'How the Northern Rhodesia Coppers Were Found (III)', *Rhokana Review*, 8, 4 (1959), 31.

[129] *Ibid*.

[130] Cunningham, *The Copper Industry in Zambia*, 74.

shareholder in Nkana. This is how Nkana came under AAC and latterly, Rhokana. With the AAC exercising control over all three companies, it moved towards merging them into a single firm, Rhokana Corporation.

Through RAA and the Rhokana Corporation, Ernest Oppenheimer, Chairman of Anglo American, wanted to consolidate AAC's presence on the Copperbelt in order to fend off large North American mining companies from dominating in Northern Rhodesian industry.[131] Oppenheimer wished to 'attract the financial support of other large British and South African companies' so as to avoid what he perceived to be the dangers of US control.[132] Between 1928 and 1929 Oppenheimer vetoed an attempt by the American Smelting and Refining Company (ASARCO) to purchase shares in Nchanga mine. According to one historian,

> Oppenheimer who, though willing to use American capital in a minority role, was not amenable to the idea of it becoming further entrenched on the Copperbelt. He argued that American control would irreparably harm the empire's ability to manage its resources by surrendering suzerainty to an outside power. Oppenheimer, with tacit support from the British Government, was able to pressure ASARCO into withdrawing its offer. He then put together a British-based scheme to replace ASARCO's bid, in cooperation with Lord Auckland Geddes and the Rio Tinto Zinc Corporation.[133]

An all-British scheme meant that the dangers of US control were averted.

Also, there was a serious problem of finding additional capital for infrastructural development, which worsened with the onset of the Great Depression.[134] One large company, it seemed, would be better placed to raise fresh capital, loans and debentures from abroad. Besides, stakeholders in all three companies anticipated that the Great Depression would last for several years and undermine the price of copper.[135] They stressed 'the strong position that one large company, as compared with three companies, would have when it came to negotiating output restrictions with the other large copper producers'.[136] A large firm would also be able to negotiate more effectively with the government and the BSA Company.

[131] *Ibid*., 73–7.
[132] *Ibid*., 73–4.
[133] Phillips, 'Roan Antelope', 146–7.
[134] Cunningham, *The Copper Industry in Zambia*, 76.
[135] Alford and Harvey, 'Copperbelt Merger: The Formation of Rhokana Corporation', 343.
[136] Cunningham, *The Copper Industry in Zambia*, 77.

In 1931, the RCBC and Nchanga were amalgamated with Bwana Mkubwa and formed the Rhokana Corporation.[137] The name Rhokana was itself an amalgamation of Rhodesia and Nkana.[138] RAA was jointly owned by AAC, Newmont Corporation, Kennecott, BSA Company, Rand Selection, Consolidated Mines Selection, New Era Corporation, and Johannesburg Consolidated.[139] RAA also owned shares in the BSA Company.[140] In the Rhokana Corporation, RAA owned about 52% shares, with the remainder distributed among Rio Tinto, Johannesburg Consolidated and Minerals Separation.[141] Additionally, Rhokana owned 47% of Nchanga and 32% of Mufulira.[142] Rhokana Corporation retained a 'one-third interest in any property found' in these concessions, 'which was a wise decision as…after the Second World War, Chibuluma, Chambishi, Baluba [and Bancroft] were developed in [these areas]'.[143] Rhokana Corporation had become both a mining company and an investment firm on the Copperbelt.

The Corporation raised '£4,500,000 7 percent debentures, at par, which were convertible to ordinary shares, pro rata, at rising prices up to the year 1940'.[144] The capital was intended both to open Nkana mine and construct a copper refinery. Nkana began large-scale mining operations in 1932. As discussed below, Rhokana Corporation discontinued development of Nchanga and active prospecting in the RCBC, 'throwing all its effort and weight into the rapid development and equipping of the Nkana mine, and its interests in the Mufulira'.[145] It was considered reasonable to concentrate on Nkana and Mufulira as 'they were all showing up large tonnages of sulphide ore, whereas Nchanga, further from the railway, had two problems to solve: water, and mixed sulphide ore'.[146]

2.2.2 Management structure

As a result of these mergers, the management structure of the AAC-controlled companies was streamlined. For Rhokana Corporation, Auckland Geddes (Rio Tinto) became chairman; Ernest

[137] Phillips, 'Roan Antelope', 148.
[138] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts together with Statement by the Chairman, 30 June 1954* (Kitwe: Rhokana Corporation Head Office, 1954), 8; AAC, 'Company Histories No. 3: Rhokana Corporation', 22.
[139] Cunningham, 'Nationalisation and the Zambian Copper Mining Industry', 44.
[140] *Ibid*.
[141] *Ibid*.
[142] *Ibid*.
[143] *Ibid*., 45.
[144] Alford and Harvey, 'Copperbelt Merger: The Formation of Rhokana Corporation', 333–4.
[145] Brooks, 'How the Northern Rhodesia Coppers Were Found (III)', 31.
[146] *Ibid*.

Oppenheimer, Edmund Davis and Francis Gibbs became deputy chairmen.[147] Leslie Pollak (brother in-law to Oppenheimer) and S.S. Taylor became managing directors in South Africa and London, respectively.[148] Moreover, Oppenheimer and Pollak became part of the African committee with the former as chairman and the latter with Drummond Chaplin as ordinary members; Carl Davis and J. Buchanan sat on the board.[149] The board members of Rhokana also sat on the RAA Board of Directors, consisting of nine executive committee members, of whom Oppenheimer, Edmund Davis, Carl Davis and Taylor were the leading lights. The composition of the board of Rhokana Corporation was dominated by Britons and white South Africans.[150] Even so, it included not only AAC, but also Barnato Brothers, the BSA Company, Newmont Mining Corporation, Kennecott and Morgan Grenfell.[151] What Oppenheimer did not like was that two-thirds of the board of RST was composed of American nationals.[152] As stated earlier, he viewed this dominance as inimicable to British imperial interests.

North America had pioneered the mining of low-grade copper deposits and the Copperbelt too benefited from the continent's experienced mining engineers. Chester Beatty used AMC and his network of friends to secure key personnel from America which included Roan's first General Manager, D.D. Irwin; Mine Superintendent, R.M. Peterson; and Managing Director, Arthur Storke.[153] Similarly, AAC used Newmont Corporation to utilise American experience in the Northern Rhodesian copper industry and, therefore, Nkana and the other Copperbelt mines benefited from an international mining network with a North American flavour.[154] Both groups (RAA and RST) organised their mines around two corporate administrative structures, one in Northern Rhodesia and the other in Britain, AAC Head Office, though, was in South Africa.

The existence of two main administrative departments enhanced cooperation between the parent and subsidiary companies. Despite RST being largely American funded; its administrative headquarters were in London where Selection Ttrust (ST) was located. Similarly, despite RAA being principally funded by AAC of South Africa, its Head Office was

[147] ZCCM 3.8.2F, *Rhokana Corporation Limited: Directors' Report and Statement of Accounts for the Year ended 30 June 1931* (London: Rhokana Corporation Head Office, 1931), 2; Gregory, *Ernest Oppenheimer*, 438.
[148] *Ibid*.
[149] *Ibid*.
[150] Alford and Harvey, 'Copperbelt Merger: The Formation of Rhokana Corporation', 355.
[151] Gregory, *Ernest Oppenheimer*, 29–30.
[152] *Ibid*., 30.
[153] ZCCM 16.2.2D, Roan Antelope Copper Mines (hereafter, RACM) Minutes: 20 August 1928, 4 September 1928, 15 October 1929.
[154] Cunningham, *The Copper Industry in Zambia*, 82–3.

also in London.[155] London had long been the centre of the international copper trade, which largely explains why the Rhokana Corporation and the other Copperbelt companies preferred their headquarters to be established there. Both mining groups, however, also had partner consulting departments in New York; Newmont, Kennecott, Morgan Grenfell for RAA; and AMC for RST; as well as in Johannesburg for AAC. Accordingly, strategic decision-making for RST remained with the directors in London; but for RAA strategic decision-making remained in Johannesburg.[156] Phillips observed that the management structure of AAC compared to ST was different:

> Micro-management of the facility [Roan's] layout caused some irritation, but in most aspects London proved [more] receptive to junior management's input and gave mine staff wide [liberal] latitude in the carrying out of policy. As a result, the decision making process within Roan occurred at a lower level within the organisation than was typically found in the American copper industry. This was also true in comparison to the authoritarian and secretive [conservative] structure of the Anglo American mines, where the field managers were closely monitored and supervised by consulting engineers residing in Johannesburg.[157]

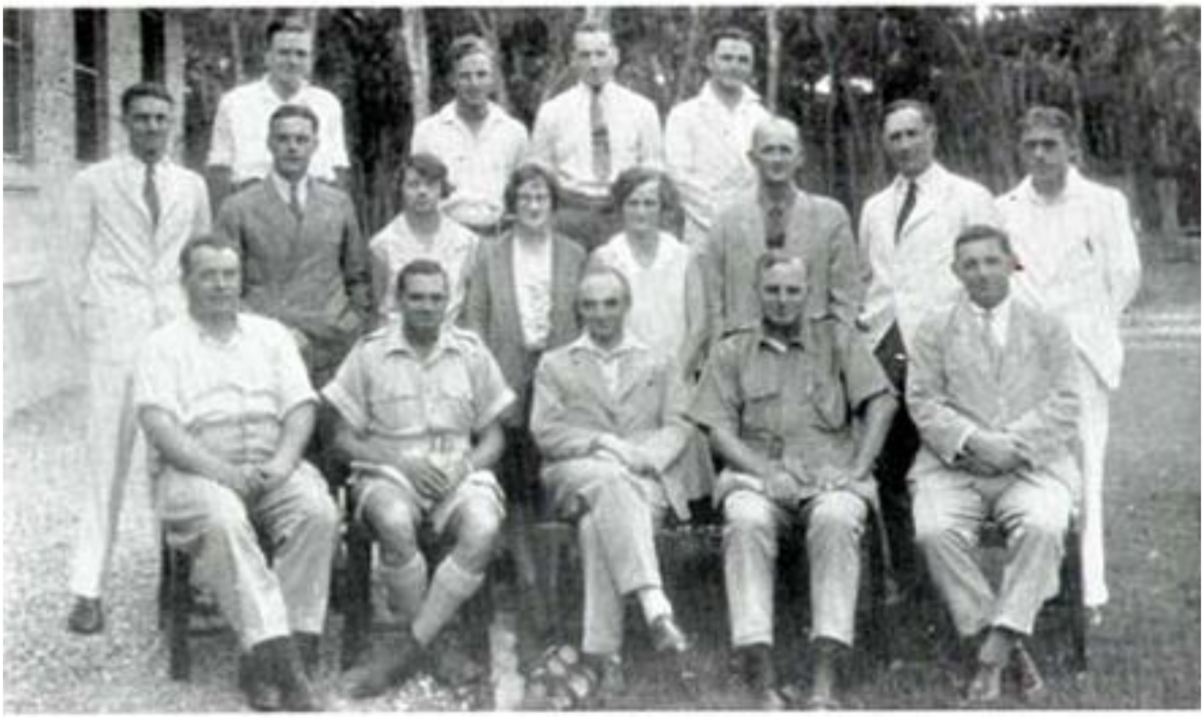


Figure 2.1: Rhokana/Nkana management in 1932. Source: Picture taken from R. Brooks, 'How the Northern Rhodesia Coppers Were Found (III)', *Rhokana Review*, 8, 4 (1959), 30.

[155] ZCCM 19.2.4F, *Rhodesian Anglo American Limited: Report for the Period from Incorporation of the Company, 8 December 1928 to 31 March 1930* (London: Rhodesian Anglo American Head Office, 1930), 1.
[156] Phillips, 'Roan Antelope', 152.
[157] *Ibid*.

2.3 Rhokana during the Great Depression, 1932–1939

The Great Depression was a global phenomenon of economic downturn, which began in the USA and spread to Europe, Africa, Asia, Latin America, and Australasia. The October 1929 New York Stock Exchange crash was followed by a major slowdown in business activity coupled with bank failures.[158] This led to a reduction in the amount of money that was available for domestic and foreign investments, causing unemployment to increase, as companies tried to cut back on their work force in order to reduce costs. Between 1929 and 1932, the USA's economy halved in size and shed 14 million jobs.[159] By comparison, Britain escaped relatively unscathed with employment rising to 20%, and recovering from the effects of the Depression faster than the USA.[160] But even so, the economic meltdown in the metropole spread to the periphery through market ties, investment and trade. The immediate impact on the global copper industry was that prices halved between 1929 and 1931, as world consumption fell from 2,084,560 to 1,406,535 short tons.[161]

2.3.1 Management, production and profitability

To keep afloat, the six leading USA copper companies devised two key measures which were implemented around the world.[162] The first method was to focus on selective mine production. This involved concentrating on high-grade ore mines and closing lower-grade ones. This policy was followed in Northern Rhodesia, the Belgian Congo, Chile and Canada. Other companies followed suit. The RAA group, closed its mining operations at Bwana Mkubwa and Kansanshi, and halted operations at Nchanga until 1938, leaving only Nkana in operation. Development was halted at Nchanga because the entire underground workings were flooded in 1931 and remained underwater until 1937.[163] Similarly, the RST group operated the Roan Antelope mine but reduced production at Mufulira until 1933. On the other side of the border, Union Miniere du Haunt Katanga (UMHK) closed two high-cost producing mines, Luishia and Lukuni, and

[158] S. Kraner, 'Causes of the Great Depression and the Great Financial Crisis' (PhD Thesis, Univerza Na Primorsken, Koper, 2010), 9–10.
[159] R. Palmer and J. Colton, *A History of the Modern World* (New York: Doubleday and Company, 1992), 806.
[160] P. Clarke, *Hope and Glory: Britain 1900–1990* (London: Penguin, 1997), 152–8.
[161] Phillips, 'Roan Antelope', 194.
[162] The companies were the American Smelting and Refining Company (ASARCO), American Metal Company (AMC), Kennecott, Phelps Dodge, Anaconda, and Newmont. For details, see Navin, *Copper Mining and Management*, 128–32.
[163] ZCCM 3.8.2F, *Rhokana Corporation Annual Reports and Accounts*, 1931–9.

operated three low-cost producing mines, Kambove, Shangulowe and Shituru.[164] Rhokana and the other Copperbelt companies lowered production costs by operating low-cost mines.

The second method was an attempt to control the export market, by stabilising prices through a cartel called Copper Exporters Inc., comprised of the major producers, including the Copperbelt mines. Inside the United States, Copper Exporters sought protection against foreign competition by demanding that Washington impose a tariff of 4 cents per pound on imported copper; externally, the cartel sought to support prices by restricting production to 25% of capacity.[165] On the Northern Rhodesian Copperbelt, Rhokana scaled down production to 31,000 long tons per year, while Roan Antelope and Mufulira each reduced annual production to 29,000 long tons.[166] In Katanga, the UMHK's production fell to 10,000 short tons per month.[167] For the Copperbelt mines, this meant that it kept their copper out of the US market and directed exports toward Europe where there were less restrictions.[168] Meanwhile, the enforcement of this restriction coupled by the tariff on imported copper caused the collapse of Copper Exporters Inc., as non-USA producers who felt disadvantaged, pulled out of the cartel.

In March 1935, there was further effort at bringing production in line with international demand.[169] The chief executive of Chile's Anaconda mine invited the world's leading producers of copper to a meeting in New York to secure an agreement to cut back output. However, the meeting produced scant results. It saw Chile, Katanga and Northern Rhodesia agree only to a meagre reduction of 10%; Canada did not even attend; and the two Northern Rhodesian groups refused to stop development of new mines.[170] Rhokana and the Copperbelt producers felt that in view of the magnitude of their investments, they were entitled to a reasonable proportion of the world's markets.[171] However, when a second cartel, the Production Control Committee, was formed to control the production of copper from sources and its sale in markets outside the USA, the Northern Rhodesian mines joined it and kept their production within the limits agreed on for the rest of the 1930s. Between May 1, 1935, and

---

[164] Perrings, *Black Mineworkers in Central Africa*, 101.
[165] Navin, *Copper Mining and Management*, 133.
[166] Phillips, 'Roan Antelope', 200; Perrings, *Black Mineworkers in Central Africa*, 101.
[167] Perrings, *Black Mineworkers in Central Africa*, 101.
[168] As discussed later in the chapter, Europe was experiencing a resurgence in industrial developments, booming automotive and electrical industries and rearmament which increased demand for copper.
[169] ZCCM 3.8.2F, *Rhokana Corporation Limited: Director's Report and Statement of Accounts for the Year ended 30 June 1935* (London: Rhokana Corporation Head Office, 1935), 7.
[170] Navin, *Copper Mining and Management*, 134.
[171] ZCCM 3.8.2F, *Rhokana Corporation Limited: Director's Report and Statement of Accounts for the Year ended 30 June 1935*, 7–8; *The Times*, 11 December 1934, 31 October 1935.

November 1, 1936, the basic production quota was placed at 77%, and in line with this restriction, Rhokana maintained production at an average of 4,416 long tons of copper per month.[172] From December 1, 1937, to October 4, 1939, when world copper production was fixed at 100%, Rhokana scaled its production to an average of 6,247 long tons per month.[173] These restrictions partially helped to reduce production and supply, thereby easing world stocks, and consequently contributed to an increase in the price of copper (see Table 2.2).

Despite the negative economic climate, the Great Depression actually saw the competitiveness of Nkana and the Copperbelt mines enhanced vis-à-vis that of its more established counterparts in the Belgian Congo and the USA. A number of factors enhanced the competitiveness of the Northern Rhodesian copper industry. One of the first initiatives taken by the Copperbelt mines to maintain profitability was to reduce production costs by negotiating with key Southern Rhodesian companies, Rhodesia Railways and Wankie Colliery, for cheaper railway rates and coal supplies.[174] The three producing mining companies, Rhokana, Roan Antelope and Mufulira, entered into a thirteen-year contract with Rhodesia Railways to send all of their exports and imports along the Rhodesian system at reduced rates from October 1931.[175] Similarly, the mining companies secured a thirteen-year contract with the Wankie Colliery Company, to run from 1931 to 1944, for the supply of all their coal requirements at a reduced price. On the Rhodesia Railways, export rates for copper fell from £5.10 to £4 a ton; for coal from 22s to 20s a ton; and on general goods, plant and machinery, from £9 to £8 a ton.[176]

But the Rhodesia Railways would not have reduced their rates without being cushioned by Wankie. As such, Wankie offered the Railways coal at a special rate of 7.6s per ton for a 10-year period.[177] For the Northern Rhodesian mines, the price of coal per ton was reduced from 10.6s to 8s.[178] This agreement would have been difficult to negotiate without the concerted efforts of Sir Edmund Davis and Sir Ernest Oppenheimer who were 'powerful figure[s] in the interlocking world of [the] Central African Mining Company boards and directorships'.[179] They sat on the BSA Company Board of Directors which owned 86.56% shares in the Rhodesia

[172] ZCCM 3.8.2F, *Rhokana Corporation: Annual Reports and Accounts*, 1935–7.
[173] ZCCM 3.8.2F, *Rhokana Corporation: Annual Reports and Accounts*, 1938–9.
[174] *The Times*, 9 July 1931.
[175] *Ibid*.
[176] *Ibid*.
[177] I.R. Phimister, *Wangi Kolia: Coal, Capital and Labour in Colonial Zimbabwe* (Harare: Baobab Books, 1994), 93.
[178] *Ibid*.
[179] *Ibid*., 4.

Railways and a substantial interest stake in Wankie Colliery.[180] Davis was also chairman for the Wankie Colliery Company until his death in 1939. Following this agreement, the Colliery's supply to the Copperbelt mines increased from 423,392 tons in 1934 to nearly 1 million tons in 1937.[181]

The profitability of the Copperbelt mines during the Great Depression was also enhanced by the presence of high grade copper ores compared to their counterparts owned by the United States of America. For instance, in the 1930s, the Copperbelt and Katanga mines contained huge ore reserves averaging 4% to 8% copper respectively, while those owned by the United States contained an average of 1.6% copper.[182] Given the high quality and quantity of copper ores in the mines of the former, the two regions produced at a cost below the selling price on the market. The latter's mines with low quality and quantity of copper ore remained high-cost producers. Specifically, the quantity and quality of the Nkana sulphides were not higher than those of Nchanga, Mufulira and Roan Antelope. For example in the 1930s, the Nchanga sulphides averaged 143,780,000 short tons carrying 5.4% copper; sulphide ores of the RST mines averaged 4.11% to 4.41% copper; and the sulphide ores of Nkana mine averaged 127,000,000 short tons with about 4% copper.[183] But the mineral veins of Nkana existed in continuous series on the surface layer hence could easily be extracted using stopping and pillar mining compared to the copper veins of the other three mines which were detached. Despite having the highest quality of copper deposits, as mentioned earlier, Nchanga was not operational because its underground workings were submerged and the company lacked advanced machinery to pump out the water.[184]

2.3.2 Labour costs, capital and price-level

Another major factor behind the enhanced profitability of Rhokana, Roan Antelope, Mufulira and the UMHK during the Great Depression was that, compared to the copper mines of North and South America, they were more labour-intensive than capital-intensive. There was need for both skilled and unskilled labour in mine production, mine development and construction at Nkana and in the other Copperbelt mines. Consequently, a dual wage labour structure emerged between late 1920s and early 1930s. The large number of Africans, without a formal

[180] ZCCM 19.2.2B, *British South Africa Company Reports and Accounts*, 1929–39.
[181] Phimister, *Wangi Kolia*, 84.
[182] *The Times*, 9 July 1931.
[183] ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1931–9; ZCCM 12.6.1E, *Roan Selection Trust Limited: Annual Reports and Accounts*, 1931–9.
[184] ZCCM 3.8.2F, *Rhokana Corporation Annual Reports and Accounts*, 1931–9.

education, could only sell unskilled labour, while skilled employment was reserved for Europeans. By 1931, when all four copper producing mines on the Copperbelt began large-scale operations, they employed a total of 2,221 Europeans and 13,948 Africans.[185] The majority of European workers came from as near as Southern Rhodesia and South Africa and as far as Britain and Australia. The majority of African workers originated from within Northern Rhodesia, a substantial number from Nyasaland, Tanganyika, Portuguese East and West Africa, and a few from Belgian Congo, Southern Rhodesia and South Africa (see Appendix VIII). African workers were 'obtained in two ways: by contracting villagers (sometimes with the use of coercion) through recruitment agencies (contract labo[u]r) and by directly hiring workers who came to the mines on their own (voluntary labo[u]r)'.[186] Voluntary labour was cheaper than contract labour, hence the Copperbelt companies depended on the former. Despite being unskilled, it is interesting to observe that some Africans came to work in the Copperbelt mines with work-experience from the other mines in the Southern African region. Through labour migration, Nkana and the Copperbelt mines were linked to the national, regional and global industrial politics, as workers of similar and different racial and ethnic backgrounds mingled.[187]

For efficient operation of the mines, the labour force needed to be accommodated. To this end, Rhokana provided infrastructure in the form of the Kimberly model huts, roads, schools, hospitals, shopping centres, recreation halls and fields.[188] Some of the early infrastructure developed at Nkana by 1931 included the erection of 166 huts to accommodate 828 European employees and 850 dwellings to cater for 4,565 single and married African workers.[189] Accommodation, especially for African labour, was inadequate; there were not enough dwellings to cater for everyone. Informal settlements mushroomed, accommodating those who could not be sheltered in mine compounds.[190] One unintended consequence of this for the mining companies was that black workers lumped together in the work place and mine compounds developed what Mhone, Parpart and Perrings, following Charles van Onselen, call

---

[185] Perrings, *Black Mineworkers in Central Africa*, 252.
[186] Ferguson, *Expectations of Modernity*, 49.
[187] Berger, *Labour, Race and Colonial Rule*, 12–18; A. Daimon, 'Ringleaders and Troublemakers: Malawian (Nyasa) migrants and transnational labour movements in Southern Africa, c. 1910–1960', *Labor History*, 58, 5 (2017), 656–75.
[188] ZCCM 3.8.2B, *Rhokana Corporation Limited: Annual Reports*, June 1931–June 1935 (unpublished reports).
[189] Bancroft, *Mining in Northern Rhodesia*, 159; ZCCM 3.8.2B, *Rhokana Corporation Limited: Annual Report covering period from 1 June 1931 to 30 June 1932*, 1–2 and 17.
[190] ZCCM 3.8.2B, *Rhokana Corporation Limited: Annual Report covering period from 1 June 1931 to 30 June 1932*, 17.

"worker consciousness", coupled with new ideas about labour organisation and industrial politics, on the Rhodesian Copperbelt.[191] Worker consciousness refers to "'a sense of economic self-interest and an awareness of their colonized status … through the immediate experiences of labour conditions'" on the mines.[192]

[191] C. van Onselen, *Chibaro: African mine labour in Southern Rhodeisa, 1900–1933* (London: Pluto Press, 1976), 128–57, 227–44. For further details, see I.R. Phimister and C. van Onselen, *Studies in the History of African Mine Labour in Colonial Zimbabwe* (Gwelo: Mambo Press, 1978), 1–40; Mhone, *The Political Economy of a Dual Labour Market in Africa*, 49–160; Parpart, *Labour and Capital on the African Copperbelt*, 54–95; Perrings, 'Consciousness, Conflict and Proletarianization'.
[192] Perrings, 'Consciousness, Conflict and Proletarianization', 31.

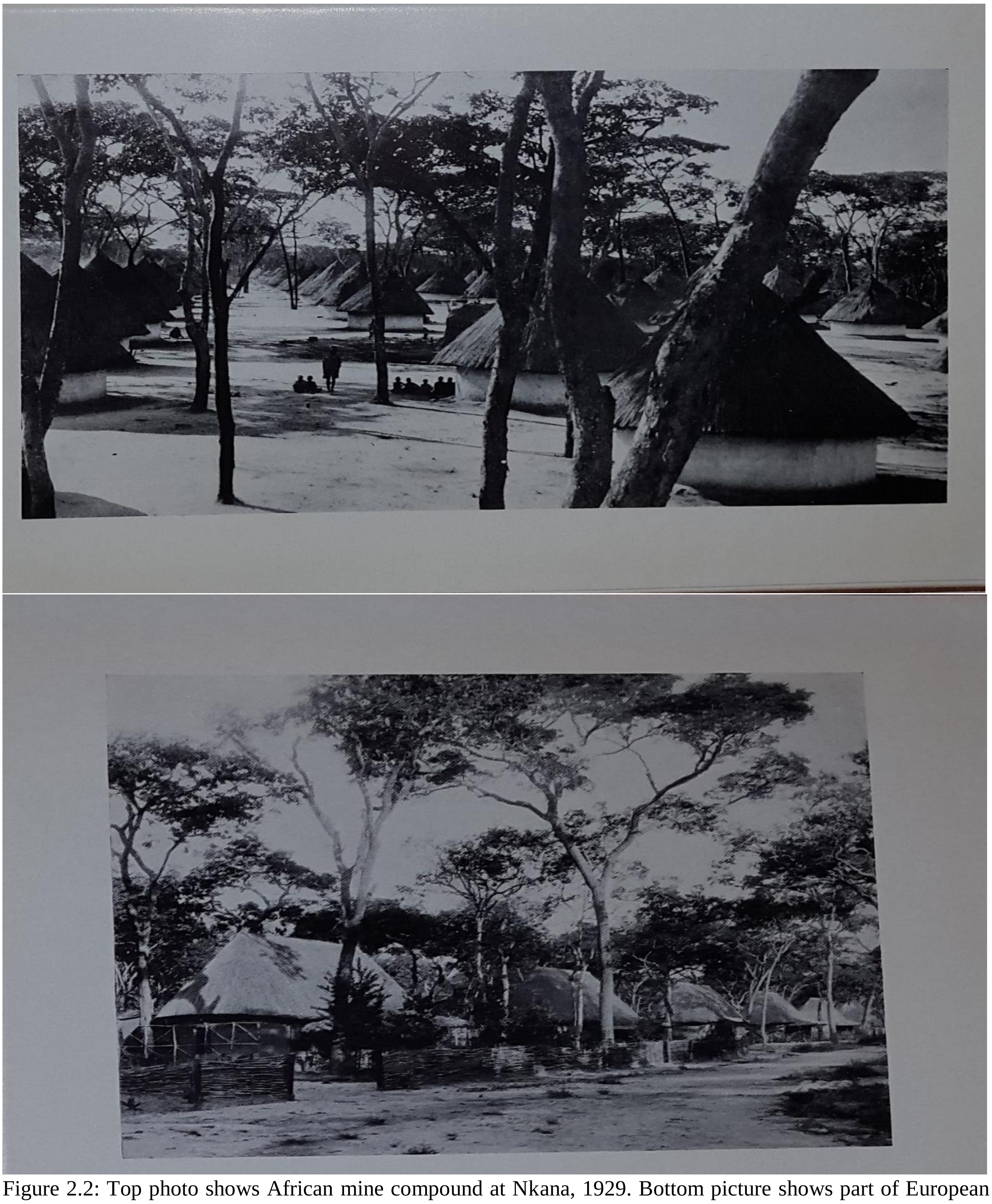


Figure 2.2: Top photo shows African mine compound at Nkana, 1929. Bottom picture shows part of European Compound at Nkana, 1929. Source: Both images taken from A.J. Bancroft, *Mining in Northern Rhodesia: A Chronicle of Mineral Exploration and Mining Development* (Bedford: The Sidney Press Limited, 1961), 154, 158.

In the late 1920s when the Copperbelt mines were developing, they devoured capital, but between 1931 and 1934, production techniques and labour policies were re-calibrated to underpin the mines' profitability. Capital expenditure on major projects at Nkana increased from £14,113 in 1932 to a peak of £693,693 in 1935 (see Appendix IV). The increase in capital expenditure was due to development activities at Nkana, such as construction of the concentrator, smelter and refinery.[193] Between 1932 and 1938, labour force at Nkana grew from 5,390 to 7,678 (see Appendix IV). When the Great Depression struck, the closure of the majority of the mines led to a drastic reduction in the labour force of all the mining groups. The UMHK scaled down its black labour from 11,621 in 1931 to 5,065 by the end of 1932, and its white labour from 1,388 to 664. Rhokana, Roan and Mufulira followed suit, with their total African labour force falling from 13,948 in 1931 to 5,831 in 1932, while white labour dropped from 2,221 to 959.[194] The reduction in labour enabled the mines to save funds for other developmental projects. It is not clear how much Nkana saved in this manner, but between 1932 and 1934 Roan Antelope managed to save £1,151,962.[195] As the mines began production after 1933, however, there was a demand for African labour, due to greatly increased production and construction activities.[196]

On the UMHK mines, the number of African employees increased tremendously from 10,564 in 1935 to 15,727 by 1939, while European workers increased steadily from 596 to 870 between these years.[197] At Rhokana, the African labour force was 5,853 against 844 Europeans in 1935; both categories of workers increased to about 6,190 compared to 1,231 in 1939, respectively.[198] Similarly, the African labour force on RST mines rose from 7,156 to 12,808, while the number of European workers increased from 946 to 1,422 over the same period.[199] By comparison, the UMHK relied more on African workers compared to its Copperbelt counterparts. The reason being that the UMHK, unlike the Copperbelt mines, employed more semi-skilled African workers from Nyasaland, who had gained experience working in the mines of South Africa and Southern Rhodesia.[200] However, the Copperbelt mines, especially Nkana, relied more on white and coloured semi-skilled labour from South Africa.[201] Coloured labour at Nkana was placed in jobs where it was not economical to employ Europeans, yet such jobs were beyond those occupied by Africans.[202]

[193] ZCCM 3.8.2B, *Rhokana Corporation Limited: Annual Reports*, June 1931–June 1935.
[194] Perrings, *Black Mineworkers in Central Africa,* 252.
[195] Phillips, 'Roan Antelope', 220.
[196] ZCCM 3.8.2F, *Rhokana Corporation Limited: Director's Report and Statement of Accounts for the Year ended 30 June 1934* (London: Rhokana Corporation Head Office, 1934), 19.
[197] Perrings, *Black Mineworkers in Central Africa*, 252.
[198] *Ibid*.
[199] *Ibid*.
[200] *Ibid*., 109.
[201] ZCCM 3.8.2B, *Rhokana Corporation Limited: Annual Report Covering Period from 1 July 1932 to 30 June 1933*, 14.
[202] *Ibid*.

In 1937, the annual turnover rate of African labour was 41.9% at Roan; 73.1% at Mufulira; and 70.2% at Nkana; coupled with a service record of between one and four years, especially among married men.[203] The low turnover rate for Roan compared to Nkana and Mufulira was due to the stabilisation of labour, practiced by the former since it was incorporated in 1928. Stabilisation of labour was a practice by the mining companies, whereby '[African] miners, were accommodated [or allowed to stay] in compounds, often segregated by ethnic group, and contracted for' a number of years.[204] Perrings observes a similar increase in the stabilisation of African labour on the UMHK with long service records. For example, in 1932 there was less than 1% of voluntary workers under three years' service but by 1934 the figure was more than 50% and in 1935 more than 70%, the majority of them married.[205] Throughout the 1930s, however, Rhokana relied more on migrant labour than stabilised labour. This can be seen from the high percentage of single men compared to married ones at Nkana. Between 1932 and 1939, married men averaged 33.6%, and the remainder for single men.[206] In this same period, married workers at Roan averaged 53.3%.[207] By comparison, Roan relied more on stabilised labour than Nkana. Nonetheless, all Copperbelt mines utilised voluntary labour more than contract labour, as the former was cheaper. Stabilisation enhanced the productivity of Africans as they gained from experience and became more efficient. In 1932, it took 198 Africans and 35 Europeans to produce 1,000 tons of copper at Nkana; by 1938, however, the mine only required 88 Africans and 14 whites to produce the same quantity.[208] At Roan, about 112 Africans and 19 Europeans produced 1,000 tons of copper in 1932, but in 1938, the number of employees involved was 100 blacks and 11 whites.[209] In addition to experience and efficiency, the quantity and quality of ore discussed above partly determined the productivity of African workers.

Table 2.1 compares average African wages in shillings per shift for all workers in semi-skilled, surface and underground employment on the Copperbelt.

[203] Mhone, *The Political Economy of a Dual Labour Market in Africa*, 104–5.
[204] J.S. Harington et al., 'A Century of Migrant Labour in the gold mines of South Africa', *The Journal of the South African Institute of Mining and Metallurgy* (2004), 65. The volume and number of this publication are not indicated.
[205] Perrings, *Black Mineworkers in Central Africa*, 104.
[206] Ferguson, *Expectations of Modernity*, 59.
[207] *Ibid*.
[208] Perrings, *Black Mineworkers in Central Africa*, 253.
[209] *Ibid*.

Table 2.1: Average African Wages on the Copperbelt Mines, 1931–1939 (in Shillings per Shift).[210]

Year	Roan/Mufulira Mines	Rhokana
1931	0.87	0.93
1932	0.92	0.98
1933	0.99	0.85
1934	0.84	0.84
1935	0.90	0.90
1936	0.96	0.96
1937	0.95	0.98
1938	0.96	1.00
1939	0.99	1.04

Table 2.1 indicates that African wages began to increase on the Copperbelt mines after 1935. Three factors were responsible for this state of affairs. Firstly, as the Great Depression eased and the mines stepped up production, expanding construction work on the Copperbelt mines caused African wages to rise. For the RST group, the re-opening of the Mufulira mine raised African wages from an average of 0.87s per shift in 1931 to 0.99s in 1933, partly to attract more labour. For the RAA group, the construction of the Rhokana Refinery raised African wages from an average of 0.84s per shift in 1933 to 0.90s in 1935. It should be added that the international demand for copper, following re-armament in Europe, also increased wages and bonus allowances as the mines stepped up production and increased working hours over the normal duration of eight hours per day.[211] The second factor behind the increase in African wages on the Copperbelt mines was the strike in 1935 by African workers demanding, among other things, an increase in wages. The strike was sparked by the government when it increased the poll tax in urban areas by 50% but reduced it by 25% in rural areas, provoking workers at Roan, Nkana and Mufulira to take strike action.[212] Thirdly, re-opening of Nchanga mine after 1937 also increased wages at Rhokana. Despite Rhokana's reliance on migrant labour, which was cheaper than stabilised labour, the Corporation still paid more for African labour than Roan and Mufulira because of three reasons noted above.

European workers were expensive at this time because they had the skills not yet acquired by African labourers. Despite the high wages paid to attract skilled white workers, Nkana and the other Copperbelt mines were low-cost producers largely because of low African wages.[213] The

[210] Table 2.1, compiled from ZCCM 3.7.2B, attachment to letter from Secretary – Northern Rhodesia Chamber of Mines, Kitwe, to General Managers – Mufulira, Nchanga, Rhokana, Roan Antelope and Chibuluma, 21 May 1953; Perrings, *Black Mineworkers in Central Africa*, 258.
[211] Perrings, *Black Mineworkers in Central Africa*, 121–9.
[212] Henderson, 'Labour and Politics in Northern Rhodesia', 135–8; Perrings, 'Consciousness, Conflict and Proletarianization', 45–7; Butler, *Copper Empire*, 51–3; Phillips, 'Roan Antelope', 231, 233.
[213] Butler, *Copper Empire*, 22.

difference in wages between European and African workmen per shift at Nkana in particular and in the Copperbelt mines in general was in the ratio of about 25:1 and the average monthly wage of a white miner was £40 and that of an African was 22.6s, plus rations and housing in each case.[214] The disparity in European and African monthly wages was greater than elsewhere in the Southern African mining industry. This disparity in European and African labour earnings was not born out by comparable disparities in the cost of living on the Copperbelt. When Nkana and the Copperbelt mines were opened in the late 1920s, housing and health conditions were bad, general amenities were lacking and the cost of living high.[215] An unusually generous scale of pay was, therefore, necessary to attract skilled labour from Europe, the USA, South Africa and Southern Rhodesia.

Overall, labour on the Copperbelt was still cheaper than in America (Canada, Chile, and the United States) and Europe. Due to cheap African labour, the Copperbelt mines constructed a copper refinery at Nkana instead of in Britain.[216] Butler supports this proposition, observing that it cost £415,000 to construct the Rhokana Copper Refinery, £291,800 less than it would have cost to build it in Britain, 'the difference largely being due to the relative cheapness of African labour'.[217] The cheapness of African labour in the Northern Rhodesian mining industry kept operating costs low, despite the high cost of European labour. The construction of the Refinery enabled Rhokana and the Copperbelt mines to reduce processing costs as they minimised exporting blister copper to the USA for refining.[218]

Low labour costs and access to good quality ores reduced operating costs at Nkana. Throughout the Great Depression, the cost of producing a long ton of copper at the Nkana mine was below the selling price (see Table 2.2). At the same time, concerted efforts by the major producers to align production with demand paid off as prices began to improve. In 1934 a better copper market and price was helped by the reduction in copper stocks in the USA of 200,000 short tons and 77,000 short tons in Europe.[219] This improving economic situation was boosted by the booming automotive and electrical industries and re-armament by Germany and Britain.[220]

[214] ZCCM 3.8.1A, Trade Union Relations - Nkana Division: Native Strike, March 1940–June 1941.
[215] *Ibid*.
[216] Butler, *Copper Empire*, 22.
[217] *Ibid*.
[218] ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1934–5.
[219] *Financial Times*, 17 July 1934.
[220] For further details about re-armament in Europe, see P.M.H. Bell, *The Origin of the Second World War* (London: Longman Group Limited, 1986), 1–4; M. Harrison, 'Resource Mobilization for World War II: the USA, UK, USSR, and Germany, 1938-1945', *Economic History Review*, 41, 2 (1988), 2.

There was a high demand for minerals, especially copper. Germany alone purchased about 22,000 short tons of copper per month and became the second largest buyer of Katangese and Northern Rhodesian copper. Between 1937 and 1939, Britain purchased about half of Northern Rhodesia's copper output, with Germany buying one-third.[221] As a result, the average monthly copper consumption in Europe increased from 85,600 short tons in 1936 to 111,600 short tons in 1937, pushing the price of the metal up to £60.08.[222]

The result of all these factors taken together, was that the cost of production remained very low compared to copper's selling price, making copper mining at Nkana and other Copperbelt mines increasingly profitable after 1932. Operating costs and prices are illustrated in Table 2.2.

Table 2.2: Trends in Operating Costs for the Copperbelt mines and Prices on the LME, 1931–1939.[223]

Year	Average Price per Long Ton	Average Cost per Long Ton Delivered to Buyers	
	London Metal Exchange (LME)	Roan/Mufulira	Nkana
1931	£42.66	£42.63	-
1932	£36.39	£31.50	£31.47
1933	£36.71	£26.60	£21.58
1934	£33.78	£27.27	£23.47
1935	£35.70	£25.23	£22.20
1936	£42.88	£27.66	£23.86
1937	£60.08	£26.06	£22.59
1938	£45.84	£23.53	£23.06
1939	£49.84	£21.58	£23.67

Between 1931 and 1934, when the Depression was at its most severe, the average cost of producing a long ton of copper at Nkana was approximately £25.51, and £32.01 for the RST group, when the metal was selling at an average price of £37.39 on the London Metal Exchange (LME). By comparison, the USA-owned mines were incapable of producing a long ton of copper for less than £40 because of their high operating costs.[224] The majority of American mines could only produce at a profit after 1935 when the price per long ton of copper increased.[225] Following expansion and improved efficiency of the Copperbelt mines, driven by mechanisation and better labour productivity, production costs fell. Northern Rhodesian copper

[221] Butler, *Copper Empire*, 21.
[222] *The Times*, 23 November 1937.
[223] Table 2.2, compiled from ZCCM 12.6.1E, *Rhodesian Selection Trust Limited: Annual Report and Accounts, 1948* (London: RST Head Office, 1948), 17; ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1931–9; Gregory*, Earnest Oppenheimer*, 419; Perrings, *Black Mineworkers in Central Africa*, 243.
[224] ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1931–9.
[225] *Ibid*.

was produced and landed in Europe for an average £24.81 per long ton for the RST group and £23.08 for Rhokana, at a time when the metal was selling for an average price of £46.86 between 1935 and 1939 (see Table 2.2).

The benefits accruing from the low cost of producing copper on the Copperbelt can be seen from Table 2.3 indicating capital expenditure, production, cost and value of sales, large net profits and dividends secured by Rhokana Corporation during the 1930s.

Table 2.3: Capital, Production and Overall Profitability of Rhokana Corporation, 1932–1939.[226]

Year	Capital Expenditure £	Production Long Tons	Value of Sales £	Cost of Sales £	Net Profit £	Dividends £
1932	14,113	15,812	108,173	-	56,742	-
1933	74,788	48,589	1,792,275	1,276,674	40,862	-
1934	556,302	62,180	2,339,374	1,721,962	389,044	-
1935	693,693	69,234	2,549,662	1,973,793	287,681	331,849
1936	465,466	50,399	2,635,059	1,811,315	206,642	509,900
1937	512,025	75,254	4,417,512	2,250,602	231,507	1,645,000
1938	607,415	76,275	4,647,857	2,489,371	255,404	1,645,501
1939	474,848	82,501	5,444,606	2,544,410	231,801	1,332,501

Note: Capital refers to new expenditure on prospecting, properties (plants), machinery, mine development, building, administrative and overhead expenses. Total copper sold was more or less than produced in a financial-year depending on the demand. Similarly, value of sales was more or less depending on the demand and price of the metal. Cost of sales included: operating costs incurred on mining, concentrating, smelting, and royalty; realisation and refining charges expended on rail-age, handling, freight, refining, selling costs and other related expenses. The difference between value of sales and cost of sales was known as operating profit (gross profit). The net profit was arrived at after deducting depreciation reserve, development reserve, debenture interest, loan interest, income tax, balance on exchange account and dividends. Dividends include that paid on preference and ordinary (interim and final) shares at the end of each financial year. Between 1931 and 1934, Rhokana failed to declare dividends because the Company was under-capitalised in relation to the rapid expansion and magnitude of the Corporation's undertakings on the Copperbelt, which compelled the Firm to use all its profits as working capital.

Rhokana posted a total net profit of £1,213,035 between 1935 and 1939. During the same period, the Copperbelt's mines realised after-tax profits totalling £13,155,073.[227] Beyond net profits, Rhokana, Roan and Mufulira mines paid their first income and royalty taxes and after-tax dividends.[228] Rhokana paid the highest after-tax dividends averaging 41% per annum amounting to a total of £5,464,751 between 1935 and 1939.[229] From 1923 to 1941, the total gross profit of the Copperbelt mines was about £25 million, while their total dividends

[226] Table 2.3, compiled from ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1932–9.
[227] Perrings, *Black Mineworkers in Central Africa*, 244.
[228] Roberts, 'Notes towards a Financial History of Copper Mining in Northern Rhodesia', 353; Butler, *Copper Empire*, 23, 34.
[229] ZCCM 3.8.2A, Arbitration for European Miners, May 1940–July 1941.

amounted to £7 million.[230] But their gross profit was less than a third of the total value invested in the mines.

The prosperity of Nkana and the Copperbelt mines can also be seen from their tax contributions. For example, in 1933 the mining companies paid an income tax of £40,000, and £43,000 the following year, and between 1935 and 1937, taxes generated by mining contributed 45% of total Government revenue.[231] The mining companies also paid over £300,000 to the BSA Company in royalties. From the remaining profits of about £4 million, the British and Northern Rhodesian governments received each £500,000 and also taxed the BSA Company's royalty receipts each getting £40,000.[232] But in terms of retained earnings, although a total of 25% of the companies' profits was taxed, only half went to the Northern Rhodesian Government. Even so, the low royalty tax rates levied by the BSA Company on the companies compared to the relatively high income tax paid in Britain, where their headquarters were domiciled, and Northern Rhodesia their host-nation cushioned the effects of double taxation on the mines. The BSA Company's revenue in the form of royalty was on the following sliding scale per long ton of standard or blister copper, '2% when the price was less than £55; 2.25% on £55 or more, but less than £60; 2.5% on £60 or more, but less than £80; 5% on £80, plus 10% on such portion of the price as exceeds £80'.[233]

Between 1932 and 1939 total copper output in Northern Rhodesia was about 1,421,967 long tons or 11.5% of world production; the UMHK's total production was 818,157 long tons or 6.6% of the world output.[234] The Northern Rhodesian Copperbelt mines produced and contributed more towards world production than the UMHK in this period. According to Butler, Northern Rhodesia ranked fourth in terms of world copper production during the Great Depression.[235] Rhokana produced more copper than the RST-operated mines between 1932 and 1934 with 126,571 long tons (see Table 2.3 and Appendix IV), compared to 113,064 long tons, respectively.[236] Between 1935 and 1939, the latter with a total output of 461,541 long

[230] Roberts, 'Notes towards a Financial History of Copper Mining in Northern Rhodesia', 353; Butler, *Copper Empire*, 23, 34.
[231] Butler, *Copper Empire*, 29–30.
[232] Roberts, 'Notes towards a Financial History of Copper Mining in Northern Rhodesia', 352; Butler, *Copper Empire*, 32.
[233] *The Times*, 31 May 1932.
[234] Gregory, *Ernest Oppenheimer*, 422, 441; Perrings, *Black Mineworkers in Central Africa*, 245; Phillips, 'Roan Antelope', 198.
[235] Butler, *Copper Empire*, 21-3.
[236] Perrings, *Black Mineworkers in Central Africa*, 245.

tons outstripped the dominance of the former whose total production was 353,663 long tons.[237] The major reason for the decrease in production at Rhokana was adherence to world copper production restrictions. Gregory notes that these restrictions affected Rhokana more than RST because of different opinions among the affiliated offices of AAC in Northern Rhodesia, South Africa, Britain and the USA. With the latter at the centre-stage of global production strategies, its decisions determined market prices. In a letter dated 5 August 1938, Pollack lamented to Taylor about the loss of Rhokana's bargaining power compared to RST between 1935 and 1939.[238] Pollak regretted advice from their American counterparts that had led to major reductions in production at Nkana and neglect of the Nchanga mine, while RST had minimally reduced output in line with international regulations. As discussed earlier, the management structure of AAC-controlled companies embraced a top-down approach in decision-making compared to RST whose bottom-up approach 'gave mine staff wide latitude in the carrying out of policy'.[239] 'Rhokana lost its preferential position and the Roan was put on equality. Mufulira was recognised as a second producer, while Nchanga was treated as a joke'.[240]

2.3.3 The Formation of the European Mineworkers' Union

If 1937 marked a break-through in the corporate profitability of Rhokana and the other Copperbelt mines, it was also a break-through in the history of industrial labour. That year, the Northern Rhodesian (European) Mineworkers' Union (NRMWU) was recognised by Rhokana and the other Copperbelt companies. As noted above, the Copperbelt mines were able to produce more cheaply than their counterparts in America and Europe, partly because of the relative cheapness of African labour. But what was effectively a dual labour structure eventually gave birth to separate trade unions.

The Nkana mine was central to the formation of a trade union for white miners on the Copperbelt. The idea of forming a European trade union in the Copperbelt mines was initiated by Richard Olds, employed on Nkana mine.[241] Little is known about Olds, apart from being born in 1881 in Cumberland, England.[242] He trained as a machine operator and worked as a machine agent. In the 1920s he migrated to South Africa to seek employment in the mines,

[237] *Ibid*.
[238] Gregory, *Ernest Oppenheimer*, 442.
[239] Phillips, 'Roan Antelope', 152.
[240] Gregory, *Ernest Oppenheimer*, 442.
[241] *Copperbelt Times*, 28 September 1934; Money, 'No Matter How Much or Little They Have Got, They Cannot Settle Down', 81-2.
[242] Money, 'No Matter How Much or Little They Have Got, They Cannot Settle Down', 81.

where he learnt about the boom conditions developing on the Copperbelt mines. He then moved to the Copperbelt and worked at Nkana mine as a painter.[243] In September 1934, Olds relinquished his job to organise a trade union for European miners. Because of its importance in this discussion, an excerpt from the *Copperbelt Times* deserves a verbatim quotation:

> Mr. R. Olds has relinquished his position on the Nkana mine to organise an Industrial Workers' Federation. In the course of an interview reference was made to words uttered some 12 years ago by the late Sir Evelyn Wallers, sometime President of the Transvaal Chamber of Mines, the substance of which was that no industry could be considered on a sound footing until both employers and employees were well organised. Mr Olds said that the 2,000 odd workers on the copper mines had felt for some time that an organisation was needed which could provide the men with a medium of expression, and negotiate and mediate between them and the managements…. The desire for something of the sort had led to him being asked to organise a Federation whose scope would not be confined to the miners, but be capable of extension to other spheres of industrial enterprise if needed. Mr Olds is establishing his office in Ndola.[244]

However, Olds wanted to extend the influence of the Industrial Workers' Federation (IWF) to industries beyond the copper mines.[245] This ambitious agenda brought him into conflict with his colleagues, especially from Roan Antelope.[246] It is also clear that African workers did not feature in his vision. But Olds soon realised many European workers did not share his ideas. Earning more than their counterparts in Southern Africa, they were slow to become involved. In October 1934, Olds published an article in which he argued vehemently that:

> [T]he white worker in Northern Rhodesia is faced with two alternatives viz. [as follows]. To either organise against the encroachment of the Native in their skilled trades or get ready to leave the country. To my mind a great many still considers themselves Birds of Passage, they have no interest in the affairs of the country further than trying to evade the Income Tax. …. Who have we today who will champion the cause of the white population [?] Where are the Men who can think WHITE and will stand out and fight the cause of the white worker and his children? Are we going to maintain our WHITE STANDARD or allow ourselves to descend to the level of the

[243] T. Scannell, 'A Dynamic Union with a Turbulent Career', *Horizon*, 3, 4 (1961), 5.
[244] *Copperbelt Times*, 28 September 1934.
[245] *Ibid*.
[246] ZCCM 10.7.9A, Letter from Frank Ayer, Roan Antelope General Manager, Luanshya, to Roan Selection Trust Limited Secretary, London, 5 October 1936.

> blacks by always thinking BLACK[?]…. Let us visualise and see what is going to happen if we do not organise…[247]

Olds feared that as Africans settled down to an industrial way of life and learnt new skills, they would threaten future European employment.[248] Africans at Nkana, Roan and Mufulira were already doing certain jobs previously reserved for whites, such as surveying, mail-posting, telegraphic, locomotive driving, bricklaying, fitting, tailoring, and carpentry, and held blasting certificates.[249] With a counter message to African advancement, some white workers supported Olds' idea of a European trade union in the three copper producing mines. Within two months of his initial campaign he managed to convince about 417 (50%) of the daily-paid white workers at Nkana, 100 at Mufulira, and 50 at Roan.[250] These figures suggest that initially, Olds was successful at Rhokana, much more so than he was at Roan and Mufulira.

Money attributes the relative lack of success of Olds' agenda in the early months of his campaign for a European union at Roan and Mufulira to management opposition.[251] These mining companies were worried by Olds' activities, and in most instances stopped him from holding meetings with their employees. The companies opposed the colour bar proposed by Olds as it would limit 'skilled work to people of European descent … [and] raise costs'.[252] When he realised that the mining companies would not easily be budged, Olds decided to affiliate the IWF to the South African Mineworkers' Union (SAMU) in order to bring in more support. Support from SAMU might force the Copperbelt companies to accept a white workers' trade union. In 1935, he visited the Rand frequently, and early in 1936 invited the SAMU organising Secretary, Charles Harris, to campaign for the formation of a branch of the union on the Copperbelt.[253] By the end of their campaign on the three Copper mines, Olds and Harris claimed no less than 80% support among the European miners, had representatives at each

---

[247] Richard Olds, 'The Survival of the White Workers of Northern Rhodesia', *Copperbelt Times*, 12 October 1934 (emphasis in the original).
[248] Scannell, 'A Dynamic Union with a Turbulent Career', 5.
[249] Olds, 'The Survival of the White Workers of Northern Rhodesia'.
[250] ZCCM 3.8.2B, *Rhokana Corporation Limited: Annual Report and Accounts for the Year ended 30 June 1935* (London: Rhokana Corporation Head Office, 1935), 14; ZCCM 10.7.9A, Letter from Frank Ayer, Roan Antelope General Manager, Luanshya, to Roan Selection Trust Limited Secretary, London, 1 December 1934; *Northern Rhodesia Advertiser*, 18 May 1935.
[251] Money, 'No Matter How Much or Little They Have Got, They Cannot Settle Down', 82.
[252] *Ibid*.
[253] Scannell, 'A Dynamic Union with a Turbulent Career', 6.

mine elected, and affiliated them to the SAMU, though not officially.[254] Olds was elected overseer and Organising Secretary of the IWF on the Copperbelt.

The mining companies, especially Roan Antelope, opposed the setting up of branches of SAMU. They argued that 'gold and copper producers' interests seldom coincided, and that laws affecting the settlement of trade disputes in South Africa did not apply in Northern Rhodesia'.[255] In this particular instance, the companies were correct as the SAMU Constitution could not be applied beyond South African borders. This explains why Harris failed to formally identify his Union with the IWF. Indeed, the position of the copper companies concurred with that of colonial officials. Lusaka and London repeatedly argued that, 'no colour bar legislation would be allowed in Northern Rhodesia', and that Africans with skills or qualifications must be allowed to advance in industry.[256]

The fall of Olds came later, when he fell out with the Roan Branch Chairman, Ben Rount, over organisation and administrative policies. At a meeting held in September 1936, Rount accused Olds of appropriating union funds and diverting part of it to Harris in South Africa. Consequently, Olds was dismissed by branch officials through a vote of no confidence.[257] The mining companies welcomed this, because, as stated earlier, they did not like Olds' colour bar ideology. However, his dismissal did not prevent the formation of a recognised European union, as trade unions in Northern Rhodesia could be registered under Company Laws. Section 16 (i) (e) of the Workmen's Compensation Ordinance provided that a workman who was a party to an application to the court under the ordinance could be represented by an officer of a trade union to which he belonged.[258] In addition, the 'English statute law had been applied to Northern Rhodesia in 1911, and protection for trade unions was, therefore, provided by the British Trade Unions Acts of 1871, 1876 and 1906'.[259] As a result, in April 1937, the NRMWU was recognised by the copper mines, based on the British model of trade unionism.[260]

British labour law recognised trade unions as lawful voluntary bodies but without particular and entrenched legal practices such as a colour bar or increased wages after a certain period of

---

[254] *Ibid*.
[255] *Ibid*.
[256] Henderson, 'Labour and Politics in Northern Rhodesia', 19.
[257] ZCCM 10.7.9A, Letter from Frank Ayer, Roan Antelope General Manager, Luanshya, to Roan Selection Trust Limited Secretary, London, 5 October 1936.
[258] ZCCM 10.7.9A, Letter from P.F. Ellis of Ellis and Company Solicitors to Frank Ayer, 25 October 1934.
[259] Berger, *Labour, Race and Colonial Rule,* 65.
[260] Henderson, 'Labour and Politics in Northern Rhodesia', 110.

time. By contrast, registered trade unions in Southern Rhodesia and South Africa, were entrenched through conciliation boards with a colour bar. The Constitution of the NRMWU was accepted by the government, because it did not contain any colour bar provision, though Clause 39 of the 1937 Agreement between the Companies and the Union 'enforced a standstill on the advancement of native labour'.[261] Total membership of the NRMWU was 834, of which 374 came from Nkana, 240 from Roan and 220 from Mufulira.[262] Table 2.4 shows former general secretaries and presidents of the NRMWU. P. Webb, T.W.S. Shaw, V.S. Welsford, and A.B. Leslie were all appointed to the position of General Secretary outside the mining industry.[263] B. Rount worked at Roan Antelope; F.S. Maybank worked at Mufulira; G. Spires and B.J. Peterson worked at Nchanga.[264] For the presidents: T.S. Ross, B. Goodwin, J.T. Moll, and E.L. Williams all worked at Rhokana; D. Welensky worked at Broken Hill; F.G. Tullidge worked at Nchanga; and A. Clarke worked at Chibuluma.[265]

Table 2.4: Former Secretary Generals and Presidents of the NRMWU, 1937-1961.[266]

General Secretaries	Period	Presidents	Period
P. Webb (Part Time)	1937	V.S. Diamond	1937
B. Rount (Part Time)	1937	T.S. Ross	1938-1940
T.W.S. Shaw	1937	F.E.J.P. Murray	1940-1943
V.S. Welsford	1937	B. Goodwin	1943-1947
F.S. Maybank	1940-1943	D. Welensnky	1948-1951
M.S. Visagie	1943-1944	W.G. Spires	1951-9152
F.S. Maybank	1945-1953	J.T. Moll	1952
G. Spires	1953-1954	B.P. Burke	1953
B.J. Peterson	1955-1958	F.G. Tullidge	1953
J.F. Purvis	1958-1959	F.B. Shaw (Acting)	1954
E.L. Williams (Acting)	1959-1960	A.C. Stevens	1954
A.B. Leslie	1961	A. Clarke	1955
-	-	J.F. Purvis	1955-1957
-	-	E.L. Williams	1958

[261] *Ibid*., 112.
[262] ZCCM 10.7.9A, Attachment to letter from the Northern Rhodesia Mineworkers' Union Head Office, Luanshya, to the General Manager – Roan Antelope Copper Mines Limited, Luanshya, 2 April 1937.
[263] Scannell, 'A Dynamic Union with a Turbulent Career', 9.
[264] *Ibid*., 4–8.
[265] *Ibid*., 4, 9.
[266] Table 2.4, taken from Scannell, 'A Dynamic Union with a Turbulent Career', 6.

Through the NRMWU, the privileged position of white workers was entrenched on the Copperbelt. The Union led the successful 1940 strike which resulted in substantive wage increases and allowances. But the major achievement of the NRMWU was when the Closed Shop was formalised in 1941.[267] The Closed Shop blocked African Advancement and maintained the privileged status of white miners up to 1955.[268] The Closed Shop, however, led to the fragmentation of the European Union, with salaried officials organising themselves into the Mines Officials Salaried Staff Association (MOSSA).[269] Monthly-paid officials saw the NRMWU as only representing daily-paid white miners who performed quite different tasks from themselves.

This section has demonstrated that Nkana and the Copperbelt mines emerged during the Great Depression as strong and profitable competitors in world copper production. What has become clear, too, is that Nkana workers were central in the formation of the labour movement on the Copperbelt. In the region, the economic importance of Northern Rhodesia became second to that of South Africa, outstripping Southern Rhodesia. At the same time, Nkana and the Copperbelt established copper mining as the dominant sector of the Northern Rhodesian economy, far surpassing the importance of peasant and settler agriculture. Additionally, copper production added an element of diversification of the Northern Rhodesian economy, now embracing mining, cattle-rearing, growing of maize, cotton and rubber plantations.[270] As the clouds of war became darker, Nkana's strategic importance for Britain was to become obvious.

2.4 Rhokana during and immediately after the Second World War, 1940–1949

The outbreak of the Second World War boosted the economies of a number of colonies.[271] African and Asian colonies became strategic sources of minerals for war efforts. As alluded to earlier, re-armament by Germany and Britain helped to pull the world out of recession, but it was the demands of the Second World War that saw the extraction of raw materials on an unprecedented scale.[272] The copper mining industry of Northern Rhodesia in particular, benefited from this increased demand. Copper played a key role in the execution of the war

[267] Henderson, 'Labour and Politics in Northern Rhodesia, 1900-1953', 180.
[268] ZCCM 11.8.3C, *Labour Relations on the Copperbelt*, 1930 – 1982, 8–9.
[269] *Ibid*., 4.
[270] Butler, *Copper Empire*, 22–3.
[271] For further details about the arms-race and origins of the Second World War, see Bell, *The Origin of the Second World War,* 1–10; G.L. Weinberg, *A World at Arms: A Global History of World War Two* (Cambridge: Cambridge University Press, 1994), 503.
[272] Phillips, 'Roan Antelope', 247.

between the Allied and Axis powers. Before 1939, copper was mainly used in domestic and industrial appliances, but during the war, demand more than doubled due to copper's importance in the manufacture of munitions, aircraft, and naval equipment.[273]

Prior to the war, about 90% of the British wire-drawing industry depended on imported dies principally from France, Belgium, Holland and Portugal.[274] However, the outbreak of war and the subsequent German attacks on Belgium and France forced Britain to purchase half of its supplies from the United States. But as the war intensified, insufficient supplies compelled the United States of America to reduce its deliveries to the United Kingdom. Britain was forced to look elsewhere in the colonies for cheap supplies of minerals, including copper, for manufacturing diamond dies.[275] A diamond die was an important 'tool for making fine wire of any sort – and fine wire [was] essential in the production of a tremendous range of articles' utilised in wiring of aircraft, sub-marines, motor cars, electrical appliances, telephone systems and radio communications used during the war.[276] The USA obtained part of its copper supplies from Canada, Chile, Mexico and Belgian Congo while the deposits of Northern Rhodesia and South Africa were utilised by Britain. During the early stages of the war, Germany and Japan controlled access to minerals in Central and Western Europe, Scandinavia, and South East Asia.[277] But even so, at the height of the war, Britain and the USA commanded about 57% by value of the world minerals production, whereas Germany and her partners were short of supplies in many strategic items.[278]

2.4.1 Productivity and Profitability during and in the immediate Post-war period

During the Second World War, government and the private sector worked closely together, as did metropolitan and colonial economies. The Ministry of Supply in London required Rhokana and the other Copperbelt mines to supply a certain amount of the red metal, but the Copperbelt mines failed to meet the required quantity.[279] Specifically, the Ministry of Supply wanted Nkana to supply 9,500 short tons of copper per month but initially the mine only managed to produce a maximum average of 6,852 short tons a month, obliging Britain to purchase the

[273] R. Dumett, 'Africa's Strategic Minerals during the Second World War', *The Journal of African History*, 26, 4 (1985), 393; R. Prain, *Reflections on an Era: An Autobiography* (Letchworth: The Garden City Press, 1981), 64–8.
[274] Prain, *Reflections on an Era*, 64.
[275] *Ibid*., 63–4.
[276] *Ibid*., 64.
[277] Dumett, 'Africa's Strategic Mineral during the Second World War', 382.
[278] *Ibid*.
[279] ZCCM 19.2.4F, *Rhokana Corporation: Annual Report and Accounts for the Year ended 30 June 1945* (London: Rhokana Head Office, 1945), 11.

balance from the UMHK.[280] A number of problems, including shortages of European labour, shortage of plant materials and new equipment, shipping delays, closed capital markets and shortage of fuel were responsible for this under-capacity.[281] Because of these problems, production costs at Nkana during the war increased compared to the pre-war period from an average £25 during the Great Depression to £30.77 per long ton of copper delivered to England between 1940 and 1945 (see Table 2.5). For the RAA group, Nkana was still cheaper to operate than Nchanga, the latter being a high-cost producer due to difficult underground conditions, especially flooding.[282]

Table 2.5 demonstrates between 1940 and 1945, Nkana was the largest Copperbelt supplier of copper to the Ministry of Supply, totalling 493,321 long tons. The Northern Rhodesian mines sold 68% of their copper to Britain, and contributed 9.12% to global output.[283] Over this period, Northern Rhodesia moved up from fourth to third in terms of world production, behind USA and Chile but ahead of Canada, Belgian Congo and the Soviet Union.[284] In addition to copper, Rhokana produced cobalt, supplying a total of 15,219 short tons of cobalt alloy, yielding 6,154 short tons of cobalt metal which was treated in Canada and England. Of particular wartime importance, cobalt metal was utilised in the manufacture of cutting tools and drills, welding rods, stock for tipping tools, dies, valve steel, magnets and electroplating.[285] Even more valuable was its use in the production of essential military equipment, and consumption in high-speed steel, stellate and carbide-type alloys, magnets, and jet-propulsion gas turbines.[286]

[280] *Ibid*.
[281] *Ibid*.
[282] ZCCM 3.8.2F, *Rhokana Corporation: Annual Reports and Accounts*, 1931–44.
[283] Gregory, *Ernest Oppenheimer*, 394, 408, 439.
[284] *Ibid*.
[285] H.W. Davis, 'Nickel and Cobalt', *Minerals Yearbook: Review of 1940*, 607. http://images.library.wisc.edu/EcoNatRes/EFacs2/MineralsYearBk/MinYB1940/reference/econatres.minyb1940.hdavis.pdf. Accessed on 6 April 2017.
[286] H.W. Davis, 'Cobalt', *Minerals Yearbook: Review of 1941*, 625. http://images.library.wisc.edu/EcoNatRes/EFacs2/MineralsYearBk/MinYB1941/reference/econatres.minyb1941.hdavis02.pdf. Accessed on 6 April 2017.

Table 2.5: Copper Production, Costs and London Metal Exchange Price for Copperbelt Mines, 1940-1945.[287]

Name of Mine	Production of Copper in Long Tons	Average Cost of Production per Long Ton f.o.b. Beira	London Metal Exchange Price per Long Ton
Nkana	493,321	£30.77	£62
Mufulira	457,982	£26.09	£62
Roan Antelope	396,877	£31.02	£62
Nchanga	76,584	£50.75	£62

More than this, Nkana's mine workshop was used to manufacture and repair ordnance. Between 1941 and 1944, certain parts of R.A.F practice bombs and brass tank parts were made, as well as urgent repairs done for the Military Transport units.[288] Both black and white women were employed in the manufacturing of bomb parts and fuse bodies.[289] Moreover, women were employed to do certain surface jobs previously done by men in order to alleviate the critical shortage of European and African male labour as the mines stepped up production.[290]

Three major financial measures were introduced by the British and Northern Rhodesian governments for the purpose of supporting the war effort: the fixed price of copper; double taxation in the form of Income Tax in Britain and Northern Rhodesia; and surcharges or Excess Profits Tax (EPT) and the national defence contribution.[291] This tax (EPT) 'was a wartime instrument designed by the state to capture above-normal profits by industrialists [businesses] as a way of curbing wartime profiteering'.[292] These measures had a significant impact on Rhokana's profitability. The price of copper originally fixed at £43.10 per long ton in London, was substantially lower than the price in New York of £80 per ton.[293] Even when it stabilised at £62 in Britain, it was still lower than that in the USA. As a result, Rhokana and the

[287] Table 2.5, constructed from Bancroft, *Mining in Northern Rhodesia*, 144, 162–3; ZCCM 19.2.6D, *Roan Antelope Copper Mines Limited: Summary of Operations for the Six Years ended 30 June 1945* (Luanshya: RACM, 1945), 3; ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts for the Year ended 30 June 1945*, 16-17.
[288] ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts for the Year ended 30 June 1945*, 20.
[289] *Ibid*.
[290] *Ibid*.
[291] Double taxation was charged on the companies for having two administrative departments, one in Britain and the other in Northern Rhodesia. During the war, EPT and national defence contribution added to the burden of double taxation. For further details, see Phillips, 'Roan Antelope', 252.
[292] V.M. Gwande, 'Foreign Capital, State and the Development of secondary in Southern Rhodesia, 1939–1956' (MA Thesis, University of the Free State, Bloemfontein, 2015), 22.
[293] C. Schmitz, *World Non-Ferrous Metal Production and Prices 1700–1976* (London: Frank Cass Publishers, 1979), 272.

Copperbelt mines together lost £500,000 per month.[294] The burden of double taxation, EPT and the national defence contribution became even more onerous when, in 1941, the Northern Rhodesian Government requested the mines to pay part of the estimated tax in advance.[295] In 1938, Rhokana and the other Copperbelt companies paid out on average a manageable 17% of operating surplus in taxes, but in 1941 it increased tremendously to 67%, largely because of EPT.[296] Table 2.6 compares capital and labour strengths, and overall profitability of Rhokana Corporation during and immediately after the Second World War.

Table 2.6: Capital, Labour Strength and Overall Profitability of Rhokana Corporation between 1940 and 1949.[297]

Year	Capital Expenditure £	No. of African Workers	Wages per Shift (s)	Value of Sales £	Cost of Sales £	Net Profit £	Dividends £
1940	126,028	7,784	1.04	5,777,606	2,907,628	215,601	1,082,501
1941	93,106	8,885	1.30	5,777,606	2,755,205	214,860	832,500
1942	85,746	9,318	1.39	4,788,221	2,997,096	254,628	457,600
1943	85,422	10,430	1.46	6,124,553	3,621,537	441,797	707,500
1944	84,538	9,490	1.45	5,938,198	3,965,702	510,002	707,500
1945	295,361	9,655	1.47	6,129,662	4,031,198	507,975	707,501
1946	217,989	9,565	1.69	6,513,232	4,395,120	490,484	1,581,906
1947	241,747	9,187	1.83	7,555,325	4,667,818	491,326	2,204,918
1948	225,963	9,670	2.15	9,623,205	5,232,218	491,589	2,579,562
1949	423,562	10,463	2.31	10,832,455	6,089,175	560,270	2,579,401

Note: Wages are in shillings per shift per African.

Between 1940 and 1944, capital expenditure fell, while the African labour force increased. Capital expenditure declined owing to inadequate supplies of equipment and machinery, coupled by transport bottlenecks and disruption to international trade because of the war. Furthermore, Rhokana halted major construction projects and development activities, concentrated on production for the war.[298] Declining profits obliged Rhokana to rely on a labour-intensive mode of production in order to maintain production. Table 2.5 shows that the cost of producing a ton of copper at Nkana was half the selling price on the LME in this period. Production costs during the war were successfully contained for two reasons. Table 2.6

[294] Phillips, 'Roan Antelope', 251.
[295] *Ibid.*, 252.
[296] *Ibid.*, 253.
[297] Table 2.6, constructed from ZCCM 3.7.2B, attachment to letter from Secretary – Northern Rhodesia Chamber of Mines, 21 May 1953; ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1940–4; ZCCM 12.7.2F, *Rhokana Corporation Limited Annual Reports*, 1946–9; ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts for the Year Ended 30 June 1945*, 2–20.
[298] ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1940–4; ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts 30 June 1945*, 11–13.

indicates that African labour costs marginally increased between 1940 and 1945. High grade ores averaging 3.58% copper in reserves and yielding 3.29% of this metal meant that it was economical to produce copper at Nkana.[299] Therefore, the increase in transport costs was largely offset by low labour and mining costs during the war. The average operating cost per long ton of copper delivered to buyers in the period under review was about £31 for Rhokana and the selling price stabilised at £62 on the LME.

Between June 1940 and June 1945, Rhokana's gross profit, after subtracting operating costs, was approximately £13,407,607; provision for double taxation and BSA Company royalties amounted to £5,460,751, and within this amount the EPT aggregate was £3,713,311.[300] The total dividends in this period amounted to £4,495,102; whereas the expenses on directors' remuneration, and allocation to the general reserve account, and share redemption fund totalled roughly £1,306,891; leaving an unappropriated (net) profit of about £2,144,863 (see Table 2.6 and Appendix IV).[301]

As Butler, Dumett and Phillips, amongst others, claimed, double taxation, EPT and the national defence contribution had a negative impact on Northern Rhodesian mining industry. For some scholars, '"wartime financial measures, especially price controls and tax increases, severely cut into the industry's ability to finance expansion of mining operations and stifled reinvestments and improvements"' as they reduced profit.[302] True, provision for double taxation, royalty and EPT reduced the net profits and dividends. Between June 1940 and June 1945, Rhokana surrendered £51,574 per month or £618,888 per year through EPT.[303] By comparison, Britain was able to save almost £41.67 million per year and a gross of £250 million by the end of the war in terms of foreign exchange as a result of purchasing its copper within her Empire.[304] Because of heavy taxes, dividends paid to shareholders by Rhokana were reduced from 40% in 1940 to 25% per year throughout the war.[305] As indicated above, however, dividends totalled £4,495,102, and show that Rhokana made a substantial amount of

[299] ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts 30 June 1945*, 9, 16, 19.
[300] ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1940–4; ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts for the Year ended 30 June 1945*, 2–6.
[301] *Ibid*.
[302] Dumett, 'Africa's Strategic Minerals', 395; Phillips, 'Roan Antelope', 251.
[303] ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1940–4; ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts for the Year ended 30 June 1945*, 2–6.
[304] Butler, *Copper Empire*, 64.
[305] ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1940–4; ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts for the Year ended 30 June 1945*, 2–6; Roberts, 'Notes towards a Financial History of Copper Mining in Northern Rhodesia', 354.

profit despite heavy taxes and price controls during the war. Therefore, the assertion by Butler, Dumett and Phillips that wartime financial measures corroded into profits of the Copperbelt companies has been challenged and the experience of Rhokana Corporation has also been qualified.[306]

Capital expenditure and labour strength increased after 1944, but then stagnated until 1949, while labour costs increased throughout the post-war period (see Table 2.6). Capital expenditure, labour force and labour costs generally increased because of rehabilitation, construction and developmental projects at Nkana after the war.[307] Even more, Rhokana and the Copperbelt companies continued to face a series of challenges which impacted on their productivity. The two major challenges for Rhokana were inadequate coal supplies from Wankie Colliery in Southern Rhodesia and rail-road problems due to labour unrest and general wear and tear.[308] Thus, fuel and transport difficulties caused annual production costs per long ton of copper at Nkana to rise from an average of £31 during the war to £33 between 1946 and 1949.[309] By contrast, however, international developments were much more positive, causing Nkana and the other Copperbelt mines to enter a period of expansion. Unlike the aftermath of the First World War, a short-lived recession after 1945 did not result in the collapse of the copper market. The end of price controls in November 1946 saw the price of copper rise to an annual average of £118.67 between 1946 and 1949, which was above the cost of production and transport.[310]

There were a number of factors behind the continued demand for copper. Post-war reconstruction increased demand in Europe, while in the USA demand was spurred by booming electrical and automotive industries.[311] Additionally, there was pent-up demand for copper immediately after the war, further compounded by the disruption of world production by strikes and high levels of consumption, especially in the USA.[312] Due to high levels of consumption, the USA suspended the copper tariff that was implemented from 1947 to 1958 to stimulate copper imports. The 44% devaluation of the British pound to curtail US dollar expenditure in 1949 also gave Nkana and the Copperbelt mines an added advantage, as copper prices rose by

---

[306] Butler, *Copper Empire*, 64; Dumett, 'Africa's Strategic Minerals', 395; Phillips, 'Roan Antelope', 251.
[307] ZCCM 12.7.2F, *Rhokana Corporation Limited Annual Reports*, 1946–9.
[308] *Ibid*.
[309] ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme*, Table 7.
[310] ZCCM 12.7.2F, *Rhokana Corporation Limited Annual Reports*, 1946–9.
[311] Phillips, 'Roan Antelope', 288.
[312] Butler, *Copper Empire*, 106.

the same percentage.[313] Another advantage of the devaluation of the pound was that the sales which were quoted in American dollars but paid in British pounds gained commensurately. The result was a double benefit, since prices on the New York market kept on increasing especially during the Korean War. At much the same time, Nkana and the Copperbelt mines were relieved from the burden of double taxation. This ended in 1947, and from roughly this point, the financial position of the mines began to improve dramatically. Following the termination of double taxation, coupled with the increase in copper prices, Rhokana announced net profits of £6,958,227 and paid final dividends averaging 65% per annum between 1946 and 1949.[314]

2.4.2 The formation of the African Mineworkers' Union

It took almost twelve years after the formation of the NRMWU for African mineworkers to form their recognised union. The formation of an African union was preceded by the African mineworkers' strikes in 1935 and 1940, through which black miners demonstrated signs of worker consciousness and organisation. Workers from Nkana spearheaded the 1935 strike on the Copperbelt. For instance, false news about the success of the strikes at Mufulira and Rhokana reached Roan through a letter delivered by an emissary. The emissary was believed to have been sent by Blackmore Musuku, Isaac Ngumbo and Herbert Kamanga who worked as clerks at Nkana.[315] Part of the evidence submitted before the commission of inquiry indicate that these gentlemen also connived with some leaders of the Mbeni Dance Society to boost morale during the strike action. During the 1940 strike African workers demanded a wage increase of about 5s to 10s per shift. When the mine management refused, successive strikes occurred in the Copperbelt mines involving a total of 15,000 workers between 24th March and the 7th of April.[316] Serious disturbances occurred at Nkana, involving about 3,000 strikers who fought running battles with the police. The police was almost defeated before firing live bullets, killing 13 and injuring 71 of the strikers.[317] The resultant Forster Commission of Inquiry stated, *inter alia*, in their report:

> For trades(*sic*) unionism, as trades(*sic*) unionism is generally understood by the British worker, the African worker in Northern Rhodesia is clearly not ready. The reason for

[313] Prain, *Reflections on an Era*, 87–8.
[314] ZCCM 12.7.2F, *Rhokana Corporation Limited Annual Reports*, 1946–9.
[315] NAZ 11/57/C, Northern Rhodesia Government (hereafter NRG), *Evidence Taken by Commission Appointed to Enquire into Labour Disturbances in the Copperbelt, Vol. II* (Lusaka: Government Printers, 1935), 548–50.
[316] Henderson, 'Labour and Politics in Northern Rhodesia', 158.
[317] *The Times*, 11 April 1940.

> this un-readiness is not far to seek. In no case has his education gone very far; in most instances it has not even begun. Further, his introduction to industrialisation and industrial conditions is of a very recent date, too recent to admit of his intelligent participation in the more elaborate trades(*sic*) union system existing in Great Britain. It is none the less necessary that some scheme should be devised to make articulate mass grievances and to ensure that such mass grievances are properly brought to the notice of the managements. It is also desirable to devise a method whereby the African can be educated up to that point where his participation in his trades union will seem not only desirable but a natural and, indeed, an inevitable development.[318]

As a result of the recommendations by the Forster Commission, the system of consultation between the mine managements and African tribal elders was developed into a general system of Tribal Representatives (TR).[319] The TR system was first established at Roan during the early years of stabilisation and extended to Nkana, Mufulira and Nchanga in 1942.[320] But the TR system was increasingly irrelevant for African miners since it was essentially designed to handle domestic conflicts in compounds, not industrial disputes. As a result, in 1943 daily-paid African workers rejected the TR system and formed Boss Boys' Committees (BBCs). BBCs evolved into Works Committees (WCs) in 1947, which represented African workers in all departments of the individual mines.[321] By then, there was anxiety in Government and company circles concerning the growing power and influence of the African miners. Each protagonist tried to find the best method to control the African workers.[322]

In 1946 the NRMWU proposed deleting the word "European" from the Closed Shop Agreement in order to bring all African employees within its terms. This was because the European Union 'was sceptical as to the usefulness of a separate African Union in the mining industry'.[323] However, the proposal was rejected by the Chamber of Mines as not being in the

[318] As cited in NAZ 11/57/H, NRG*, Report of the Commission Appointed to Inquire into the Unrest in the Mining Industry in Northern Rhodesia in Recent Months* (Lusaka: Government Printers, 1956), 13.
[319] Berger, *Labour, Race and Colonial Rule*, 82.
[320] *Ibid*.
[321] Boss Boys or Kapitaos were underground African supervisors of gangs or groups of about 10 to 15 labourers. Therefore, BBCs were committees consisting of senior Africans who supervised and represented the interest of these gangs. The major difference between BBCs and TRs was that the former represented the economic interests of supervisors of gangs, while the latter were spokespersons for the rest of the African labour force. For further details, see Berger, *Labour, Race and Colonial Rule*, 81–96; Henderson, 'Labour and Politics in Northern Rhodesia', 209–210; N. Mijere, 'One Industry, One Union: The Rise and Governmental Control of the Mineworkers of Zambia, 1930-1982', in K. Osei-Hwedie and M. Ndulo (eds.), *Issues in Zambian Development* (Nyangwe and Roxbury: Omenana, 1985), 378; Parpart, *Labour and Capital on the African Copperbelt*, 103–09.
[322] Mijere, 'One Industry, One Union', 380.
[323] *Ibid*.

interests of African miners. In any case, neither Government nor mining companies welcomed the prospect of a giant African and European trade union. Colonial officials in London and Lusaka were the most worried. Government officials and mine managers feared 'that if workers [miners] in the colonies [mines] were left to themselves some might form communist [and South African] type unions'.[324] Colonial officials feared that communist trade unions would organise African workers to fight against colonial rule. South African type unionism, on the other hand, would not only entrench the job colour bar for white miners, but also antagonise African workers. These were the major reasons why William Comrie, a British labour unionist, was appointed in March 1947 by the Colonial Office to promote moderate reformist trade unions for Africans in Northern Rhodesia.[325]

Within a month of his arrival, Comrie was successful in spreading, what Berger calls, the "gospel of trade-unionism" among Africans in the construction, retail and mining industries.[326] As a result, the first recognised African trade union in Northern Rhodesia was formed by shop assistants. On the Copperbelt mines, Comrie aligned himself with core African groups composed of educated, foremen, clerks, orderlies and interpreters.[327] Out of each group he chose a few disciples he entrusted with the mission. The first union for African miners on the Copperbelt was launched at Rhokana in 1948 as the Nkana African Mineworkers' Union. Two major factors can help explain why the African trade union was launched at Nkana. The first reason was that Nkana-Kitwe is geographically located at the centre of the Copperbelt mines, so it was convenient to operate from there. The second and possibly more important reason was that Nkana was home to African and European mineworkers who had taken a lead in industrial affairs on the Copperbelt.[328] Nkana African workers were the first to send a memorandum to Comrie and the Northern Rhodesian Labour Secretary advising them of the formation of an African miners' union (see Figure 2.3).

---

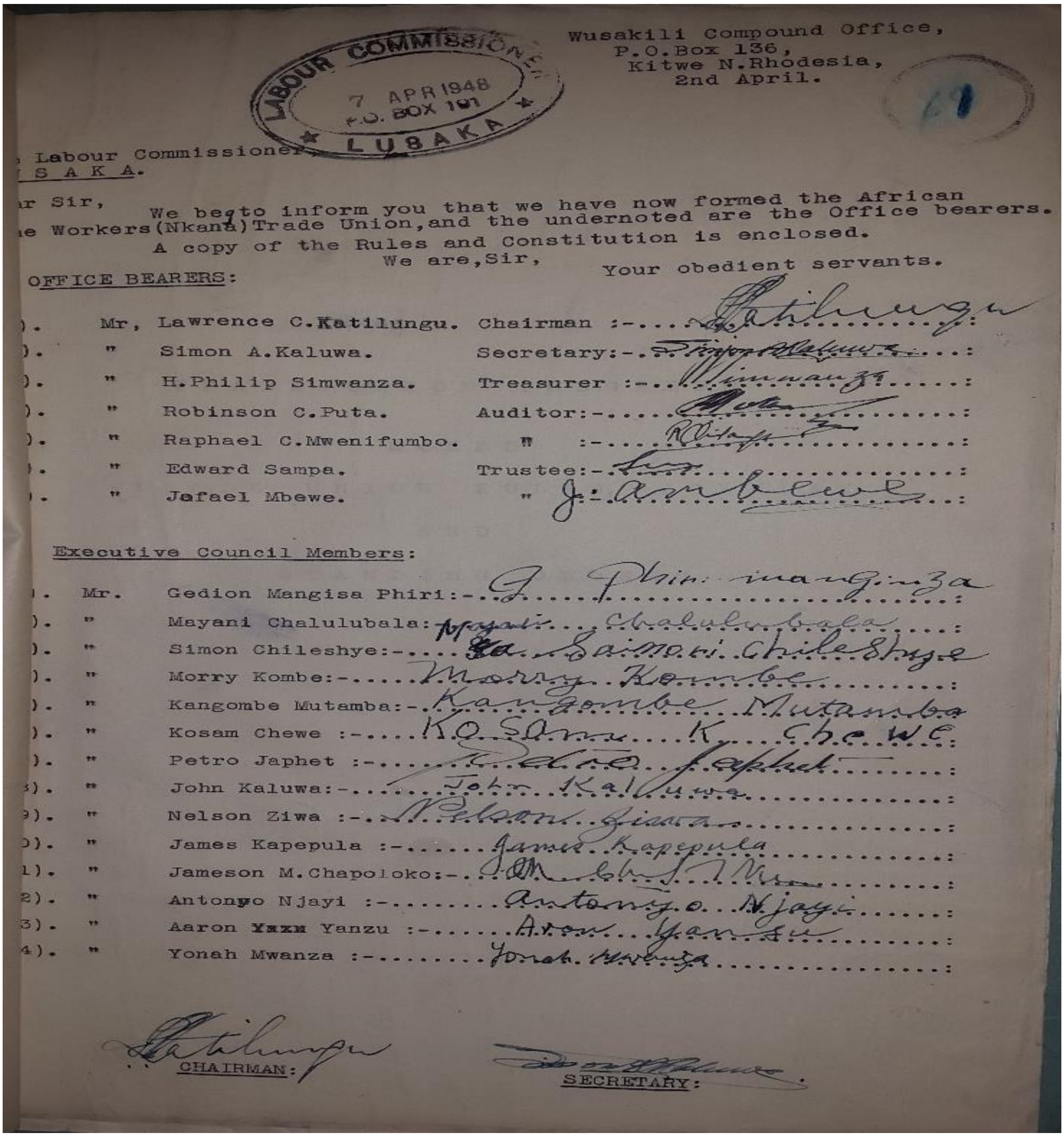
[324] *Ibid.*

[325] Berger, *Labour, Race and Colonial Rule*, 91.

[326] *Ibid.*, 92.

[327] *Ibid*.

[328] As discussed elsewhere in this chapter, Nkana relied more on migrant African labour with mining experience from other mines in the Southern Africa region, and on European labour mainly from South Africa. There had been a series of strikes by these white workers during and after the First World War mostly against meagre wages. These workers brought ideas of labour activism and were already exposed to strikes. For further details about labour activism in the Southern Africa region up to the early 1930s, see L. Van Der Walt, 'The First Globalisation and Transnational Labour Activism: White Labourism, the 1WW, and the ICU, 1904-1934', *African Studies*, 66, 2–3 (2007), 223–51.



Wusakili Compound Office,
P.O.Box 136,
Kitwe N.Rhodesia,
2nd April.

LABOUR COMMISSIONER
7 APR 1948
P.O. BOX 101
LUSAKA

Labour Commissioner,
SAKA.

r Sir,

We beg to inform you that we have now formed the African
e Workers (Nkana) Trade Union, and the undernoted are the Office bearers.
A copy of the Rules and Constitution is enclosed.

We are, Sir,
Your obedient servants.

OFFICE BEARERS:

).	Mr,	Lawrence C.Katilungu.	Chairman :-...........:
).	"	Simon A.Kaluwa.	Secretary:-..........:
).	"	H.Philip Simwanza.	Treasurer :-.........:
).	"	Robinson C.Puta.	Auditor:-............:
).	"	Raphael C.Mwenifumbo.	" :-.................:
).	"	Edward Sampa.	Trustee:-............:
).	"	Jafael Mbewe.	" ....:

Executive Council Members:

.	Mr.	Gedion Mangisa Phiri:-..........:
).	"	Mayani Chalulubala:..........:
).	"	Simon Chileshye:-..........:
).	"	Morry Kombe:-..........:
).	"	Kangombe Mutamba:-..........:
).	"	Kosam Chewe :-..........:
).	"	Petro Japhet :-..........:
8).	"	John Kaluwa:-..........:
9).	"	Nelson Ziwa :-..........:
10).	"	James Kapepula :-..........:
11).	"	Jameson M.Chapoloko:-..........:
12).	"	Antonyo Njayi :-..........:
13).	"	Aaron ~~Yxzx~~ Yanzu :-..........:
14).	"	Yonah Mwanza :-..........:

CHAIRMAN:

SECRETARY:

Figure 2.3: Office bearers of the newly formed African Mineworkers (Nkana) Trade Union, 2 April 1948. Source: NAZ MLSS 1/26/18, attachment to letter from Labour Commissioner, Lusaka, to the Chief Secretary–Labour Department, Lusaka, 8 April 1948.

Following the example by Africans at Nkana, African miners at Nchanga, Mufulira and Roan formed their own unions. In May 1949, the four African mineworkers' unions were merged to form the Northern Rhodesia African Trade Union, commonly referred to the African Mineworkers' Union (AMU), with its head office at Nkana-Kitwe.[329] Lawrence Katilungu, from Nkana, became the first President of the Union (see Appendix IX, for the list of former AMU/MUZ presidents). In August of the same year, the Chamber of Mines signed, on behalf of RAA and RST, an agreement recognising the AMU as representing the interests of both

[329] Mijere, 'One Industry, One Union', 381.

companies' workers. By then, the AMU had a membership of about 19,000 out of a total of 33,656 black miners in the Copperbelt mines.[330] Nkana was the largest branch of the AMU with 7,068 members.

Between 1950 and 1953, the AMU made two major gains. To begin with, the AMU managed to gain an average wage increase of 70% for daily paid African workers through a series of negotiations and arbitrations (see section 2.5 for details). In 1953, African workers in the Copperbelt mines overwhelmingly voted for the abolishment of the TR system in the copper mines.[331] The mining companies wanted to maintain the TR system parallel to the African Union to weaken the AMU.[332] But through the power of the ballot, the AMU managed to get rid of the TR system.

Despite the foregoing semblance of unity, the AMU like the NRMWU, experienced intra union wrangles, leading to the formation of the Mines African Staff Association (MASA).[333] The idea of forming MASA was spearheaded by clerks and interpreters at Nkana shortly after the AMU was formed. The key individual behind the formation of MASA and its first Secretary General was Godwin Mbikusita Lewanika from Nkana mine.[334] The clerks and interpreters argued that since they occupied senior posts, they should not belong to the same union as daily-paid workers. In May 1953 the mining companies and Government were notified of the formation of the Rhokana African Staff Association and similar branches were extended to the other copper mines. Despite welcoming the industrial politics of MASA, the mining companies only officially recognised the Union on 3 December, 1955, after the African Advancement memorandum.[335] The mines delayed recognising MASA 'because of its small membership' and their original agreement with the AMU, which recognised the latter as the sole representative of African mineworkers.[336]

---

[330] NAZ 11/57/H, NRG*, Report of the Commission Appointed to Inquire into the Unrest in the Mining Industry in Northern Rhodesia in Recent Months*, 14; Berger, *Labour, Race and Colonial Rule,* 92.
[331] Mijere, 'One Industry, One Union', 382.
[332] *Ibid*.
[333] Berger, *Labour, Race and Colonial Rule,* 96.
[334] Henderson, 'Labour and Politics in Northern Rhodesia', 227.
[335] NAZ 11/57/H, NRG*, Report of the Commission Appointed to Inquire into the Unrest in the Mining Industry in Northern Rhodesia in Recent Months*, 19.
[336] *Ibid*., 147; Mijere, 'One Industry, One Union', 383.

2.5 Rhokana and the Korean Crisis, 1950–1953

Investment, production, marketing, sales and taxation in the copper industry were all significantly affected by the Korean War.[337] Washington and London passed legislation for appropriation on the basis of immediate need for copper to conduct the war in Asia.[338] Soaring demand for copper led to a shift in policy strategies, giving birth to a new era of modernisation and expansion in the copper mining industry. This new era was characterised by, among other things, an emphasis on fostering new techniques for the discovery of mineral deposits, as the USA felt that for security reasons, such as combating the spread of Communism, she should be prepared to invest in copper ventures abroad during the Cold War. This led to long-term trade agreements with producers at high prices that would assure them (producers) of better profit margins compared to the Second World War, when the price of copper on the LME was fixed. Accordingly, two government departments, the Reconstruction Finance Corporation and Economic Corporation Administration, were established with over US$170 million, in direct loans 'that would increase the nation's copper-mining capabilities by about 25%', and encourage investment abroad.[339] The price of copper was increased from about 17 cents to 24.5 cents per pound, while the two cents tariff on copper was removed to encourage imports.[340]

The Korean War gave the mining companies a powerful impetus for the pursuit of their long-range objectives. Among American companies abroad, the AMC, later American Metal Climax (AMAX), in Northern Rhodesia benefited considerably from a US Government loan of about US$12 million, with a contract to supply 50 million pounds of copper per year from 1951 to 1953.[341] One of the major benefits to Rhokana during this period was a loan worth £8 million to complete its Power Interconnection Scheme to cater for fuel and power shortages.[342] The loan was partly repaid in supplies of copper and cobalt to the US Government. Meanwhile, the consumption of copper in the USA more than tripled with demand surpassing supply in 1953 despite production being maintained at 55%.

[337] For a discussion of the causes and course of the Korean Crisis, see C. Locher, 'The Conflict with North Korea/North Korea as a source of Conflict: An analysis from a peace and conflict resolution studies perspective' (PhD Thesis, Fern Universitat Hagen, Berlin, 2008), 12–13; O. Chang-II, 'The Causes of the Korean War, 1950-1953', *International Journal of Korean Studies*, 14, 2 (2010), 28–9.
[338] Navin, *Copper Mining and Management*, 147.
[339] *Ibid.*, 147.
[340] *Ibid.*, 146.
[341] *Ibid.*, Table 14.1, 148.
[342] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts together with Statement by the Chairman, 30 June 1953* (Kitwe: Rhokana Corporation Head Office, 1953), 4.

Nkana and the other Copperbelt mines were ready to produce copper to meet the demands of the Korean Crisis. Even so, the Copperbelt mines could not escape labour, power and transport problems. For many years, these mines relied on power stations and smelters which mainly depended on coal supplies from Wankie Colliery in Southern Rhodesia. After the Second World War, however, coal supplies from Wankie were irregular, not because of any lack in reserves, but due to strikes and equipment problems coupled with shortage of rolling stock on the Rhodesia Railways.[343] The shortfalls were severe, at times forcing the mines to burn firewood. The situation worsened between 1950 and 1951, when coal deliveries from the Wankie Colliery to the Copperbelt mines dropped from a monthly average of 40,700 tons to 37,000 tons.[344] In addition to these problems, Rhokana was now mining at a greater depth, as top-layer deposits were worked out. In 1953, one shaft at Nkana was already 2,370 feet deep, making this mine one of the deepest on the Copperbelt.[345] With increased depth, conditions deteriorated, aggravated by flooding and lower ore grades. The grade of ore hoisted dropped from an average of 3.6% copper in 1936 to 2.8% in 1953.[346] As a result of all these problems, production costs per long ton of copper increased from an average of £33 between 1946 and 1949 to £57 between 1950 and 1953.[347] As production and transport costs increased, Nkana's profitability had declined by the start of the Korean War. Three major developments turned the situation around. The devaluation of the pound sterling, coupled with the Korean Crisis brought about higher copper prices and greater demand. Copper prices soared in London from an annual average of £118.67 per long ton between 1946 and 1949 to almost double at an annual average of £228.88 between 1950 and 1953.[348] The price of copper per ton quadrupled, far exceeding any increase in production costs.

Secondly, in order to compensate wage increases, machinery was substituted for labour.[349] The formation of the AMU in 1949 had increased the bargaining power of the black workers who fought for better wages and conditions of service. In 1950, a deadlock between the AMU and

[343] Phimister, *Wangi Kolia*, 100–1, 127.
[344] ZCCM 19.2.4F, *Rhodesian Anglo American Corporation Limited: Report of the Directors and Statement Accounts, 30 June 1951* (Kitwe: Head Office, 1951), 3.
[345] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts together with Statement by the Chairman, 30 June 1953*, 13.
[346] ZCCM 3.8.2F, *Rhokana Corporation Limited: Directors' Report and Statement of Accounts for the Year ended 30 June 1936* (London: Rhokana Head Office, 1936), 15; ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts together with Statement by the Chairman, 30 June 1953*, 13.
[347] ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme*, Table 7.
[348] Gregory, *Ernest Oppenheimer*, 456.
[349] Mhone, *The Political Economy of a Dual Labour Market in Africa*, 163, 174.

the mining companies over the need for an increase in wages resulted in a series of commissions of inquiry. The most important of these was Guillebaud Commission, which recommended a wage increase of 77% for surface and 63% for underground black workmen across the Copperbelt mines.[350] Thus, the cost per African per shift worked at Nkana mine increased from approximately 3.87s in 1950 to 7.09s in 1953 while the ratio of European to African wages fell from 28:1 to 18:1 in these years.[351] Table 2.7 shows that the turnover rate of African labour in the four mines declined from 72.23% in 1949 to 56.60% in 1952, while the percentage of married men increased as a result of a drive towards the stabilisation of black labour. But even as the mechanisation and the stabilisation of labour improved the efficiency reliability of African workers, some labour was discharged to reduce costs. Nkana, though continued to rely on both stabilised labour and migrant labour compared to Roan and Mufulira, which relied more on the former. This can be seen from the percentage of married men which is more or less stable at Nkana, but growing in the other three mines, if less so at Nchanga, between 1948 and 1952. By comparison, married men tended to work longer periods than single men, not only because of the former's wider responsibilities to their families but also being accompanied by their wives.[352] But single men were cheaper to maintain than married men. Stabilised labour comprised of married men, while migrant labour consisted of more single men. Therefore, Nkana relied on both stabilised labour and migrant labour to offset the higher cost of the former.

[350] *Ibid.*, 139.
[351] ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme*, 4; Daniel, *Africanisation, Nationalisation and Inequality*, 71.
[352] Ferguson, *Expectations of Modernity*, 53–8.

Table 2.7: Turnover and Percentage of Married African Employees on the Copperbelt mines, 1948-1952.[353]

Mine	**1948**	**1949**	**1950**	**1951**	**1952**
Roan					
No. Employed	10,782	11,136	11,275	10,359	10,074
% Married	54.40	49.40	53.75	58.50	63.65
Mufulira					
No. Employed	7,526	7,734	8,769	8,548	8,893
% Married	56.40	58.30	61.42	62.13	62.84
Nchanga					
No. Employed	4,155	4,559	5,449	5,826	5,907
% Married	44.32	45.78	52.89	58.27	55.27
Nkana					
No. Employed	10,052	10,227	10,837	11,295	10,862
% Married	51.13	44.56	45.50	45.47	51.33
Turnover %	65.22	72.23	56.31	57.90	56.60

Nkana and the Copperbelt mines also undertook short and long term measures to ease fuel and transport problems. Wood burning enabled Nkana to save about 55,886 tons of coal per annum between 1950 and 1953. To facilitate Wankie Colliery's recovery, Nkana, Roan, Mufulira and Nchanga agreed to an increase in the price of coal from 14.3s per short ton to 19s.[354] Nkana made a further contribution to the Colliery by training and sending workers there to alleviate labour shortages. In 1951, the mines constructed a hydro-electric power station on the Lualaba River in the Belgian Congo to help meet their energy requirements.[355] Rhokana also acquired 25% shares in the Rhodesia Congo Border Power Corporation.[356] And finally, in March 1953, the AAC acquired a majority shareholding in the Wankie Colliery Company and took over its management.[357] Following the acquisition of the Wankie by the AAC, coal output increased to over 50,000 tons per month and in the third-quarter of 1953 supplied the Nkana mine with 74% of its requirements.[358]

Because of these combined factors, the period between 1950 and 1953 saw greater returns for the Copperbelt mines than ever before. Total copper production was 1,236,232 long tons of

[353] Table 2.7, compiled from NAZ ML 8/4/18, Northern Rhodesia Mines Department (hereafter NRMD), *Annual Report for the Year 1952* (Lusaka: Government Printers, 1952), 25; ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme*, 28.
[354] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts together with Statement by the Chairman for the Year ended 30 June 1953*, 4.
[355] Gregory, *Ernest Oppenheimer*, 459.
[356] *Ibid*.
[357] Phimister, *Wangi Kolia*, 117.
[358] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts together with Statement by the Chairman for the Year ended 30 June 1954* (Kitwe: Rhokana Corporation Head Office, 1954), 4.

which 25.33% came from Rhokana, 25.07% from Mufulira, 24.81% from Nchanga and 24.79% from Roan.[359] By this time, the other three big mines were catching up with Nkana in terms of copper production, especially Nchanga, which surpassed Roan and was closing in on Mufulira. Nonetheless, Nkana made more profit than the three Copperbelt producers for two reasons. In addition to copper production, Nkana produced and sold 6,889 short tons of cobalt alloy containing 2,803 short tons of cobalt metal whose price increased from an annual average of 15.6s per pound in 1949 to 20s between 1950 and 1953.[360] The second contributing factor was the fact that Rhokana owned substantial shares in other mines. In this period combined retained profits from Mufulira and Nchanga amounted to £2,221,482 or one-third of the total net profit.[361]

Rhokana's income increased throughout the Korean Crisis. Net profits from copper and cobalt after taxation rose from about £6.7 million in 1951, through to £7.8 million in 1952, to £8.4 million in 1953. The corresponding final declared dividend rates were over 150%, 200% and 225%, respectively.[362] Similarly, the holding company, RAA, reported a £6.5 million record gross profit increase to £21,330,000, while its final declared dividend rose from 55% in 1951 to 62.5% in 1952.[363] The good returns were not only experienced by these multinational mining companies. Roberts notes that between 1947 and 1953, the value of copper sales for the Copperbelt mines more than tripled from £31 million to £116 million, while mining taxes accounted for 57.5% of Northern Rhodesia's total revenue.[364] Indirect and direct benefits from the mining industry in the form of local expenditure and taxation increased from £21,164,448 in 1951 to a record £38,141,134 in 1953.[365]

2.6 Conclusion

The corporate structure and profitability of Rhokana in particular and the copper industry of Northern Rhodesia in general, were transformed by the effects of the Great Depression, Second World War, Korean Crisis, and the emergence of the dual labour structure between 1928 and

---

[359] NAZ ML 8/4/18, NRMD, *Annual Reports*, 1951–53; ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts together with Statements by the Chairman*, 1950–53; ZCCM 19.2.4F, *Rhodesian Anglo American Corporation Limited: Reports of the Directors and Statements of Accounts*, 1950–53; Phillips, 'Roan Antelope', 302.
[360] NAZ ML 8/4/18, NRMD, *Annual Reports*, 1951–53.
[361] *Northern News*, 24 November 1954.
[362] *Birmingham Post*, 22 October 1951; *Liverpool Daily Post*, 22 October 1951; *Northern News*, 23 October 1951; *City Press*, 24 October 1952; *Northern News*, 24 November 1954.
[363] *Ibid*.
[364] Roberts, 'Notes towards a Financial History of Copper Mining', 356.
[365] NAZ ML 8/4/18 NRMD, *Annual Reports*, 1951–53.

1953. In the period under review, Nkana was the centre of the labour movement in the Copperbelt mines. Looking at the causes and course of the 1935 and 1940 African strikes, black workers at Nkana proved the most militant of all the Copperbelt mines. The events leading to the formation of the NRMWU and the AMU suggest that the Nkana's white and black workers were prominent leaders in the industrial politics of the Copperbelt mines. Not surprisingly, then, when the next chapter discusses the role of the mining sector in the Federation and the first years of independent Zambia, "all eyes were set on Nkana".

Chapter Three: Rhokana/Nkana during the Federation and first years of Independent Zambia, 1954 – 1969

3.1 Introduction

Between 1954 and 1969, Rhokana was transformed by new developments in the regional political economy. On the 1st of September 1953 the Federation of Rhodesia and Nyasaland was formed, encompassing Southern Rhodesia (Zimbabwe), Northern Rhodesia (Zambia) and Nyasaland (Malawi). Federation lasted up to 1963. In the following year, Northern Rhodesia and Nyasaland became independent while Southern Rhodesia remained a settler colony. This chapter relates the corporate strategy and profitability of Rhokana to the political economy of the Federation and the new Zambian state. The chapter also examines the part played by Rhokana's management in the politics of African Advancement on the Copperbelt, and the impact of Zambianisation on labour at Nkana. The chapter stops in 1969 because after nationalisation in the same year, a new corporate structure was introduced in the Zambian mining industry.

3.2 Rhokana during the Federation of Rhodesia and Nyasaland, 1954–1963

The birth of the Federation in 1953 had a long gestation period dating back to the 1930s. At that time, the Copperbelt mining companies opposed the idea of closer cooperation among the three Central African Territories because they did not favour the colour bar policies promoted in industrial relations in Southern Rhodesia. Rhokana, Roan and Mufulira argued that labour policies in Southern Rhodesia were 'completely opposed to the policy of the [Northern Rhodesian] mining companies and to the native policy of the [C]olonial [O]ffice' which 'allowed and encouraged [the native] to do such work as he [wa]s capable of doing and no colour bar industrial legislation exist[ed]'.[366] The mining companies further emphasized that the principle of closed shop was not in operation in Northern Rhodesia since they refused to countenance it in spite of persistent demands by the NRMWU. They favoured the principle of open shop which they enshrined in their agreement with the Northern Rhodesia Mineworkers' Union (NRMWU) to 'prevail at all mines in the Copperbelt for a period of two years from the 20th [of] September 1937'.[367] In a letter dated 17 March 1938, to the Secretary of the Bledisloe

[366] ZCCM 16.2.3C, The Copperbelt Companies' Submissions to the Royal (Bledisloe) Commission appointed to Report whether any, and if so what, form of closer cooperation between Southern Rhodesia, Northern Rhodesia and Nyasaland is desirable and feasible, 5 April 1938, 17.
[367] *Ibid.*, 18.

Commission, Rhokana's Management stated that it favoured 'a continuance of the separate administration of Northern Rhodesia'.[368] Partly because of these objections, the idea of amalgamation of Rhodesia and Nyasaland failed.

In the late 1940s and early 1950s, the Colonial Government and settlers revived the idea of closer association of the three Central African territories. This time, the idea of a federation coincided with the change in leadership and management styles in the Copperbelt mines, and the Copperbelt mining companies now supported the vision. In this regard, Navin noted that 'the old guard, most of them the surrogate heirs of the founders, was passing and was being replaced mostly by engineers promoted from within'.[369] By then, Ernest Oppenheimer who was the Chairman of Rhokana's parent company Anglo American Corporation (AAC), was close to retirement. His son, Harry Frederick Oppenheimer, was becoming instrumental in the affairs of AAC in Central Africa. H.F. Oppenheimer sat on the Board of Directors of the AAC and Rhokana from 1947 onwards.[370] In addition, he was elected Member of Parliament for Kimberly on the ticket of the opposition (white-dominated) United Party in South Africa in 1948.[371] In 1951 Oliver B. Bennett, who had worked as an engineer for Rhokana since 1936, was appointed General Manager of the Corporation.[372] Meanwhile, Chester A. Beatty retired as Rhodesian Selection Trust (RST) Managing Director and was succeeded by Ronald Prain, who was also associated with the operations of RST's mines 'for virtually his entire working life'.[373]

Compared to the old-guard who were generally conservative in their style of management and policy, the new leaders were liberal thinkers with new ideas in line with current trends in the political and economic environment. Harry Oppenheimer 'believed apartheid was an impractical solution to the problem of achieving a successful multi-racial society'.[374] Consequently, he supported the idea of partnership among the races in the Federation, hoping it would provide a model for South Africa. Like Oppenheimer, Bennett was a liberal of sorts,

---

[368] ZCCM 16.2.3C, attachment to the Bledisloe Commission's Report: Letter from S.S. Taylor, Managing Director, Rhokana Corporation Limited, London, to The Secretary, Rhodesia-Nyasaland Royal Commission, Dominions Office, London, 17 March 1938.
[369] Navin, *Copper Mining and Management*, 156.
[370] ZCCM 12.7.2F, *Rhokana Corporation Limited: Directors' Report and Statement of Accounts for the Year ended 30 June 1947* (London: Rhokana Corporation Head Office, 1947), 1.
[371] Cohen, 'Business and Decolonisation in Central Africa Reconsidered', 643.
[372] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1962* (Salisbury: Rhokana Head Office, 1962), 13.
[373] Money, 'No Matter How Much or Little They Have Got, They Cannot Settle Down', 162–3.
[374] Cohen, 'Business and Decolonisation in Central Africa Reconsidered', 644.

politically close to Roy Welensky, who later became Federal Prime Minister. In 1962, Bennet resigned as General Manager of Rhokana upon being appointed Minister for Central African Federation Affairs in the USA[375]

The managers of the Copperbelt mines felt that their mines could benefit from the idea of partnership among races.[376] Their liberal ideology fitted squarely with the British Government's idea of partnership among races in Central Africa. To the British Government, federation was viewed 'as a middle way between the extremes of Black nationalism to the north and Afrikaner racial ideas to the South'.[377] In this vein, federation would promote a multiracial partnership in the three Central African territories. Through a limited franchise, 'the Federation would, in theory, allow for gradually increasing African political participation, while preserving effective white hegemony for the foreseeable future'.[378] In particular, the RST management felt that close association, especially between the two Rhodesias, would be a means of curbing the 'growing power [and demands] of settler politicians, many of whom were sponsored by, or linked to, the [NR]MWU'.[379] Under these conditions, federation would 'create a more balanced political climate, embracing a broader range of local opinion'.[380] Besides, federation would be a way of strengthening minority control through closer association, and ensuring stability in the three Central African territories.[381]

There were also compelling economic factors for Rhokana and the Copperbelt mines to accept the idea of a federation. Firstly, they were attracted by coal and transport networks in Southern Rhodesia.[382] Nyasaland was to continue being one of the main sources of cheap but productive African labour, given that Nyasas were among the most experienced Africans in the Southern African mining industry.[383] By joining the Federation, Northern Rhodesia's Copperbelt mines

---

[375] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1962*, 13.
[376] Partnership entailed that Africans and Europeans would unite and work together in harmony; promote the interests of all races; and reduce tension among races and, therefore, promote peace. Partnership in the mining and other industries was to be achieved through African advancement. For further details, about partnership in the Federation, see C. Pratt, 'Part Two: Why Federation was Supported', in C. Leys and C. Pratt (eds.), A New Deal in Central Africa (New York: Frederick Praeger, 1960), 98–117; L.W. Bowman, *Politics in Rhodesia: White Power in an African State* (Cambridge, MA: Harvard University Press, 1973).
[377] Butler, 'Business and British Decolonisation', 461.
[378] *Ibid.*, 461.
[379] *Ibid.*, 462.
[380] *Ibid*.
[381] ZCCM 16.2.6D, *Rhodesia Selection Trust: Discussion Notes*, 7 September 1951.
[382] Butler, *Copper Empire*, 206; Phillips, 'Roan Antelope', 380.
[383] M.M. Burdette, 'Industrial Development in Zambia, Zimbabwe and Malawi: The Primacy of Politics' in Z.A. Konczacki, J.L. Parpart and T.M. Shaw (eds.), *Studies in the Economic History of Southern Africa, Vol. 1, The Front-line States* (London: Frank Cass and Co. Ltd., 1990), 80-5.

would have unfettered and preferential access to Nyasa labour, thus be able to elbow out South Africa which had so long been their biggest threat and competitor in this regard. Secondly, the Copperbelt companies felt that white control of the three territories would assure foreign investors that Central Africa was a safe place in which to invest.[384] The AAC and RST believed that in this way the region would attract overseas capital, which was crucial for boosting the economic profile of the territory generally and the mines in particular.[385]

For these reasons, the mining companies offered financial support towards the formation of the Central African Federation. Between 1950 and 1953, the AAC and RST contributed a shared total of £10,000 to the United Central Africa Association for Central African Federation (UCAA), led by Godfrey Huggins and Roy Welensky as President and Vice President respectively, to campaign for the Federation in the territories.[386] Meanwhile, by 1952, the two mining houses shifted their offices from London to Lusaka. There were two major reasons why the companies transferred their domicile from London to Lusaka. First, the fear of double taxation, and second, to fully identify with the host nation.[387] Rhokana followed in the footsteps of her parent company, AAC, and became incorporated in Northern Rhodesia on 11 May 1954, and ceased to be incorporated in Britain.[388] In 1956, the AAC and RST shifted their corporate offices to Salisbury, then the federal capital. Rhokana also transferred its head office to Salisbury on 5 August 1957, where the AAC had an established office at Charter House (see Figure 3.1).[389]

---

[384] Pratt, 'Part Two: Why Federation was Supported', 49.
[385] *Ibid*.
[386] Phillips, 'Roan Antelope', 346.
[387] Prain, *Reflections on an Era*, 100–2; Butler, *Copper Empire*, 202–3.
[388] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts together with Statement by the Chairman, 30 June 1954* (Kitwe: Rhokana Corporation Head Office, 1954), 6.
[389] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1957* (Salisbury: Rhokana Corporation Head Office 1957), 14.

Figure 3.1: Charter House, the headquarters of British South Africa Company and Anglo American Corporation in Salisbury, Southern Rhodesia. The building cost more than £500,000, and had three floors at the front and ten at the back. Its total office accommodation of 61,365 square feet was shared by the two big companies. Source: *The Rhodesia Herald*, 8 September 1955.

3.2.1 Rhokana and the Federal Economy

Federal corporate tax came from seven industries namely mining, agriculture, manufacturing, construction, transport, communications, and service. Nkana and the Copperbelt mines were the major sources of Federal and territorial revenues in the form of income tax and heavy customs duties on imported supplies. The capital raised in this manner funded Federal projects, infrastructure development, and provisioning of services in member states.[390] Nkana and the Copperbelt mines paid taxes both to the Federal Government, as well as a surcharge in the form of additional tax to the Northern Rhodesian Government.[391] In 1954, the initial tax rate imposed by the Federal Government on copper profits was 7.6s in the pound and remained identical to the previous Northern Rhodesian Income Tax Ordinance.[392] The Copperbelt mines also

[390] Berger, *Labour, Race and Colonial Rule*, 8–9.
[391] While Federal Income Tax was charged on company profits, Northern Rhodesia Territorial Surcharge was deductible from declared dividends at 1.3s in the pound (ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts together with Statement by the Chairman, 30 June 1954*, 3).
[392] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Report and Accounts, 30 June 1954*, 2.

indirectly provided much of the tax paid by the Rhodesia Railways and the BSA Company in the territory.[393]

The BSA Company was also a big taxpayer. The Federal Government guaranteed the terms of the 1950 Agreement that the BSA Company entered into with the British and Northern Rhodesian governments. The agreement allowed the BSA Company to enjoy its royalties until 1986.[394] In return, the Northern Rhodesia Government was awarded 20% of the BSA Company royalties.[395] Under this new agreement, 'royalties on the copper content of mined ore were payable according to a formula of 13.5% of the average London Metal Exchange [LME] quotation per long ton, less £8'.[396] Income tax paid to the Federal Government by the Copperbelt mines, BSA Company, and their employees averaged about 28% of total revenue per year.[397]

By 1954, Rhokana was already a large and complex organisation, bigger than any of the other mines on the Copperbelt.[398] Its overall operations were enormous by world standards. Nkana mine and mill handled over 360,000 tons of copper per month, while the smelter processed about 16,000 tons. Rhokana also smelted copper from Nchanga mine. By comparison, Mufulira had the second largest smelter on the Copperbelt, capable of processing 10,000 tons of copper per month.[399] Rhokana had the largest copper refinery on the Copperbelt, capable of handling over 13,000 short tons of copper per month, while its cobalt plant produced 100 short tons per month.[400] Additionally, among the mines in the Federation, Rhokana was the largest employer, with about 10,000 workers.[401] The biggest corporation in the mining industry (see Figure 3.2), Rhokana generated more tax revenue than any other firm in the Federation. At the same time, Rhokana was the consulting engineer to all the Copperbelt mines. Nchanga and Mufulira were not only among the largest mines in the Federation but also in the world, and Rhokana owned

[393] Berger, *Labour, Race and Colonial Rule*, 9. As indicated in Chapter Two, the Copperbelt mines were the biggest customers of Rhodesia Railways and BSA Company-owned Wankie Colliery. Therefore, the taxes paid by these two companies depended on the volume of business they would have done with Rhokana and the Copperbelt mines.
[394] NAZ 11/57F, United Nations, Economic Commission for Africa, and Food and Agriculture Organisation (hereafter UN/ECA/FAO), *Report on the Economic Development of Zambia* (Ndola: Falcon Press Limited, 1964), 9.
[395] *Ibid*.
[396] Berger, *Labour, Race and Colonial Rule*, 10.
[397] *Ibid.*, 9.
[398] ZCCM 3.8.2A, Nkana Division-Board of Directors: Review of Operations from 1948 to 1954, 6.
[399] *Ibid*.
[400] *Ibid*.
[401] *Ibid*.

about 33.6% and 26.6% shares in them, respectively. These shares provided about one-third of Rhokana's net profits between 1953 and 1963.

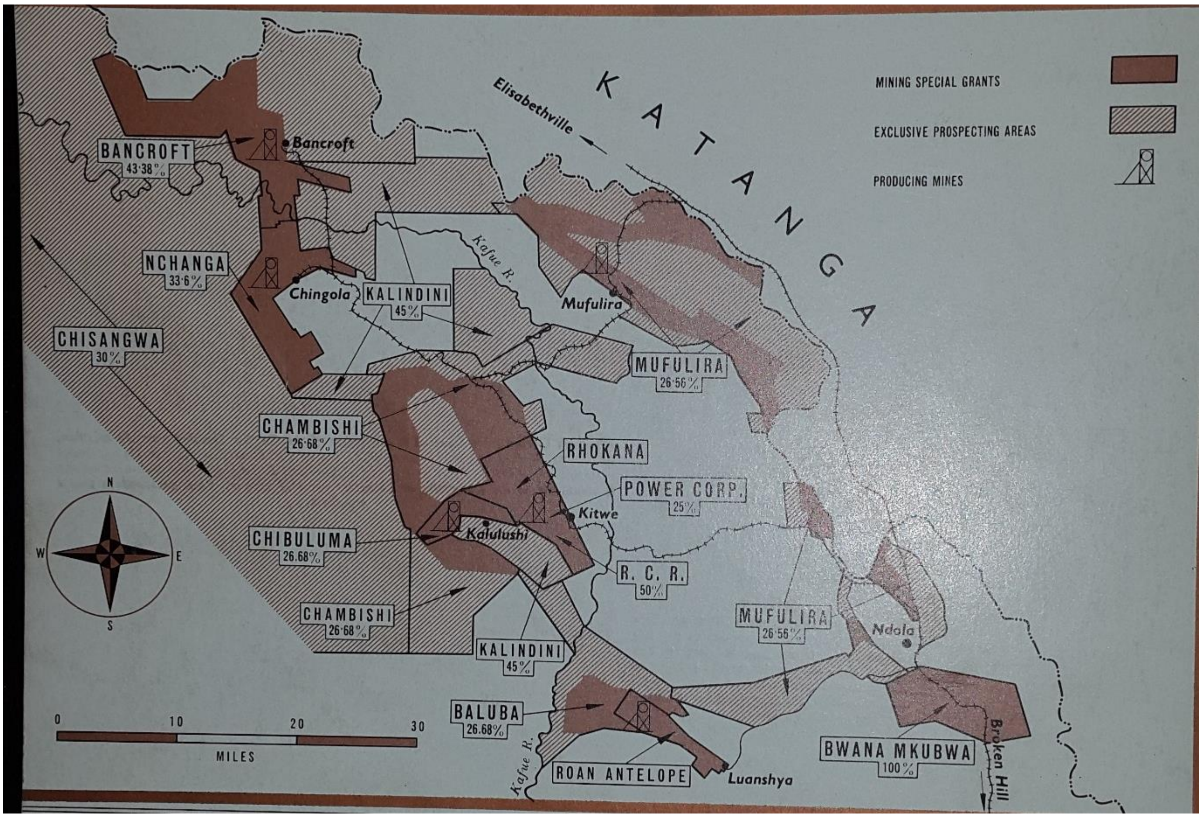


Figure 3.2: Rhokana Corporation interests in the Copperbelt, 1954. The shares were as follows: Nchanga mine 33.6%, Bancroft mine 43.38%, Kalengwa Exploration Limited 45%, Bwana Mkubwa mine 100%, Rhodesia Copper Refineries 50%, Rhodesia Congo Border Power Corporation 25%, Mufulira mine 26.56%, Chibuluma mine 26.68%, Chambishi mine 26.68%, Baluba mine 26.68%, and in Chisangwa mine 30%. Source: ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1960* (Salisbury: Rhokana Head Office, 1960), 22.

3.2.2 Rhokana's Corporate Strategy and Profitability

Nkana's profits during the Federal period were affected by two major factors. These were the increase in the cost of sales and the fluctuating price of copper on the LME. Cost of sales constitutes two major elements, namely production and transport costs. As discussed in Chapter Two, during the Great Depression and the Second World War, Nkana and the Copperbelt mines were generally low-cost producers. But in the 1950s, the cost of production at Nkana together with transport to either Europe or the USA had risen to the point where they were intermediate between low and high cost-producers; that is, about £160 per long ton of copper.[402] There were two major reasons for this increase in the cost of production. Labour had become more expensive and technical conditions underground were deteriorating despite improved mechanisation, causing expenditure on production to double. Table 3.1 compares the average

[402] NAZ 11/57F, UN/ECA/FAO), *Report on the Economic Development of Zambia*, 42.

price of copper on the LME and production cost per long ton at Nkana mine between 1952 and 1956.

Table 3.1: Average Price of Copper on the LME and Production Costs per Long ton at Nkana mine, 1952-1956.[403]

Years	**1952**	**1953**	**1954**	**1955**	**1956**
Average Price of Copper per Long Ton on the LME: (£)	259.5	256.3	249.3	351.7	328.7
Total Production costs per Long Ton at Mine (£)	54.1	63.3	62.8	76.4	83.4
Mining Costs:					
Total Mining Costs (£)	27.8	34.0	32.7	41.9	49.7
Mining Costs Excluding African Labour (£)	24.0	29.2	27.6	34.8	39.6
Mining African Labour Costs* (£)	3.8	4.8	5.1	7.1	10.1
Other Production Costs:					
Total Other Costs (£)	26.3	29.3	30.1	34.5	33.7
Other Costs Excluding African Labour (£)	19.9	21.8	22.3	25.2	22.0
Other African Labour Costs* (£)	6.4	7.5	7.8	9.3	11.7
Percentage Contribution of Certain Costs to the Total Production Costs:					
Total Mining Costs as Percentage of Total Production Costs	51%	54%	52%	55%	60%
Mining African Labour Costs as Percentage of Total Mining Costs*	14%	14%	16%	17%	20%
Total African Labour Costs as Percentage of Total Production Costs*	18.7%	19.4%	20.4%	21.5%	26.1%
Other Costs excluding African labour as Percentage of Total Production Costs	36.8%	34.4%	35.5%	33.0%	26.4%

Note: Total production costs per long ton of saleable copper, excluding copper bonus. Total mining costs were made up of costs of mineral extraction including underground African labour, costs of mineral processing, and costs of surface African labour (concentrator, smelter, refinery, cobalt department). Other production costs include expenditure on services (townships, administration and hospital), plant materials (stores), fuel and transport up to and within the mine.

Table 3.1 demonstrates that mining costs per ton of copper increased from 51% of the total production cost in 1952 to 60% in 1956. Production costs apart from African labour did not rise as much because of power costs actually fell.[404] These other costs fell from 36.8% of total production costs per long ton of copper in 1952 to 26.4% in 1956, leading Rhokana to assume that production costs excluding African labour per ton of copper would remain constant at least, up to 1961.[405] As a single unit, total African labour costs formed the highest proportion of total production costs. Labour costs at Nkana and in the other Copperbelt mines were relatively high for a number of reasons. Between 1952 and 1956, 40% of the total African labour force was employed on mining, meaning that increases in African labour costs had a big impact on overall mining costs.[406] Total African labour costs as a percentage of total production costs per long ton of copper increased from 18.7% in 1952 to 26.1% in 1956. In addition to improved rates of basic wages and copper bonuses, African wages increased substantially because of the

[403] Table 3.1, constructed from ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme*, Tables 7 and 9.
[404] ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme*, 24.
[405] *Ibid*.
[406] *Ibid.*, 23.

tendency by arbitrators to increase them to reduce disparities in the dual wage structure.[407] For instance, the cost of African labour per employee per annum at Nkana increased from about £160 in 1951 to £240 by 1956.[408]

European wages were also a large proportion of total production costs. Salaries paid to European workers were high compared to those received by United States miners, and higher than those paid in the Belgian-Congo, South Africa, Chile and Southern Rhodesia.[409] The annual average earnings per European at Nkana and in the other Copperbelt mines increased from £1,600 in 1951 to £2,200 by 1955.[410] This was attributed to improved rates of basic pay following consolidations of cost-of-living allowances and the higher rates of copper bonuses. From the figures above it can be seen that the ratio difference between European and African wages fell slightly from 10:1 in 1951 to 9:1 in 1955. However, European labour was nine to ten times more expensive than African labour. Phimister has noted that 'an increase of 50% in African emoluments only raised production costs by about 5%'.[411]

Nevertheless, Table 3.1 indicates that the rising cost of production was more than offset by the substantial increase in the price of copper from an annual average of about £259.50 in 1952 to £351.70 in 1955. Had the upward trend persisted, total African labour costs would have accounted for 43.3% of total production cost per long ton by 1961, but in fact the price of copper fell abruptly from the record high of £351.70 in 1955 to £328.70 in 1956.[412] Determined to reduce labour costs in order to offset rising production costs, Rhokana and other Copperbelt mines pressed for the partial substitution of African labour for European labour. African Advancement, as this policy was known, claimed to be one of opportunity for better and relatively high paying jobs for black miners, but in practice their wages were lower than those paid to Europeans in comparable jobs.[413] This marked the beginning of what Perrings calls the 'proletarianization of the new [black] middle class' as a cost-saving measure.[414] The role of Rhokana in the politics of African Advancement is discussed below.

[407] E. Oppenheimer, 'The Advancement of Africans in the Industry', *Optima*, 3, 3 (1953), 1.
[408] ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme*, 4.
[409] NAZ 11/57F, UN/ECA/FAO, *Report on the Economic Development of Zambia*, 42.
[410] *Northern News*, 9 May 1957.
[411] Phimister, 'Corporate Profit and Race in Central African Copper Mining, 1946–1958', 759.
[412] ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour, Cost Trends, Policy and Programme*, Table 9.
[413] Perrings, 'A Moment in the Proletarianization of the New Middle Class', 183–213.
[414] *Ibid*.

3.2.3 Rhokana and the African Advancement Policy

After a series of prolonged and inconclusive negotiations between the Mining Companies and the NRMWU, the African Advancement problem came to the boil from late 1953 onwards.[415] Prain announced that RST would advance Africans to certain jobs occupied by Europeans.[416] A similar announcement was made by the AAC, though in somewhat more guarded terms.[417] According to Butler, the AAC was hesitant in pursuing African Advancement with the NRMWU because it had to consider 'the impact changes in the labour policy [on the Copperbelt] might have on industrial relations in South Africa'.[418] In March 1954, Sir William Lawther, former head of the British National Union of Mineworkers, arrived on the Copperbelt on a peace-making mission.[419] During his stay, a joint statement by the NRMWU and the African Mineworkers' Union (AMU) was drawn up, welcoming African Advancement on the basis of equal pay for equal work and no fragmentation.[420] The NRMWU would only accept revision of the closed shop clause in their agreement with the companies, and allow dilution of labour if this principle was accepted by the mining companies.[421] The companies, however, were not willing to advance Africans and pay them European wages, which from their point of view, would defeat the whole object of the exercise: a lower overall wage bill.

On 27 August 1954, the Northern Rhodesia Government set up the Forster Board of Inquiry to examine the African Advancement question.[422] In evidence to this Commission, the NRMWU reaffirmed its stance as 'equal pay or nothing'.[423] Rhokana and the other Rhodesian Anglo American (RAA) companies accepted the conclusions of the Commission and resumed negotiations with the NRMWU. On 3 November 1954, Rhokana and the other members of the RAA group met with the NRMWU to discuss the African Advancement issue based on the

[415] *Northern News*, 31 January 1955.
[416] *Ibid*.
[417] *Ibid*.
[418] Butler, 'Business and British Decolonisation', 472–3.
[419] *Northern News*, 31 January 1955.
[420] T. Scannell, 'The African Advancement Agreement', *Horizon*, 3, 5 (1961), 6–7; *Northern News*, 31 January 1955.
[421] Scannell, 'The African Advancement Agreement', 6–7.
[422] The Commission was appointed in consultation with the mining companies to ascertain whether there was anything to prevent African employees from advancing to the full extent of their capacities in the copper mining industry. This was after the four-party talks on the issue of advancement involving representatives of the two groups of companies, the NRMWU and AMU broke-down and a deadlock ensued early in May the same year. For further details, see NAZ 11/57F, NRG, *Report of the Board of Inquiry into the Advancement of Africans in the Copper Mining Industry in Northern Rhodesia* (Lusaka: Government Printer, 1954), 20.
[423] *Northern News*, 31 January 1955.

findings of the Forster Commission.[424] At the meeting, Bennett, Rhokana's General Manager, informed the NRMWU's representatives that he had contacted Sir Ernest Oppenheimer, who in turn had given a policy statement setting the tone of negotiations with the Union. The policy statement re-stated the key principles of the AAC's advancement proposal. The AAC believed an enduring solution of the African Advancement problem could only be achieved with the cooperation and assistance of its European employees.[425] Another principle stated that the AAC would not quicken the rate of African Advancement at the expense of European workers, but would rather implement the policy gradually to give the necessary time for the substantial human and economic adjustments.[426]

On 4 November 1954, in the face of the continued refusal by the NRMWU to relax its attitude, the RST management served six months' notice of its intention to end its agreement with the Union.[427] While this issue was being discussed within the RST group, the AAC-owned mines led by Rhokana decided to meet the NRMWU again to discuss their advancement proposal.[428] At a meeting held on 22 December 1954, Bennett encouraged the NRMWU and the RST to be reasonable in their outlook.[429] On 21 January 1955, RST and the NRMWU met to discuss the former's advancement scheme.[430]

There were a number of differences and similarities between the proposed advancement schemes of RST and AAC. The fundamental difference was that the AAC-owned mines gave the NRMWU power to veto any proposal which they felt would be against the interests of their members.[431] RST opposed this proposal, as being against African Advancement. Another cardinal difference was that the RST group's scheme meant the relinquishment of five categories of work on a permanent basis, while the RAA group's proposal comprised two categories of jobs.[432] Categories of jobs in the RAA scheme were very similar to those jointly

---

[424] ZCCM 10.7.9A, Notes of the 3rd Meeting with the NRMWU and the Rhoanglo Mining Companies held at Kitwe on 3 November 1954.
[425] *Ibid*.
[426] *Ibid*. Other meetings were held on 13 and 22 December 1954.
[427] *Northern News*, 18 December 1954.
[428] *Ibid*.
[429] ZCCM 3.8.2A, Rhokana Corporation Limited: summary of Operations from December 1954 to February 1955, 6; ZCCM 3.8.2A, Rhokana Corporation Limited: summary of Operations from August to September 1955, 5–6.
[430] ZCCM 10.7.9A, Northern Rhodesia Mineworkers' Trade Union-General, Appendix A: Meeting between the NRMWU and the RST, 25 January 1955.
[431] ZCCM 10.7.9A, Record of 4th Meeting between NRMWU and the Rhoanglo Mining Companies held at the Chamber of mines on 16 December 1954.
[432] RST's five categories were (i) identical or ragged-edge jobs which included certain least-skilled jobs on the European schedule which could be given to Africans with less training, (ii) intermediate jobs which were certain other jobs within the European schedule, some of which could be simplified or subdivided, and be given to

submitted by the Copperbelt companies to the Forster Commission.[433] Because of these differences, Bennett accused the RST scheme of departing from the proposals put forward by both groups of companies jointly at the Forster Board of Inquiry.[434] RST's scheme was not only accused of having more categories of jobs but also containing the germ of continual dispute by leaving an allowance for the unions to negotiate for wages.[435] A suggestion which came from Rhokana and included in the RAA's scheme was that European workers in the lowest paying jobs would be given opportunities to advance in the industry. To this effect, the RAA companies set out to provide adequate facilities for the training of Europeans in lower posts, technical and skilled jobs that would make them fit for more advanced posts.[436] Other safeguards and guarantees promised to Europeans were that any member of the union in old age or poor health would not be displaced, and that European workers on probation at the time of signing the agreement would be given permanent jobs.[437]

These differences did not escape the notice of the members of the NRMWU and the Mines Officials and Salaried Staff Association (MOSSA).[438] The MOSSA announced its acceptance of the RAA/AAC's scheme and rejected the RST one.[439] The major similarity was that both groups of companies promised that no European miner would lose his job because of African advancement. On 30 January 1955, the NRMWU decided to hold a ballot among their members to decide 'whether they wished their Executive to adhere to their original mandate of "equal pay for equal work and no fragmentation" as a guiding principle in their negotiations with the companies on the subject of African Advancement', or abandon this principle and permit of

Africans after some training, (iii) certain identical/ragged-edge jobs which could be valued at rates to be negotiated with the AMU, (iv) certain categories of intermediate jobs which would require an upgrading of the then African schedule and would attract wages above the rates of the African and be fixed on the European rates and would be negotiated by both the NRMWU and AMU, (v) certain intermediate jobs with a supervisory element to be given to the MASA members whose rates would be negotiated with the MASA as well as the NRMWU and MOSSA. For more information, see ZCCM 10.7.9A, Statement Setting out the RST Group of Companies Policy with regard to African Advancement in their Copper Mines and their Proposals in order to Effect a Solution of the African Advancement Problem, 21 January 1955. RAA's proposed categories were (i) 13 identical/ragged-edge jobs, and (ii) 11 jobs which, although done by almost all Europeans were generally acknowledged to be within the capacity of the African. For details, see ZCCM 3.8.2A, Nkana Division: Directors Minutes of Meeting, 30 July 1955; *Northern News*, 1 August 1955.

433 For further details, see NAZ 11/57F, NRG, *Report of the Board of Inquiry into the Advancement of Africans in the Copper Mining Industry in Northern Rhodesia*, 1954, Appendix 3, 34–5.

434 ZCCM 3.8.2A, Rhokana Corporation Limited: Minutes of Meeting held on 4 March 1955, 7.

435 *Ibid*.

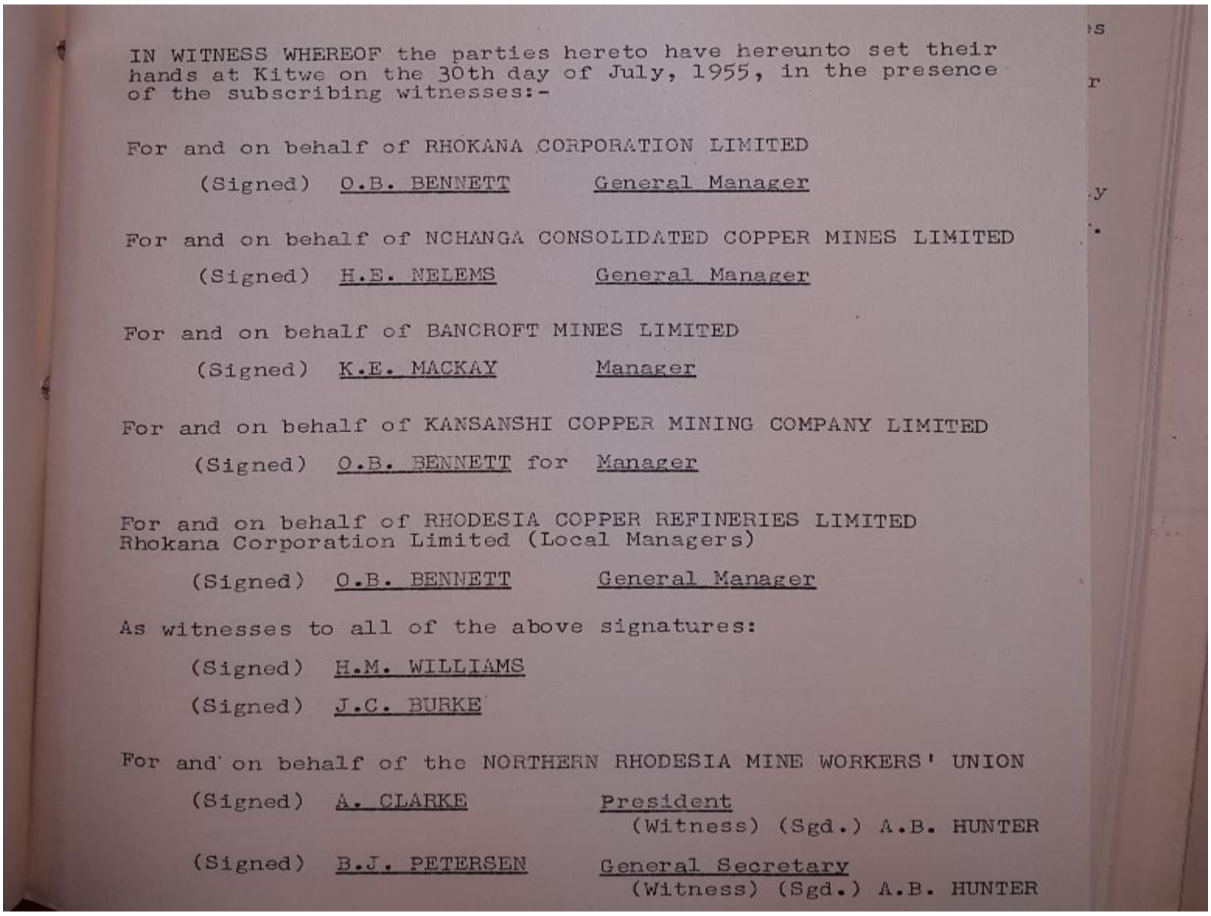
436 *Ibid.*, 8.

437 *Ibid*.

438 Ibid., 9.

439 *Ibid*.

concessions being made.[440] In the poll, 59.7% of the NRMWU's membership voted in favour of amending the mandate and allowing for dilution of labour.[441] A second ballot was held to see whether members recognized the implications of the first, and again, the majority remained in favour of conceding the jobs. Though the gap was narrow, the majority vote gave the negotiating parties power to push for African Advancement. The result of the ballot, broke the deadlock between the companies and the NRMWU on the problem of African Advancement. Rhokana and the RAA group were the first to sign an agreement with the NRMWU on 30 July 1955 (see Figure 3.3).



IN WITNESS WHEREOF the parties hereto have hereunto set their hands at Kitwe on the 30th day of July, 1955, in the presence of the subscribing witnesses:-

For and on behalf of RHOKANA CORPORATION LIMITED

(Signed) O.B. BENNETT General Manager

For and on behalf of NCHANGA CONSOLIDATED COPPER MINES LIMITED

(Signed) H.E. NELEMS General Manager

For and on behalf of BANCROFT MINES LIMITED

(Signed) K.E. MACKAY Manager

For and on behalf of KANSANSHI COPPER MINING COMPANY LIMITED

(Signed) O.B. BENNETT for Manager

For and on behalf of RHODESIA COPPER REFINERIES LIMITED
Rhokana Corporation Limited (Local Managers)

(Signed) O.B. BENNETT General Manager

As witnesses to all of the above signatures:

(Signed) H.M. WILLIAMS

(Signed) J.C. BURKE

For and on behalf of the NORTHERN RHODESIA MINE WORKERS' UNION

(Signed) A. CLARKE President
(Witness) (Sgd.) A.B. HUNTER

(Signed) B.J. PETERSEN General Secretary
(Witness) (Sgd.) A.B. HUNTER

Figure 3.3: Signatories to memorandum of an agreement made on African Advancement between the Northern Rhodesia Mineworkers' Union (NRMWU) and the Rhodesian Anglo American (RAA) Group of companies on 30th July 1955. Source: ZCCM 3.8.2A, Nkana Division: Directors Minutes of Meeting, 30 July 1955.

The RST group followed suit by signing an agreement with the NRMWU on 10 August 1955.[442] Bennett claimed that RST signed a similar agreement to the one endorsed between the RAA-owned mines and the NRMWU.[443] On 27 September 1955, both agreements were

[440] Scannell, 'The African Advancement Agreement', 7; *Northern News*, 31 January 1955.
[441] *Ibid*.
[442] AAC, 'Topics of the Quarter: African Advancement', *Optima*, 5, 4 (1955), facing page 105.
[443] ZCCM 3.8.2A, Nkana Division: Directors' Minutes of Meetings, August to September 1955.

adopted by all Copperbelt mines.[444] The contents of the provisional agreement contained substantial information from Rhokana and the RAA's scheme. For instance, 24 jobs from the RAA's scheme were included under Schedule "B" jobs to be given to Africans.[445]

In November 1955, jobs in the advancement agreement and those outside the European field but of an advanced type were fragmented into 75 jobs.[446] In order to reduce labour costs, Rhokana and the other Copperbelt mines decided that most of these fragmented jobs would be awarded to Mines African Staff Association (MASA) members. Therefore, on 3 December 1955, the mining companies officially recognized MASA, with Godwin Mbikisita Lewanika, from Nkana mine and the founder of this union, as its leader.[447] Early in 1956, the number of African workers who joined the MASA was 492 at Rhokana, 453 at Nchanga and 423 at Mufulira.[448] Of the 75 jobs for advancement, 62 fell within the MASA, 2 went to the Mines' African Police Association, and only 11 fell within the AMU.[449] In April 1956, almost 428 Africans had been promoted to advanced jobs on the Copperbelt mines.[450] By then Rhokana had advanced almost 95 Africans into jobs previously reserved for Europeans, 20 were put into newly-created senior African posts outside the European fields, and a further 71 Africans were undergoing training for various advanced jobs.[451]

---

[444] Phimister, 'Corporate Profit and Race in Central African Copper Mining', 767.

[445] AAC, 'Topics of the Quarter: African Advancement ', facing page 105. The initial jobs considered were: screwing machine operator, sampler, mechanical loading and appliance driver, overhead crane driver, tripper operator, shunter, underground store man, pump man, anode takeoff operator, holding furnace caster, weigher and loader, crane chaser, screens attendant, cathode shearing machine operator, mobile crane operator, plant environs clean-up handyman, smelter mason's handyman, trench-digging handyman, parks and gardens handyman, sand-filling operator, concrete mixture attendant, underground pipe-fitter, sub-level lasher, and tank-house inspector. Schedule "A" jobs were those performed by members of the NRMWU at the time of signing this agreement. The importance of the agreement was that merit would be the only criterion in the future choice of a person to fill a schedule "A" vacancy. Schedule "B" jobs were those which would be filled by persons who were not members of the NRMWU and were the highest to which Africans progressed. See NAZ 11/57H, NRG, *Report of the Commission Appointed to Inquire into the Unrest in the Mining Industry in Northern Rhodesia in recent months* (Lusaka: Government Printers, 1956), Appendix 5, 74–9; ZCCM 3.8.2A, Nkana Division: Directors Minutes of Meeting, 30 July 1955; *Northern News*, 12 September 1955; Scannell, 'The African Advancement Agreement', 5.

[446] NAZ 11/57H, NRG, *Report of the Commission Appointed to Inquire into the Unrest in the Mining Industry in Northern Rhodesia in recent months*, 19.

[447] Berger, *Labour, Race and Colonial Rule*, 146; Mijere, 'One Industry, One Union', 383.

[448] Mijere, 'One Industry, One Union', 384.

[449] NAZ 11/57H, NRG, *Report of the Commission Appointed to Inquire into the Unrest in the Mining Industry in Northern Rhodesia in recent months*, 19.

[450] ZCCM 12.1.9C, Northern Rhodesia Chamber of Mines (hereafter NRCM), *Northern Rhodesia Chamber of Mines Yearbook 1956* (Kitwe: NRCM, 1957), 7.

[451] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1956* (Kitwe: Rhokana Head Office, 1956), 7.

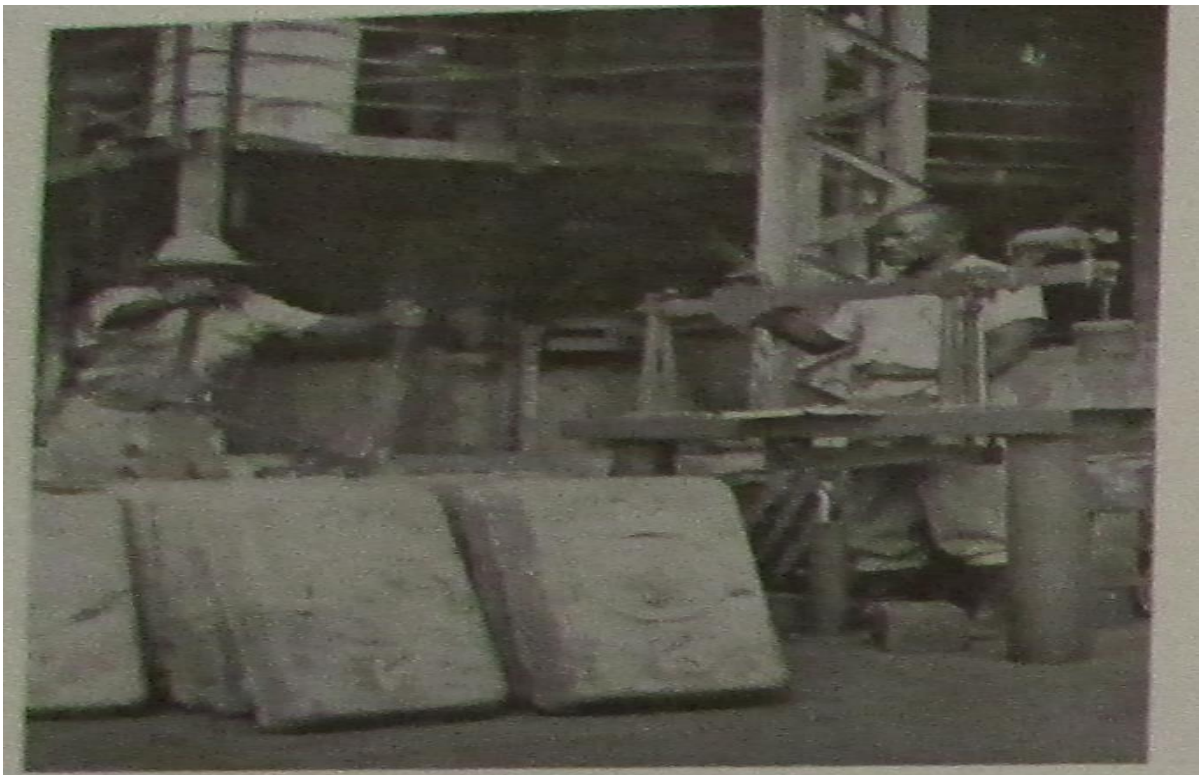


Figure 3.4: An African operating a copper scale at the Nkana mine. This was one of the jobs handed over to Africans after the advancement agreement. Source: ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30th June 1956* (Kitwe: Rhokana Head Office, 1956), 8.

Because of this division of jobs, the AMU came to regard the MASA as a company union that needed to be defeated. Between 26 April and 17 September 1956, rolling strikes occurred across the Copperbelt mines supported by the AMU. This was mainly due to dissatisfaction among AMU members with the categories of jobs awarded to MASA members. The unrest involved over 25,000 African workers, and out of this number 7,400 were at Nkana mine.[452] As a result of the rolling strikes, the Copperbelt mines lost about 12,000 long tons of copper worth over £3 million.[453] However, at Rhokana production was maintained at 75% by European workers.[454] Consequently, copper and cobalt production at this mine increased from 71,288 long tons and 871 short tons in 1955 to 81,566 long tons and 1,271 short tons in 1956, respectively.[455]

3.2.4 Power, Fuel and Technical Problems

In addition to labour unrest, Rhokana and the other Copperbelt companies experienced power and fuel shortages and technical problems after 1956. As mentioned in Chapter Two, the

---

452 ZCCM 12.1.9C, NRCM, *Northern Rhodesia Chamber of Mines Yearbook 1956*, 11.
453 *Ibid*.
454 ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1955–6.
455 *Ibid*.

Copperbelt mines relied on Wankie Colliery for coal supplies, but these supplies remained inadequate. Following the AAC's purchase of Wankie in 1953, the Colliery's productive capacity increased from 2,500,000 tons to 5,000,000 tons a year.[456] But output was restricted by the railways' shortage of rolling stock. The AAC, through its newly formed subsidiary, the Anglo American Rhodesian Development Corporation, funded Rhodesia Railways in an attempt to overcome transport difficulties. [457] It offered 2,500 trucks for hire to the railways. But this proved to be only a temporary solution, as both power and transport challenges remained. Meanwhile, railway rates for transporting copper to Beira or Lourenco Marques increased from £7.1 in 1955 to almost £15 per long ton in 1957, compounding transport woes.[458] With such problems, production costs could hardly be reduced. Nevertheless, the completion of the Le Marinel hydro-electric power station, ahead of schedule in 1956, briefly cushioned shortages of power. Le Marinel power station supplied about half of the Copperbelt's power, nearly 63 million kWh per month, at a favourable price under a five-year contract to be renewed in 1961.[459]

Even so, the Copperbelt's demand for electricity increased significantly following the opening of new mines. Electricity was the life blood of the mining industry, and lack of it, even for a few hours, would be disastrous to Rhokana and the Copperbelt mines. Without electricity to drive the pumps, for example the mines would be flooded – an average of about 11.5 million gallons of water a day were pumped out of Nkana mine alone.[460] Le Marinel could not satisfy the power demands of the mines. Besides, the generating thermal plant at Rhokana was nearly 30 years old, and needed to be replaced with equipment that would cost about £70 per kilowatt installed.[461] To satisfy the electricity needs of the mines and the Federal economy as a whole, it was decided that the Kariba Hydro-Electric Power (HEP) station be constructed.

The cost of constructing Kariba HEP was estimated at £114 million, while the cost of building thermal stations of equivalent capacity was estimated at £101 million.[462] It was projected that Kariba HEP would save Nkana and the Copperbelt mines £31 million in the first ten years, and, thereafter, £10 million per year.[463] It was also envisaged that Kariba HEP's output would be

[456] *Northern News*, 25 October 1957.
[457] *Ibid*.
[458] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1957*, 11.
[459] RST, 'Kariba and the Copperbelt', *Horizon*, 1, 3 (1959), 13.
[460] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1957–63.
[461] RST, 'Kariba and the Copperbelt', 13.
[462] *Ibid*.
[463] *Ibid*.

more than double the output of all the combined existing stations in the Federation. Based on these calculations, the Copperbelt mines were persuaded by the Federal Government to raise £20 million towards the construction of the Kariba power station, and Rhokana contributed the largest share of £4.25 million.[464] Rhokana was the largest consumer of power among the Copperbelt mines, with its peak electric loads increasing from 56,700kw in 1957, through to 65,700kw in 1960, to 68,600kw in 1962.[465] Thanks to the Kariba HEP station, which began supplying electricity in 1959, the power supply to the Copperbelt increased from 482,000kwh that year, to nearly 762 million kWh in 1960, and about 1.4 billion kWh in 1963.[466] Furthermore, the opening of the Kariba HEP station was timely, because the supply of electricity from the Le Marinel power station was disrupted by the outbreak of the civil war in 1960 in the newly independent state of Congo.

[464] D.L. Anderson, 'Kariba Hydro-Electric Power for Central African Development', *Optima*, 6, 2 (1956), 37; ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30th June 1962* (Salisbury: Rhokana Head Office, 1962), 9. The construction of the Kariba HEP was the most important project undertaken during the Federation of Rhodesia and Nyasaland, a symbol of cooperation. Though the Copperbelt mines contributed most towards this project, the other funders were the British South Africa Company, the Colonial Development Corporation, and loans from the Commonwealth Development Finance Corporation, International Bank for Reconstruction and Development, Barclays Bank, and Standard Bank. For the politics surrounding the financing of the scheme by Rhokana and Copperbelt mines, see Prain, *Reflections on an Era: An Autobiography*, 132; Butler, *Copper Empire*, 218–24; J. Tischler, *Light and Power for a Multiracial Nation: The Kariba Dam Scheme in the Central African Federation* (Basingstoke: Palgrave Macmillan, 2013), 29–33; Cohen, *The Politics and Economics of Decolonization in Africa*, 50–3.

[465] ZCCM 12.1.9C, *Northern Rhodesia Chamber of Mines Yearbooks*, 1957–63.

[466] *Ibid*.

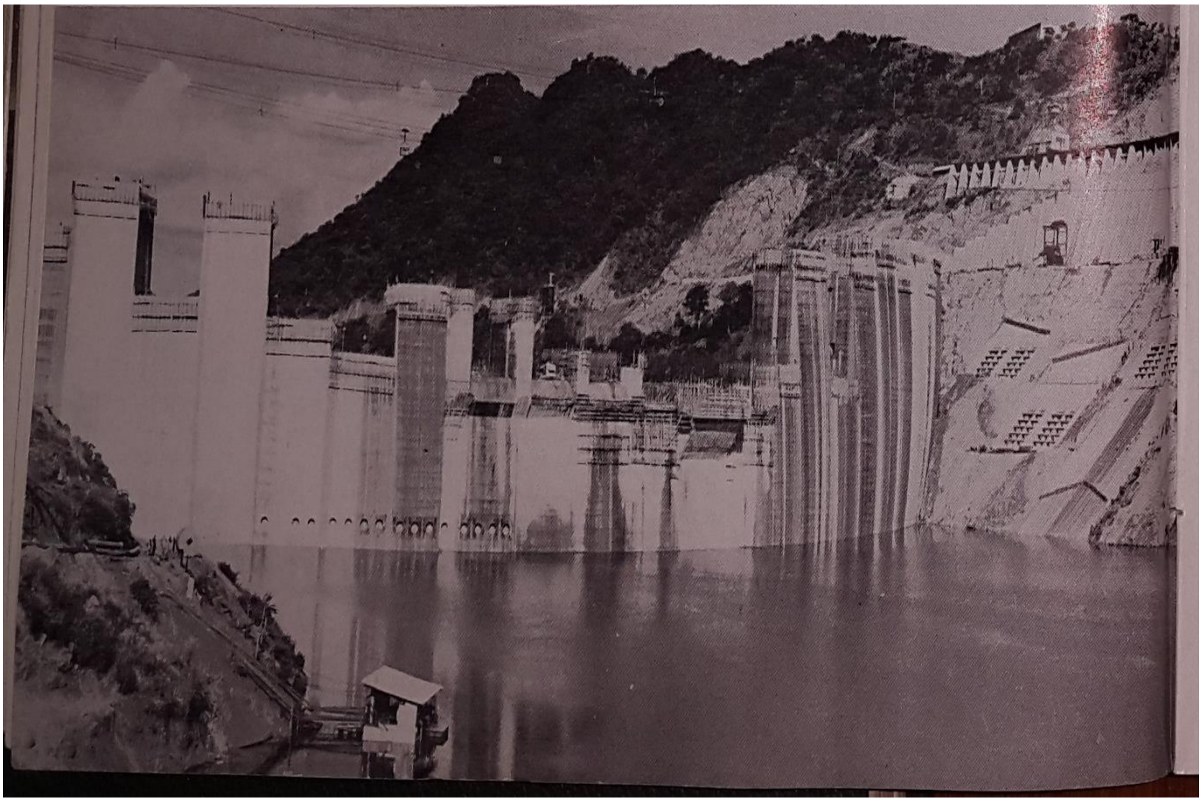


Figure 3.5: View of the Kariba dam wall with the lake filling up early in 1959. When this picture was taken the depth of water was 203 feet. Source: Rhodesian Selection Trust, 'Kariba and the Copperbelt', *Horizon*, 1, 3 (1959), 12.

3.2.5 Capital Expenditure, Labour Productivity and Quality of Ores

Adequate and efficient supplies of power did little to ease the problems associated with deeper level mining at Nkana. Nkana was the Copperbelt's deepest mine at 3,742 feet by 1958.[467] Mining at such great depth brings with it challenging underground conditions: increased pressure makes pillar construction difficult, which may result in collapsing of the walls. Deep level mining was also characterised by flooding, and, significantly diluted ore grades. At Nkana, there was a drop in the grade of the ore mined to an average of 2.6% copper in 1956, compared to an average of 3.2% in 1944.[468] This meant that in order to produce the equal amount of copper in 1956, the company had to mine and hoist about 122 tons of ore as against 100 tons in 1944.[469]

With increased depth, more capital (see Table 3.2 and Appendix V) for mechanisation was needed. This included the utilisation of underground crushers, scrappers, automatic trip-

[467] RST, 'World's Deepest Mine Workings Reach 11,000 Feet', *Horizon*, 1, 3 (1959), 25.
[468] ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour Report*, 8 January 1957, 2.
[469] *Ibid*.

switches, and charging-sets. Mechanisation improved the productivity of African labour and the manning structure. In 1949, productivity per African per shift was 2.33 tons compared with 3.90 tons in 1956.[470] It took 5,215 African workers to hoist 316,500 tons in June 1949, compared with 4,184 African workers to hoist 408,005 tons in December 1956.[471] As mechanisation improved the productivity of African labour, it spurred Rhokana to reduce African labour in order to save costs. Hence, underground strength was decreased by 408 from 5,215 in June 1949 to 4,807 in December 1956 while surface strength was reduced by 623 in the same period.[472]

At Nkana, the number of workers declined relative to capital. The size of the African work force increased annually by 0.5% between 1948 and 1955, and shrunk by -0.2% from 1956 to 1962.[473] In the same periods, the annual growth in the size of the European work force slowed from 2.7% to 1.7%, while net total capital declined relatively from 5.7% to 3.7%.[474] Partly because of mechanisation and the stabilisation of labour, the number of African workers at Rhokana declined relative to the number of European workers between 1953 and 1963. Although capital expenditure at Nkana increased tremendously after 1953, it fell away dramatically after 1957. This partly reflected the collapse of the copper price towards the end of 1956. For capital expenditure and labour force between 1953 and 1963, see Table 3.2 below. Compared to the marked decline in the turnover of African labour, European turnover was influenced by strike action in 1958, and by the advent of independence.

[470] *Ibid*., 4.
[471] *Ibid*.
[472] *Ibid.*
[473] Mhone, *The Political Economy of a Dual Labour Market in Africa*, 174.
[474] *Ibid*.

Table 3.2: Capital, Labour Strength, Turnover percent and Length of Service for Rhokana, 1953–1963.[475]

Year	Capital Expenditure £	African Labour			European Labour		
		Strength	Turnover %	Length of Service (Years)	Strength	Turnover %	Length of Service (Years)
1953	2,968,000	10,574	52.0	-	1,747	17.6	-
1954	5,600,000	9,733	47.6	-	1,761	17.3	-
1955	5,123,294	8,610	125.8	-	1,805	13.8	-
1956	2,300,000	9,099	27.6	-	1,844	13.1	-
1957	3,300,000	8,583	33.4	-	1,835	24.9	-
1958	1,690,000	7,523	26.2	-	1,698	36.0	-
1959	1,180,000	7,553	28.3	-	1,716	16.2	-
1960	1,800,000	7,575	30.2	5.8	1,716	17.4	5.6
1961	960,000	7,626	22.8	5.6	1,737	20.6	5.5
1962	1,270,000	8,861	17.7	6.2	1,921	33.0	6.0
1963	1,400,000	8,928	9.3	6.7	1,991	25.1	5.6

Note: The figures for the years 1955 and 1958 are abnormally inflated since some Africans and Europeans were discharged and subsequently re-engaged due to strikes. Some of the turnover rates and length of service are average figures for Copperbelt mines.

3.2.6 Overall Production and Profitability

While all of the factors above impacted on the productive capacity of Nkana mine, the overall profitability of this mine was also affected by the fluctuating price of copper. The formation of the Federation of Rhodesia and Nyasaland coincided with an economic boom on the Copperbelt. In 1954, Nkana produced 79,755 long tons of copper and a record 1,264 short tons of cobalt. Rhokana made the Federation the second largest producer of cobalt metal in the world after the Belgian Congo (9,414 tons), surpassing the USA (1,110 tons), Canada (1,091 tons) and French Morocco (811 tons).[476] However, between 3 January and 2 March 1955, a strike by African workers across the Copperbelt mines demanding an increase of 10.6s per shift, reduced production of copper and cobalt at Rhokana by 8,467 long tons and 393 short tons, respectively.[477] The Copperbelt miners' strike, coupled with similar strikes in Chile and

[475] Table 3.2, constructed from National Archives of Zambia Ministry of Labour and Social Services (hereafter NAZ MLSS) 1/25/121, Strikes and Disputes Lab Form 4: Kitwe-Nkana, November 1962–December 1963; NAZ 11/57C, Government of the Republic of Zambia (hereafter GRZ), *Report of the Commission of Inquiry into the Mining Industry 1966* (Lusaka: The Government Printer, 1966), 160; Bates, *Unions, Parties, and Political Development*, 81, 250; Berger, *Labour, Race and Colonial Rule*, 208; Mhone, *The Political Economy of a Dual Labour Market in Africa*, 163.

[476] H.W. Davis and C.H. Buck, 'Cobalt', *Minerals Yearbook Review of 1954*, 358–60. http://images.library.wisc.edu/EcoNatRes/EFacs2/MineralsYearBk/MinYB1954v1/reference/econatres.minyb1954v1.hdavis.pdf. Accessed on 6 April 2017.

[477] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30th June 1955* (Kitwe: Rhokana Head Office, 1955) 4, 25–6.

the USA, reduced world copper stocks, and consequently increased both demand and the price of copper by about £150 per long ton on the LME.[478]

The increase in the price of copper, however, was not sustained and it fell by more than 40% between 1956 and 1958 and continued to fluctuate until 1961, due to a combination of factors including industrial unrest, international tension, political disturbances, and government measures.[479] During the Korean Crisis, financial loans by the US Government encouraged the development of new copper mines in order to increase production for the war. Because of the time lag between the development of the sites and the start of large-scale production, these mines only came onstream during 1956. This resulted in a surplus. The supply-demand situation was further unbalanced by the slackening of industrial activity in the USA and Britain following the end of the Korean Crisis. World stocks rose from 710,100 long tons to 920,000 long tons between 1956 and 1957, while consumption declined by 40% in the USA and Britain.[480] Consequently, the average monthly price of copper dropped from £400 a long ton on the LME in 1956, through £240 in 1957, to £160 in February 1958.[481] Between 1955 and 1957, world cobalt production increased by 7.5% from 13,500 metric tons to 14,600 tons.[482] In this period, consumption of cobalt in the USA, which was the main buyer, reduced by almost 6%.[483]The price of cobalt metal per pound declined from US$2.35 in 1956 to US$1.75 by 1959.[484]

In order to address the surplus on the market, Rhokana and other major copper producers cut back on production by about 10% between 1956 and 1958, amounting to a total of 400,000 short tons or about 12% of the free world's annual production of new copper.[485] As result of this reduction in world stocks between February 1958 and the first quarter of 1959, the demand for copper increased. This raised and stabilised the copper price on the LME at a monthly average of about £260 per long ton.[486]

[478] *Ibid.*, 7.
[479] NAZ 11/57F, UN/ECA/FAO, *Report on the Economic Development of Zambia*, 11.
[480] *Northern News*, 4 October 1957.
[481] Cyprium, 'The Copper Price, 1956-1959', *Horizon*, 1, 7 (1959), 42.
[482] Rhokana Corporation, 'Drop in Price of Cobalt Metal', *Rhokana Review*, 6, 6 (1959), 23.
[483] J.H. Bilbrey and D.T. McDougal, 'Cobalt', *Minerals Yearbook, 1959*, Table 5, 365. http://images.library.wisc.edu/EcoNatRes/EFacs2/MineralsYearBk/MinYB1959v1/reference/econatres.minyb1959v1.jbilbrey.pdf. Accessed on 25 January 2018.
[484] *Ibid.*, 366.
[485] Cyprium, 'The Copper Price, 1956-1959', 42.
[486] *Ibid*.

Other factors also caused fluctuations in the price of copper. In April 1958, a strike by mineworkers in Chile which lasted for 51 days, 'during which time the market was deprived of 40,000 tons of copper…causing the price to move a few pounds a ton'.[487] Likewise, about six months later, the supply position was altered by the strikes in Northern Rhodesia and Canada, causing the price of copper to increase by £40 a ton on the LME.[488] The price of copper was also indirectly influenced by local and international conflicts. In 1958, serious trouble was brewing in the Middle East with a revolution in Iraq, civil war in the Lebanon, and Jordan being threatened by Syria.[489] Elsewhere, mainland China threatened to invade Quemoy held by Taiwan, supported by the USA.[490] Taken together, these events stimulated copper prices in two ways. Firstly, the Middle East troubles coincided with the US Government's decision to protect its industry by imposing an import duty of £14 per long ton of copper.[491] But the conflict in the Middle East increased demand, restored and raised copper prices to over £200 per long ton.[492] Secondly, the Western World copper industry was given a shot in the arm when on 15 August 1958, restrictions on sales of copper other than copper of US origin, to the Soviet bloc were lifted.[493]

Political disturbances in the Federation of Rhodesia and Nyasaland also disrupted production and maintained the demand and price of copper per long ton on the market from an annual average of about £230 in 1961 to £234 in 1963.[494] In Northern Rhodesia, there was a tendency by nationalist leaders to woo mineworkers and their trade unions. They found a receptive audience, because the disparities created by the dual wage structure caused many African mineworkers and their families to look to the nationalist movement led by the Northern Rhodesia African National Congress (NRANC), as well as the United National Independence Party (UNIP). Despite Katilungu's attitude, the majority of the AMU leadership, especially those on Nkana mine, were closely associated with the NRANC (see Appendix X). Cooperation between the labour and nationalist movements caused the government and mine companies to accuse union and nationalist leaders of instigating a wave of strikes by mineworkers between

[487] *Ibid.*, 43.
[488] Oppenheimer, 'Chairman's Review Rhokana Corporation Limited Annual Report', 2; and Cyprium, 'The Copper Price, 1956–1959', 43.
[489] Cyprium, 'The Copper Price, 1956–1959', 43.
[490] *Ibid*.
[491] *Ibid.*
[492] *Ibid*.
[493] *Ibid*.
[494] ZCCM 12.1.9C, *Northern Rhodesia Chamber of Mines Yearbooks*, 1961–3.

1961 and 1963.[495] The strikes at Rhokana reduced production to an average of 103,122 long tons per year.[496] But reduction in production and supply, as a result of strikes on the Copperbelt and elsewhere, did not cause the price of copper to increase in this period because of the stockpile in the world market.

The foregoing wide variety of factors, combined to affect the profitability of Rhokana. Table 3.3 summarises finished production and overall profitability of Rhokana during the Federal period.

Table 3.3: Rhokana's Production and Profits, 1954–1963.[497]

Year	**Production (Tons)**		**Price of Copper**	**Value of Tax**		**Net Profits**		**Final Dividends**
	Copper Long T.	Cobalt Short T.	LME (£)	Income (£)	Royalty (£)	Mine (£)	Investment Income (£)	(£)
1954	79,755	1,264	249.3	3,450,000	-	5,844,000	3,660,000	6,250,000
1955	71,288	871	351.7	3,660,000	2,888,132	6,190,000	3,832,000	6,563,000
1956	81,566	1,271	328.7	6,120,000	3,033,162	10,799,000	5,138,000	8,750,000
1957	88,306	1,330	219.4	2,900,000	1,950,486	5,845,000	4,027,000	5,625,000
1958	86,216	1,269	197.7	1,100,000	1,413,505	2,138,000	2,121,000	3,125,000
1959	76,983	1,092	237.7	2,090,000	2,390,525	3,583,000	2,042,457	5,000,004
1960	103,981	1,307	245.8	3,930,000	2,726,467	7,311,928	4,222,350	8,750,007
1961	106,881	837	229.7	3,420,000	2,594,210	6,087,441	4,868,552	8,750,007
1962	104,476	951	234.0	3,480,000	2,344,890	6,137,195	4,605,019	8,750,007
1963	97,979	778	234.4	2,480,000	2,503,727	4,679,000	4,659,000	8,750,000
Total	897,431	11,026	-	32,630,000	21,845,104	58,614,564	39,171,378	70,313,025

Note: Between 1954 and 1969, total value of sales amounted to £275,624,221 while total cost of sales amounted to £191,641,084. Year in year break down of these amounts is indicated in Appendix V.

The table shows that between 1954 and 1963, Nkana mine produced a total of 897,431 long tons of copper. In the same period, Nchanga produced 1,260,973 tons; Mufulira, 895,256 tons; and Roan, 849,915 tons.[498] Thus, Nkana was the second largest producer of copper in the Federation of Rhodesia and Nyasaland. After 1961, production at Nkana declined for two major reasons. First, because of challenges associated with deeper level mining, such as flooding, high underground temperature, falling walls and dilution of ore, and resultant decline in the grade of ore reserves and ore milled. Secondly, Rhokana invested part of its capital in expanded production at Bancroft, Mufulira and Nchanga, hence Nchanga surpassed Nkana in terms of production. While Nkana was the second largest producer of copper in the Federation of

[495] A. Gupta, 'Trade Unionism and Politics on the Copperbelt' in W. Tordoff (ed.), *Politics in Zambia* (Berkeley and Los Angeles: University of California Press, 1974), 293.
[496] ZCCM 12.7.2F, *Annual Reports: Rhokana Corporation Limited*, 1960–3.
[497] Table 3.3, compiled from ZCCM 12.1.9C, *Northern Rhodesia Chamber of Mines Yearbooks*, 1956–63; ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1954–63. The royalty figure for 1954 is not available.
[498] *Ibid*.

Rhodesia and Nyasaland, it also produced 11,026 short tons of cobalt. Between 1954 and 1959, combined cobalt production from Nkana and Chibuluma mines totalled 8,798 short tons, making the Federation of Rhodesia and Nyasaland the third largest world producer of cobalt after the Belgian Congo (54,281 tons) and Canada (9,232 tons).[499] Indeed, the Central African Federation surpassed the USA and French Morocco whose respective production was 8,424 tons and 5,172 tons in this period.[500]

The prosperity of Rhokana is also reflected in the tax it paid to the Federal and Northern Rhodesian Governments, as well as to the BSA Company. During the Federal period, tax paid by the Copperbelt mines in the form of income tax, customs duties on imports, mining and vehicle licences, amounted to about £163,969,000.[501] Of this figure, Rhokana contributed approximately £32,630,000 or nearly 20% to the Northern Rhodesian and Federal tax revenue. The total value of tax paid by the Copperbelt mines, BSA Company and their employees into Federal coffers was almost £239,078,000.[502] Of this amount, 48.5% accrued to the Federal Government; 37.2% to the Northern Rhodesian Government; 9.9% to the Southern Rhodesian Government; 4.4% to the Nyasaland Government.[503] In addition, between 1955 and 1963, the Copperbelt mines paid out a total of £108,221,903 BSA Company royalties, and of this amount, Rhokana contributed £21,845,104 or 20.2%.[504] Total net profits for Rhokana between 1954 and 1963, after provision for tax, amounted to £58,614,564 from the mine and a further £39,171,378 from investments in other properties on the Copperbelt. From a grand net profit of £97,785,942, final dividends paid out to shareholders amounted to £70,313,025 during the entire Federal period. Accrued unappropriated profits amounted to £27,472,917. Much of this sum was spent on expansion, renovation and projects at Nkana mine.

Nkana and the Copperbelt mines were central to the Federal economy. Yet, the Federal Government spent far more in Southern Rhodesia than in Northern Rhodesia and Nyasaland. For instance, the Federal Government was responsible for European education and agriculture, and most white children and farmers were in Southern Rhodesia.[505] In addition, the Federal

[499] For further details, see *Bureau of Mines Minerals Yearbooks – Metals and Minerals – Cobalt*, 1954–59. https://minerals.usgs.gov/minerals/pubs/usbmmyb.html. Accessed on 30 March 17.
[500] *Ibid*.
[501] ZCCM 12.1.9C, NRCM, *Northern Rhodesia Chamber of Mines Yearbook 1963* (Salisbury: Mardon Printers, 1964), 23.
[502] *Ibid*.
[503] *Ibid*.
[504] Berger, *Labour, Race and Colonial Rule*, 11; ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1954–63.
[505] NAZ 11/57F, UN/ECA/FAO, *Report on the Economic Development of Zambia*, 10.

capital was placed in Salisbury, as were all the other main Federal institutions: the University College, the Bank of Rhodesia and Nyasaland, the Supreme Court, and the head offices of the Northern Rhodesia mining companies, including Rhokana.[506] Similarly, the bulk of the Federal investment also took place in Southern Rhodesia. The biggest single Federal project, the Kariba HEP, was chosen in preference to a scheme on the Kafue River in Northern Rhodesia, which would have been cheaper to build as well as nearer to the copper mines, the chief consumer of electricity.[507] Moreover, the first-stage generating stations were set up on the south-bank of the Zambezi River, on the Southern Rhodesian side. More than half of the total public and private investment in the Federation went to Southern Rhodesia. Consequently, Southern Rhodesia's income grew more rapidly between 1954 and 1963 than that of Northern Rhodesia and Nyasaland. Gross Domestic Product rose by 59% for Southern Rhodesia and only 42% for Northern Rhodesia.[508]

Political uncertainty was the main deciding factor for the future of the Federation, especially from 1959 following the rise of mass African nationalism. In February and March that year, a State of Emergency was introduced in Nyasaland and the two Rhodesias, following rumours of African nationalist plots.[509] The business community, including the two main mining companies, RST and AAC, interpreted this development differently to mean the end of white rule.[510] The rise of African nationalism in Northern Rhodesia and decolonisation throughout Africa, starting with the independence of the Gold Coast (Ghana) in 1957 and the Belgian Congo (Congo Kinshasa) in 1960, made the managers of the Copperbelt companies aware of the need to identify themselves with emerging nationalist leaders.[511] The AAC group remained conservative, but the RST group led by its chairman, Ronald Prain, took the lead and ingratiated itself with DR Kenneth Kaunda of UNIP.[512] With the winds of change becoming obvious by 1962, Rhokana's parent company, AAC, and its chairman, Harry Oppenheimer, also met with Kaunda.[513]

---

[506] *Ibid*.
[507] *Ibid*.
[508] *Ibid*.
[509] Cohen, 'Business and Decolonisation in Central Africa Reconsidered', 642.
[510] For a detailed analysis of the copper mining companies and their reactions to the fall of the Federation between 1959 and 1962, see Butler, 'Business and British Decolonisation'; Cohen, 'Business and Decolonisation in Central Africa Reconsidered'.
[511] Butler, 'Business and British Decolonisation', 474.
[512] *Ibid.*, 473.
[513] *Ibid*.

In addition, the Copperbelt companies transferred their headquarters from Southern Rhodesia back to Northern Rhodesia.[514] The move of Rhokana's head offices to Lusaka, announced by the directors in May 1963, was effected on 1 January 1964.[515] Mr. P.H.A. Brownrigg, who was then the AAC director in Southern Rhodesia, was transferred to Northern Rhodesia and was put in charge of Rhokana Corporation and other head offices of the AAC's subsidiaries in Lusaka and Kitwe. [516] At the same time, the registered office was moved from Nkana to Lusaka. Anglo American Corporation (Central Africa) Limited appointed secretaries, administrative and technical advisers to Rhokana with effect from 1 January 1964.[517] By the time Northern Rhodesia became independent on 24 October 1964, with the new name of Zambia, Rhokana had already shifted its head office from Salisbury to Lusaka.[518]

3.3 Rhokana in the First Years of Zambian Independence, 1964-1969

3.3.1 Economic Problems in the Zambian Mining Sector at Independence

At independence, there were four major problems facing the Zambian economy.[519] Firstly, the Zambian economy depended on a single export commodity, copper. Sold on the London Metal Exchange, copper supplied over 90% of the state's exports and about 50% to 70% of Government revenue by the 1960s.[520] Secondly, the dominant position of the copper industry hampered diversification outside its influence.[521] This problem was exacerbated by the fact that independent Zambia inherited a weak agricultural, manufacturing, construction and service sectors compared to Southern Rhodesia which had a more diversified economy. The third major problem was Zambia's reliance on external forces for its local development.[522] The mining sector was dominated by foreign capital. Much of it came from South Africa, Britain and the USA. In addition, Rhokana and the Copperbelt mines were largely dependent on South

---

[514] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1964* (Lusaka: Rhokana Head Office, 1964), 9.
[515] *Ibid*.
[516] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1963* (Salisbury: Rhokana Head Office, 1963), 6–7.
[517] *Ibid*.
[518] *Ibid*.
[519] Martin, *Minding Their Own Business,* 39–41, 51 and 56; Burawoy, *The Colour of Class on the Copper Mines*, 1–2; Bates, *Unions, Parties and Political Development*, 7–26; Berger, *Labour, Race and Colonial Rule*, 218–26; Sklar, *Corporate Power in an African State*, 16, 35–36; Daniel, *Africanisation, Nationalisation and Inequality*, 8–22.
[520] Martin, *Minding Their Own Business*, 41; Burawoy, *The Colour of Class on the Copper Mines*, 2.
[521] Daniel, *Africanisation, Nationalisation and Inequality*, 8–22; Martin, *Minding Their Own Business,* 39–41, 51, 56.
[522] *Ibid*.

Africa and Southern Rhodesia for much of their skilled labour and transport for exports and imports.[523] Besides, mining in Northern Rhodesia was controlled by private companies notably the BSA Company, AAC and RST. The fourth striking problem of the Zambian economy was, the dominance of a white minority. This unevenness motivated new policy initiatives.

The new government had four major tasks. Firstly, it wished to reduce dependence on one export commodity, copper, by diversifying the economy. Secondly, the UNIP Government also aimed at eliminating European domination in the mines and other economic activities through rapid Zambianisation.[524] Thirdly, there was an effort to mobilise labour in the mines and other sectors to support national development as a whole.[525] Fourthly, the ultimate goal of the new government was increasing national benefits from economic activities, especially mining, so as to reduce poverty and economic imbalances between rural and urban areas. These priorities were implemented in two ways after independence; first through liberalisation and later through nationalisation of the economy. The former, at least up until 1968, was intended to mobilise foreign investment by assuring private investors that the new regime would not nationalise their assets.[526] Consequently, Kaunda's initial approach 'accumulated a great fund of goodwill both inside the country and abroad'.[527]

Rhokana and its holding company, RAA, now the Zambian Anglo American Corporation (ZAMANGLO), were relieved that Kaunda did not nationalise the mines, and cooperated in implementing the new government's mining policies. In the copper industry, there were three controversial issues in the first years of independence. The first controversy concerned mineral rights and taxation.[528] The second problem had to do with labour relations in the industry.[529] The third controversy was the extent to which the government would participate in the mining sector.[530] It should be noted that the Zambian Government was not the first to question the

[523] Martin, *Minding Their Own Business,* 39–41, 51, 56; Burawoy, *The Colour of Class on the Copper Mines*, 1–2; Bates, *Unions, Parties and Political Development*, 7–26; Berger, *Labour, Race and Colonial Rule*, 218–26; Sklar, *Corporate Power in an African State*, 16, 35–36; Daniel, *Africanisation, Nationalisation and Inequality*, 8–22.
[524] Burawoy, *The Colour of Class on the Copper Mines*, 1–2; Daniel, *Africanisation, Nationalisation and Inequality*, 8–22.
[525] Bates, *Unions, Parties and Political Development*, 7–26.
[526] Martin, *Minding Their Own Business,* 39–41, 51, 56.
[527] *Ibid.*, 44.
[528] Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime', 11; P. Slinn, 'The Legacy of the British South Africa Company: The Historical Background', in M. Bostock and C. Harvey (eds.), *Economic Independence and Zambian Copper: A Case Study of Foreign Investment* (New York: Praeger Press, 1972), 365–85.
[529] Bates, *Unions, Parties and Political Development*, 7–26; Berger, *Labour, Race and Colonial Rule*, 218–26; Burawoy, *The Colour of Class on the Copper Mines*; Daniel, *Africanisation, Nationalisation and Inequality*, 8–22.
[530] Sklar, *Corporate Power in an African State*, 34–40.

ownership of mineral rights by the BSA Company. In 1938, for instance, the settlers objected to the Chartered Company's claims but nothing changed. Later on, Roy Welensky, a representative in the Legislature, argued that the BSA Company should surrender its mineral rights to the government, but the controversy ended with the signing of the 1950 Truce Agreement, which merely 'provided for an extension of the company's ownership of its mineral rights, free from special taxation, until 1986'.[531]

At independence, the Zambian Government questioned the very validity of the BSA Company's mining and mineral rights, forcing it to relinquish them for only £4 million, half of which was paid by the British Government.[532] In the past, the BSA Company had been handsomely rewarded through their mining rights. The Company's royalty earnings in 1925 was a paltry £12,781 but by 1937 it had risen to a substantial £311,000 per annum, and by 1964 it was estimated that the Company had received a total of £70 million after tax in royalty payments.[533] Following government acquisition, mineral royalties continued to be increased and paid on the BSA Company standard, based on the price of copper, not profits. As such Rhokana and the Copperbelt mines complained of remaining with meagre retained profits for mining investment, because royalties 'levied on the value of copper produced…added to production costs….'[534] Certainly, Rhokana had suggested that the mineral royalty be based on sales proceeds.[535] But in the colonial era, Rhokana never complained of paying high royalties to the BSA Company. This was because AAC were a major shareholder in the BSA Company, so Rhokana benefited from mining royalties paid to the BSA Company.[536]

Between 1966 and 1969, monthly copper prices fluctuated between £336 and £700 per long ton on the LME, spurring the government to increase tax rates.[537] The new tax regime on copper 'was set at 40% of the amount by which the average LME price for the month [exceeded] £300 per long ton. Income taxes, at a maximum rate of 45%, were levied on company profits after the payment of royalties and export taxes'.[538] Consequently, the post-1964 mining tax had three components; royalty tax (13.5%), export tax (40%) and corporate or income tax (45%).[539]

[531] *Ibid.*, 35.
[532] Prain, *Reflections on an Era*, 158; Sklar, *Corporate Power in an African State*, 35–6.
[533] Slinn, 'The Legacy of the British South Africa Company: The Historical Background', 365–85.
[534] A. Sardanis, *Zambia: The First 50 Years* (London and New York: I.B. Tauris, 2014), 62.
[535] ZCCM 12.7.2F, *Rhokana Corporation Limited: 44th Annual Report 1966* (Lusaka: Rhokana Head Office, 1966), 2.
[536] Sardanis, *Zambia: The First 50 Years*, 62.
[537] Sklar, *Corporate Power in an African State*, 53.
[538] *Ibid*.
[539] Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime', 11.

Royalty and export taxes continued to be charged against the LME price of copper while income tax was levied on profit. On average, the three-fold mining tax regime produced a tax rate of about 74.4%.[540] Mineral taxes in Zambia, which had been relatively mild, totalling a tax rate of 40% during the Federal era, now approximated levels elsewhere in the copper industry.[541] For instance, the tax on profits in the USA was 52%; in Chile, the basic profits tax on the big foreign companies was 50%, plus a surcharge of 25%.[542]

3.3.2 From African Advancement to Zambianisation Policy

Studies by Bates, Burawoy, and Daniel have identified two problems facing the government concerning labour in the copper industry at independence. According to Bates and Daniel, one of the major objectives of the government policy was to eliminate reliance on European workers, while securing an adequate supply of skilled African labour. As discussed in section 3.2.3, the new government was not the first to address the issue of advancing local workers in the mines. The policy of African Advancement began in 1955 but in the period up to 1964 the government felt little had been done to implement it.[543] At Rhokana, for example, only 211 Africans were employed in advanced jobs by the fourth quarter of 1959.[544] The mining companies attributed the slowness of advancement to the difficulties arising from the low educational standard among Africans.[545] For its part, Rhokana spearheaded an advancement policy designed to maintain productivity but at low labour costs, however, Europeans remained entrenched in semi-skilled and skilled jobs.

The identification of these obstacles underpinned the Zambianisation of labour which Rhokana and the other mining companies were expected to implement in order to speed up African Advancement. Accordingly, the colour bar and closed-shop policy were done away with in 1965 and a formula was devised for Europeans to be displaced by trained Zambians.[546] European workers were given expatriate status. Expatriate status was reinforced by offering

---

540 *Ibid*.
541 NAZ 11/57F, UN/ECA/FAO, *Report on the Economic Development of Zambia*, 42.
542 *Ibid*.
543 In 1953 there were 2,500 Africans in partly skilled jobs, by independence, however, this figure rose to 8,000. Similarly, in 1953, over 55% of the total African labour force was concentrated in the lowest grade of employment, but by 1964 this figure had declined to 30%. Etheredge, 'Zambianisation on the Copperbelt', 183.
544 ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30th June 1959* (Salisbury: Rhokana Head Office, 1959), 17.
545 Etheredge, 'Zambianisation on the Copperbelt', 183–5.
546 ZCCM 12.7.2F, *Rhokana Corporation Limited: 43rd Annual Report 1965* (Lusaka: Rhokana Head Office, 1965), 6; Daniel, *Africanisation, Nationalisation and Inequality*, 98.

them fixed contracts of three years that could only be renewed twice.[547] The purpose of expatriates was to help in the training of Zambians for advancement in the industry. Table 3.4 demonstrates the impact of the new labour policy at Rhokana. Between 1964 and 1969, the African labour force increased while the number of European workers fell; the annual turnover rate of African workers went down from 8.4% to 6.4%, while that of white workers increased; the length of service of African workers increased from about seven to nine years, while that for white workers ranged between five and six years.

Table 3.4: Labour Strength, Turnover and Length of Service at Rhokana, 1964-1969.[548]

Year	**African Labour**			**European Labour**		
	Strength	**Turnover %**	**Length of Service (Years)**	**Strength**	**Turnover %**	**Length of Service (Years)**
1964	9,413	8.4	7.0	1,991	22.5	5.8
1965	10,207	7.3	6.9	1,328	33.9	6.4
1966	10,891	5.2	7.5	1,705	28.6	6.3
1967	10,489	5.3	8.2	1,876	32.0	6.0
1968	11,072	5.6	8.9	1,293	34.5	5.6
1969	11,179	6.4	9.4	-	26.7	5.0

Between 1964 and 1969, the number of African workers at Nkana increased from 9,413 to 11,179. They were also staying longer. Even so, European workers could not be easily replaced by Africans because the former's skills were still needed. At Rhokana in 1967, of the 176 Zambian section bosses, only 47 had a Standard VI and above qualification, with more than five years underground experience, and only 22 Zambian section bosses worked in that grade for a year or more.[549] Moreover, only 23 new Zambian shift bosses were promoted in the same year; although three Zambian mine captains were to be appointed by 1970, only 10 Zambian shift bosses were appointed, less than in 1967.[550] The problem of the small number of trained African workers, however, was not unique to Rhokana, but a national issue. In Zambia in 1964 'there were in total just over 1,200 Africans who had obtained a secondary school certificate – about the same number as in Kenya in 1957, Uganda in 1955, Tanzania in 1960 and Ghana in

[547] *Ibid*.

[548] Table 3.4, constructed from NAZ MLSS 1/25/137, Strikes and Disputes Kitwe General, February 1964-December 1967; NAZ 11/57C, GRZ, *Report of the Commission of Inquiry into the Mining Industry 1966*, 160; Bates, *Unions, Parties, and Political Development,* 81, 250; Berger, *Labour, Race and Colonial Rule*, 208; Mhone, *The Political Economy of a Dual Labour Market in Africa*, 163.

[549] NAZ MLSS 1/18/3, Minutes of Meeting of the Committee on Zambianisation in the Mining Industry in Lusaka, 19 April 1967.

[550] *Ibid*.

1943. The number of Zambian graduates at the same time was scarcely [one hundred]'.[551] Rapid Zambianisation in the Copperbelt mines was also thwarted by the practice whereby 'the succession [of European workers by African workers] [was] accompanied by the creation of new posts for some of the displaced expatriates' which did not only provide 'further employment for expatriates but also increase[d] the number of authority levels between the Zambian and the head of department'.[552]

In addition to observations by the above mentioned scholars, government officials and leaders of the Mineworkers' Union of Zambia (MUZ), tried to drive government policy towards indigenisation and not mere Africanisation.[553] Indigenisation meant creating employment opportunities for local Zambians rather than foreigners.[554] The government encouraged Nkana and the other Copperbelt mines to recruit more Zambians than foreign Africans and expatriates. Zambianisation was intended to replace foreign Africans and expatriates in technical, supervisory and managerial positions by locals.[555] As a circular from the Ministry of Labour stated in 1967:

> A number of inquiries have been made regarding the Government policy on the employment of alien Africans in the mining industry and this Circular Minute is being issued as a guide to Labour Officers on the problem. At the moment there are thousands of alien Africans employed on the mines and therefore their employment positions calls for caution in dealing with it, particularly in the light of the fact that the matter itself has serious political implications. However, policy on the matter is that no new employment of alien Africans will be permitted, that is, any alien who is not already in employment may not be engaged on the mine in any category of work; no promotion of alien Africans will be made, or training with a view to promote will be offered to alien Africans….[556]

Indigenisation and Zambianisation were encouraged in the mining sector for two major reasons. Mining was the second largest employer after public service.[557] Thus, it was anticipated that indigenisation and Zambianisation would promote a greater degree of local

[551] Burawoy, *The Colour of Class on the Copper Mines*, 4.
[552] *Ibid.*, 29–30.
[553] Etheredge, 'Zambianisation on the Copperbelt', 182–7.
[554] *Ibid*.
[555] *Ibid*.
[556] NAZ MLSS 1/18/3, Circular Letter from Secretary Ministry of Labour, Lusaka, to Labour Officers, Ndola, Kitwe, Mufulira, Chingola, Luanshya, Bancroft, and Broken Hill, 18 August 1967.
[557] Meller and Simpasa, 'Role of Copper in the Chilean & Zambian Economies: Main Economic and Policy Issues', 23.

participation across the board.[558] The UNIP Government also encouraged indigenisation and Zambianisation in order to garner political support among local workers.[559] Table 3.5 illustrates the number of local, foreign African and expatriate workers at Nkana and in the other Copperbelt mines in 1966. It shows that Rhokana employed the largest number of foreign African workers, many of them from Malawi and Tanzania. However, the Corporation operated within the government policy of limiting their advancement in the industry; specifically, by confining employment and advancement in the mines to local Zambians while ensuring that new foreign Africans were not employed and existing foreigners were not given further training.

Table 3.5: Local, Foreign African and Expatriate Labour at Nkana and in the other Copperbelt Mines in December1966.[560]

Name of Mine	Local	Foriegn Africans	Expatriates	Local Section Bosses	Foreign Section Bosses
Nkana	8,371	2,503	1,705	176	9
Bancroft	2,872	1,510	568	150	6
Nchanga	7,359	975	1,237	137	-
Mufulira	7,250	1,337	1,223	223	10
Roan	6,667	1,138	1,055	214	5
Chibuluma	1,500	549	306	374	104
Total	34,019	8,012	6,094	1,274	134

The other aim of the government was to expand mineral output, even as it tried to Zambianise labour by holding wages down.[561] But this objective was undermined following strikes, which lasted from 2 to 14 April 1966, involving both Europeans and Africans. They were dissatisfied with wages, housing and general conditions of service. Africans in particular, were protesting against the disparity between local and expatriate wages. At Rhokana, the number of workers on strike or locked out were as follows: all 1,870 Europeans belonging to the Zambia Mineworkers' Society, formerly called NRMWU; all Africans belonging to the Zambia Mineworkers' Union formerly called AMU, except 689 offering essential services; and 184 members of the Mines' Local Staff Association, previously known as MASA.[562] As a result of

558 NAZ MLSS 1/18/3, Circular Letter from Secretary Ministry of Labour to Labour Officers, 18 August 1967.

559 MUZ HQ, *A Historical Analysis of MUZ in the Harmonisation of Industrial Relations in ZCCM: An Overview of MUZ Objectives*, 1990, 13–14.

560 Table 3.5, constructed from NAZ MLSS 1/18/3, attachment to Minutes of Meeting held in the Ministry of Labour's Office in Lusaka, 1 March 1967; NAZ MLSS 1/18/3, Minutes of Meeting of the Committee on Zambianisation in the Mining Industry held in Lusaka, 19 April 1967; NAZ MLSS 1/18/3, Joint Letter from Roan Selection Trust and Anglo American Corporation General Managers, Lusaka, to Permanent Secretary Ministry of Labour, Lusaka, 29 May 1967; ZCCM 1/3/2F, Labour Figures and Statistics: January 1988-December 1988.

561 Burawoy, *The Colour of Class on the Copper Mines*, 2–3.

562 NAZ MLSS 1/25/137, Strikes and Disputes Kitwe General: Report on a Labour Dispute, 14 May 1966. Workers offering essential services included underground machine operators, and those working in the plant, smelter, concentrator, and refinery.

this strike, total copper production at Nkana mine fell by 3,408 long tons in 1966 compared to the output in 1965.[563]

The Brown Commission of Inquiry into the causes of the 1966 strike was published in October of the same year. The principal recommendation of the Commission was that a single wage structure should be introduced on the mines so that locals and expatriates should be on the same basic salaries. Most importantly, the Commission 'proposed that the establishment of this new single structure should be preceded by increasing the local wage scale throughout by 22%' in order to bridge the gap between Europeans and Africans.[564] Since the government agreed to this proposal, Rhokana and the other Copperbelt mines had no option but to implement the new wage increase. The 22% increase in African wages raised labour costs at Rhokana by about £900,000 per year.[565] Despite the increase in African wages, the objective of a single wage structure remained unrealised. Instead, in August 1968, the government introduced new expatriate conditions, which were well received.

Generally, the decline in the length of service and the increase in annual turnover of Europeans especially between 1965 and 1968 was 'the result of changes in the political climate and the resulting reclassifications of European labour through Zambianisation'.[566] Nonetheless, the privileged position of white workers was maintained. White employees at Nkana as well as in other mines, continued to earn higher wages than Africans, even in comparable jobs. For example, in 1966 the monthly salary of an underground expatriate shift boss was £181.16 while that of an underground local shift boss was £110.[567] The expatriate conditions granted to Europeans raised labour costs at Nkana by about £1 million.[568] Since the government guaranteed better conditions of service to expatriate miners, it decided that they should not have a trade union. In April 1969, the Zambia Expatriate Mineworkers Association was banned.[569]

[563] ZCCM 12.7.2F, *Rhokana Corporation Limited: 44th Annual Report 1966*, 5.
[564] *Ibid.*, 3.
[565] *Ibid*.
[566] Mhone, *The Political Economy of a Dual Labour Market in Africa*, 165.
[567] NAZ 11/57C, NRG, *Report of the Commission of Inquiry into the Mining Industry 1966*, 163.
[568] ZCCM 12.7.2F, *Rhokana Corporation Limited: 44th Annual Report 1966*, 3.
[569] ZCCM 12.7.2F, *Rhokana Corporation Limited: 47th Annual Report 1969* (Lusaka: Rhokana Head Office, 1969), 6.

3.3.3 Capital Expenditure, Labour Productivity and Ores Quality

Table 3.6 shows capital expenditure, productivity and efficiency of African miners at Nkana.

Table 3.6: Capital Expenditure, Productivity and Efficiency of African Labour at Nkana Mine, 1957–1966.[570]

Years	Capital Expenditure £	Footage Lashed per Man-shift	Feet Advanced per Machine-shift	Tons Hoisted per Tramming Man-shift
1957	-	-	6.88	940
1958	-	-	7.07	1,167
1959	-	-	7.13	1,193
1960	-	2.25	7.07	967
1961	960,000	2.33	7.51	1.007
1962	1,270,000	2.33	8.57	1,250
1963	1,400,000	2.33	9.82	880
1964	1,565,000	1.82	8.82	740
1965	2,685,000	1.82	6.25	873
1966	1,606,000	1.75	5.44	907

The patterns revealed by Table 3.6 show that African labour at Nkana was more productive and efficient between 1957 and 1962, before declining between 1963 and 1966. In the latter period, footage lashed per man-shift fell from about 2.3 to 1.8; feet advanced per machine-shift also fell from 8.6 to 5.4; and tons hoisted per African per shift declined from 1,250 to 907. As mentioned previously, a substantial number of African miners both underground and on the surface were already experienced, trained and advanced by 1962. In addition, labour was supplemented with machinery and, therefore, African workers should have been more productive than they were. So, why was there a decline in African labour productivity at Nkana mine? The answer to this question is three-fold.

The first explanation relates African labour inefficiency to growing indiscipline, following African Advancement and independence. Cases of absenteeism, refusing to obey lawful instructions, bad timekeeping, and loafing at work on the Copperbelt mines, increased after independence.[571] Between October and November 1966, at Nkana mine absenteeism accounted for the largest number of offences (403) despite a noticeable stiffening of penalties awarded.[572] The numbers of cases of refusing to obey instructions increased from 45 in October 1966 to 109 in November the same year.[573] Cases of bad timekeeping dealt with fell by 38% from 115 cases in October to 71 in November. But there was an increase of 37% to 72 cases of loafing

[570] Table 3.6, constructed from ZCCM 11.7.8A, *Brown Commission of Inquiry: Productivity and Efficiency of African Labour from 1956 to 1966*, 26 May 1966, Charts IV–VI; ZCCM 12.7.2F, *Rhokana Corporation Limited Annual Reports*, 1961–6.
[571] ZCCM 6.10.1A, Disciplinary Statistics from November 1966 to May 1978.
[572] ZCCM 6.10.1A, *Rhokana Corporation Limited: Disciplinary Report*, November 1966, 1–2.
[573] *Ibid*.

at work.[574] Overall, 7.96% or 838 out of the labour force of 10,504 was disciplined. From its inception, Zambianisation resulted in high levels of ill-discipline.

The second reason for the lack of work-place motivation among African miners were disparities created by the continuation of the dual wage structure. African workers were disappointed by government's failure to abolish the dual wage structure and the lack of meaningful improvements in their conditions of service. Consequently, the government failed to motivate African miners to work hard in support of national development. Additionally, African miners were not well informed about the nexus between the Zambianisation of labour and national development. These issues were exemplified by African workers at Rhokana in their report to the members of the Zambianisation Committee who were touring the mines in 1969:

> …. Zambianisation, as understood by Government officials, is not understood by us in the same context. There is some frustration regarding the training programs, and apparently the Government is not aware of what is happening. The Government is always fed the wrong figures, regarding Zambianisation and the number of qualified people from the various training schemes. The Government is always presented with false information about the training of personnel and the performance of the promoted personnel. …. There is a general belief among the African workers that conditions of work are deteriorating every day, and nobody knows where we are heading. Unless the situation is arrested and preferably reversed, only chaos lies ahead for the mining industry.[575]

Productivity was also adversely affected by mining problems encountered at depth. By 1966, Nkana mine was almost 3,900 feet deep.[576] With increased depth, values declined, as ground conditions were deteriorating with a substantial degree of dilution (mixture of ore with rock-waste), and there was a consequential reduction in the average grade of ore mined and treated. The grade of ore mined and milled fell steadily from an average of 2.43% copper in 1960, through to 2.27% in 1964, to 2.05% by 1969.[577] This made it impossible to reap the full benefits of mechanisation and labour efficiency. Moreover, increasing depths led to flooding, resulting

---

[574] *Ibid*.

[575] NAZ MLSS 1/18/3, Trainees and Trained Staff Employees of Rhokana Corporation Limited Report on their Grievances, 29 September 1969, 1.

[576] ZCCM 12.7.2F, *Rhokana Corporation Limited: 44th Annual Report 1966*, 9.

[577] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1960,* 12; ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1964*, 12; ZCCM 12.7.2F, *Rhokana Corporation Limited: 47th Annual Report 1969*, 16.

in the increase from an average of 11.5 million gallons of water pumped out per day between 1957 and 1963 to about 14.9 million gallons between 1964 and 1969.[578] By then, there was the need for more power to drive the water pumps. The water pumps contributed largely to the increase in the electricity-load at Rhokana from 68.2 million watts in 1964, through to 76.8 million watts in 1966, to 86.1 million watts in 1968.[579]

3.3.4 Operating Costs for Rhokana vis-à-vis the Price of Copper on the LME

The factors discussed had a significant impact on operating costs at Nkana. Table 3.7 indicates the average cost of sales per ton for Rhokana and the price of copper on the LME between 1964 and 1969.

Table 3.7: Annual Cost of Sales per ton at Nkana and the Price of Copper on the LME, 1964-1969.[580]

Description/Years	**1964**	**1965**	**1966**	**1967**	**1968**	**1969**
Price LME per Long Ton	£352	£469	£541	£418	£517	£617
Cost of Sales per Long Ton	£177.7	£194.5	£243.8	£349.1	£388.2	£391.8
Year on Year Increase	£17.7	£16.8	£49.3	£105.3	£39.1	£3.6

The table shows that the cost of sales for Nkana mine increased significantly in 1966. The cost of sales increased on account of several factors, but as indicated above, the most important was the royalty tax of 40% when the copper price exceeded £300 per ton on the LME.[581] This alone accounted for £18.6 per long ton of the total increase of £49.3 per long ton in cost of sales. The following additional factors make up the balance of the increase: 'labour costs £9.8, capital expenditure to maintain production £6.9, the effect on unit costs because of the lower output £4.4, stores £4.2, transport and realisation costs £1.6, strike expenditure £1.5 and sundry items totalling £2.3 per [long] ton'.[582] Further, the cost of sales peaked by £105.3 in 1967, primarily because of export tax, which averaged £63.2 per long ton. Still more liability for taxation increased by £21 in 1968, following the promulgation of the Income Tax Amendment Act,

[578] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1957–69.
[579] ZCCM 12.1.9C, *Copperbelt of Zambia Mining Industry Yearbooks,* 1965–8.
[580] Table 3.7, constructed from ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1964–9. Note that the new currency, Zambian Kwacha, was introduced in 1968. Therefore, from this date, all financial calculations appear in kwacha instead of British pound. Accordingly, the figures for 1968 and 1969 have been calculated using the annual average exchange rate of K1 = £0.59 and K1 = £0.58 respectively. For further information, see table on page xv; Daniel, *Africanisation, Nationalisation and Inequality*, xvii.
[581] ZCCM 12.7.2F, *Rhokana Corporation Limited: 44th Annual Report 1966*, 2.
[582] *Ibid.*, 1.

which fixed the rate at 37.5% for all companies and consequently withdrew the differential tax rates previously enjoyed by Rhokana.[583]

Cost of sales also included an increased charge in respect of capital expenditure, which at £26 per long ton in 1967 was £19.1 higher than in 1966.[584] Between 1967 and 1969, general operating costs also increased on account of the higher prices for stores and materials, and the full impact of the 22% wage increase granted to local employees, increases in the African labour force, and the conversion of expatriate employees to full expatriate conditions of service.[585] Meanwhile, Southern Rhodesia mounted its Unilateral Declaration of Independence (UDI) against Britain in November 1965. In retaliation, Britain and latterly the United Nations Organisation imposed sanctions on Rhodesia. Zambia followed suit. This had a huge impact on Zambia, which had a close economic association with its southern neighbour.[586] The major impact was felt in the transport sector and the supply of coal.[587] After two and half years of UDI, sanctions cost Zambia about £35 million, forcing her to find alternative ways, notably railway routes, to the coast through Mozambique (Beira) and Angola (Lobito) as well as air-lifting products to and from the Tanzanian port of Dar-es-Salaam.[588] Although, power supplies from the Kariba HEP station were not disrupted, Zambia decided to develop new sources of coal at the Nkandabwe and Maamba fields.[589]

The increase in the cost of sales was compensated for by rising copper prices. As shown in Table 3.7, the annual average price of copper per long ton on the LME increased beyond corresponding costs of sales from £352 in 1964 to £541 in 1966. Despite falling to £418 in 1967, the upward trend returned in 1968 and peaked at a record price of £617 in 1969. Between 1965 and 1966 there was a high demand for copper and cobalt in the USA particularly, following the intensification of the Vietnam War and fears of interruptions to world supplies. Rhokana was boosted by sales surpassing production (103,850 against 102,020 long tons of

---

[583] ZCCM 12.7.2F, *Rhokana Corporation Limited: 46th Annual Report 1968* (Lusaka: Rhokana Head Office, 1968), 6.
[584] ZCCM 12.7.2F, *Rhokana Corporation Limited: 45th Annual Report 1967* (Lusaka: Rhokana Head Office, 1967), 5.
[585] ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1967–9.
[586] For a better appreciation of the impact of UDI on Zambia, see variously R.B. Sutcliffe, 'Zambia and the Strains of UDI', *Royal Institute of International Affairs*, 23, 12 (1967), 506–11; A.J. De Roche, 'You Can't fight guns and knives: National Security and Zambian Responses to UDI, 1965-1973' in J. Gewald, M. Hinfelaar and G. Macola (eds.), *One Zambia, Many Histories: Towards a history of post-colonial Zambia* (Leiden: Brill, 2008), 77–97; C. Chongo, 'The Impact of Rhodesia's Unilateral Declaration of Independence (UDI) on Zambia's Economic and Social-political Developments, 1965-1979' (MA Dissertation, University of Zambia, Lusaka, 2009).
[587] Burawoy, *The Colour of Class on the Copper Mines*, 1.
[588] *Ibid*.
[589] ZCCM 12.1.9C, *Copperbelt of Zambia Mining Industry Yearbooks,* 1965–9.

copper in 1966; and 1,711 against 1,106 short tons in 1965, respectively).[590] In line with this high demand, the monthly average price of copper on the LME increased from about £508 per long ton to a record £790 in April 1966.[591] In addition, the interruption of rail transport from the Copperbelt through Rhodesia between June and July 1966, arising from UDI and the political situation in Central Africa, brought a temporary surge in copper prices on the LME to a monthly average of £435 per long ton.[592]

Nonetheless, the price of copper declined in 1967 because of the adoption of a new pricing system based on a three months forward quotations for wire-bars.[593] Rhokana and the Copperbelt producers adopted the new system in line with the Zambian Government's new tax regimes based on the price of copper on the LME. The previous pricing system was based on contractual arrangements exercised by customers. The new system led to fluctuations with the annual average price falling from £541 to £418 in 1966 and 1967, respectively.[594] Even so, the prolonged strike in the USA mining industry had a marked effect on copper prices between 1968 and 1969 with a new annual record figure (see Table 3.7).

3.3.5 Finished Production and Overall Profitability

The effect of the factors examined can be seen in Table 3.8 indicating the overall profitability of Rhokana between 1964 and 1969.

Table 3.8: Profitability of Rhokana during the First Years of Zambian Independence, 1964–1969.[595]

Year	**Production (Tons)**		**Value of Sales**	**Value of Tax**		**Net Profits**		**Final Dividends**
	Copper Long T.	Cobalt Short T.	Copper and Cobalt	Income (£)	Royalty (£)	Mine (£)	Investment Income (£)	(£)
1964	107,014	1,048	31,054,331	4,020,000	2,759,000	3,965,000	4,717,000	8,438,000
1965	99,995	1,106	28,303,552	2,840,000	4,463,000	4,003,000	5,195,000	8,750,000
1966	96,587	1,694	32,781,000	2,420,000	6,048,000	3,401,000	5,863,000	8,750,000
1967	81,929	1,717	40,659,020	1,700,000	4,708,613	4,912,000	4,949,000	7,500,000
1968	90,272	1,499	43,682,946	3,368,900	5,533,761	10,342,110	6,262,850	13,750,000
1969	96,638	1,146	74,458,971	4,682,340	7,294,530	13,786,020	12,044,280	21,250,000
Total	572,435	8,210	250,939,820	19,031,240	30,806,904	40,409,130	39,031,130	68,438,000

Note: Cost of sales between 1964 and 1969 amounted to £172,711,910 (see Appendix V).

---

590 ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports*, 1965–6. High demand gave Rhokana the opportunity to sell previously accumulated stockpiles.
591 ZCCM 12.7.2F, *Rhokana Corporation Limited: 44th Annual Report 1966*, 5.
592 *Ibid*.
593 ZCCM 12.7.2F, *Rhokana Corporation Limited: 45th Annual Report 1967*, 5.
594 *Ibid*.
595 Table 3.8, compiled from ZCCM 12.1.9C, *Copperbelt of Zambia Mining Industry Yearbooks*, 1965–1969; ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1964–9. The calculation of figures for 1968 and 1969 is explained in footnote 558.

Nkana produced 572,435 long tons of copper between 1964 and 1969. In the same period, Nchanga produced 1,303,834 tons, Mufulira 919,772 tons, and Roan 585,733 tons.[596] Nkana slipped from second position during the Federal era to the fourth largest copper producer in the first years of independence. Nkana's cobalt production also declined from 11,026 short tons produced during the Federation of Rhodesia and Nyasaland to 8,210 short tons of cobalt in the first five years of independence. As explained elsewhere, the major causes of this reduction in Rhokana's production were technical difficulties associated with deep level mining and the resultant decline in the quality of ore. Despite the reduction in production, the total value of sales increased because of the escalation of copper and cobalt prices.

Rhokana's net profits actually declined in the first years of independence because of an increase in the cost of sales. The total amount of taxes paid by Rhokana between 1964 and 1969 was £49,838,144, while total net profits from Nkana mine plus investment income from other properties amounted to £79,440,260 (see Table 3.8). Of this figure, £68,438,000 was paid as dividends to shareholders; leaving unappropriated net profits of £11,002,260. It can be seen that the retained or reinvested profits were much lower than the appropriated earnings of shareholders in the Rhokana Corporation. This was noted by Mhone in his analysis of percentage distribution of gross profits for Roan, Mufulira and Nkana.[597] The annual average initial declared dividends between 1964 and 1969 from Nkana was 60.7%, which was the highest in the Copperbelt mines, while retained earnings in this period averaged 18.6% per year.[598]

3.3.6 The End of Private Enterprise in the Zambian Mining Sector

The large difference between appropriated and retained profits, not only for the mines but also in other sectors such as the manufacturing, construction, retail and service industries, annoyed the government and it decided to limit dividend transfers abroad. The government accused private companies of appropriating and externalising huge amounts of profits at the expense of reinvestment and expansion in the local economy (see Table 3.9).

[596] ZCCM 12.1.9C, *Copperbelt of Zambia Mining Industry Yearbooks*, 1965–9.
[597] Mhone, *The Political Economy of a Dual Labour Market in Africa*, Table 26, 210–11.
[598] *Ibid*.

Table 3.9: Net Profits, Retention and Dividends realised by all Private Companies, 1960–1967.[599]

Year	All in Millions of Kwacha		
	Net Profits	**Retained in Business**	**Dividends**
1960	9.4	5.1	4.2
1961	6.6	3.5	3.2
1962	11.2	2.6	8.6
1963	11.9	2.3	9.5
1964	11.8	2.3	9.5
1965	17.4	3.9	13.5
1966	20.8	3.1	15.3
1967	20.7	5.3	15.4

This was the major reason why the Zambian Government decided to nationalise the private sector in 1968, despite having promised previously not to do so. The UNIP Government abandoned its liberal policies and began radical policies of nationalisation. Accordingly, private enterprise came to an end in the manufacturing sector in April 1968 when, following President Kaunda's Mulungushi Reforms speech, the government partially nationalised 25 leading manufacturing companies by acquiring 51% shares.[600] The mining companies were not yet nationalised, but shareholders in Rhokana and the Copperbelt mines felt the pinch of the new legislation limiting dividend remittances. A 50% limitation on the distribution of profits to shareholders outside Zambia was introduced.[601]

Rhokana and the mining companies thought that the government was acting unfairly in seeking to limit dividend transfers. Speaking on behalf of ZAMANGLO, Harry Oppenheimer argued that the companies had paid 65% of their gross mining profits to the government, only distributed to shareholders 80% of what remained to them.[602] He further claimed that the ZAMANGLO group invested no less than K36.4 million, equivalent to 41% of the dividends paid since independence, while an additional K12.6 million retained out of net profits was used for capital expenditure purposes. This amounted to a total of 55.3% invested of the amount paid out in dividends since 1964.[603] Table 3.8 suggests otherwise; dividends accounted for 86.2% of total net profits while unappropriated or retained earnings out of total net profits accounted for only 13.8% between 1964 and 1969. The RST group raised similar arguments as ZAMANGLO. But the government remained resolute on this issue, and further accused

[599] Table 3.9, taken from Martin, *Minding Their Own Business*, 92.
[600] Martin, *Minding Their Own Business*, 76.
[601] ZCCM 12.7.2F, *Rhokana Corporation Limited: 46th Annual Report 1968*, 1.
[602] Sklar, *Corporate Power in an African State*, 55.
[603] *Ibid*.

Rhokana and the other mining companies of transfer-pricing by buying goods from parent companies overseas at up to 33% above cost price to increase expatriation of capital.[604]

This study observes that externalisation of dividends and capital abroad from the private sector, at the expense of investment in the local industries, were the major reasons behind the partial nationalisation of the Zambian economy. However, some scholars have linked nationalisation of the mining sector, in particular, to political and philosophical factors. According to Cunningham, nationalisation in Zambia was a product of political and philosophical thinking of the governing elite in response to a wave of change in Latin America and Africa.[605] Kaunda associated himself with international leaders spearheading nationalist policies of socialist nature, perceived to be compatible with communism. First, following the fluctuation of copper prices on the international market early in 1967, the Inter-Governmental Council of Copper Exporting Countries (CIPEC) was formed by Zambia, Zaire, Chile and Peru to monitor production of and the market for copper.The CIPEC administrative headquarters was based in Paris, France.[606] Following the formation of CIPEC, the Zambian copper exports which were dominated by Britain and the USA, found their way into other countries including Japan, China, Yugoslavia, and Italy.[607] Second, later in 1967, Julius Nyerere of Tanzania introduced Ujamaa, a socialist version of communism, and Kaunda followed suit by introducing humanism.[608] Humanism placed human beings at the centre of development, with a desire to change their environment and improve their economic and social conditions.[609] To improve the quality of people's lives in a harsh and competitive world, the Zambian Government knew that it was not an easy task. It required 'a continued reassessment and reorganisation of the development or productive machinery in the economy' and changes in the distribution of goods and services to 'ensure the fair and effective flow of wealth into every Zambian home'.[610] Therefore, humanism 'as a way of life' logically implied 'in its practical implementation that…Zambians must control their own economy' through nationalisation.[611]

[604] *Ibid.*, 78, 92.
[605] Cunningham, *The Copper Industry in Zambia*, 269–72.
[606] Sklar, *Corporate Power in an African State*, 80.
[607] ZCCM 12.1.9C, *Mining Industry Yearbook of Zambia 1969* (Kitwe: Copper Industry Service Bureau, 1969), 40.
[608] Martin, *Minding Their Own Business*, 103, 107.
[609] B.G. Fortman, *After Mulungushi: The Economics of Zambian Humanism* (Nairobi: East African Publishing House, 1969), vi.
[610] *Ibid*.
[611] *Ibid*.

Third, and most influential of the international factors influencing Kaunda, was the partial (51%) nationalisation path taken by Chile in the copper industry in June 1969. On 11 August of the same year, Kaunda announced the new mining strategy in a speech which was hailed as the Matero Reforms.[612] The principle of 51% already applied in the manufacturing, construction and service industries was extended to the mining sector with the government owning 51% and the two firms, RST and ZAMANGLO, sharing 49%between them. Other reforms included a 51% mineral tax and a continuation of the 50% curb on dividend remittances.[613] The government announced that the new mineral tax would be based on profitability, instead of the royalty and export tax system, which were related to prices on the LME.[614] To implement the new state-private venture, the government determined that there would be modifications of the corporate structure of the group companies. Even so, the two mining giants retained managerial, sales and marketing responsibilities but had to work hand in hand with government officials.[615] Another consoling factor to the multinationals, AAC and American Metal Climax (AMAX), was an agreement that Zambia would compensate them to the extent of US$178 million to be paid over 12 years.[616]

3.4 Conclusion

The corporate structure, labour organisation and profitability of Nkana mine changed during the Federal period and in the first years of independent Zambia. To safeguard its operations and profitability, like the other Copperbelt companies, Rhokana cooperated in implementing new policies in line with the unfolding political and economic environment. Even so, the Zambian Government accused Rhokana and the other copper companies of expropriating capital abroad at the expense of local investment. It used this factor to introduce partial nationalisation in the mining sector. The new policies of nationalisation and Zambianisation continued to affect the operations of Rhokana after 1969.

612 Martin, *Minding Their Own Business*, 165, 168.
613 *Ibid.*, 166.
614 ZCCM 12.7.2F, *Rhokana Corporation Limited: Report and Accounts, 31st December 1969*, 6.
615 *Ibid*.
616 Larmer, 'Zambia's Mineworkers and Political Change', 84. By this point, AMAX owned 42.3% shares in RST (Zambia). Sklar, *Corporate Power in an African State*, 44.

Chapter Four: Rokana/Nkana Mine Division during the First Phase of Nationalisation, 1970 – 1981

4.1 Introduction

This chapter examines the impact of nationalisation on Rokana's corporate strategy, now under Nchanga Consolidated Copper Mines (NCCM) Limited, from 1970 to 1981. Rokana and NCCM's cooperation is framed by the 'wisdom of accommodation with interest groups that were essential to the industry's efficient operation, [such as government, African workers, expatriate employees, and trade unions]'.[617] The impact of Zambianisation of labour at Nkana, particularly local, foreign African and expatriate workers, is analysed. The discussion in this chapter goes up to 1981 because the following year, a new corporate structure was introduced in the Zambian mining industry.

4.2 The Government Take-over and Reorganisation of the Mining Industry

After the Matero Declaration of 1969, the Zambian Government and the mining companies prepared to negotiate the new private-state joint venture. The bargaining position of the companies was strengthened by the fact that Zambia still needed them to run the mines while the government's position was strengthened by the fact that the 'companies had only two alternatives: [either] to do business on Zambian terms…or to pull out of the country altogether and lose their whole investment and prospects of future income'.[618] The government had three major aims in negotiating the takeover. As stated in Chapter Three, the UNIP leadership wished to acquire substantial control over the activities of the mining companies, since it no longer trusted their transactions.[619] At the same time, the government wanted to partner with the companies in order to direct their operations towards increasing mineral production.[620] So, the government desired to retain the companies' managerial and technical expertise until such a time that more Zambians could be trained to take over these functions.[621]

The negotiations were dominated by four issues. These were: 'the method of valuing the assets; the terms of repayment; the future management fee for the companies; and the guarantees that

[617] Sklar, *Corporate Power in an African State*, 134.
[618] G. Lanning and M. Mueller, *Africa Undermined: A History of the Mining Companies and the Underdevelopment of Africa* (Ontario: Penguin Books Limited, 1979), 209.
[619] Mining and Industrial Development Corporation (MINDECO) Limited, *Zambia Mining Industry* (Lusaka: MINDECO, 1972), 7.
[620] *Ibid*.
[621] *Ibid*.

the agreement would be honoured'.[622] The assets of Anglo American Corporation (AAC) in the Zambian mining sector were valued at K240 million while those of Roan Selection Trust (RST) were valued at K165 million. The Zambian Government would pay 51% of these valuations plus interest, that is K125 million and K84 million, respectively.[623] Compensation was to be made through government bonds with an interest rate of 6%, to be paid over a period of twelve years, beginning in 1970. Management contracts, covering a range of services, from higher level positions, through to staff positions, to the marketing of copper, were left under the control of the mining companies. The management fee was set at 0.75% and 2% of sales revenue and profits after mineral tax, respectively, while the sales service provided by the two mining companies was set at 0.75% of the gross revenue.[624] This represented a lucrative total of 3.5% to be appropriated by each of the two mining companies free from exchange control. In fact, management fees, service charges, as well as bond repayments were not subjected to the Zambian exchange control. The bonds would be paid in United States dollars and could be remitted anywhere in the world designated by the companies. In addition, the parties agreed that future disputes over partial nationalisation would be settled with the help of the International Centre for the Settlement of Investment Disputes.[625]

During the Matero announcement of 11 August 1969, President Kenneth Kaunda also stated that mineral concessions would revert to the state. Consequently, the Mines and Minerals Act was passed soon after the Declaration was signed and became effective on 1 January 1970. This Act specified that mineral concessions 'reverted to the state, and a system of licenses was introduced under which companies [would] prospect, explore or mine in specific areas and for specific periods'.[626] The Act had further restrictions in terms of the acquisition of mining rights; exploration regulations, mining conditions and duration of prospecting; and that the state would be allowed to take part in any mining venture. The latter regulation was similar to that introduced by the BSA Company in 1922. The government realised that Rhokana and the other mining companies held exclusive mining and prospecting rights extending over vast areas "in perpetuity".[627] So it was important for the government to terminate exclusive mining rights in order to 'encourage accelerated expansion in prospecting, and exploration by parties other than those that had obtained concessions in earlier years' and 'large areas were opened under the

[622] Lanning and Mueller, *Africa Undermined*, 209, 211.
[623] *Ibid*.
[624] *Ibid*.
[625] *Ibid.*, 212.
[626] MINDECO, *Zambia Mining Industry*, 17.
[627] Sklar, *Corporate Power in an African State*, 71.

new Act for prospecting by other parties'.[628] Government hoped to stimulate mineral exploration, development and expand production. It was also the best way to change the structure of production and initiate the new state-private enterprise.

The government responded to the companies' discontent with the tax system by replacing two taxes (royalties and export tax) previously paid against production and the price of copper with a 51% mineral tax levied on profits.[629] Additionally, a uniform income tax rate of 45% on the profit was introduced.[630] However, the two-fold mining tax regime raised taxes charged on the Copperbelt companies from about 74.4% between 1964 and 1969 to above 80% after 1970.[631] Capital expenditure on mining operations was also to be deducted from profits before taxation. But there were some incentives for the companies. For instance, the Mineral Tax Act 'provided a mineral tax refund for a new mining company incorporated in Zambia'.[632] The purpose of these tax reforms was to encourage the companies to open new mines and develop low grade and high cost ones. The Mineral Tax Act also provided that NCCM and Roan Consolidated Mines (RCM) would not pay tax on unprofitable mines.

Re-organisation of the mining company structure was settled quickly. The AAC mining assets were placed under a new company, NCCM Limited, while the companies operated by RST International, owned by the American Metal Climax (AMAX), were placed under RCM Limited. The shares in each of the two mining groups were divided into two parts. The "A" shares comprising of 51% of the capital were held by the Mining and Industrial Development Corporation (MINDECO) Limited, a new state corporation, while the "B" shares composed of the remaining 49% of the capital were shared by the mining companies and international public investors.[633] As a result of this re-organisation, minority shares were streamlined as follows: Anglo American held, through Zambia Copper Investment (ZCI) Limited, a 49% interest in NCCM; RST International held 20.43% in RCM, on behalf of AMAX; ZCI also owned 12.25% in RCM; and international public investors held 16.32% in RCM.[634]

[628] UNIP 1-3-9, Speeches by His Excellency on State Participation in the Mining Industry, 4.
[629] Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime', 11.
[630] O.S. Saasa, 'Determinants of Zambia's Policies towards the Mining Industry: 1964-1984' in K. Osei-Hwedie and M. Ndulo (eds.), *Issues in Zambian Development* (Roxbury: Library of Congress, 1985), 363.
[631] Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime', 11.
[632] Saasa, 'Determinants of Zambia's Policies towards the Mining Industry: 1964–1984', 363.
[633] MINDECO, *Zambia Mining Industry*, 7.
[634] UNIP 1-3-9, Speeches by His Excellency on State Participation in the Mining Industry, 4; *Mining Mirror*, 21 August 1973.

The government was 'satisfied that the capacity had been bought much cheaper than new capacity could have been created. The Zambians paid K550 per ton for operating capacity, the Chileans at the same time paid K650 per ton and expansion schemes throughout the world were costing around K1,400 per ton at the end of the sixties'.[635] Even so, as noted in the previous chapter, Rhokana and the other Copperbelt mines had arguably been more than adequately compensated for their investments in form of the massive profits sent abroad. Besides, foreign companies were not only compensated for agreeing to the principle of partial-nationalisation, but would also remain minority shareholders in the Zambian mining industry. By contrast, Zambia's neighbour, Congo, introduced a 100% nationalisation (see Table 4.1). Despite full nationalisation of the mining sector in Congo, its mines continued to rely on technical and marketing services of foreign companies.[636] Similarly, minority shareholders kept effective control of the mines in Zambia, enjoying a wide range of safeguards. NCCM and RCM retained a veto power over certain areas of the mining activities such as 'winding-up of operations; disposal of asserts; grants of any retained concessions or mining rights to others; new financial commitments; borrowing powers; appropriation for capital expenditure; and exploration and prospecting'.[637] These negotiations were finalised on 24 December 1969, and the new corporate structure came into effect in January 1970.[638]

Table 4.1: Comparing Government and Private Participation in the Mines of some Countries in Africa.[639]

Country	Name of Company	Product	% Owned before Government's Participation	Year of State Participation	Company Interest %	State's Interest %
	Halco	Bauxite	51.0	1960	51.0	49.0
	FRIGUIA	Bauxite	51.0	1969	51.0	49.0
Tanzania	De Beers	Diamonds	100.0	1967	50.0	50.0
Congo	Union Miniere	Copper	66.0	1969	Nil	100.0
Zambia	AMAX	Copper	40.0	1970	20.4	51.0
	AAC	Copper	56.0	1970	49.0	51.0

Note: As explained elsewhere above, Zambia Copper Investments held nearly 12.3% in Roan Consolidated Mines Limited (RCM), owned by AMAX, on behalf of AAC. Public investors owned about 16.3% in RCM.

635 Lanning and Mueller, *Africa Undermined*, 211.
636 *Ibid.*, 96.
637 *Ibid.*, 211.
638 UNIP 1-3-9, Speeches by His Excellency on State Participation in the Mining Industry, 3.
639 Table 4.1, constructed from Lanning and Mueller, *Africa Undermined*, 439; UNIP 1-3-9, Speeches by His Excellency on State Participation in the Mining Industry, 4; *Mining Mirror*, 21 August 1973. AMAX bought all the shares in RST and formed RST International. Even so, shareholders in RST were not happy with the manner in which AMAX handed the offer; they accused AMAX of undervaluing the assets of RST. When the matter was taken to court, the offer was revised. The head offices of ZAMANGLO (Zambian Anglo American Corporation) were transferred to Bermuda, where ZCI was established. ZCI received bond repayments on behalf of AAC and benefited from low taxes in Bermuda.

4.2.1 The Importance of Rokana/Nkana Division for NCCM

NCCM consisted of: Rokana (Nkana) Division and Central Services Divisions in Kitwe; Chingola Division in Chingola; Konkola Division in Chililabombwe; and Broken Hill Division in Kabwe which produced zinc and lead.[640] As stated in Chapter Three, these divisions were controlled by the Zambian Anglo American Corporation (ZAMANGLO), and produced about 53% of Zambia's copper output per year between 1964 and 1969.[641] Prior to nationalisation, Anglo American held 45% shares in ZAMANGLO. ZAMANGLO held the 'highest controlling share of 53.7% in Rhokana Corporation Limited'.[642] As indicated in the preceding chapters, Rhokana was not only a copper and cobalt mining company but also an investment firm in other mines and metallurgical properties on the Copperbelt. Thus, prior to nationalisation, Rhokana owned a share percentage of: 100% in Bwana Mkubwa mine; 50% in Rhokana Copper Refineries; 34.73% in Nchanga mine; 34.51% in Bancroft mine; 30% in Chisangwa mine; 26.68% in Baluba mine; 26.61% in Mufulira mine; and 8.63% in Mwinilunga mine.[643] Investment income from these properties contributed to almost half of Rhokana's net profits. Moreover, the Company smelted and refined its own copper from the Nkana mine, and the surplus from other mines, including Nchanga, Bancroft, Bwana Mkubwa and Mufulira. Rhokana's book balance of issued capital in shares of K4 was valued at slightly above K112 million in 1969.[644] Overall, Rhokana had the widest and biggest operations in the Zambian mining industry prior to nationalisation.

As a result of the new Mines and Minerals Act, Rhokana lost investments in the other mines as well as mining rights over vast areas. For example, in 1969, the Company held special grants of mining rights over 36,800 acres in the Nkana area and over 37,000 acres in the Bwana Mkubwa area; a grant of exclusive prospecting rights over 51 square miles in the Bwana Mkubwa area; free-hold and leasehold surface rights in Nkana area over 44,812 acres, and 23,908 acres over Bwana Mkubwa.[645] In line with the new law, Rhokana's special grants for mining licenses reduced to just over 16,882 acres in the Nkana area, and 9,701 acres in the Bwana Mkubwa area; though freehold and leasehold surface rights remained almost the same

[640] *Mining Mirror*, 21 August 1973.
[641] R. Sklar, 'Zambia's Response to UDI' in W. Tordoff (ed.), *Politics in Zambia* (California: University of California Press, 1974), 321.
[642] Saasa, 'Determinants of Zambia's Policies towards the Mining Industry', 358.
[643] ZCCM 12.7.2F, *Rhokana Corporation Limited: 47th Annual Report 1969*, 5.
[644] ZCCM 12.1.9C, *Mining Industry Yearbook of Zambia 1969*, 52.
[645] *Ibid.*, 51.

over 44,600 acres in the Nkana area, and approximately 23,700 acres in Bwana Mkubwa.[646] Rhokana also ceased to be the consulting engineer to the Copperbelt mines, except for Bwana Mkubwa.[647] The government created the Geological Survey Department to work in conjunction with the two mining firms (NCCM and RCM) in carrying out mineral exploration. Furthermore, government issued some 120 new prospecting and exploration licenses to various companies from countries such as USA, Britain, Japan, Yugoslavia, Italy, France and Romania to prospect for copper, uranium and other minerals.[648] Individual mines did their own prospecting and exploration, although the parent company to Rhokana, the AAC, was hired at times. As a result of the new mining structure, Rhokana Corporation was renamed Rokana/Nkana Mine Division.[649]

Despite the restructuring, Rokana/Nkana remained one of the most important divisions of the mining, smelting and refining operations, of NCCM in particular, and the Zambian mining industry in general. Its major importance lay in the fact that the Division operated three underground mines (South, Central and Mindola orebodies) and one open-pit mine, with estimated ore reserves averaging 124,600,000 metric tons, containing about 2.6% copper in 1970.[650] The orebody averaged 55 degrees in dip and about 8 metres in thickness.[651] From these sources, the division was capable of producing almost 100,000 metric tons of copper and 1,900 tons of cobalt a year.[652] The Rokana concentrator operated differential flotation of copper and cobalt mineralisation from underground sulphides, and an oxide concentrator was commissioned after 1970. Rokana also operated one of the world's largest copper smelters.[653] It treated about 80,000 metric tons of copper a month of sulphide and oxide concentrates for the three major producing NCCM mines (Nkana, Konkola and Chingola).[654] The refinery produced about 17,000 metric tons of electro refined copper a month, and also casted about 20,000 tons of wire-bars per month, while the cobalt plant produced up to 2,000 tons of

---

[646] ZCCM 12.1.9C, *MINDECO Mining Yearbook of Zambia 1970* (Kitwe: Copper Industry Service Bureau, 1971), 55. Note that in the *MINDECO Mining Yearbooks*, the figures are indicated in hectares. For easy comparison, they have been converted here into acres using the formula 1 Hectare = 2.471 acres.
[647] *Mining Mirror,* 26 March 1982; MINDECO, *Zambia Mining Industry*, 8, 17.
[648] UNIP 1-3-9, Participation in the Mining Industry, 4-5. Upon issuing new mining licenses to various companies, the government envisaged expansion in copper production from 670,000 metric tons in 1970 to about 900,000 tons by 1975.
[649] MINDECO, *Zambia Mining Industry*, 8 and 17.
[650] *Ibid.*, 8.
[651] Manpower Planning, Training and Zambianisation (MPTZ), *Opportunities for Graduates for Zambia's Mining Industry* (Kitwe: Copper Industry Service Bureau, 1978), 17.
[652] MINDECO, *Zambia Mining Industry*, 8.
[653] MPTZ, *Opportunities for Graduates for Zambia's Mining Industry*, 17.
[654] *Ibid*.

electrolytic metal a year from its complex leaching and purification circuits.[655] The Nkana cobalt plant also continued to treat cobalt from mines owned by RCM. In terms of offering employment opportunities in the Zambian mining industry, Rokana employed a labour force of about 11,000 Africans and over 1,000 expatriates each year between 1968 and 1970.[656]

4.2.2 The Redeeming of Bonds in NCCM and RCM

While Rokana and the other Copperbelt mines were implementing the industry's new corporate structure, the Copperbelt was severely hit by political and economic problems in the national, regional and international arena between 1971 and 1972. Internal wrangles in the UNIP led to the formation of a rival party, the United Progressive Party (UPP), by Simon Mwansa Kapwepwe in 1971.[657] The UPP became a threat to UNIP's ruling elites who reacted vigorously. In 1972, UNIP declared a one-party-state rule in Zambia and opposition political parties were banned. While UNIP was grappling with intra-party wrangles, the government was severely hit by falling tax revenue from the mines. Revenue from mining fell from K234 million in 1969 to an average of K42 million in 1971 and 1972.[658] This reduction was partly due to the 1969 contract agreement with the companies, which put a strain on the government's effective tax rate. As mentioned above, in theory the total tax take was above 80% of profits, but the 1969 agreement reduced the government's effective tax rate in 1971 and 1972 to 28% of the profits.[659]

The balance of payment was further strained by greater leakage of foreign exchange through dividend remittances and capital repayments. Depending on the price of copper and profits, the 'net foreign exchange cost of the management fees ran between K2 million and K6 million a year'.[660] The major problem of the 1969 agreement was that it did not provide for a reduction of capital repayments if the price of copper dropped.[661] The government did not anticipate that the price of copper would drop below K800 per metric ton over the repayment period. The price of copper actually fell from K1,252 per long ton in 1970 to K750 in 1971, minimally

---

[655] *Ibid.*, 18.
[656] ZCCM T8.2A, Employment Returns: Nkana Division, 1970.
[657] Lanning and Mueller, *Africa Undermined*, 217.
[658] *Ibid.*, 218.
[659] *Ibid*.
[660] *Ibid*.
[661] In the 1969 Agreement, the government was obliged to pay around K28.7 million per year as compensation to NCCM and RCM. This amount was to be paid out of government's copper dividend earnings 'for which purpose the critical average price level was initially estimated at K750' per ton. But the government did not envisage rising cost of sales and a slackening of industrial activity, which affected the demand and price of copper. See Sklar, *Corporate Power in an African State*, 75–6.

rising to K796 in 1972.[662] As a result, the balance of payments deteriorated from a surplus of K77 million in 1970 to a deficit of K97.5 million in 1972. Despite the fall in revenue from mining, the government could neither increase mineral, export, income nor withhold taxes and royalty payments as long as the bonds remained outstanding.

These problems were compounded by rising production costs and Rhodesia's closure of the border with Zambia in January 1973. The cost of sales per metric ton of copper at Rokana and NCCM-owned mines increased from an average of K519 in 1971 to over K600 by the end of 1972.[663] Previously, 50% of Rokana and NCCM copper had been exported through Beira and Rhodesia.[664] Now copper had to be re-routed, though consumables such as coke, sulphuric acid, chlorine, and explosives were mainly in short supply. Materials including machinery had to be airlifted into the Copperbelt. Rokana and the Copperbelt mines complained of rising production costs but the government accused them and their mother companies of 'artificially inflating costs as a hidden way of exporting profits and reducing tax payments'.[665] Furthermore, the government claimed that some consumables could be obtained cheaply in Zambia.

By mid-1973, however, the price of copper per metric ton increased from an average of K766 in 1972 to K817 on the international market.[666] The monthly price of copper had risen since mid-1971 because of two major reasons. First, it began to rise in July 1971 following the strike involving 30,000 workers in the four big USA mines partly reducing world stocks and indirectly stimulating demand and price.[667] Second, three of the four major copper exporting countries, Zaire, Peru and Zambia, were trying through the Inter-Governmental Council of Copper Exporting Countries (CIPEC) to ensure stability in the world copper market.[668] These countries cut-back production by 10%, and in 1972 reduced world copper stocks to help stimulate its demand and price, and also used the LME cash settlement price for sales purposes, which partly helped to stabilise the copper price. The coup in Chile and resultant production problems also helped to ease world stocks, therefore, restoring demand and a rise in the price of copper in 1973.[669]

---

662 Lanning and Mueller, *Africa Undermined*, 217.

663 ZCCM 11.1.1F, *Nchanga Consolidated Copper Mines* (hereafter *NCCM*) *Limited*: *Annual Reports*, 1971–4; ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey* (Kitwe: IPD, 1981), 32.

664 Lanning and Mueller, *Africa Undermined*, 220.

665 *Ibid.*, 218.

666 ZCCM 11.1.1F, *Roan Consolidated Mines Limited: Annual Report 1973* (Ndola: RCM Central Services Division, 1973), 9.

667 ZCCM 11.1.1F, *NCCM Limited: Annual Report 1971* (Lusaka: NCCM Head Office, 1971), 1.

668 *Ibid.*, 3.

669 Sklar, *Corporate Power in an African State*, 77.

The Zambian Government sought to take advantage in August 1973 of the increase in copper prices to redeem the remaining bonds in NCCM and RCM. Several reasons were advanced for the government's dramatic decision to redeem the bonds. One of the major considerations was that the government was not comfortable with the fact that the companies 'retained effective control of the industry through' their managerial control and power of veto, and 'their resistance to Zambianisation'.[670] In fact, the issue of Zambianisation had not been included in the 1969 Agreement, leaving the companies with the right to hire and fire.[671] The major complaint from the government was that 'despite the generous tax provisions, and the relaxation of foreign exchange controls, the companies were not concerned to invest in Zambia, as they had been before the Matero announcement'.[672] The government argued that the two companies transferred levies charged for their sales, marketing, management and consultancy services abroad, instead of re-investing it in the industry. As a result, 'capital for the expansion programmes of both companies [was mainly] obtained from external borrowing and not from retained profits'.[673] By then, the two companies were planning to borrow about K65 million from abroad.[674]

The government further accused the mining companies of double dealing, as they entered into separate arrangements with other foreign companies for acquisitions of loans, as well as sales, marketing, management and consultancy services.[675] According to the UNIP leadership, this was what made the services from these companies expensive. The companies entered into separate arrangements, either with their parent companies or others, for one major reason; to avoid paying high tax. When asked how NCCM and RCM practiced transfer-pricing, Charles Muchimba explained that one of the methods was through 'selling their copper to parent companies [AAC and AMAX] or their agents abroad at a reduced price. The parent companies would later on re-sell the copper on the international market at a high price'.[676] Additionally, 'NCCM and RCM would obtain loans from lending institutions abroad at a higher rate than what was obtained on the market. When they sold copper, the companies would start by paying

[670] Lanning and Mueller, *Africa Undermined*, 220.
[671] Sardanis, *Zambia: The First 50 Years*, 82.
[672] Lanning and Mueller, *Africa Undermined*, 220, 222.
[673] *Ibid.*, 222.
[674] *Ibid*.
[675] Sardanis, *Zambia: The First 50 Years*, 82.
[676] C.B. Muchimba interviewed by author, Kitwe, 28 October 2017.

overdue tax on contracts. Then what remained was low profit. The Copperbelt companies, therefore, paid less tax by reducing declared profit'.[677]

Given these factors, the government decided to revise the 1969 Agreement. Accordingly, the outstanding bonds were redeemed, while management and sales contracts between MINDECO, AAC and AMAX were terminated in 1973. 'The outstanding bonds were redeemed partly out of buoyant foreign exchange reserves due to the temporary high price of copper, which reached K1,500 in November 1973', and 'with the proceeds from a US$115 million Euro-dollar loan raised earlier that year'.[678] However, many observers felt the government was not sincere about the 1973 re-arrangement of the mining industry. The 1973 takeover was criticised on four grounds. According to Andrew Sardanis, the decision by the government was associated with personal interests within Kaunda's Government, and businessmen such as Tiny Rowland of London Rhodesia (Lonrho) Limited.[679] Second, the government was charged for abrogating the management and sales contracts. For abrogating these contracts, the government compensated the AAC with K33 million and AMAX with K22 million.[680] But the major criticism was that the bonds were redeemed by borrowed money on the Euro-dollar market.[681] The short loan was obtained at an 'exorbitant interest rate of 13 [12]%' to pay bonds with an interest rate of 6%.[682] In total, the government paid about 'US$231 million when it could have bought the bonds on the [LME] market [where they were floated in May 1973] for just US$110.88 million, thus saving the country $120.12 million'.[683] The bonds had two significant advantages: the bonds only had eight and a half years to run; there was no direct government obligation; and were to be repaid out of dividends; and could be renegotiated if the mines became unprofitable.[684] Lanning and Mueller suggested that 'the best and cheapest way for the government would have been to buy out ZAMANGLO [NCCM] and sell off its non-Zambian assets'.[685]

Once the bonds were redeemed, the companies were subject to normal taxation and exchange control regulations. With effect from December 1973, the companies' dividends to

677 *Ibid*.
678 Lanning and Mueller, *Africa Undermined*, 223.
679 A. Sardanis interviewed by author, Lusaka, 24 August 2017. For further information about Sardanis's assessment, see Sardanis: *Zambia: The First 50 Years*, 83–4.
680 Lanning and Mueller, *Africa Undermined*, 224.
681 Sardanis, *Zambia: The First 50 Years*, 85.
682 Sardanis interviewed by author, 24 August 2017.
683 Sardanis, *Zambia: The First 50 Years*, 85.
684 Sardanis interviewed by author, 24 August 2017.
685 Lanning and Mueller, *Africa Undermined*, 223.

shareholders abroad were subject to a 20% tax rate.[686] The tax rate to which NCCM was granted 100% allowance for capital expenditure was withdrawn.[687] A high tax rate was introduced at 74.5% comprised 'of a 51% minerals tax on profits and a 48% tax on profits after minerals tax and credit for minerals tax payment'.[688] There was also high effective taxation on cobalt, zinc and lead revenues at 58.4% comprised of a 20% minerals tax and 48% income tax. These tax regimes, coupled with surcharges on dividend remittances maintained government's total share of profits above 80%. The sales contracts were also terminated and the Metal Marketing Company (MEMACO) wholly owned by the government and based in Zambia, was established to market copper from RCM and NCCM.[689] Copper from Rokana and NCCM-operated mines had been marketed by Anmercosa Sales Limited, created by Anglo American in 1966 and based in London.[690] Anmercosa Sales had established trade links with various companies in South Africa, Europe, USA and Japan.[691] When asked why MEMACO was formed and subsidiary offices opened in London, Francis Kaunda responded jokingly, 'young man, when the copper reached the shore [to world markets], you literally know nothing about what happens to it thereafter, and this problem has continued up till now'.[692] It can be seen from his illustration that, following the military coup in Chile in 1973 and the resultant weakness of the CIPEC, it became difficult for the Zambian government to monitor the copper market and sales abroad, hence the formation of MEMACO in 1974.[693]

Besides the above restructuring, the government Zambianised the position of Managing Director in the two companies. It was proposed that the Managing Directors of NCCM and RCM would be appointed by the "A" shareholders and not the "B" shareholders. In this connection, W.M. Chakulya, an "A" director, was appointed Managing Director of the NCCM in February 1974.[694] But to prevent MINDECO or the management of NCCM and RCM from becoming a rival centre of power, the relationship between these companies was restructured.[695] MINDECO ceased to be the holding company for the two mining companies

[686] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1974* (Lusaka: NCCM Head Office, 1974), 5.
[687] *Ibid*.
[688] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 7.
[689] Sardanis, *Zambia: The First 50 Years*, 83.
[690] Sklar, *Corporate Power in an African State*, 83.
[691] *Ibid*.
[692] F. Kaunda interviewed by author, Lusaka, 25 October 2017.
[693] For a detailed understanding of the military coup and its impact on the Chilean mining industry, see T.M. Klubock, 'Copper Workers, Organized Labor, and Popular Protest under Military Rule in Chile, 1973–1986', *International Labor and Working–Class History*, 52 (1997), 106–33; Keeton and Beer, '*MIASA Position on State Participation in Mining*', 31.
[694] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1974*, 5.
[695] Lanning and Mueller, *Africa Undermined*, 224.

while the government's shares in these companies were transferred to the Ministry of Finance and Ministry of Mines.[696] While the new changes did not have a direct impact on Rokana, the new tax rates totalling above 80% meant that tax in the Zambian mining sector was amongst the highest in the world. It left Rokana and the other Copperbelt mines with little resources to invest in expanded production. It also ate into the companies' net profits, as shall be discussed later. The termination of managerial contracts with the mining firms, and the subsequent emphasis on rapid Zambianisation in the mining industry had a significant impact on labour organisation in the mines after 1973.

4.2.3 Indigenisation and Zambianisation of Labour in the Mining Sector

As discussed in Chapter Three, the Zambian Government distinguished Zambianisation from Africanisation. In this vein, the government reduced both the number of expatriate and foreign African workers in order to provide more employment opportunities for local people. The UNIP Government also emphasised discipline, efficiency and productivity of labour for the sake of the country's wider economic development.[697] In September 1970, a productivity agreement was signed between the mining companies and the MUZ.[698] It incorporated an integrated pay structure and improvements in conditions of service in return for measures to improve efficiency.[699] For Nkana and the other NCCM mines, however, indigenisation and Zambianisation of labour not only promoted government policy but also induced greater stability in the labour force, permitting savings on recruitment and other incidental costs.[700] Table 4.2 shows the number of local, expatriate and foreign Africans at Rokana from 1966, 1970 to 1976.

[696] *Ibid*.
[697] UNIP 1-3-17, Speeches: 'Hard Work is the Answer'-Addresses to and Resolutions of the United National Independence Party at the Mulungushi Hall, Lusaka, 14-17 December 1974.
[698] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1971*, 3.
[699] *Ibid*.
[700] *Ibid*.

Table 4.2: Comparing Local, Expatriate and Alien (Foreign) African Labour Strength at Rokana, in December of each year from 1966, 1970-1976.[701]

Year	**Local Employees**			**Expatriate Workers**			**Alien African Workers**		
	Total	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**
1966	8,371*	-	-	1,705*	-	-	2,503*	-	-
1970	11,545	11,213	332	843	712	131	-	-	-
1971	11,444	11,082	362	808	693	115	-	-	-
1972	9,739	9,421	318	726	628	98	1,807	1,759	48
1973	10,300	9,933	367	678	589	89	1,726	1,682	44
1975	10,784	10,365	419	698	598	100	1,550	1,514	36
1976	11,284	10,822	462	600	523	77	1,448	1,414	34

Note: *These figures represent total numbers for male and female workers. The number of expatriate workers between 1972 and 1976 have been calculated by adding figures for Zambians and non-Zambians, and deducting number of Africans. There are no categorised figures for male and female workers for 1966, and for local and alien African employees in 1970 and 1971. Also there are no figures categorizing Alien male and female workers for 1970 and 1971.

The patterns that emerge from Table 4.2 demonstrate a number of insights about indigenisation and Zambianisation of labour at Rokana. It was obvious that indigenisation increased the number of local workers from 8,371 in December 1966 to 11,284 by December 1976. The number of expatriate workers declined from 1,705 in 1966 to almost half that number in 1970, falling to 600 by 1976. The number of foreign Africans went down from 2,503 in 1966 to 1,448 by 1976, in line with the 1967 government policy of freezing them in their positions and squeezing them out of the industry to increase opportunities for Zambians. The reduction in the number of expatriate workers between 1970 and 1971 was largely due to the nationalisation in the mining sector. When asked why the number of expatriate workers reduced drastically in these years, Sardanis stated that most expatriates were worried about their future following nationalisation of the sector and resigned.[702]

One day after the Matero speech, the government sent a consortium of paramilitary and police officers to the Copperbelt to guard the mines and other workshops there.[703] The government feared that expatriate miners would riot and cause damage to the mining properties following the government takeover. The police officers were soon joined by a delegate of 40 government workers to ascertain the attitude of the white miners, and convince them that they would not be retrenched from the mines. Sardanis, then Permanent Secretary in the Ministry of State Participation, was one of the delegates. The delegation held meetings in each mine including

[701] Table 4.2, drawn from ZCCM T8.2A, Employment Returns: Nkana Division, from 1970 to 1976.
[702] Sardanis interviewed by author, 24 August 2017.
[703] A. Sardanis, *Africa Another Side of the Coin: Northern Rhodesia's Final Years and Zambia's Nationhood* (London and New York: I.B. Tauris, 2003), 233–4.

Rokana. Expatriate workers raised a number of concerns. Some feared that their future was at stake since Zambianisation and nationalisation would displace them; others were worried about their safety after complaining of being racially abused in the mine compounds, shops, and other public places.[704] Sardanis recalled one worker expressing worries about the future value of his pension following nationalisation of the sector.[705] The delegation explained to the miners that their pension fund would be externalised; and that this automatically meant that the expatriates' wages would increase. Government, Rokana and the other mines were also forced to retain the expatriate workers because there were very few skilled and trained Zambians to take up skilled jobs in administration, mining engineering, metallurgy, mineral technology, electrical engineering, mechanical engineering, geology and chemical engineering.[706] Expatriate employees were also retained in order to train local workers for Zambianisation.[707]

Table 4.2 also points up the employment of female employees at Rokana. In 1956, the majority of women were employed in the colony's agricultural sector where there were 75 female European workers and 4,000 female Africans.[708] The same year, there were 460 female European workers and only 100 female African workers in the mining industry.[709] Most white women were employed in administration as secretaries, while black women performed duties such as cleaning and cooking in the mines. According to the *Mining Mirror*, 'before independence, the highest ranking female in the mining industry was a shorthand typist regardless of colour or qualifications'.[710] But now, the total number of African female employees at Rokana increased from 332 in 1970 to 496 in 1976, while the number of expatriate female workers fell from 131 to 77.

As was the situation during the colonial era, there was no official government policy encouraging women to seek employment in the mining industry in Zambia.[711] Even so, the government quietly encouraged private companies and the mines to employ women.[712] Rokana and the Copperbelt mines consequently found some space within the policy of Zambianisation and tried to promote the employment of women in the industry. When given employment

[704] Sardanis interviewed by author, 24 August 2017.
[705] *Ibid*.
[706] MPTZ, *Opportunities for Graduates for Zambia's Mining Industry*, 14.
[707] Daniel, *Africanisation, Nationalisation and Inequality*, 98.
[708] NAZ 11/57H, NRG, *Report of the Commission Appointed to Inquire into the Unrest in the Mining Industry in Northern Rhodesia in recent months*, 6.
[709] *Ibid*.
[710] *Mining Mirror*, 24 October 1974.
[711] K. Chibesakunda interviewed by author, Lusaka, 23 September 2017.
[712] *Ibid*.

opportunities, women worked on the surface and not underground.[713] Most women at Rokana and in the other Copperbelt mines were employed in administrative and medical departments.[714] But in the field of engineering, Chibuluma Division of RCM, championed the cause of equal opportunities for women, by appointing Margaret Bunyard as acting clerk of works at Chambishi.[715]

The labour movement followed suit by appointing women in administrative positions. For example, Betty Nkalabanda was appointed MUZ Shop Steward for the Personnel Department at Rokana.[716] In January 1975, NCCM-owned companies sponsored 193 female school leavers to be trained in typing and nursing, at divisional craft and trades' training institutions.[717] Fifteen candidates who became typists were enrolled at Rokana, while 20 recruits pursuing a career in nursing were enrolled at Chingola.[718] In October the same year, Rokana employed a total of 35 nurses and midwives.[719] For the first time in the history of Rokana, two Zambian nurses were promoted to the post of hospital matron.[720] These were Margaret Ngoma, at Nkana Hospital, and Judith Bungoni, at Wusikili Hospital. In other fields, Angela Kawandami was the first woman Mining Controller in the Zambian mining industry, appointed at NCCM's Rokana Division.[721] As controller in the surface manning office, she was in charge of the daily movements of an engineering and administrative staff establishment of over 2000.[722]

At the same time, various managerial positions at Rokana were Zambianised. Table 4.3 compares Zambianisation of managerial positions at Rokana, Chingola and in NCCM Limited between 1974 and 1976.

---

[713] S. Mulenga interviewed by author, Kitwe, 16 September 2017; C. Kabanda interviewed by author, Kitwe, 17 September 2017.
[714] J. Mukunka interviewed by author, Kitwe, 18 September 2017; C. Nyerenda interviewed by author, Kitwe, 18 September 2017.
[715] *Mining Mirror*, 24 October 1974.
[716] *Ibid.*
[717] *Ibid.*, 24 January 1975.
[718] *Ibid*.
[719] *Ibid.*, 3 October 1975.
[720] *Ibid.*, 28 November 1975.
[721] *Ibid.,* 12 December 1975.
[722] *Ibid*.

Table 4.3: Comparing Zambianisation of Managerial, Supervisory and Technical Positions at Rokana, Chingola and in NCCM between 1974 and 1976.[723]

Category	**Rokana Division**				**Chingola Division**				**NCCM Limited: Total**			
	1974		1976		1974		1976		1974		1976	
	E	L	E	L	E	L	E	L	E	L	E	L
Management:												
General Manager	1		1		1		1		4		4	
Manager-Mining	1		1		1		1		2		2	
Manager-Metallurgical	1		1		1		1		2		2	
Manager-Engineering			1								1	
Manager- Administration		1		1		1		1		4		4
Mining Underground:												
Undergrou. Superintendent	1		1		1		1		3		3	
Underground Manager	5		5		2		2		11		11	
Underground Assistant	11		11	2	6		6		23		21	4
Mine Captain Tech/Spec	13		8		6		8		25		22	
Mine Captain RBS	17	6	14	10	11	2	8	3	38	13	29	18
Mine Captain Other	1	7		10		2	2	3	1	14	2	20
Mining Engineer (Snr/Ass)	9		7	2	6		7	1	16	1	17	4
Shift Boss Tech/Spec	11	5	3	13	5	3	4	3	26	8	14	16
Shift Boss RBS	3	61	4	50	2	41		44	8	135	4	129
Mining Open-pits:												
Open-pit Superintendent	1		1		1		1		2		2	
Open-pit Manager	1		1		1		1		2		2	
Open-pit Assistant	1		1		4		4	1	5		5	1
Mine Captain Tech/Spec	1		1		3		4		5		5	
Mine Captain Open-pit	2		1	1	4	4	2	4	6	4	3	5
Shift Boss Tech/Spec	2		2		2		3		4		3	
Shift Boss Open-pit		6		1	1	32	1	33	1	38	1	37

Note: "E" stands for number of Expatriate workers while "L" for number of Local workers.

Apart from administration, the positions where most Zambianisation occurred were those of shift boss and mine captain. Expatriate workers remained entrenched in management and technical fields. Though the position of Managing Director was Zambianised at Rokana, the post of General Manager was occupied by an expatriate until 1987.[724] Mining, metallurgical and engineering management positions were also held by expatriates. Moreover, underground and open-pit technical positions were dominated by expatriate employees. This scenario was attributed to a number of factors. The government did not want to meddle with its main source

[723] Table 4.3, drawn from ZCCM 11.7.9C, *Zambianisation Report: Comparison of 1974, 1975 and 1976 Records of Actual Achievement*, 29 April 1977, Charts 1–3.
[724] *Mining Mirror*, 28 August 1987.

of revenue, and was also 'quite content to have expatriates control the mines. Expatriates, on three-year renewable contracts, could be easily removed if they created trouble; if Zambians ran the mines, however, they could pose a political threat'.[725]

There was also a marked contrast in the pace and direction of Zambianisation in the government and the mining industry. In the government and the public sector, Zambianisation proceeded both from the top down and bottom up. At Nkana and in the other Copperbelt mines, it was introduced from the bottom up.[726] Hence there was little change in the management structure of individual mines since colonial times, with the lines of authority still running from white to black. Second, Rokana and the other mining companies controlled the extent of Zambianisation 'by controlling both the intake of Zambians and their advancement', thereby restricting 'the privilege of gaining more experience to expatriates or those Zambians who share[d] the values of the existing management'.[727] 'Where Zambians had been promoted, the mines created new supervisory or advisory posts which were filled by the expatriates, and authority remained with the expatriate whatever nominal authority had been conferred on his Zambian superiors'.[728] This caused many frustrated Zambian graduates to leave the industry in the 1970s.

But these were not the only major contributing factors to the slowness of Zambianising managerial positions at Rokana and the other Copperbelt mines. Zambianisation was also slowed by the low output of qualified personnel from various training institutions. There was generally few trained and skilled Zambians in technical fields. This was mainly due to the fact that the education/training system did not adhere to the basic education standards required for certain skills in fields such as engineering, metallurgy, chemistry, physics and electricity.[729] For instance, only two graduates were allocated for Rokana from the University of Zambia in 1976, and five were expected in the following five years.[730] In the technical services department, all positions in the ventilation section were Zambianised, but not the geology and survey sections. In these two sections, there was not any progress due to the lack of qualified geologists and surveyors.[731] Even so, Rokana sponsored a total of 13 students to the Zambia Institute of Technology (ZIT), now known as the Copperbelt University, to study surveying.

---

725 M. Burawoy, 'The Colour of Class Revisited: Four Decades of Post-colonialism in Zambia', *Journal of Southern African Studies*, 40, 5 (2014), 967.
726 Lanning and Mueller, *Africa Undermined*, 213.
727 *Ibid.*, 216.
728 *Ibid*.
729 MUZ HQ, *Report of the Zambianisation Tour of all the Mines on the Copperbelt*, 29 April 1977, 30.
730 *Ibid*., 26.
731 *Ibid*.

Steady progress was made in the engineering department. There were a total of three Zambian Sectional Engineers and six Senior Assistant Engineers. At the artisan and technician levels, there were 135 Zambian artisans, 33 assistant foremen and 4 foremen.[732] A further 72 were being trained including technician improvers, craft improvers and mechanics. With the larger numbers of students graduating from ZIT and Trades Training Institutions, it appeared there was no need of recruiting abroad. But Rokana still lacked trained draftsmen, and power plant operators and shift engineers. Besides, Zambian trained metallurgists at technician, foreman and assaying levels were lacking.

Despite the challenges posed by Zambianisation, Rokana continued to stabilise its labour force. Therefore, the turnover rate of African workers declined from an average of 9.17% in 1971 to 5.17% in 1980, while the average length of service remained high at almost 10 years in this period.[733] For expatriate employees, their turnover rate increased from 24.96% in 1970 to 32.33% in 1979, while the average length of service ranged between 5 and 6 years.[734] The turnover rate of Africans fell while that of the expatriates remained high, partly due to the stabilisation of local labour as well as the fact that rapid Zambianisation of managerial positions was not attained. In fact, job fragmentation and training responsibilities led to an increased demand for skilled expatriate labour.

Table 4.4 shows that, total wages for both African and expatriate workers at Nkana mine increased from about K2, 249,029.47 in December 1970 to about K3,965,420.47 in December 1976.

---

[732] *Ibid*., 27.

[733] ZCCM 12.1.9C, *MINDECO Mining Yearbooks of Zambia*, 1971–72; ZCCM 12.1.9C*, Zambia Mining Yearbooks, 1973–80*; Daniel, *Africanisation, Nationalisation and Inequality*, 87–9.

[734] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 10–11.

Table 4.4: Wages for Local and Non-Zambian workers at Rokana in December of each year between 1970 and 1976.[735]

Year	Local Employees			Non-Zambian Employees		
		Total Wages (K)			Total Wages (K)	
		Basic Pay	Special/Overtime		Basic Pay	Special/Overtime
1970	11,545	1,257,236.41	456,750.28	843	488,778.35	46,264.43
1971	11,444	1,213,070.13	141,937.72	808	371,867.60	96,957.86
1972	9,739	1,075,502.43	750,809.92	2,533	574,586.77	225,149.41
1973	10,300	1,192,099.56	183,144.43	2,404	577,235.79	173,131.45
1975	10,784	1,664,044.40	863,971.76	2,248	940,122.82	236,830.80
1976	11,284	2,089,640.12	1,180,673.86	2,048	683,568.24	211,538.25

Note: In addition to normal pay, total wages include special/bonus payments and overtime allowances. Bonus allowances were now related to copper production and not copper price. Between 1972 and 1970, wages for non-Zambian employees comprised of those for both expatriates and foreign Africans.

Late in 1969, a wage-freeze was introduced after the government realised that workers in Zambia were the highest paid in the Southern African region. The government advised the mining companies not to increase wages in the industry. However, Table 4.4 indicates that one of the major reasons for increased wages at Rokana was the introduction of special payments and overtime bonuses meant to motivate workers to work hard. The other reason was the impact of new expatriate conditions of service. Expatriate employees were put on contracts for three years. As noted previously, their salaries were externalised with remittance of earnings limited to one-third of annual salaries up to K600 per month, and a gratuity payment of 25% of after tax salary in foreign exchange.[736]

African wages increased for a number of reasons. First, following the 1970 Productivity Agreement signed between the MUZ, government and the mine companies, a 5% wage increase was introduced to cover the period up to October 1973.[737] At that point, a new agreement, designed to improve pay and other conditions of service came into effect and lasted until October 1976.[738] Under the new agreement, MUZ would co-operate in improving efficiency, safety and discipline. Second, despite these provisions and subsequent increase in wages, workers at Nkana and the other Copperbelt mines continued to fight for better conditions of service through wildcat strikes. In 1976, there were two major and twelve minor stoppages which accounted for a total of 48,363 man-hours lost.[739] Furthermore, a total of 1,440

[735] Table 4.4, drawn from ZCCM T8.2A, Employment Returns: Nkana Division, from 1970 to 1976.
[736] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 12.
[737] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1971*, 3.
[738] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1974*, 9.
[739] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1976* (Lusaka: NCCM Head Office, 1976), 9.

man-hours were lost when winding engine drivers at Chingola, Konkola and Rokana went on strike because of low salaries and grading.[740] The companies were forced to revise conditions of service. Rokana and the other Copperbelt mines introduced improved conditions of service for both African and expatriate staff. For expatriates, 'these conditions of service included, inter alia, two year contracts and new salary scales which were divorced from the Industry Basic Pay Scales introduced after the Brown Commission in 1966'.[741] For expatriate senior staff, adjustments were made to their salaries as part of an exercise rationalising wages in the mining industry. In addition to these measures, the government introduced workers' participation in industry through the effect of Part VII (Works Councils) of the Industrial Relations Act, 1971.[742] This Act empowered Works Councils to veto new management policy decisions in matters of welfare and conditions of service.

There was another strike related to conditions of service in 1980. These included inadequate remuneration, low job grading and ill-defined jobs.[743] The dispute lasted for 18 days and the mines lost about 15,486.5 man-hours.[744] The largest wildcat strike in the Copperbelt mines happened in 1981; lasted for 23 days; and the mines lost over 2,299,419.9 man-hours.[745] The initial cause of the strike was the withdrawal of the credit facility for the purchase of maize meal. The government accused the leaders of the Zambia Congress of Trade Unions (ZCTU) and MUZ of not restraining workers from participating in the illegal strike, and expelled 17 of them from UNIP.[746] The expulsion of the labour leaders aggravated industrial unrest on Copperbelt mines. As a result of these strikes, wages for Africans increased by 4% in 1980, while in the last quarter of 1981 wages increased by 7.6%.[747]

As noted above, the government emphasised discipline and productivity on the mines. It tried to promote discipline among workers in a number of ways. Generally, trade unions in Zambia, including MUZ, worked under a variety of legal restrictions and were brought under government control through ZCTU, which was founded in 1965.[748] In 1971, the Industrial

---

[740] *Ibid.*, 10.
[741] *Ibid*.
[742] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1977* (Lusaka: NCCM Head Office, 1977), 8.
[743] MUZ HQ, ZCCM Limited Head Office: Attachment to Letter from ZCCM Deputy Director of Operations, Kitwe, to ZCCM Director–Human Resources, Lusaka, 15 August 1989.
[744] *Ibid*.
[745] *Ibid*.
[746] *Ibid*.
[747] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 9.
[748] MUZ HQ, *Zambia Congress of Trade Unions (ZCTU): Report of the General Secretary*, presented to the 4th Annual Conference held in the Rokana Cinema in Kitwe, 21–24 May 1970, 1.

Relations Act was passed, which not only provided for the registration of trade unions but also the banning of unconstitutional strikes and establishment of an Industrial Relations Court to advise unions and deal with industrial disputes.[749] In addition to the 1971 Labour Law and the affiliation of the MUZ to ZCTU, the Party's leadership ensured that trade union leaders were or became members of UNIP.

Under one-party participatory democracy, workers from individual mines were allowed to compete for elections into government. For instance, 30 mine employees from NCCM and RCM divisions were among the more than 90 candidates contesting in the primary elections in various mine-township constituencies in 1973.[750] At Rokana, six mine employees were among the 12 contestants in Kitwe's Nkana and Wusikili constituencies.[751] In fact, these contested the Nkana Constituency where MUZ President and incumbent Member of Parliament, David Mwila, was standing. Mwila retained the Nkana parliamentary seat. Nonetheless, the workers tried to resist government control through wildcat strikes.[752] Furthermore, when the workers realised that their leaders at MUZ headquarters were compromised, they expressed resistance through their branches in the mines. For example, between 1970 and 1971 workers at Nkana, Luanshya and Konkola staged demonstrations and strikes in solidarity with their branch leaders against the Mwila leadership who they accused of being a sell-out.[753] The workers tried to push Mwila out of the MUZ.

4.3 Capital, Labour Productivity and Quality of Ores at Nkana

Zambianisation in particular, labour relations in general, coupled with capital and quality of ores treated were all important elements of production and costs at Nkana. Table 4.5 compares productivity of underground African labour at Nkana with other NCCM mines.

[749] ZCCM 11.8.3C, *Labour Relations on the Copperbelt*; ZCCM 12.1.9C, *MINDECO Mining Yearbook of Zambia 1971* (Kitwe: CISB, 1972), 14.
[750] *Mining Mirror*, 31 October 1973.
[751] *Ibid*.
[752] For a detailed analysis of mineworkers' reaction to UNIP's desire to control them between 1964 and 1981, see Larmer, 'Zambia's Mineworkers and Political Change'; Larmer, 'Zambia's Mineworkers and the Labour Movement's Resistance to the One-Party State, 1973–1981', 154–76.
[753] For further details, see M. Larmer, 'Unrealistic Expectations? Zambia's Mineworkers from Independence to the One-Party State, 1964–1972', *Journal of Historical Sociology*, 18, 4 (2005), 338–40.

Table 4.5: Comparative Productivity of underground African Labour at Rokana and other NCCM-owned mines, 1979.[754]

Financial Year	1963	1979	Change % from 1963 to 1979	Annual Change %
Rokana (Nkana):				
Labour Strength	3,498	4,169	19.2	1.3
Ore Hoisted per Man-shift (Tons)	4.9	3.2	34.7	2.3
Chingola (Nchanga):				
Labour Strength	2,314	3,062	32.3	2.2
Ore Hoisted per Man-shift (Tons)	4.4	2.5	43.2	2.9
Konkola (Bancroft):				
Labour Strength	2,775	3,074	10.8	0.7
Ore Hoisted per Man-shift (Tons)	2.0	1.8	10.0	0.7

Despite increased wages, productivity at Rokana and in the other NCCM-owned mines actually declined. According to Table 4.5, at Nkana mine, it took 3,498 Africans to hoist 4.9 tons of copper in 1963, but it needed 4,169 Africans to hoist 3.2 tons in 1979. The reasons behind the decline in labour productivity at Rokana can be explained in four ways. Firstly, 'the decline in labour productivity reflected among other things a general apathy and lack of motivation among African mineworkers attributable in a large part to disincentives built into the dual wage structure'.[755] Secondly, Rokana and the other Copperbelt mines were overstaffed at non-skilled levels because of indigenisation and Zambianisation of labour. Overall, less productive non-skilled labour remained high. Even so, 'it [was] still more economic for the mines to use a higher-labour versus capital-intensive mode of production due to the high costs of capital, shortage in foreign exchange for capital expenditure, and shortage in skilled technicians to maintain equipment'.[756] In fact, capital expenditure at Nkana markedly between 1970 and 1978 (see Table 4.10 and Appendix VI). As discussed below, this was partly attributed to a decline in revenue due to a combination of increased production costs and low copper prices. But it was mainly due to diversion of NCCM's profits into non-mining activities such as agriculture and tourism which deprived Nkana and other mines of much needed capital.[757]

The decline in labour productivity was also related to changes in the manning structure in line with Zambianisation. This not only reduced European workers in supervisory jobs but also weakened the discipline of African workers who became resentful of local supervisors.[758] The fourth and most important reason for the decline in labour productivity was related to the fall

[754] Table 4.5, taken from ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 37.
[755] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 37.
[756] *Ibid.*, 37–8.
[757] *Mining Mirror*, 12 October 1982.
[758] Burawoy, 'The Colour of Class Revisited: Four Decades of Post-colonialism in Zambia', 965.

in grade of ore delivered to the mill (see Table 4.6). As discussed in Chapter Three, this situation at Nkana mine was linked to two factors: decreasing grades of ore reserves; and increasing mixture of waste rock with ore (dilution). With deep level mining at Nkana, the quality of fully-developed ore reserves declined from about 3.0% copper in 1969 to around 2.3% by 1980.[759] The grade of ore reserves remained relatively steady at Rokana and the other NCCM-owned mines. Nevertheless, Table 4.6 demonstrates that there was a big gap between the grade of ore in reserve and mill-head grades.

Table 4.6: Comparing Grade of Ore Reserves, Mill-Head and Mining Dilutions at Nkana and other Copperbelt mines, 1980.[760]

Name of Mine	**Ore Reserves Copper %**	**Mill-Head Copper %**	**Dilution %**
Nkana	2.35	1.66	22
Luanshya (Roan)	2.53	1.47	72
Mufulira	3.09	2.10	47
Konkola	3.74	2.94	27
Chingola	6.50	3.24	101

In part, dilution can be explained 'by geological hanging wall conditions, in particular Copperbelt mines, where the mining method [broke] waste in the footwall and ground conditions were weak'.[761] The effects of geological hanging wall conditions were generally less at Nkana compared to all the other mines on the Copperbelt, with the least dilution rate of 22% in 1980. Nkana had the strongest underground workings because of effectiveness of the stoping method of mining. Despite this method being expensive and slower, it was not only stronger but also safer.[762] Mining challenges were better addressed at Nkana than at any other mine on the Copperbelt. But labour productivity at Nkana was much lower than at Konkola and almost similar to that of Chingola (see Table 4.5). Mufulira suffered from an underground mine-disaster in September 1970, mainly due to weak hanging wall conditions. The block-caving method employed at Mufulira weakened underground walls and was unsafe, although cheap and quick with a big tonnage.[763] Underground working conditions at Luanshya were also bad with 72% dilution (see Table 4.6). Compared to Rokana and the other mines, Chingola

[759] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 35.
[760] Table 4.6, compiled from ZCCM 11.1.1F, *NCCM Limited: Annual Report 1980* (Lusaka: NCCM, 1980), 35; ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 35.
[761] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 35.
[762] *Mining Mirror*, 30 January 1987, 27 January 1989; ZCCM 11.1.1F, *NCCM Limited; Annual Reports*, 1971–81.
[763] V.S. Vutukuri and R.N. Singh, 'Mine Inundation: Case Histories', *Mine Water and the Environment*, 14, 9 (1995), 120; GRZ, *The Mufulira Mine Accident: Final Report on the Causes and Circumstances of the Disaster Which Occurred on 25 September 1970* (Lusaka: Government Printer, 1971), 16, 19; ZCCM 10.5.5D, *Inspection Report at Mufulira Mine*, by A. Walden, Mines Inspector, 14 April 1970. Prior to the disaster, the block-caving method was replaced by a similar but much cheaper and faster method called sub-level or cascade method.

seemed to have suffered the most from weak geological wall conditions (see Table 4.6). Despite this problem, Chingola remained the largest producer, because the grade of its ore reserves that contained about 3.14% copper, was the highest among the major producers on the Copperbelt.[764]

Table 4.7 indicates the grade of ore reserves, ore mined and milled/treated at Rokana between 1970 and 1981. Ore hoisted, milled, metal per cent and content increased between 1973 and 1975, and thereafter fell away significantly.

Table 4.7: Comparing Ore Reserves, Ore Mined and Treated at Rokana between 1970 and 1981.[765]

Year	**Ore Reserves**		**Ore Mined and Treated**					
			Metric Tons		**Metal % of Ore Milled**		**Metal Content**	
			Ore Hoisted	**Ore Milled**	**Copper**	**Cobalt**	**Copper**	**Cobalt**
1970	129,657,000	2.62	5,857,000	5,478,000	1.93	0.11	105,725	6,026
1971	123,027,000	2.53	5,707,000	5,530.000	1.90	0.12	105,070	6,636
1972	123,246,000	2.52	5,972,000	5,746,000	1.87	0.11	107,450	6,321
1973	121,973,000	2.52	5,931.000	5,781,000	1.78	0.11	102,902	6,359
1974	119,944,000	2.44	6,528,000	6,337,000	1.88	0.11	119,136	6,971
1975	118,212,000	2.39	6,175,000	6,025,000	1.80	0.09	108,450	5,423
1976	131,336,000	2.35	5,448,000	5,426,000	1.78	0.09	96,583	4,883
1977	126,998,000	2.36	5,427,000	5,093,000	1.66	0.10	84,544	5,093
1978	121,320,000	2.35	4,818,000	4,868,000	1.54	0.11	74,967	5,300
1979	117,988,000	2.37	5,023,000	4,758,000	1.75	0.11	83,265	5,234
1980	113,402,000	2.35	4,879,000	4,794,000	1.66	0.11	77,663	4,794
1981	113,433,000	2.35	4,806,000	4,663,000	1.56	0.10	72,743	4,663

Underground mining operations were constrained by shortages of skills and spares, and breakdowns of aged air compressors and ore handling plants. Other difficulties which affected mining operations were major heat and pressure problems associated with increasing depth. The South Ore Body, was the deepest on the Copperbelt at 4,190 feet.[766] The Central Ore Body was 3,560 feet deep. A major problem in 1974 was flooding, following break-down of the main pump at the Central shaft. Generally, daily average quantities of water pumped from underground sources at Nkana averaged 72,027m^3 during 1972 and 1973, and increased to 76,670m^3 during 1974.[767] In order to cope with such problems, technological improvement in mining methods and equipment was required if operations were to be continued with an

[764] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1980*, 37.
[765] Table 4.7, compiled from ZCCM 12.1.9C, *MINDECO Mining Yearbooks*, 1970–2; ZCCM 12.1.9C, *Zambia Mining Yearbooks*, 1973–85.
[766] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1974*, 22.
[767] *Ibid*.

acceptable degree of safety and efficiency. Besides, it was realised that a suitable draining system was necessary in order to make it possible 'to produce 100,000,000 metric tons of relatively high grade sulphide mineralization that lay within the fold systems of the Nkana synclinorium'.[768] There were also metallurgical problems in the treatment plant due to an amount of obsolete and aged equipment making the plant expensive to maintain and operate efficiently. Between 1974 and 1976, Rokana invested K18.6 million into new machinery and technology in order to copy with such problems, improve on safety underground and efficiency of processing plants.[769]

Underground mining methods were mechanised by utilising raise borers and rubber-typed loaders which provided a great deal of flexibility in development and stoping-layouts, and led to more rapid extraction rates and higher recoveries.[770] There was also the introduction of the Sands Flotation Technique, which increased copper recovery concentrate by 17%, and led to the treating of oxide ores for the first time in the history of Rokana.[771] Another important innovation was in the metallurgical operations involving 'the successful application of tonnage oxygen to the reverberator furnaces and convertors' which increased smelter throughput and flexibility by 17%.[772] To improve the refinery process, a new system, the Periodic Current Reversal System, was introduced in the Refinery Tank-house.[773] As a result production shot up by about 20%.[774] Mechanisation also cushioned problems associated with dilution and labour productivity. Consequently, the quantity and quality of ore hoisted and ore treated improved.

The other contributing factor was that in 1971 large tonnages of additional ore was discovered near the Central, South and Mindola orebodies leading to the opening of two new open-pit mines in 1973, averaging 4.37% copper.[775] Thus, three open-pit mines were operated at Rokana (Mindola open-pit (Torco), Mindola open-pit (Oxide), and Nkana Area E (Torco).[776] These were easier to mine and, therefore, low-cost sources of copper. However, the reduction in ore hoisted and treated after 1977 was mainly due to a depletion of high-grade ore in these

768 ZCCM W2.2.2G, GRZ, *A Submission to the World Bank: Rehabilitation Projects within the Zambian Copper Mining Industry* (Lusaka: Government Printer, 1982), 16.
769 ZCCM 11.1.1F, *NCCM Limited: Annual Reports*, 1974–6.
770 ZCCM 11.1.1F, *NCCM Limited: Annual Report 1971*, 2.
771 *Ibid*; ZCCM 11.1.1F, *NCCM Limited: Annual Report 1974*, 22; ZCCM 11.1.1F, *NCCM Limited: Annual Report 1975* (Lusaka: NCCM Head Office, 1975), 5.
772 ZCCM 11.1.1F, *NCCM Limited: Annual Report 1971*, 2; ZCCM 11.1.1F, *NCCM Limited: Annual Report 1975*, 5.
773 ZCCM 11.1.1F, *NCCM Limited: Annual Report 1974*, 5.
774 *Mining Mirror*, 9 July 1974.
775 ZCCM 11.1.1F, *NCCM Limited: Annual Report 1971*, 2; ZCCM 11.1.1F, *NCCM Limited: Annual Report 1974*, 22.
776 ZCCM 11.1.1F, *NCCM Limited: Annual Report 1974*, 22.

opencasts mines. Nkana's open-pits were nearing the end of their economic lives and were closed in 1981. This was a big blow, as these open-pits contributed about 40,000 metric tons of finished copper per year.[777] All of these innovations slowed but did not arrest declining production.

4.4 Selling Price of Copper on the LME, Costs of Production and Transport for All NCCM-operated Mines

Rokana and the other Copperbelt mines lost control of two important components of mining costs; mill-feed quality, and mine operations' labour productivity. Between them, they comprised 50% to 60% of the total production costs and about 40% of the total cost of sales per metric ton of copper between 1970 and 1981.[778] Table 4.8 establishes the relationship between cost of sales and selling price of copper on the LME. After 1974, the cost of producing and transporting a ton of copper increased tremendously compared to the selling price.

Table 4.8: Average Cost of Sales (K) and Selling Price of Copper (K) per ton on the LME for all NCCM-owned Mines, Selected Years from 1971 to 1981.[779]

Years	**1971**	**1974**	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**
Selling Price of Copper	916	1,300	1,087	768	1,072	1,002	1,159	1,690	1,629
Cost of Copper Sales	519	609.8	754.2	795.9	839.6	1,047.6	1,092.7	1,281.6	1,540.7
Cost by Expense Class:									
Mining and Labour	222.6	268	334	340	333	409	399	482	562
Mineral Processing	109.8	152	200	237	234	276	314	376	470
Inventory Charges	77.4	111	133	133	153	220	201	206	281
Transport Expenses	64.7	78.8	87.2	85.9	87.6	97.6	108.7	138.6	141.7
Other Expenses	44.5	-	-	21	32	45	71	79	86

Note: Mining and labour costs denotes average cost of production at themine. Mineral processing costs include total expenses on concentrating, leaching, smelting and refining. Inventory charges were expenses on administrative and technical services, and mine general expenses. Average transport costs were calculated from mine station to United Kingdom and world ports. Other expenses include charges on overheads, depreciation, written down value of stocks, and abnormal expenditure. There are no figures for individual mines except for the average for all NCCM-owned mines. All figures are in kwacha.

The increase in cost of sales was attributed to three linked factors between 1970 and 1981.[780] As discussed above, the first factor was related to the fall in the metal content of ore treated, and second, the decline in productivity of African labour, major components of total operating

[777] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1981* (Lusaka: NCCM Head Office, 1981), 5.
[778] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 33.
[779] Table 4.8, constructed from ZCCM 11.1.1F, *NCCM Limited: Annual Reports*, 1971–81; ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 32; ZCCM 12.1.9C, *MINDECO Mining Yearbooks of Zambia*, 1970–2; ZCCM 12.1.9C, *Zambia Mining Yearbooks*, 1973–85.
[780] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 20.

costs. Third, was the disruption of transport routes through Rhodesia in 1973 and Angola in 1975 due to political disturbances in the region (see Figure 1). This was a major blow to Rokana and the Copperbelt mines. The interruption of external railroad connections through Rhodesia closed the entire southern route to Beira and Maputo, and was compounded by a suspension of operations of the Benguela railway line which was destroyed in 1975.[781] This impacted on Rokana and the other Copperbelt mines in three ways. Firstly, it slowed completion of projects because of the delayed arrival of materials and equipment. Secondly, it blocked copper exports from reaching the coast, causing congestion. Thirdly, it raised the cost of transport by diverting the mine traffic from rail to road.

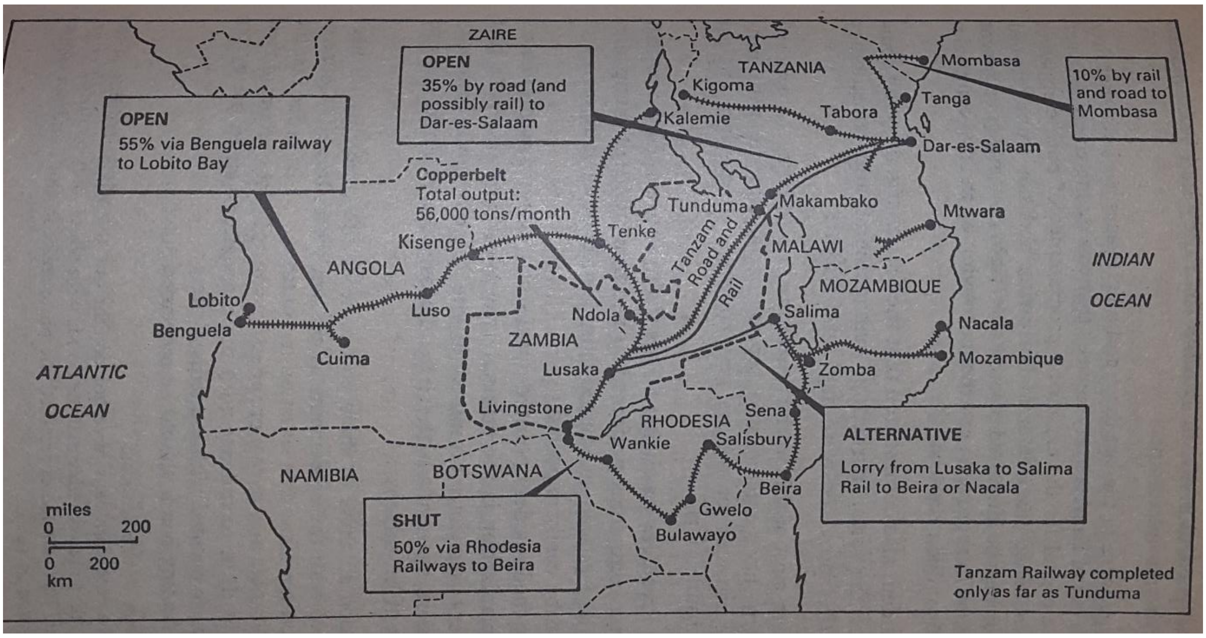


Figure 4.3: The Zambian Copperbelt and the transport routes. Note: The TAZARA was completed in 1976; the road link to Mombasa was closed in 1977 due to a dispute between Kenya and Tanzania. Source: G. Lanning and M. Mueller, *Africa Undermined: A History of the Mining Companies and the Underdevelopment of Africa* (Ontario: Penguin Books Limited, 1979), 221.

Transport problems for Rokana and the Copperbelt mines were eased following the completion of Tanzania Zambia Railways (TAZARA) to the port of Dar-es-Salaam in 1976; the opening of Rhodesia's border in 1978 and the subsequent independence of Zimbabwe in 1980. Extra carrying capacity was eased as a result of Zambia's increased self-reliance in certain fields, notably coal, fertilizers, liquid fuels, cables and explosives.[782] But, transport costs continued to increase because of the escalation of the civil war in Angola, the volatile political situation in

[781] *Ibid.*, 42–3.
[782] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1971*, 3.

Mozambique, and the subsequent transport interruptions (see Table 4.8).[783] To ease power shortages Zambia speeded up construction of her own hydro-electric stations at Kariba North Bank, Kafue Gorge and Victoria Falls, which became fully operational by 1979.[784] Also, in 1981 the oil shock eased and supplies began to increase. Even so, the Zambian Government remained anxious about the volatile political environment in the Southern African region.

4.5 Overall Profitability of Rokana and All the NCCM Mines

The overall profitability of Rokana and the other Copperbelt mines was undermined by the decline in copper prices caused by the drop in demand arising from a world recession, especially between 1975 and 1979 (see Table 4.8). As a result of the recession, there was a slow-down in industrial activity in the USA, Europe and Japan, the latter being the largest buyer of Rokana and NCCM copper. The financial fall of Burmah oil, Britain's second largest oil company, and that of Aston Martin, heightened the fears of an imminent economic depression and pushed down prices on the stocks and metal markets.[785] In addition, Japan's Nippon and Mitsubishi, companies which were major consumers of Zambian copper, were forced by the recession to close some of their smelters contributing to the decline in copper prices.[786] The copper price on the LME fell steadily from an average of K1,087 in 1975 to K768 in 1976 (see Table 4.8). The worst result came in 1976, when the average cost of sales for Rokana and NCCM-owned mines was more than the annual average price of copper on the LME (see Table 4.8).

Also, there was an oversupply of copper following expansion programmes in the main producing countries such as USA, Soviet Union, Chile and Peru in the late 1960s and early 1970s. As a result, between 1975 and 1976 the copper price declined, and between 1977 and 1979 it did not increase substantially because of the increase in world stocks following excess production capacity. Copper stocks in the LME warehouses stood at 10,000 metric tons in April 1974, increased substantially to 176,000 tons by Mach 1975 and reached 533,000 tons by mid-1976.[787] The recession worsened and the short-lived economic recovery in the first half of 1976, with a growth rate of approximately 6.5% throughout the Western World, fell away again

[783] S. Onslow and A. van-Wyk (eds.), *Southern Africa in the Cold War, Post-1974* (Washington DC: Wilson Center, 2013), 45–73; C. Chongo, 'Decolonising Southern Africa: A History of Zambia's Role in Zimbabwe's Liberation Struggle, 1964–1979' (PhD Thesis, University of Pretoria, Pretoria, 2015), 111–9.
[784] ZCCM 12.1.9C, *Zambia Mining Yearbook* 1979 (Kitwe: CISB, 1980), 19.
[785] *Mining Mirror*, 10 January 1975.
[786] *Ibid*.
[787] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1975*, 7; ZCCM 11.1.1F, *NCCM Limited: Annual Report 1976*, 7.

in the second half of 1977, and copper prices continued to tumble.[788] In July 1976, the Zambian Government devalued the kwacha by 20%. While this temporarily improved the financial position of Zambian companies in local currency terms, gains were corroded by increased overseas payments and loan repayments. The overall loss arising from devaluation of the kwacha amounted to K32,021,000 leaving a profit of K2,471,000 for the financial-year 1977.[789]

During 1978, the mines faced three major problems: lack of a reliable and efficient transport system; low shipments; inadequate foreign exchange allocations, and the low purchasing power for essential consumables.[790] Inadequate foreign exchange forced the government to seek a standby arrangement from the International Monetary Fund (IMF) totalling Special Drawing Rights (SDR) K322.6 million.[791] As part of this standby arrangement, the government devalued the kwacha by a further 10% in March 1978, and also agreed to impose restrictions on local borrowings.[792] But it became difficult for Rokana and the Copperbelt companies to operate within IMF restrictions because of problems associated with transportation, shipments and allocation of foreign exchange. As indicated above, copper prices remained low for two major reasons; the effect of the recession and excess production capacity. The copper oversupply was reflected in the high level of world stocks at two million metric tons.[793] CIPEC members announced a 15% cut-back on their production.[794] But there was no concerted action with other big producers such as the USA and Soviet Union. As a result, 'copper prices declined 48% in real terms between 1974 and 1975, and since 1975, had risen only 2.8% per year in real terms'.[795]

Mining enjoyed a brief period of profitability between 1980 and 1981, due to higher copper and cobalt prices, albert the benefits of the higher prices were diluted by increases in cost of sales (see Table 4.8). As a result, Konkola, Kansanshi and Rokana's Mindola Open Pit mines operated at a loss, although the mother company, NCCM, as whole produced a profit (see Table 4.9).[796] NCCM was able to make a profit by selling other metals such as cobalt, zinc and lead. For instance, in 1979 Zambia was the world's second largest producer of cobalt accounting for

---

[788] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1977*, 6.
[789] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1976*, 7.
[790] ZCCM 11.1.1F, *NCCM Limited: Annual Report 1978* (Lusaka: NCCM Head Office, 1978), 3, 5.
[791] *Ibid.*, 5.
[792] *Ibid*.
[793] *Ibid.*, 7.
[794] *Ibid*.
[795] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 4.
[796] *Ibid.*, 38.

10% (2.59 thousand metric tons), following Zaire with 51% (148 thousand tons).[797] More than two-thirds of Zambia's cobalt originated from Rokana and NCCM-owned mines.[798] The increase in the price of cobalt reduced the impact in the price of copper.[799] The USA accounted for almost half of NCCM and RCM's cobalt exports, and the United Kingdom purchased about 1.8 thousand metric tons. The Soviet Union and Japan accounted for less than 100 metric tons, and the remainder was purchased by other consumers. By comparison, in 1974 copper production accounted for 93.7% of the total value of mineral production in Zambia, followed by zinc at 3.8% and cobalt at 1.0%. In 1979, copper's share of the total value of mineral production fell to 76.8%, while cobalt's share rose tremendously to 13.1% and zinc's declined to 1.9%.[800]

Table 4.9 compares the trends in output and financial performance of all NCCM-controlled mines between 1970 and 1981.

[797] *Ibid.*, 8.
[798] ZCCM 11.1.1F, *NCCM Limited: Annual Reports*, 1971–81
[799] Between 1976 and 1979, consumer stocks soared by 77% above their 1975 level, reflecting concern over the disruption of supply from Zambia and Zaire during the liberation struggle in the Southern Africa region. Informal rationing by suppliers also reduced world stocks and increased demand for cobalt, while resurgence in industrial activity and the resultant demand for magnetic materials utilising cobalt components raised the price of cobalt. The price of cobalt more than quadrupled on the international market from an average of US$3.98 per pound in 1975 to US$20 per pound in 1978. For further details about the cobalt market in the 1970s, see *Bureau of Mines Minerals Yearbooks – Metals and Minerals – Cobalt*, 1970–80. https://minerals.usgs.gov/minerals/pubs/usbmmyb.html. Accessed on 4 April 17.
[800] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 4.

Table 4.9: Finished Production and Overall Profitability of NCCM-controlled mines between 1970 and 1981.[801]

Year	Finished Production (Metric Tons)		Total Sales (Metric Tons)	Total Value of Sales	Total Cost of Sales	Total Tax	Total Net Profits	Total Net Dividends
	Copper	Cobalt	Copper	Millions (K)	Millions (K)	Millions (K)	Millions (K)	Millions (K)
1970	395,511	2,073	382,719	365	-	-	-	-
1971	494,816	2,080	475,983	449	246	107	97	51
1972	401,283	2,056	420,363	348	-	18	68	36
1973	440,077	2,137	445,794	363	262	23	83	36
1974	408,753	1,870	397,385	555	276	164	113	67
1975	408,666	2,018	396,160	479	340	78	59	17
1976	385,414	1,698	386,201	327	366	54	-	-
1977	427,810	999	425,931	506	403	49	34	-
1978	377,156	1,093	384,560	422	-	40	6.5	-
1979	368,332	1,105	365,551	489	-	0.1	26	-
1980	359,816	1,258	363,815	702	-	75	56	9
1981	356,541	1,122	362,812	657	-	19	32	5

Note: Value of sales refers to total revenue from all the metals including lead and zinc from Broken Hill/Kabwe mine. Net Dividends are total net paid dividends on "A" (Zambian Government's) and "B" (Minority Shareholders') shares. In 1976, NCCM made a loss of K54 million before tax deductions hence the company did not declare net dividend in this year. There are no figures for individual mines except for the total for all NCCM-owned mines.

Overall, the financial performance of Rokana and other NCCM-owned mines, especially between 1976 and 1981, reflected the influence of the world industrial recession which began in 1975 (reducing consumption of copper), the increase in costs of imported mining inputs (reflecting the rise in oil prices since 1973), and volatile but generally depressed copper prices. As a result, Rokana and NCCM-owned mines recorded a loss after tax in 1976, and in the following years up to 1979, the Company (NCCM) failed to pay dividends. Dividends declared in 1980 and 1981 were much lower than previously. As indicated elsewhere in this chapter, total tax rates in the Zambian mining sector increased from about 74.4% in the first years of independent Zambia to above 80% after the Matero Declaration in 1969 and the 1973 reforms, and were a major contributing factor in the reduction in net value of profits and dividends indicated in Table 4.9. Also, the increase in the cost of sales against low copper prices reduced revenue and capital expenditure allocations from copper proceeds at Rokana and NCCM-owned mines. This can be seen in Table 4.10 and Appendix VI.

[801] Table 4.9, compiled from ZCCM 11.1.1F, *NCCM Limited: Annual Reports*, 1971–81; ZCCM 12.1.9C, *MINDECO Mining Yearbooks of Zambia*, 1970–2; ZCCM 12.1.9C, *Zambia Mining Yearbooks*, 1973–85.

Table 4.10: Breakdown of Capital and Revenue for Rokana and all NCCM mines in Millions of Kwacha, 1971-1981.[802]

Year	**Capital Expenditure**		**Capital Employed**	**GRZ Dividends**	**Minority's Dividends**	**Retained**
	NCCM	**Rokana**	**NCCM**			
1971	43.0	-	337	30	25	45
1972	42.0	-	381	20	10	35
1973	58.8	-	426	20	10	50
1974	69.0	9.0	482	30	30	40
1975	59.4	5.6	571	10	10	50
1976	39.4	4.0	841	-	-	-
1977	16.1	-	828	-	-	-
1978	23.2	-	753	-	-	-
1979	29.0	13.0	725	-	-	-
1980	63.0	22.0	692	4.6	4.4	-
1981	108.0	64.0	904	3	2	-

Note: Capital Employed includes capital expenditure, retained proceeds and loans obtained. As indicated elsewhere in this chapter, Capital Expenditure was charged on profits during nationalisation. Figures for Retained proceeds are unavailable after 1975.

Rokana and other Copperbelt mines relied on internal and external borrowing for capital projects. As a result of low internal cash generation and high levels of debt, coupled with low debt service, loans for Rokana and NCCM-owned mines reached a peak of K145.7 million in 1977.[803] In 1978, the Zambian Government made an interest-free loan to NCCM of K66 million for repayment of the short-term debt held by the Bank of Zambia. But in 1979, the Zambian Government realised that NCCM was struggling to repay the loan and decided to convert K57 millions of its 1978-loan to equity, thereby, increasing the government's shareholding from 51% in 1970 to 60%.[804] Similarly, the government's K40 million loan to RCM was converted to equity, increasing the percentage of government ownership from 51% to 61% in this company.[805] Therefore, the government's shareholding in the mining industry was raised to approximately 60% in 1979.

4.6 Conclusion

Following nationalisation in 1970, Rokana lost its broader investment interests in the Zambian mining sector, and the Company was placed under NCCM. Despite this, Rokana/Nkana Division co-operated with Lusaka in implementing the new corporate structure and labour policies. However, its co-operation was constrained by the increase in cost of sales, depressed and volatile copper prices without a substantial increase. The result was a decrease in internal revenue. Decrease in internal revenue forced Rokana and the other NCCM-owned mines to

[802] Table 4.10, drawn from ZCCM 11.1.1F, *NCCM Limited: Annual Reports*, 1971 and 1974–81.
[803] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, Annex 3-2, 1.
[804] *Ibid*.
[805] *Ibid*.

rely on internal and external loans for capital, resulting in high levels of debt with low debt service. As described above, the government took advantage of Rokana and the other Copperbelt mines' indebtedness and increased its equity shareholding in 1979. By mid-1981, the UNIP leadership contemplated merging the two mining firms into a single company, Zambia Consolidated Copper Mines (ZCCM) Limited, which would have a significant influence on the operations of Rokana and other Copperbelt mines. Rokana under this new company, is the focus of the next chapter.

Chapter Five: History of Rokana/Nkana Mine Division between 1982 and 1991

5.1 Introduction

The previous two chapters examined the evolving relationship between the Zambian Government and the mining companies. Essentially, this comprised state partnership with the mining firms. Two key considerations lay behind this partnership. On the one hand, the government argued that exploitation of the country's mineral assets should be in the national interest, without jeopardising the smooth operations of either Rokana/Nkana or other individual mines. On the other, Nkana and the other Copperbelt mines themselves desired to align their operations with government policy, notwithstanding the changed circumstances emanating from the effects of nationalisation, Zambianisation of labour, and the world recession. In 1982, the two mining companies, Nchanga Consolidated Copper Mines (NCCM) Limited and Roan Consolidated Mines (RCM) Limited, were merged into a single company known as the Zambia Consolidated Copper Mines (ZCCM) Limited, and it is the history of Rokana/Nkana's fortunes under ZCCM up to 1991 that this chapter explores.

5.2 Formation of ZCCM Limited

The government considered a number of factors before the formation of the Zambia Consolidated Copper Mines (ZCCM) Limited. These factors ranged from corporate shareholding to mineral production and profitability. The merger of NCCM and RCM was also 'driven by increased donor influence on economic policy: the IMF [international Monetary Fund] provided major loans for the new ZCCM'.[806] After increasing the Zambia Industrial and Mining Corporation (ZIMCO)'s issued share capital in the mining industry to about 60% in 1978, the government began to push for the amalgamation of NCCM and RCM.[807] In May 1981, President Kaunda announced that his government had decided to merge NCCM and RCM into a single mining company.[808] He claimed that the advantages of a merger would be numerous, including 'selective mining, production balanced against demand, co-ordinated planning and prospecting, firmer pressure on research and development and sharing instead of duplication of plant equipment and stores'.[809] The President remarked that since mining was

[806] Larmer, 'Zambia's Mineworkers and Political Change', 218–9.
[807] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985* (Kitwe: Manpower Planning and Development, 1985), 3.
[808] *Ibid*.
[809] ZCCM 4.10.2E, *History of ZCCM Limited: Birth of a Giant*, 2.

the mainstay of the Zambian economy, it was important to address the industry's problems by re-organising it in such a manner that it lived up to the challenges of the current economic situation. Yet the proposed merger was not entirely a government initiative. The minority shareholders (ZCI, AMAX International and public investors) shared the government's concerns and felt that the effects of the world recession and the general depletion of ore reserves called for a bigger unit to face the challenges ahead.[810] Besides, NCCM and RCM had 'different problems and advantages, most of which were complimentary'.[811] Therefore, the merger represented 'a logical step in the development of the mining industry'.[812]

Negotiations between majority and minority shareholders began soon after the President's announcement in May 1981. On 22 December 1981, the representatives of Government, ZIMCO, NCCM, RCM, AMAX International and ZCI signed the Heads of Agreement in order to facilitate the merger of NCCM and RCM.[813] The Heads of Agreement was a bill detailing terms of the merger and resolutions on matters relating to transfer of assets.[814] On 5 March 1982, Parliament ratified the Amalgamation of Mining Companies (Special Provisions) Act No. 2, which effected the merger of NCCM and RCM.[815] The Act came into operation on 17 March 1982 and it enabled 'the share capital of NCCM to be acquired by RCM in exchange for shares of RCM, and to enable the undertaking of NCCM to be amalgamated with that of RCM'.[816] Accordingly: NCCM redeemed in full all outstanding 5.5% and 5% preference shares at the price of K2.10 and K2.20 per share, respectively.[817] NCCM paid to the holders of such shares the accruals of the preference share dividend from the date of redemption and the share capital of RCM was reconstructed.[818] Roan purchased while ZIMCO and ZCI transferred their shares in NCCM to RCM.[819] Therefore, the authorised share capital of RCM increased from K190,000,000 to K900,000,000.[820] The shares in RCM were transferred into a new Company, ZCCM.

[810] Kaunda interviewed by author, 25 October 2017.
[811] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 3.
[812] ZCCM 4.10.2E*, History of ZCCM Limited: Birth of a Giant*, 2.
[813] ZCCM 11.7.8A, The Amalgamation of Mining Companies (Special Provisions) Act, 5 March 1982, 1.
[814] *Ibid*., 1–3.
[815] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 13.
[816] *Ibid.*
[817] ZCCM 11.7.8A, The Amalgamation of Mining Companies, 1.
[818] *Ibid.*, 1–2
[819] *Ibid*.
[820] *Ibid*., 22.

The Income Tax (Special Provisions) Act No. 3 of 1982 came into operation at the same time that the negotiations for the merger took place, and made provisions for the amalgamation.[821] First, this Act provided that 'any transfer of assets from NCCM to RCM limited was to be treated as a transfer of assets between Companies under common control', and ZCCM incurred tax liabilities for both companies.[822] The government also reformed the mining tax regime of the 1970s by separating income tax and export tax from mineral tax. Under the Mineral Export Tax Act, the new Mineral Export Tax (MET) was payable 'on the gross amounts received from sales of minerals exported from Zambia'.[823] The rate of MET, which was 4% in April 1983, was raised to 8% in August 1983, and further increased to 10% from January 1985.[824] Because of this increase in export tax, the government exempted ZCCM from paying the Equity Levy. Under the Equity Levy Act of 1982, the levy was introduced at a rate of 1.5% and was based on the Zambian Government's interest in the Group's share capital.[825] In order to raise more revenue, the government amended the method by which it taxed imports based on the free on board (f.o.b.) value, to the value based on cost, insurance and freight (c.i.f.).[826] Furthermore, a new minimum rate of import duty of 10% was applied to imported items that previously had a free-entry status or a rate of less than 10%.[827] Nonetheless, petroleum products, which were much needed by Nkana and the Copperbelt mines, were exempted by law.

Arrangements for the merger were finalised between the government and the minority shareholders in March 1982, and on 1 April the same year RCM was renamed ZCCM.[828] The Board of Directors of ZCCM Limited was made up of representatives of majority and minority shareholders known as "A" and "B" Directors, respectively. The "A" Directors were appointed by ZIMCO Limited, which held 60.3% of the issued share capital on behalf of the government.[829] The "B" Directors were appointed from ZCI, AMAX International and public investors from the USA and Britain. Minority shares were divided as follows: ZCI, on behalf of AAC, 27.3%; AMAX International, 6.9%; public investors, 5.5%.[830] The AAC,

[821] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 13.
[822] I*bid*.
[823] ZCCM 11.1.1F, *ZCCM Limited: 1985 Annual Report* (Lusaka: ZCCM Head Office, 1985), 24.
[824] *Ibid*.
[825] ZCCM 11.1.1F, *ZCCM Limited: 1982 Annual Report* (Lusaka: ZCCM Head Office, 1982), 20.
[826] T.O. Glover, 'The Mineral Industry of Zambia', *Bureau of Mines Minerals Yearbook Area Reports: International 1984, Vol. 3 – Zambia* (Washington: US Bureau of Mines, 1984), 926. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1984v3. Accessed on 21 October 17.
[827] *Ibid*.
[828] *Mining Mirror*, 16 April 1983.
[829] ZCCM 4.10.2E, *History of ZCCM Limited: Birth of a Giant*, 3.
[830] MUZ HQ, ZCCM Limited Head Office: Attachment to Letter from ZCCM Deputy Director of Operations, Kitwe, to ZCCM Director-Human Resources, Lusaka, 15 August 1989.

Rokana/Nkana's former parent company, owned the largest minority interest in ZCCM. Although the formation of ZCCM reduced the AAC's stake in the Zambian mining industry, the former largely relied on the technical skills of the latter.[831]

5.2.1 Anticipated Merger Benefits for Nkana Division and the Copperbelt Mines

ZCCM comprised of seven producing divisions namely Chingola, Nkana, Luanshya, Kalulushi, Konkola, Mufulira and Kabwe. The two Centralised Services Divisions in Kitwe and in Ndola, were merged into one centralised division.[832] ZCCM was, in effect a mining giant, the world's second largest copper producing company, after Corporation Nacional del Cobre de Chile (CODELCO-Chile), with an annual capacity of over 700,000 tons of the finished metal.[833] It had the same distinction 'as a cobalt producer with the 4,000 tons annually processed from ZCCM's sources accounting for a quarter' of the total world production.[834] Furthermore, ZCCM produced significant tonnages of lead and zinc, and on a minor scale, it produced gold, silver and selenium as by-products from copper and anode slimes.[835]

To manage the divisions effectively, two head offices were created. The Corporate Head Office was established in Lusaka to perform administrative functions, while Kalulushi in Kitwe became the operational and technical centre of the ZCCM-owned mines.[836] The role of the Corporate Head Office was confined mainly to formulating corporate policies, strategies, plans and financial control. Divisional general managers reported to the Director of Operations at Kalulushi. In addition, the management and supervisory lines at Nkana and in the other divisions were streamlined through the abolition of certain management and supervisory levels to save costs. ZCCM also had twelve subsidiary companies at the time of the merger, which by 1986 had increased to twenty.[837] Some of these subsidiaries are discussed later in this chapter. These provided essential supplies and services to Nkana and the other mines. Besides, and in line with the new corporate structure, MEMACO, together with ZCCM, formed MEMACO Trading Limited as a way of diversifying into specialist fields of commodity trading and supplementing the industry's marketing efforts.[838]

---

[831] Craig, 'State Enterprise and Privatisation in Zambia 1968 – 1998', 48.
[832] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 3–4.
[833] ZCCM 4.10.2E, *History of ZCCM Limited: Birth of a Giant*, 2.
[834] *Ibid*.
[835] *Ibid*.
[836] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 3.
[837] *Ibid.*, 4.
[838] *Ibid.*, 15.

The merger was intended to improve co-ordination and direction of the capital expenditure, extraction and production of the Copperbelt mines; create a larger and financially stronger unit which would be better placed to raise funds/loans in the international money market.[839] Technical and investment gains would include scaling and rationalisation of benefits in areas such as marketing, purchasing and utilisation of stores and other specialist services.[840] It was also hoped to place greater emphasis on research and development, prospecting and exploration, and mine development.[841] Manpower benefits would include the better deployment of the scarce technical skills. The manning structure would be streamlined or rationalised to affect savings.[842] This would be achieved by re-deploying excess labour to where there was a need for additional labour, for example, to the new projects like the Roast Leach Electro-win (RLE) cobalt plant at Nkana and Tailings Leach III at Nchanga.[843] It was also envisaged that changes in technology, working methods and various other policy and operational decisions would contribute to the effective utilisation of labour at Nkana and in the other mines.[844]

The government wished to accelerate and consolidate Zambianisation in the mining industry by ensuring that both foreign Africans and expatriates were phased out of the industry as soon as possible after March 1983.[845] It was also realised that the low levels of labour productivity at Nkana and in the mining sector generally often was a result of poor planning, work organisation and communication.[846] To redress this, it was suggested that 'design and implementation of the suitable group training programmes for mine captains and shift bosses would assist in the up-grading not only of technical, but also supervisory skills. This in turn would lead to the attainment of higher levels of productivity per man shift'.[847] ZCCM also introduced a Staff Development Panel System in order to promote better placement that would lead to more effective utilisation of professional and skilled manpower.[848] But the major obstacle to the accelerated phasing out of expatriates was that they were still needed to maintain machinery and other technical facilities. In fact, expatriate workers still commanded skills not

[839] ZCCM 11.7.9C, *ZCCM Merger Benefits Plans* (Lusaka: ZCCM Head Office, 1983), Annex 1.
[840] *Ibid*.
[841] *Ibid*.
[842] *Ibid*., Annex 5, 2.
[843] *Ibid*., Annex 5, 2–3.
[844] *Ibid*.
[845] *Ibid*.
[846] *Ibid*., 3–4.
[847] *Ibid*., 4.
[848] *Ibid*.

available among the Zambian workforce. Yet even as ZCCM wanted to speed up Zambianisation, it needed to reduce the number of all workers employed by closing down some plants and shafts and declaring redundancies in order to reduce costs.[849] Rationalisation of local labour was frequently stymied by pressure from the labour movement and the need to provide employment to Zambians in the mining sector.[850] In the 1980s, ZCCM employed 16% of people in formal employment and the mining sector ranked second to Government.[851] As Zambianisation and maintenance of high levels of local workers in the industry were also intended to garner and entrench political support to UNIP, rationalisation of labour threatened UNIP's popularity.

Nonetheless, both the government and the ZCCM persisted with the object of making savings through the rationalisation of the mining activities. The rationale of the merger was to minimise duplication and effect savings through better use of existing plants and equipment, processing and refining facilities.[852] Rokana was central to attaining this objective as it possessed the largest processing and refining facilities on the Copperbelt. To effectively carry out all the above objectives, ZCCM launched a Five Year Production and Investment Plan (FYPIP) at Nkana and in the other Copperbelt mines, aimed at increasing productivity, cutting costs and improving overall viability.[853] A striking feature of the FYPIP was that it introduced uniform policies on all the mines; the major mines all having the same estimated mining life of 24 years.[854]

5.2.2 The Importance of the Rokana/Nkana Division to ZCCM

At the time of the merger, the book value of ZCCM was estimated at K1, 074.3 million.[855] Of this figure, an estimated K236.4 million worth of fixed assets belonged to Rokana. This was the highest figure of all Copperbelt mines.[856] Rokana Division continued to be vital to the mining, smelting and refining operations of the ZCCM-owned mines. As noted in the previous chapter, Nkana Division operated six orebodies: three underground operations (Nkana Central; Mindola North and South), and after 1982 the three open-pits were re-opened and expanded.[857]

[849] *Ibid.*, 3.
[850] Craig, 'State Enterprise and Privatisation in Zambia', 95.
[851] Meller and Simpasa, 'Role of Copper in the Chilean & Zambian Economies: Main Economic and Policy Issues', 23.
[852] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 3.
[853] *Ibid*.
[854] ZCCM 11.7.8A, The Amalgamation of Mining Companies, 55.
[855] *Ibid*., 52.
[856] *Ibid*., 55.
[857] ZCCM 4.10.2E, *History of ZCCM Limited: Birth of a Giant*, 18–19.

Of the total of sixteen underground and open-pit operations of ZCCM, six were located at Nkana. Nkana's ore reserves in 1982 were estimated at 113 million tons of 2.35% copper and 0.13% cobalt, from which about 459,000 tons of ore a month was hoisted out of these sources.[858]

In 1982, mining, by sub-level open-stoping, was carried out between 2,133 feet and 3,937 feet below surface, making Nkana the deepest mine on the Copperbelt.[859] The Nkana concentrator received approximately 460,000 tons of ore a month and produced about 19,000 tons of copper concentrates at a grade of up to 30% copper, and 4,000 tons of cobalt concentrates at a grade of 3-4% cobalt.[860] As discussed in Chapter Four, the smelter was one of the largest in the world, having been upgraded from handling about 80,000 tons of concentrates annually in 1970, to treating over 235,000 tons of concentrates a year in 1982.[861] Thus, the Nkana smelter treated concentrates from three former NCCM divisions, that is, from Chingola, Konkola and Nkana itself. The refinery was also expanded, producing about 19,000 tons of electro-refined copper a month at full capacity and casting almost 13,000 tons of wire-bars.[862] The cobalt plant, which produced about 2,000 tons of cobalt a year in the 1970s, produced about 2,400 tons of cobalt metal per annum by 1982, and treated cobalt concentrates from the other divisions as well.[863] Of a total of twenty-five plant and metallurgical installations under ZCCM, eight were operated by Nkana Division alone.[864]

5.3 Impact of the New Production and Investment Policy on Rokana/Nkana Division

5.3.1 Zambianisation of Labour and the New Single-Wage Structure

ZCCM's new policy hinged on a number of issues, not least labour organisation. As discussed in Chapter Four, Zambianisation in the 1970s increased the number of local workers at Rokana and in the other Copperbelt mines. But this was disproportionately confined to unskilled African workers. There was a shortage of local workers in technical, managerial and supervisory positions. The government was aware of this problem. Francis Kaunda, new Executive Chairman of ZCCM, observed that some appointments made into advanced positions in the 1970s did not meet the requirements of true Zambianisation, partly because

[858] *Ibid.*, 19.
[859] *Ibid*.
[860] *Ibid*.
[861] *Ibid*.
[862] *Ibid*.
[863] *Ibid*.
[864] *Ibid.*, 2–3 and Appendix 9.

there were very few technically trained Zambians, and most Zambians appointed to senior positions were not properly prepared for increased responsibilities.[865] As a result, expatriates remained entrenched in managerial and supervisory jobs. Following the formation of the ZCCM, the government emphasised vigorous training of Zambians to replace both expatriates and foreign or alien Africans. Zambianisation Committees were opened at all the ZCCM divisions on the Copperbelt to ensure that expatriates were replaced by locals. In addition, early in October 1982, the Minister of State for Labour and Social Services announced that 'Alien miners must go'.[866] Table 5.1 compares the impact of Zambianisation on African and expatriate labour strengths at Nkana Division and in the ZCCM mines between 1982 and 1992.

Table 5.1: Comparing African and Expatriate Labour Strength at Rokana Division and in all ZCCM Mines, 1982-1992.[867]

Year	Rokana/Nkana Mine Division			All ZCCM Mines		
	Africans	Expatriates	Expatriate %	Africans	Expatriates	Expatriate %
1982	11,900	409	3.3	54,800	2,106	3.7
1983	11,231	287	2.5	54,197	1,790	3.2
1984	11,326	239	2.1	55,743	1,571	2.7
1985	13,989	306	2.1	51.809	1,475	2.8
1986	-	-	-	50,876	1,384	2.6
1987	13,358	291	2.1	50,627	1,160	2.2
1988	14,535	256	1.7	53,870	995	1.8
1989	-	-	-	53,828	792	1.5
1990	-	-	-	54,202	765	1.4
1991	-	-	-	54,454	723	1.3
1992	-	-	-	55,886	620	1.1

Note: There are no figures categorising Africans into local and alien workers. There are also no figures for categorising labour employed into Africans and Expatriates at Rokana/Nkana after 1988.

Differentiations between the number of African workers at Nkana fell slightly from an average figure of 11,900 in 1982 to 11,326 in 1984, before increasing substantially to 13,989 the following year, and reaching 14,535 in 1988. By comparison, the number of Africans in the mining industry increased fractionally from about 54,800 in 1982 to 55,743 in 1984, decreased substantially to an average annual strength of 50,627 in 1987, and began to increase steadily thereafter. Fluctuations in the African labour-strength in this period was due to three main factors. First, was the phasing out of foreign African workers. Second, the new manning

[865] *Times of Zambia*, 1 April 1982.

[866] *Ibid.*, 2 October 1982.

[867] Table 5.1, compiled from ZCCM 1.3.1H, Establishments: Labour Figures, November 1983 – December 1985; ZCCM 1.3.1H Establishment/Labour Figures/Statistics, January – December 1988; ZCCM *5.5.*2B Parliamentary Questions, December 1991 – December 1998, Order Book No. 334-Zambianisation; ZCCM 11.7.9C, Survival-Cost Saving Measures, June 1982 – April 1983.

structure coupled by cost-saving measures introduced by the ZCCM after mid-1982, could lead either to a reduction or an increase in labour at different mines on the Copperbelt. The 1982 Memorandum of Agreement between the Copperbelt mines and MUZ affected the manning and salary structures. The new Memorandum of Agreement superseded the one entered into by the parties in 1970. The new Agreement provided for an eight-grade-manning structure as opposed to the previous eleven grade structure.[868] Table 5.2 shows the new manning structure at Nkana and in the other three major mines on the Copperbelt.

Table 5.2: Labour Strength in Each Grade at Nkana, Chingola, Mufulira and Luanshya, 29 February 1988.[869]

Grade	Nkana		Chingola		Mufulira		Luanshya	
	Expatriate	Local	Expatriate	Local	Expatriate	Local	Expatriate	Local
G1	97	412	136	545	42	303	17	262
G2	37	491	24	590	10	344	3	338
G3	1	1,360	0	1,602	0	910	0	906
G4	0	1,655	0	2,144	0	1,236	0	978
G5	0	2,000	0	2,968	0	1,379	0	1,138
G6	0	1,424	0	2,083	0	1,469	0	1,623
G7	0	4,760	0	3,762	0	1,825	0	2,546
G8	0	1,267	0	1,174	0	724	0	499
Totals	135	13,369	160	14,868	52	8,190	20	8,290

As a result of the new manning structure, the ZCCM Management realised that some workers were under-utilised, especially in small mine divisions such as Konkola, Kalulushi and Chibuluma. Partly to reduce the costs and wastage of manpower in small divisions, Chibuluma and Chambishi were joined with Nkana in 1985, while Konkola was merged with Chingola in 1986.[870] This restructuring affected a total of 3,000 workers, and the majority were redeployed at Nkana and Chingola.[871] Under the ZCCM, workers could be transferred from one mine to another without difficulty, since the companies were controlled by a single firm. Thus, some workers from Luanshya and Mufulira were transferred to either Nkana or Chingola. These two divisions needed more labour because of their bigger mining and metallurgical facilities. On

[868] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 7.
[869] Table 5.2, taken from ZCCM 1.3.1H, attachment to the Letter from Senior Manager Manpower Development, Chingola, to Director-Human Resources ZCCM, Lusaka, 7 March 1988.
[870] ZCCM 11.1.1F, *ZCCM Limited: 1986 Annual Report* (Lusaka: ZCCM Head Office, 1986), 5–6; ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 4; *Mining Mirror*, 2 February 1985. Before this restructuring, Chibuluma and Chambishi formed Kalulushi Division. Some of the seven mining and metallurgical units of ZCCM (Kansanshi mine, Chambishi mine, Chambishi Concentrator, No. 3 Shaft at Konkola, Luanshya Smelter, Ndola Copper Refinery Tankhouse, and Nkana Oxide Concentrator) were phased out of operation and others were placed under care and maintenance. This restructuring meant that the number of operating divisions were reduced from seven to five (Nchanga/Chingola, Mufulira, Nkana/Rokana, Luanshya and Kabwe).
[871] ZCCM 11.1.1F, *ZCCM Limited: 1986 Annual Report*, 6.

the other hand, as explained later in this chapter, austerity measures introduced by the ZCCM, in line with the IMF and the World Bank's borrowing conditions, reduced its overall African labour strength between 1985 and 1987.[872]

Rokana and the other Copperbelt mines also embarked on a programme of early retirement and redundancies in order to save labour costs. For example, in August 1985, a total of 95 employees were retrenched at Nkana.[873] The total number of labour losses on the Copperbelt mines in this month was 378. Nonetheless, labour gains, partly from workers redeployed from other mines and engaged under new contracts, totalled 123 in the same month at Nkana.[874] By 1988, labour losses and gains increased. For instance, in November 1985, there were 868 labour losses against 251 gains at Nkana, compared to the total of 4,587 job losses against 1,502 gains in all the ZCCM-owned mines in the same month.[875] The high net decrease against lower net gains in local labour strengths was due to non-replacement of the labour wastage, except in highly specialised fields of employment and mining departments.[876]

In line with the policy of Zambianisation, Rokana reduced the number of expatriate workers from 409 or 3.3% of the total labour force in 1982 to an annual average strength of 256 or 1.7% of the total number of workers in the mine in 1988.[877] Overall, the ZCCM reduced the expatriate labour force from an average of 2,106 or 3.7% of the total labour force in the mining industry in 1982 to 995 or 1.8% of total number of workers in 1988.[878] By comparison, there was a lower percentage of expatriates at Nkana than in the rest of the ZCCM between 1982 and 1988 (see Table 5.1). This shows that Nkana Division was achieving more Zambianisation than in ZCCM as a whole. By one calculation, the expatriate labour force in the Zambian mining industry fell from 6,162, representing about 12.1% of the total labour force, in 1966 to about 620 or 1.1% of the total number of workers in 1992, representing a Zambianisation

[872] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1985–7.
[873] ZCCM 1.3.1H, Establishment: Labour Figures, August 1985, Table 2. These separations at Nkana were distributed as follows: resignation, 18; discharged/termination, 28; medical discharge, 2; normal retirement, 17; early retirement, 16; desertion, 1; deceased, 2; transfer out, 11.
[874] ZCCM 1.3.1H, Establishment: Labour Figures, August 1985, Table 2.
[875] ZCCM 1.3.1H, Establishment: Labour Statistics, 30 November 1988, Appendix 11. At Nkana Division, labour losses were categorised as follows in November 1988: Normal retirement, 278; early retirement, 493; medical discharge, 58; poor performance, 32; redundancy, 7.
[876] ZCCM 1.3.1H, Establishment: Labour Statistics, 30 November 1988, Appendix 11.
[877] ZCCM 1.3.1H, Establishments: Labour Figures, November 1983 – December 1985; ZCCM 1.3.1H Establishment/Labour Figures/Statistics, January – December 1988.
[878] *Ibid*.

achievement of approximately 91.5%.[879] Over much the same period, the total number of foreign Africans employed in the mining industry was halved from an average figure of 8,077 or 15.9% of the total labour force in 1966 to 4,181 or almost 7.4% in 1992.[880]

Nkana and other Copperbelt mines continued to widen opportunities for Zambian women in the industry. The government also introduced a number of benefits for female workers on the mines. Through the Employment Amendment Act No. 18 of 1982, women were allowed to go on maternity leave and were provided with maternity materials, including nappies.[881] There were a total of 569 female employees at Rokana in 1987, the majority of them Zambian.[882] The same year, there were 3,281 female African employees and only 159 female expatriates in the entire mining sector.[883] Two years later, there were 3,327 female African employees and only 74 female expatriates.[884]

While Zambianisation of labour reduced expatriate workers at Nkana in particular and in the mining industry in general, there were also other contributing factors. As discussed in Chapter Four, in the 1970s, expatriate employees had been attracted by three-year contracts, coupled with the externalisation of salaries and gratuity payments of 25% after tax salary in foreign exchange.[885] But this salary structure was no longer attractive. Beginning in the early 1980s, salaries in other parts of the world such as Chile, Peru and in the USA, were high compared to Zambia where living conditions on the Copperbelt were deteriorating.[886] Taxation on salaries above K12,000 per month was also very high, at 71% from 1980 onwards.[887] The lack of

---

879 NAZ MLSS 1/18/3, attachment to Record of a Meeting held in the Ministry of Labour's Office on 1 March 1967; ZCCM *5.5.*2B Parliamentary Questions, December 1991 – December 1998, Order Book No. 334-Zambianisation.

880 *Ibid*.

881 MUZ HQ, The Employment Amendment Act No. 18 of 1982, 21 August 1982.

882 ZCCM 5.5.2B Parliamentary Questions, December 1991 – December 1998, Order Question No. 174-ZCCM Female Employees by 22 January 1987.

883 *Ibid*.

884 MUZ HQ, ZCCM Limited Head Office: Attachment to Letter from ZCCM Deputy Director of Operations, Kitwe, to ZCCM Director-Human Resources, Lusaka, 15 August 1989. The distribution of female African employees in various occupations was as follows: medical services, 1,879; secretarial services, 578; human resources (personnel), 521; supply management services (stores/buying), 101; security services, 77; education, 64; accounting and finance, 51; paramedical, 22; computers, 20; administration, 8; engineering support services, 4; chemistry and assaying, 2. At the same time, expatriate female workers were distributed as follows: education, 53; medical services, 15; human resources personnel, 3; paramedical, engineering support services, and assaying, one each.

885 ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 12.

886 *Ibid*.

887 *Ibid*.

services, such as adequate schooling, and the increasingly fraught security problems on the Copperbelt, were all major deterrents to the retention of expatriate employees.[888]

As indicated in Table 5.1 above, a small number of expatriates still remained at Rokana and in the other Copperbelt mines, especially in skilled and managerial jobs. Table 5.3 below disaggregates the Zambianisation of managerial, technical and supervisory jobs at Rokana in particular and the ZCCM in general for the years 1982, 1983 and 1988.

Table 5.3: Zambianisation of Managerial Positions at Rokana and in All ZCCM mines in 1982, 1983 and 1988.[889]

Category	**Rokana/Nkana Mine Division**						**ZCCM Limited/Copperbelt: Total**					
	1982		1983		1988		1982		1983		1988	
	E	L	E	L	E	L	E	L	E	L	E	L
Management:												
General Manager	1		1		1		7		6	1	2	4
Manager-Mining	1		1		1		2		2			
Manager-Metallurgical	1		1			1	3		3			
Mining:												
Underground Manager		1	1	1	2	2	7	1	9	1	9	5
Underground Superintend.	3	2	3	2	10	4	15	7	15	6	31	16
Assistant Superintendent	7	1	5	1	41	14	35	10	31	10	140	56
Mine Captain Tech/Spec	1						18	7	6	1		
Mine Captain RBS	5	13		21			15	59	11	58		
Mine Captain Other				26			5	38	11	98		
Mine Captain Open-pit				1			1	8	1	9		
Mining Engineer (Snr/Ass)	6	5	4	6			30	37	19	35		
Senior/Planning Engineer	8		7	1			20	1	10	4		
Technical Assistant	2		1				2		1			
Senior/Rock Mech. Eng.	4		2	2			4		2	2		

Note: "E" stands for number of Expatriate workers while "L" for number of Local workers. There are no categorised figures for Section Officers in 1988, only respective block figures are available as at 29 February 1988.

The table reveals that the position of General Manager was not yet Zambianised at Nkana as late as 1983. Indeed, despite this position being Zambianised in most ZCCM divisions by 1985, it was first Zambianised at Nkana in 1987.[890] Peter Chileshe was the first Zambian to be appointed General Manager of the Nkana Division in August 1987. However, Chileshe died in

[888] *Ibid*.

[889] Table 5.3, compiled from *Mining Mirror*, 28 August 1987; MUZ HQ, *Mining Industry Manpower Report*, June 1984, attached copies 1, 5, 6 (unpublished report); ZCCM 1.3.1H, attachment to the Letter from Senior Manager Manpower Development, Chingola, to Director-Human Resources ZCCM, Lusaka, 7 March 1988; ZCCM 11.1.1F, *ZCCM Annual Report: 15 September 1988* (Lusaka: ZCCM Head-Office, 1988), 3.

[890] *Mining Mirror*, 28 August 1987, 27 May 1988, 24 June 1988; ZCCM 11.1.1F, *ZCCM Annual Report: 30 September 1991* (Lusaka: ZCCM Head-Office, 1991), 3.

a road accident in May 1988, and David Littleford was appointed General Manager of Rokana Division.[891] Littleford held this position until 1991. Similarly, mining and metallurgical management positions were all dominated by expatriates at Nkana until the late 1980s.[892] The position of Underground Superintendent was still filled by expatriates in 1988. The position most occupied by Zambians was that of Mine Captain, although there was still a substantial number of expatriate Section Officers. The Zambianisation of managerial, supervisory and technical positions was not very effective at Nkana in particular and in the Zambian mining sector in general. A number of reasons were responsible for this state of affairs.

As noted in Chapter Four, one of the main reasons the government was reluctant to Zambianise management positions at individual mines was the growing fear among UNIP politicians that complete Zambianisation would create a political elite on the mines that would become a rival centre of power to UNIP.[893] In line with Burawoy's observation, the government was 'quite content to have expatriates control the mines. Expatriates, on three-year renewable contracts, could be easily removed if they created trouble'.[894] It partly explains why the position of General Manager at Rokana was not again Zambianised after the death of Mr. Chileshe. Rokana is a unique case concerning this issue because it was one of the two divisions whose post of General Manager was not yet Zambianised in 1991.[895] It should be noted, however, that the position of General Manager was reserved for a technically trained person with a mining experience.[896] The Late Chileshe was a mining engineer, joined the then Rhokana Corporation in 1965, and in 1985 became the second Zambian to be appointed General Manager in the mining industry at Konkola Division.[897] Similarly, Littleford had a distinguished mining career and worked as General Manager of the Kabwe Division before he was transferred to Nkana Division in 1988.[898] Since the position of General Manager needed a highly qualified and experienced person, ZCCM could not ignore the profile of Littleford despite Zambianisation.

The Zambian Government and the ZCCM also continued to experience problems in the localisation of positions in the mining, metallurgical and mechanical fields. The major reason

[891] *Mining Mirror*, 27 May 1988.
[892] *Ibid.*, 28 August 1987. Pius Maambo was the first Zambian to be appointed Manager in the Metallurgical Department at Nkana Division, which was ZCCM's largest metallurgical complex.
[893] Lanning and Mueller, *Africa Undermined*, 224.
[894] Burawoy, 'The Colour of Class Revisited: Four Decades of Post-colonialism in Zambia', 967.
[895] ZCCM 11.1.1F, *ZCCM Limited: 1991 Annual Report*, 3.
[896] *Mining Mirror*, 27 June 1986, 27 May 1988.
[897] *Ibid.*, 27 May 1988.
[898] *Ibid.*, 24 June 1988.

was because of the limited inputs of skilled personnel from the Zambian and overseas training institutions.[899] For example, out of a total requirement of 130 graduates to fill various technical fields in the mining industry in April 1985, there were only 67 graduates from the University of Zambia and overseas universities.[900] Therefore, Rokana had to either employ new expatriates or extend their contracts to cater for the difference. Quite apart from the low output of graduates from training institutions, there were other reasons for the inadequate number of graduates or technical workers in the industry. One major factor was the increasing number of technical workers leaving the mines. They did so for various reasons. These included poor conditions of service, and the under-utilisation and frustration among graduates. Table 5.4 indicates the total number of graduate losses and the recorded reasons for leaving Nkana and other ZCCM-owned mines.

Table 5.4: Total Number of Graduate Losses from all ZCCM Mines, 1982-1984.[901]

Number of Graduate Losses					**Number of Graduate Losses by Reasons for Leaving**				
Job Category	**1982**	**1983**	**1984**	**Totals**	**Reasons**	**1982**	**1983**	**1984**	**Totals**
Mining/Geology	5	8	7	20	Poor conditions of Service	10	14	30	54
Engineering	7	21	13	41	Under Utilisation	2	15	4	21
Metallurgy	2	6	8	16	Disciplinary Discharges	3	5	3	11
Accountancy	3	10	11	24	Further Studies	-	4	5	9
Computers	2	2	-	4	Personal	8	7	4	19
Personnel	5	5	6	16	Deserters	1	4	4	9
Medicine	-	-	6	6	Deceased	-	3	1	4
Totals	24	52	51	127	**Totals**	24	52	51	127

Management at Rokana realised that graduates were frustrated partly because of under-utilisation. Under-utilisation was not due to poor manning structures or grading systems, but rather 'deliberate intent on the part of individual employees to slow down the progression rate of other employees'.[902] Inadequate technical workers in the mines remained a serious problem. For example, in December 1988, of the 30 available technical positions for expatriate recruitment at Nkana, the mine only managed to recruit 7.[903] Similarly, there were 19 vacancies

899 MUZ HQ, *Mining Industry Manpower Report*, July 1984, 1 (unpublished report).
900 ZCCM 1.3.1H, attachment to Monthly Manpower Summary, July 1985, Table 1.
901 Table 5.4, taken from ZCCM 5.6.3C, Parliamentary Debates, 20–25 February 1985: Reply on Parliamentary Question about Manpower Utilisation and Zambianisation.
902 ZCCM 5.6.3C, Parliamentary Debates, 20–25 February 1985: Reply on Parliamentary Question about Manpower Utilisation and Zambianisation.
903 ZCCM 1.3.1H, *Manpower Planning and Development: Monthly Report*, December 1988, Appendix II (unpublished report).

for locals on normal contracts in the professional and technical fields at the Nkana Division.[904] It is clear that the majority of expatriates and local graduates in technical fields chose to be employed elsewhere rather than at Rokana and the other Coperbelt mines in the late 1980s.

African workers in general were frustrated by the inequalities embedded in the recently introduced single-wage structure. In April 1982, the ZCCM announced far-reaching measures aimed at improving conditions of service for Zambian miners.[905] One of the proposed measures was the introduction of a single-wage structure by which expatriates would be paid salaries equal to their local counterparts.[906] The new wage structure was based on the new manning structure mentioned above. It affected the grade salary structure and wages, applied retrospectively from 1 November 1982, and minimum wage increases of K60 and K30 per month were guaranteed to employees in the top grades.[907] The new agreement covered a two-year period from that date. The ZCCM and the government felt that 'an agreement whereby the main conditions of service, such as wages, were determined for a fixed period had proved conducive to the development and maintenance of sound industrial relations'.[908] The ZCCM also promised to maintain harmony with the Mineworkers Union of Zambia (MUZ) by foregrounding employees' interests and by providing better conditions of service such as housing. Additionally, the ZCCM wished to abolish the discriminatory educational system favouring expatriates' children. Local workers were consequently given education loans for their children.[909] Table 5.5 details basic salary increases for workers in all salary grades between 1987 and 1991.

[904] *Ibid*.
[905] *Times of Zambia*, 1 April 1982.
[906] *Ibid*.
[907] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 7–8.
[908] *Ibid.*, 8.
[909] *Ibid.*, 7.

Table 5.5: Comparing Basic Salary Increases (K) in the Single-Wage Structure for Miners at Nkana and All ZCCM Mines, 1987-1991.[910]

Year	Range	G1	G2	G3	G4	G5	G6	G7	G8
1987	Minimum	1,027	903	752	654	581	530	498	475
	Maximum	1,270	1,101	923	798	698	626	577	547
1988	Minimum	1,221	1,078	899	771	685	626	584	564
	Maximum	1,464	1,276	1,070	915	802	725	665	636
1989	Minimum	1,904	1,711	1,455	1,227	1,104	1,022	908	886
	Maximum	2,228	1,975	1,683	1,419	1,260	1,154	1,016	982
1990	Minimum	2,117	1,914	1,636	1,374	1,241	1,154	1,012	991
	Maximum	2,468	2,200	1,883	1,582	1,410	1,297	1,129	1,095
1991*	Minimum	8,171	7,345	6,512	5,467	4,915	4,550	4,000	3,880
	Maximum	8,522	7,631	6,759	5,675	5,084	4,693	4,117	3,984

Note: The figures mentioned are only for basic pay scales slotted in schedule surface rates. In 1987 and 1988, pay scales for workers in underground areas in every pay grade should be the above indicated surface-pay-scales increased by 10%; in 1989, 1990 and 1991, should be increased by 12.5% for underground workers. *The figures for 1991 were existing basic salaries by November of this year. The increase was effected in May, June or July of each year. The minimum was mainly the entry notch while the maximum for those who served for more years, or in supervisory positions.

Table 5.5 demonstrates a number of insights about basic salaries in the single-wage structure at Rokana and in the Zambian copper industry. In addition to the basic salary, workers were given new benefits such as standby, hot patching, safety, transport, high performance, water, electricity, distress, medical and repatriation allowances.[911] Every month, Rokana and the Copperbelt mines also gave African workers subsidised mealie-meal; this was 20% of the cost of two bags of 50 kilograms of roller meal for workers with registered dependents, and one bag of 50 kilograms of roller meal for those with no registered dependants.[912] As mentioned above, Rokana and the other Copperbelt mines were also compelled to 'assist African employees with school going dependants at K150 per child per annum up to a maximum of six children'.[913]

Between 1970 and 1981, basic wages had been increased every three years and at times after strikes over better conditions of service. Between 1985 and 1990, however, basic wages were increased every year. The 1982 Agreement between the MUZ and the mines stipulated that wages would be increased after two years from the previous increment. But this could not be

[910] Table 5.5 compiled from MUZ HQ, Memoranda of Agreements between The Association of Copper Mining Employees and the Mineworkers' Union of Zambia, dated 14 April 1987, 21 April 1989, 26 November 1991.
[911] MUZ HQ, Memorandum of Agreement between The Association of Copper Mining Employees and the Mineworkers' Union of Zambia, 14 April 1987. For example, in 1987, a hot patching allowance K5 per shift, a safety allowance for extremely wet working conditions K2.50 per shift, transport for workers 4km away from the work-place a minimum of K35 per month, unhoused allowance 10% of the basic pay, and high performance allowance based on monthly production.
[912] MUZ HQ, Memorandum of Agreement between The Association of Copper Mining Employees and the Mineworkers' Union of Zambia, 14 April 1987.
[913] *Mining Mirror*, 28 April 1989.

sustained, mainly due to high levels of inflation. Therefore, after 1985 the increase rate was determined in line with the level of inflation, and determined by the Association of Copper Mining Employees, representing Nkana and the other ZCCM mines, in consultation with the MUZ.[914] Between 1982 and 1984, debt servicing consumed almost 65% of Zambia's foreign exchange earnings.[915] Reduced foreign exchange revenue coupled with IMF pressure forced the government to: devalue the kwacha by 40% and allocated foreign exchange via an auction system; restrict wage increases to 5%; decontrol the price of most food stuffs.[916] These factors combined and increased inflation from about 15% in 1982 to about 25% by 1986, and 'the kwacha fell to K21, one-tenth of its value before the auction'.[917] 'Major strikes now took place, as workers demanded pay increases to compensate for inflation'.[918] In November 1986, the ZCCM 'awarded an out-of-time salary increase averaging 10% to all general payroll employees to cushion the effects of the escalating cost of living, following the depreciation of the kwacha'.[919]

Between 1987 and 1989, the rate of annual inflation in Zambia accelerated, particularly in the lower income bracket, rising by 18%.[920] The consumer price index for the low income earners registered an increase of 41% in 1987, went up further to 55.6% in 1988, and fluctuated between 60% and 80% throughout 1989.[921] Accordingly, the basic salary for the lowest paid miner (G8) increased from about K475 in 1987 to K886 in 1989 or by slightly above 46% (see Table 5.5). Basic salaries in all categories almost quadrupled in 1991. This followed a move to increase efficiency and boost employees' morale. Consequently, the ZCCM reviewed conditions of service in late 1990 and again in early 1991, 'which resulted in more benefits and better perks for employees at all levels'.[922]

However, the wage increases were also a political manoeuvre to gain support among the workers and promote peace in the industry. Between 1983 and 1986, the UNIP Government

---

[914] MUZ HQ, Memorandum of Agreement between The Association of Copper Mining Employees and the Mineworkers' Union of Zambia, 26 November 1991.
[915] Larmer, 'Zambia's Mineworkers and Political Change', 220.
[916] *Ibid*.
[917] *Ibid*., 222.
[918] *Ibid*.
[919] ZCCM 11.1.1F, *ZCCM Limited: 1987 Annual Report* (Lusaka: ZCCM Head Office, 1987), 14.
[920] MUZ HQ, *Secretarial Report for the Period from April 1988 to March 1990*, presented a Conference held in Livingstone from 15–17 March 1990, 3 (unpublished report).
[921] *Ibid*.
[922] *Mining Mirror*, 22 February 1991.

continued to pursue policies aimed at controlling the mineworkers.[923] Before 1983, the Industrial Relations Court, which was an autonomous body under the Ministry of Labour and Social Services, dealt with matters of industrial disputes in line with the Industrial Relations Act of 1971. After 1983, however, a number of clauses of the Industrial Relations Act were reviewed through various statutory instruments which ensured that the government retained the dominant position in the final outcome.[924] Before any collective bargaining agreement over wages became legal and binding upon the parties, approval and ratification by the Prices and Incomes Commission had to be obtained.[925] At the same time, UNIP made sure that all local senior managers and supervisors in the mines did not join unions.[926] An extension of this practice in 1985 was the removal of the so-called front-line supervisors in G1 and G2 scales from union representation.[927]

After the formation of the ZCCM and the introduction of the new single-wage structure, the government was initially successful in curbing major wildcat strikes over wages. Between 1982 and 1984, though, various work stoppages related to other conditions of service occurred. A major strike occurred in early June 1985. The strike was the result of dissatisfaction with the industry's Mukuba Pension Scheme.[928] Introduced in 1982, the Scheme was disliked for three major reasons. First, they did not want to subscribe to the 5% monthly charge without a corresponding increase in basic wages.[929] Yet, membership of the scheme was a condition of employment for all local full time and permanent employees of the ZCCM, and they were not allowed to withdraw from the scheme until they retired.[930] Second, they did not like the idea of receiving their pension after retiring in monthly instalments.[931] They preferred the method applied previously whereby retirees got their package in full.[932] The government believed that it would be better to pay retirees in monthly instalments because many of them misused their

[923] For details on the reaction of mineworkers to UNIP's political control, see Larmer, 'The Hour Has Come at the Pit', 293–312.
[924] MUZ HQ, *A Historical Analysis of MUZ*, 11.
[925] *Ibid*.
[926] Muchimba interviewed by author, 28 October 2017; MUZ HQ, *A Historical Analysis of MUZ*, 11.
[927] MUZ HQ, *A Historical Analysis of MUZ*, 11.
[928] *Times of Zambia*, 25 July 1985.
[929] *Times of Zambia*, 25 July 1985; G. Sinkamba interviewed by author, Kitwe, 12 September 2017; Kabanda interviewed by author, 17 September 2017.
[930] *Times of Zambia*, 25 July 1985.
[931] *Ibid.*
[932] Mulenga interviewed by author, 16 September 2017; O. Muleya interviewed by author, Kitwe, 19 October 2017; M. Lubasi interviewed by author, Kitwe, 20 October 2017.

package and became destitute.[933] Third, the 'perception spread that Mukuba funds were being used corruptly, benefiting senior MUZ officials. Mineworkers feared that the misuse of funds would prevent them receiving their expected pension'.[934] The strike action, between the 1st and 7th of June 1985, involved more than 4,000 strikers in the Copperbelt mines, causing 510,823.5 working-man-hours to be lost in 69,209 man-shifts.[935] In production terms, about 4,000 metric tons of copper and cobalt were lost, estimated at K16 million in revenue.[936] The government reacted vigorously; 600 miners were fired, and the check-off system was withdrawn and employees providing essential services were not allowed to join the strike.[937] Of the 600 miners dismissed on 11 June 1985, 223 originated from Rokana's three divisions (Nkana, Chibuluma and Chambishi).[938]

The fact that there was no major strike in the early 1980s directly linked to wages did not mean that workers were unware of inequalities in the single-wage structure.[939] The persistent striking feature of the dual-wage structure was reflected in the disparity of basic salaries in the single-wage structure, despite the government's effort to end it. Prior to 1982, operational and general employees would receive an average of a 10.5% increase, followed by the clerical/administrative employees at 9.9%, and technical personnel at about 6.0%.[940] Further, there was a sliding scale within each employee category that lower-level staff received greater than average wage increases while the higher-level staff received less than average increases. The government and the ZCCM tried to correct this situation. It is clear from Table 5.5 that wages increased for all workers. The new system ensured that the gap between the highest and lowest paid employee narrowed within each salary grade. Even so, the increase was not equal for all categories of workers. For example, in 1985 the lowest paid miners on G5 and G8 salary scales received the highest increment of K65 a month while those in G3 and G4 received

---

[933] M. Kalunga interviewed by author, Kitwe, 12 October 2017; L. Mulundu interviewed by author, Kitwe, 27 October 2017.
[934] Larmer, 'Zambia's Mineworkers and Political Change', 251.
[935] MUZ HQ, ZCCM Limited Head Office: Attachment to Letter from ZCCM Deputy Director of Operations, Kitwe, to ZCCM Director-Human Resources, Lusaka, 15 August 1989.
[936] *Mining Mirror*, 11 June 1985.
[937] MUZ HQ, *A Historical Analysis of MUZ*, 12; *Mining Mirror*, 7 June 1985.
[938] ZCCM 1.3.1E, Letter from Deputy Director of Personnel, Kitwe, to General Managers of Nchanga (Chingola), Mufulira (Mufulira), Nkana (Kitwe), and Roan Antelope (Luanshya), 2 September 1985.
[939] Kalunga interviewed by author, 12 October 2017; Mulundu interviewed by author, 27 October 2017; Muchimba interviewed by author, 28 October 2017; MUZ HQ, Letter from University of Zambia Graduates, Lusaka, to the Chairman and Chief Executive-ZCCM, Lusaka, 30 June 1990.
[940] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 9.

K54.[941] Meanwhile, miners in G1 and G2 scales received a K47 increment.[942] Nonetheless, miners in the G1 and G2 salary scales received the highest average basic salaries per month.

Similarly, operational and general employees received less than average increases, while technical and administrative workers received more than average increases. Still, and as indicated above, the Pay-As-You-Earn (PAYE) tax system was applied, whereby those whose basic salary was high, were heavily taxed. At the same time, disparities in earnings between expatriates and Africans at Rokana and the other mines remained very large. For example, in the late 1980s, on average an expatriate graduate at Rokana and in the other Copperbelt mines earned over 15 times what the Zambian graduate received.[943] For instance, a Zambian graduate earned a gross of just over K2,000, while his/her expatriate counterpart got a handsome gross amount of K40,000 per month.[944] This was on top of other expatriate benefits, such as inducement allowances (in forex), better housing, holiday allowances, and educational allowances for children abroad.[945] Wage structures such as this, that rewarded some more than others, together with the inability of wage increases in general to keep pace with national inflation rates, were making it difficult to attract and retain qualified Zambian personnel such as technical staff. Thus, it can be observed that the inequalities of the dual-wage structure were retained and embedded into the new single-wage structure after 1982. The issue of labour was important because of its significant influence on mineral production and production costs, and the overall profitability of Nkana Division.

5.3.2 Labour Productivity, Quality of Ores and Finished Production at Nkana

The extent to which Zambianisation and the new eight-grade manning and salary structure impacted on labour productivity at Nkana needs to be considered. As demonstrated in Chapter Four, management at Rokana was concerned about the deteriorating morale and productivity of most workers, mainly as a result of inequalities embedded in the wage structure such as the ones described above. Nonetheless, the government and the ZCCM encouraged mineworkers to be disciplined, efficient and productive in order to promote national development. Indeed, in 1982, the ZCCM went so far as to warn that it would be counter-productive to apply improved terms of conditions for service if there was no corresponding increase in productivity

[941] *Mining Mirror*, 17 June 1985.
[942] *Ibid*.
[943] MUZ HQ, Letter from University of Zambia Graduates, Lusaka, to the Chairman and Chief Executive-ZCCM, Lusaka, 30 June 1990.
[944] *Ibid*.
[945] *Ibid*.

from the employees.[946] On average, productivity per local employee at the Nkana mine and in the Copperbelt mines in general fell from about 10.1 metric tons of copper in 1981, through to 9.3 tons in 1983, to 7.1 tons in 1991.[947] The relative decline in labour productivity was linked to bad discipline, sub-standard or poor performance, and a fall in the grade of ore reserves and ore delivered to the mill.

Bad discipline among miners in the 1980s was reflected in the frequency of cases of absenteeism, indiscipline and sub-standard or poor performance.[948] Table 5.6 compares frequency of disciplinary cases per 1,000 employees at Nkana Division and in the other mines between January 1985 and June 1986.

Table 5.6: Divisional Frequency of Disciplinary Cases per 1,000 Employees, January 1985 – June 1986.[949]

Type of Offence	**Absenteeism**	**Sub-Standard Performance**	**Indiscipline**	**Theft and Fraud**	**Jan-Jun 1985**	**Jul-Dec 1985**	**Jan-Jun 1986**
Division:	Frequency	Frequency	Frequency	Frequency	Total	Total	Total
Nchanga	14.1	25.6	9.8	1.8	51.3	37.5	76.8
Luanshya	22.6	13.0	5.9	1.6	43.9	18.2	65.5
Konkola	9.1	21.7	9.5	2.0	42.3	43.3	64.0
Nkana	9.7	16.9	5.5	1.3	32.5	26.0	47.5
Mufulira	8.1	13.5	5.4	1.6	28.6	84.1	43.3

Note: The divisions are scaled according to frequency of disciplinary cases between January and June 1986.

It can be observed that most of the offences that occurred at Rokana and in the other Copperbelt mines, were sub-standard performances followed by absenteeism. There were three main reasons for this state of affairs at Rokana. As mentioned in chapters Three and Four, increases in sub-standard performance and absenteeism were mainly due to the relaxation of the coercive measures employed during the colonial era, following independence and the introduction of Zambianisation in the mines. Poor performance among local workers was also due to low morale, resulting from disincentives and disparities embedded in the new single-wage structure discussed above.[950] In addition, operational and general workers, especially in the G7 and G8 grades, whose basic salary was low, were further frustrated by the terms of the Mukuba Pension Scheme (a 5% deduction from their meagre salary; and membership was made compulsory).[951]

[946] *Times of Zambia*, 1 April 1982.
[947] MUZ HQ, Minutes of the First Meeting of the Mines Joint Industrial Council held on Monday, 19 April 1993, 4; Cunningham, 'Nationalization and the Zambian Copper Mining Industry', Table 5.5, 77.
[948] ZCCM 1.3.1E, Complaints, Disputes, Strikes and Disciplinary Cases, January 1985 – June 1986.
[949] Table 5.6 drawn from ZCCM 1.3.1E, Complaints, Disputes, Strikes and Disciplinary Cases, January 1985 – June 1986, Table 3.2 and Appendix 1.
[950] ZCCM 1.3.1E, Complaints, Disputes, Strikes and Disciplinary Cases, January 1985 – June 1986.
[951] *Times of Zambia*, 25 July 1985.

Hand in glove with these two factors, was the fact that Rokana was overstaffed with non-skilled workers who were less productive in skilled labour positions, as well as operational and general workers (diggers) engaged in mineral extraction.[952] For example, in February 1988, the number of operational and general workers in the G7 and G8 grades totalled 6,027 at Nkana; 4,936 at Nchanga; 3,045 at Luanshya; 2,549 at Mufulira.[953] As discussed elsewhere above, Nkana Division needed more operational and general workers because of its large mining and metallurgical facilities. At Nkana and Nchanga, this problem was exacerbated by wrong placement in the manning structure following redeployment of workers as a result of cost-saving measures.[954] As stated earlier, most of the workers from other ZCCM divisions were redeployed at Nkana and Nchanga. For political reasons, the government was reluctant to encourage the mines to reduce the excess labour. Because of Zambianisation, G3 Surveyors were automatically up-graded to G2 after three years, without an effective assessment of their performance, and irrespective of their skills and the normal establishment.[955] This practice was common at Nkana, Nchanga and Mufulira divisions.[956]

The highest frequency of offences was recorded at Nchanga and Luanshya mines (see Table 5.6). At Nchanga, the number of disciplinary cases increased from the total average of 37.5 between July and December 1985 to 76.8 between January and June 1986. At Nkana, however, the average total number of disciplinary cases increased from 26.0 to 47.5 cases in these periods. Compared to the other Copperbelt mines, there was a gradual fluctuation in the number of disciplinary cases at Nkana between January 1985 and June 1986 (see Table 5.6). One of the main factors was the relative success of the punitive measures employed by management at Nkana and in the other mines against bad discipline among local employees. The most effective measures included severe warnings, demotion and dismissal.[957] While these measures could be compared to colonial-era disciplinary practices, there were notable differences in their application. As pointed out by Larmer, 'racial inequality and violent supervision…lay at the

---

[952] As discussed elsewhere in this chapter, non-skilled workers were employees from other mines who were placed in departments that they were not trained for, but employed for the sake of redeployment and Zambianisation.
[953] ZCCM 1.3.1H, attachment to the Letter from Senior Manager Manpower Development, Chingola, to Director-Human Resources ZCCM, Lusaka, 7 March 1988.
[954] ZCCM 1.3.1H, attachment to the Letter from Senior Manager Manpower Development, Chingola, to Director-Human Resources ZCCM, Lusaka, 7 March 1988; ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1985–7.
[955] MUZ HQ, Letter from Chief Industrial Relations Officer, Kitwe, to Deputy Director of Personnel-Manpower Services and Training, Kitwe, 17 July 1985.
[956] *Ibid*.
[957] ZCCM 1.3.1E, Complaints, Disputes, Strikes and Disciplinary Cases, January 1985 – June 1986, Appendix 2.

heart of colonial industrial relations'.[958] In the colonial era workers were arbitrarily dismissed without any lawful procedure.[959] For example, following a strike by African miners on 3 January 1955 over wages, the mining companies issued a "back to work or be sacked" ultimatum which was ignored.[960] With the support of the 'Colonial Government, the companies started evicting people [workers] from their houses and employing casual labourers'.[961] After independence, however, a worker would not be dismissed without the Industrial Relations Court presiding over his/her case.[962] The workers were given an opportunity to appeal to higher courts.[963] Despite their dismissal, they were entitled to terminal benefits.[964]

Application of the measures detailed above acted as a deterrent to would-be offenders. While such measures seemed to have failed at Nchanga, Luanshya and Konkola, they were apparently successful at Mufulira where there was a tremendous reduction in disciplinary cases between July 1985 and June 1986 (see Table 5.6). Although lower at Nkana, the number of offences still doubled between January and June 1986, compared to the period from July to December 1985 (see Table 5.6). The effect of bad discipline and sub-standard performance at Nkana and in the other Copperbelt mines was also reflected in the decline of ore hoisted per local employee from about 647 metric tons per year in 1975 to 549 tons by 1983.[965] This relative decline in labour productivity, however, was partly related to the fall in the grade of ore delivered to the mill. In the period from 1970 to 1981, the grade of ore reserves was stable and averaged 2.43% copper, while mill-head grades averaged 1.76% copper (see Table 4.7). Between 1982 and 1991, the decline in the grade of ore delivered to the concentrator at Nkana was partly linked to dilution. Table 5.7 compares the grades of ore reserves, ore milled or treated and finished production at Nkana between 1982 and 1991.

---

[958] Larmer, 'Zambia's Mineworkers and Political Change', 145.
[959] MUZ HQ, *A Historical Analysis of MUZ*, 5–6.
[960] *Ibid*., 6.
[961] *Ibid*.
[962] ZCCM 5.5.1S, Memorandum of Agreement between the Association of Copper Mining Employees and the Mineworkers' Union of Zambia, 14 April 1987, 3–4; ZCCM 5.6.3I, *ZCCM: Disciplinary Code and Grievance Procedure* (Kitwe: Copper Industry Service Bureau Limited, 1988), 22; MUZ HQ, attachments to Letter from Executive Director-Personnel Services, Lusaka, to Divisional General Managers – Nchanga, Mufulira, Nkana, Luanshya, Kabwe, Central Services and Power Company, 12 March 1986.
[963] ZCCM 5.6.3I, *ZCCM: Disciplinary Code and Grievance Procedure*, 24–5.
[964] MUZ HQ, attachments to Letter from Executive Director-Personnel Services, Lusaka, to ZCCM Divisional General Managers, 12 March 1986; ZCCM 5.6.3I, *ZCCM: Disciplinary Code and Grievance Procedure*, 3.
[965] Cunningham, 'Nationalization and the Zambian Copper Mining Industry', Table 5.5, 77.

Table 5.7: Comparison of Ore Reserves, Ore Mined and Treated, and Finished Production at Nkana, 1982-1991.[966]

Year	Ore Reserves			Ore Mined and Treated				Finished Production	
				Ore Hoisted	Ore Milled and Metal %			Copper	Cobalt
				Metric Tons	Metric Tons	Copper %	Cobalt %	Metric Tons	Metric Tons
1982	109,986,000	2.32	0.13	4,279,000	4,597,000	1.56	0.10	149,706	1,002
1983	96,917,000	2.35	0.13	3,835,000	4,378,000	1.46	0.09	126,770	419
1984	83,848,000	2.38	0.13	3,858,000	4,247,000	1.61	0.10	141,733	1,543
1985	81,682,000	2.38	0.14	3,793,000	3,874,000	1.55	0.10	148,244	1,952
1986	79,274,000	2.40	0.15	-	3,526,000	1.40	0.10	135,888	2,555
1987	100,643,000	2.37	0.14	-	3,557,000	1.35	0.10	130,673	1,845
1988	101,135,000	2.36	0.14	-	3,454,000	1.31	0.09	142,088	2,343
1989	100,731,000	2.34	0.14	3,308,000	3,238,000	1.36	0.08	126,757	2,373
1990	98,792,000	2.33	0.14	3,203,000	3.225,000	1.43	0.09	138,272	2,228
1991	97,448,000	2.33	0.14	3,300,000	3,520,000	1.53	0.10	147,270	2,225

Table 5.7 shows that between 1982 and 1991 the grade of ore reserves at Nkana averaged approximately 2.36% copper and 0.14% cobalt. The grade of ore hoisted, whose annual figures are not indicated in this table, averaged about 1.41% copper and 0.09% cobalt.[967] The difference between the average grade of ore reserves and ore hoisted was about 0.95% for copper and 0.05% for cobalt. This difference was a result of high levels of dilution. Dilution in this case refers to mixture of waste rock with ore.[968] As discussed in the previous chapters, dilution partly affected the grade of the ore sent to the mill. The metal content of ore milled or treated averaged 1.46% copper and 0.10 cobalt. Dilution was partly the result of the effects of deep level mining at Nkana. In 1984, the Nkana Division had Zambia's deepest underground mining operation, with two shafts of more than 4,200 feet below the surface.[969] Deep level mining at Nkana was characterised by high temperatures, inadequate ventilation, flooding, and an increased mixture of ore with rock due to weak and falling walls. All of this made mining through sub-level-stoping difficult. However, sub-level-stoping was important in this context because it was safe.[970] As a result, fatal accident figures recorded at Nkana declined between 1985 and 1987, and the Division recorded the lowest figure on the Copperbelt in 1988.[971] The

[966] Table 5.7, compiled from ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91; ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 21.
[967] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1989–91.
[968]ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 34.
[969] Glover, 'The Mineral Industry of Zambia', *Minerals Yearbook – International 1984*, 928.
[970] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1985–91; *Mining Mirror*, 27 January 1989.
[971] *Mining Mirror*, 27 January 1989.

number of fatal accidents at Nkana Division decreased from nine in 1985, through to eight in 1986, to three in 1988.[972] The total number of fatal accidents in all the Copperbelt mines was 39 in 1985 and 24 in 1986.[973]

Finished copper and cobalt production fluctuated between 1983 and 1991. In addition to a decline in labour productivity, high levels of dilution and the resultant lower than anticipated head-grades in the concentrates treated, there were also other factors behind the general fluctuation in production at Nkana. One of the reasons was related to hoisting and crushing constraints and the limited availability of diesel, air loaders and locomotives.[974] Poor maintenance, itself the result of inadequately trained personnel, aggravated the situation.[975] Spare parts were in short supply because of inadequate allocation of foreign exchange, arising from the effects of the world recession, and supply shortages due to transportation bottlenecks.[976] Shortages of consumables such as diesel, lubricants, explosives and tyres became ever more of a problem between 1984 and 1988.[977] Shortages of spare parts and consumables meant that the concentrator, the cobalt plant, the smelter and the refinery operated below capacity. More than this, two of the three open-pit mines were closed in 1984, partly owing to the depletion of economic reserves but also as a cost reduction strategy.[978] Underground development, too, was affected by compressor problems and a shortage of drilling spare parts.[979]

If this was not enough, there was another major reason for the sharp decline in copper and cobalt production in 1983. A major fire at the Nkana Division Power Station in November 1982, immobilised the smelter, other surface facilities of the Division, and affected the hydrometallurgical operations such as the acid plant.[980] The resultant shortfall in acid production affected hydrometallurgical operations elsewhere on the Copperbelt, especially Nchanga Division which relied to a large extent on acid produced by Nkana.[981] Inadequate supplies of acid from Nkana was the major factor responsible for a 2.8% decline in the ZCCM's

[972] *Ibid*.
[973] *Ibid.*, 30 January 1987.
[974] Glover, 'The Mineral Industry of Zambia', *Minerals Yearbook – International 1984,* 928.
[975] *Ibid*.
[976] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1984–8.
[977] *Ibid*.
[978] Glover, 'The Mineral Industry of Zambia', *Minerals Yearbook – International 1984,* 928.
[979] *Ibid*.
[980] ZCCM 11.1.1F, *ZCCM Limited: 1983 Annual Report* (Lusaka: ZCCM Head Office, 1983), 6.
[981] *Ibid*.

finished copper production in 1983.[982] Additionally, cobalt production was temporarily curtailed, partly to ease stocks due to the poor demand for the metal.[983] The closure of the old facility and the start-up of the new RLE Plant also played a role.[984] The new RLE cobalt plant was capable of handling 2,500 metric tons of metal a year and boosted production in the following years.

In 1989, copper production fell because ore deliveries from three underground sources were constrained by poor ground conditions, which caused the collapse of the stope grizzlies, as well as haulage and rock hoist breakdowns before a new 3,760m level crusher at the Central Shaft was commissioned.[985] The grade of ore hoisted was further diluted by over-pulling from existing stopes, because of a shortage of replacement stopes.[986] Nevertheless, production at Nkana thereafter improved because, for the first time under the ZCCM, the Company invested in advanced machinery and technology, which boosted its operations. Between 1988 and 1991, the ZCCM increased capital expenditure on the mining department at Nkana, amounting to K1, 483 million compared to K167.1 million expended on capital projects between 1982 and 1987.[987] The increase in capital expenditure in all the divisions was not only meant to replace old machinery and equipment but also to improve production in line with a dramatic increase in demand and metal prices.[988] Most expenditure was on the adoption of new technology and mining methods, especially at the Mindola shaft where the Vertical Crater Retreat method was implemented.[989] New machines and equipment were also bought, which included Toro Loaders, Drill Rigs and Jackhammers.[990] As a result of new machinery and technology, for the first time in eleven years, the quantity and quality of ore extracted and treated exceeded the forecast for the 1991 financial-year. In 1991, 'the grade of the ore delivered to the concentrator improved by 4.7% than the previous year while contained copper improved by 2,759 tons or by 4.8% than the previous year'.[991] Finished production for the 1991 financial-year also increased by 8,998 tons over the previous year (see Table 5.7). Even so, between 1982 and 1991 Rokana Division and the Copperbelt mines constantly lost control of mill-feed quality

[982] *Ibid.*
[983] *Ibid.*, 11.
[984] *Ibid*.
[985] ZCCM 11.1.1F, *ZCCM Limited: 1989 Annual Report* (Lusaka: ZCCM Head Office, 1989), 37.
[986] *Ibid*.
[987] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports,* 1982–91.
[988] *Ibid*.
[989] *Mining Mirror*, 26 April 1991.
[990] *Ibid*.
[991] *Ibid.*

and labour productivity.[992] This was compounded by poor equipment and inadequate spare parts and consumables, all important elements of production costs.[993]

5.3.3 Costs of Production and Transport for Nkana and the other ZCCM mines

Between 1970 and 1981, mill-feed quality and labour productivity were the major components of mining costs, covering almost 60% of the total operating costs and 40% of the total cost of sales per ton of copper. Between 1984 and 1991, the average cost of producing a ton of copper at Nkana and in the other Copperbelt mines increased markedly against high copper prices blighted with inflation.[994] The average cost of producing a ton of copper increased from about K151.0 (US$93.6) in 1984 to K3,825 (US$76.5) in 1991.[995] Two major factors contributed to this high cost of production. First, the main factor was the high cost of plant materials and stores. The cost of stores utilised to produce a ton of copper increased from K275.4 in 1988 to K2,000.0 in 1991.[996] This meant that the cost of stores utilised to produce a ton of copper at Nkana increased by about 86.2%. Consolidated figures indicate that in the total operating budgets, the cost of stores accounted for 41% in 1984 and increased dramatically to 60% in 1987.[997] The second major contributing factor to an escalation of production costs at Nkana and other ZCCM mines was the increase in labour costs. For example, labour costs for a ton of metal produced increased by about 91% from K88.5 in 1988 to K980.0 in 1991.[998] In 1991 alone, stores and labour costs contributed about 77.9% of total production costs per ton of metal produced.[999]

Labour costs increased due to the basic salary increases implemented every year since 1985. Also, the Copperbelt mines were overstaffed by local workers as a result of the need to provide employment to Zambians due to political pressure (see tables 5.1 and 5.2). Rokana in particular,

---

[992] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports,* 1982–91.
[993] *Ibid*.
[994] ZCCM 1.2.5I, *Zambia Consolidated Copper Mining Industry-Historical Background* – A Paper by B.K. Shamutete presented at the Seminar on Investment Opportunities in Zambia organised by Price Water-House held in Johannesburg on 25 February 1993, Appendix 2; ZCCM 11.1.1F, *ZCCM Limited: Annual Reports, 1984–91*; ZCCM 11.7.9C, *ZCCM Management Report on Operations Covering the Quarter ended 31 December 1984*, 6 February 1985, 25–7 (unpublished report); MUZ HQ, *ZCCM Management Report on Operations Covering the Quarter ended 31 March 1988*, 24–6 (unpublished report). The overall cost of sales and copper price are represented in Table 5.8.
[995] ZCCM 1.2.5I, *Zambia Consolidated Copper Mining Industry-Historical Background*, Appendix 2; ZCCM 11.1.1F, *ZCCM Limited: Annual Reports, 1984–91*; ZCCM 11.7.9C, *ZCCM Management Report on Operations Covering the Quarter ended 31 December 1984*, 25–7. For details on the exchange rates see table on page xv.
[996] ZCCM 1.2.5I, *Zambia Consolidated Copper Mining Industry-Historical Background*, Appendix 2.
[997] *Mining Mirror*, 27 March 1987.
[998] ZCCM 1.2.5I, *Zambia Consolidated Copper Mining Industry-Historical Background*, Appendix 2.
[999] *Ibid*.

was the second largest employer in the Copperbelt mines, partly because of its vast mining and metallurgical facilities, and as a result of the redeployment exercise implemented by the ZCCM. For instance, Rokana's labour force increased from 12,251 at the end of 1982 to 14,127 in 1990.[1000] In fact, one of the major reasons why the cost-saving measures failed at Rokana was because labour costs were always above budget, largely due to overstaffing. Even so, it was cheaper for Nkana to utilise a higher-labour than capital-intensive mode of production due to shortages of capital expenditure (see Table 5.9), inadequate machinery and equipment.[1001]

The cost of stores increased for several reasons. Stores comprised the major part of the ZCCM imports, which included machinery, electricity, mineral fuels and consumables, manufactures and chemicals.[1002] Sources were mainly South Africa, the United Kingdom, and Saudi Arabia (for crude oil). Crude oil was by far the major mineral import. Mining equipment was mainly imported from the USA. For instance, USA exports to Zambia's ZCCM in 1989 totalled US$49.6 million.[1003] It consisted mainly of mining equipment and spare parts, while the US-imports of copper and cobalt were US$24.1 million.[1004] Some of the spare parts and locomotive engines were purchased from China and from the Federal Republic of Germany.[1005] High costs of materials and consumables utilised in mining, concentrating and treatment activities reflected price increases due to the effects of the world recession, which began in the mid-1970s, and the depreciation of the kwacha against major currencies (see table on page xv).

Shortages of consumables worsened after 1984. Increases in fuel prices resulted in extra costs for heavy oil of K18 million per year.[1006] Between July and October 1985 serious shortages of diesel were experienced following a 30% cut-back in supplies of fuel from Saudi Arabia.[1007]

[1000] ZCCM 11.1.1F, *ZCCM Limited: 1990 Annual Report* (Lusaka: ZCCM Head Office, 1990), 37.
[1001] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91.
[1002] L.E. Antonides et al., 'The Mineral Industries of Southern Africa', *Bureau of Mines Minerals Yearbook 1988, Vol. 3 – Southern Africa* (Washington: US Bureau of Mines, 1988), 180. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1988v3. Accessed on 13 September 2017.
[1003] L.E. Antonides and G.A. Morgan, 'The Mineral Industry of Zambia', *Bureau of Mines: Minerals Yearbook Mineral Industries of Southern Africa 1989, Vol. 3 - Zambia* (Washington: US Bureau of Mines, 1989), 299. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1989v3Afr. Accessed on 13 Septmber 2017.
[1004] *Ibid*.
[1005] T.O. Glover, 'The Mineral Industry of Zambia', *Bureau of Mines Minerals Yearbook Area Reports: International 1982, Vol. 3 – Zambia* (Washington: US Bureau of Mines, 1982), 1041. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1982v3. Accessed on 13 September 2017.
[1006] ZCCM 11.7.9C, *ZCCM Management Report on Operations Covering the Quarter ended 31 December 1984*, 24.
[1007] ZCCM 11.1.1F, *ZCCM Limited: 1985 Annual Report* (Lusaka: ZCCM Head Office, 1985), 14.

Severe oil shortages during mid-1985 was also a result of a severe shortage of foreign exchange due to the effects of the recession.[1008] The ZCCM tried to cover cash shortfalls with new loans borrowed in US dollars, which totalled the Company's total foreign debt in kwacha at over K1,500 million in 1985.[1009] This debt increased dramatically as the value of the kwacha fell. Part of this amount included a US$100 million loan sourced from a consortium of foreign banks, which covered the purchase of 600,000 tons of crude oil and petroleum products.[1010] However, annual interest payments of about K200 million, 75% of which was in foreign exchange, represented a severe cash drain, further weakening the financial position of Nkana and the other mines.[1011]

The supply of foreign exchange available for ZCCM's mines fell well short of their requirements. For example, out of a total foreign exchange of about US$1,049 million supplied under the control of IMF to Zambia in 1982, ZCCM was awarded about US$357 million or 34%, and by 1985, the Company's share declined further to 31% of US$828 million of the total foreign exchange allocated.[1012] The Company needed a minimum allocation of 40% of total foreign exchange to cover all its imports, and lacking that, its mines, including Nkana, were unable to purchase the necessary spare parts and consumables from abroad.[1013] As mentioned earlier, to increase the foreign exchange earnings, the IMF and WB advised the government to devalue the kwacha against major currencies, including the US dollar and the pound sterling.[1014] This resulted in a sharp depreciation in the value of the kwacha, especially after 1985, against the US dollar and the pound sterling (see table on page xv). Accordingly, between 1984 and 1991, the value of the kwacha against the dollar depreciated by 96.8%, and by 97.7% against sterling. Depreciation of the kwacha against major currencies had two major effects for ZCCM. Devaluation made imports, especially stores, more expensive by increasing their cost in local currency.[1015] But devaluation made the ZCCM's exports more remunerative, at least

[1008] T.O. Glover, 'The Mineral Industry of Zambia', *Bureau of Mines Minerals Yearbook Area Reports: International 1985, vol. 3 – Zambia* (Washington: US Bureau of Mines, 1985), 975. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1985v3. Accessed on 13 September 2017.
[1009] ZCCM 12.3.3B, *ZCCM: Export Rehabilitation and Diversification Project-Financial Assessment Proposal*, October 1985, 5.
[1010] Glover, 'The Mineral Industry of Zambia', *Minerals Yearbook – International 1985,* 975.
[1011] ZCCM 12.3.3B, *ZCCM: Export Rehabilitation and Diversification Project-Financial Assessment Proposal*, 5.
[1012] *Ibid*.
[1013] *Ibid*.
[1014] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91.
[1015] *Times of Zambia,* 19 September 1988.

for a time by increasing the amount of local currency received by the Company for every dollar or sterling it earned.[1016]

In 1984 production and related costs accounted for 89.4% of total cost of sales of about K1,847 per ton.[1017] The remainder was accounted for by transport costs per ton of copper delivered to a buyer in Europe, the United States and elsewhere. About 76% of Rokana copper was, in order of importance, exported to Japan, France, Italy, Federal Republic of Germany, India and the United Kingdom.[1018] The remainder was mainly sold to the USA and China. Transportation costs for delivering copper and cobalt metals overseas was a large part of the total cost of sales for Rokana and other ZCCM mines. As a land-locked country, Zambia relied on road and rail transport through neighbouring Southern and East African countries in order to export her copper and cobalt to the coast. The Copperbelt mines used the ports of Durban and East London in South Africa, Dar-es-Salaam in Tanzania, and Beira in Mozambique.[1019]

Together with production costs, transport costs from the Copperbelt to buyers abroad increased between 1982 and 1991. The cost of transporting a ton of copper from Zambia to Europe and other parts of the world increased from K196 in 1984 to K953 by 1988.[1020] In the early 1980s, the Southern route accounted for 60% of the total traffic of copper exports, the Dar-es-Salaam route for 35% and other minor routes for 5%.[1021] The decline in usage of the Dar-es-Salaam route reflected the reduced capacity of the Tanzania-Zambia Railways (TAZARA) system because of operational problems. In the early 1980s, the TAZARA line suffered from lack of maintenance and shortages of fuel and lubricants, even as port operations at Dar-es-Salaam were hampered by congestion and shortages of handling equipment particularly forklifts, tractors and trailers.[1022] All of this resulted in further diversions of copper through South African ports. The southern route through to South Africa was more expensive than the Dar-es-Salaam route. The problem, though, was that it cost K124 per ton to transport copper from the Copperbelt to East London in South Africa, while it only cost K68 per ton by rail and K70

[1016] *Ibid.*
[1017] ZCCM 11.7.9C, *ZCCM Management Report on Operations Covering the Quarter ended 31 December 1984*, 27.
[1018] Glover, 'The Mineral Industry of Zambia', *Minerals Yearbook – International 1982,* 1042.
[1019] *Ibid*.
[1020] ZCCM 11.7.9C, *ZCCM Management Report on Operations Covering the Quarter ended 31 December 1984*, 27; MUZ HQ, *ZCCM Management Report on Operations Covering the Quarter ended 31 March 1988*, 26 (unpublished report).
[1021] ZCCM 11.7.9C, *ZCCM Management Report on Operations Covering the Quarter ended 31 December 1984*, 22.
[1022] *Ibid*.

per ton by road to Dar-es-Salaam.[1023] The disparity was due to the fact that Dar-es-Salaam is nearer to the Copperbelt than the South African ports (see Figure 5.1).

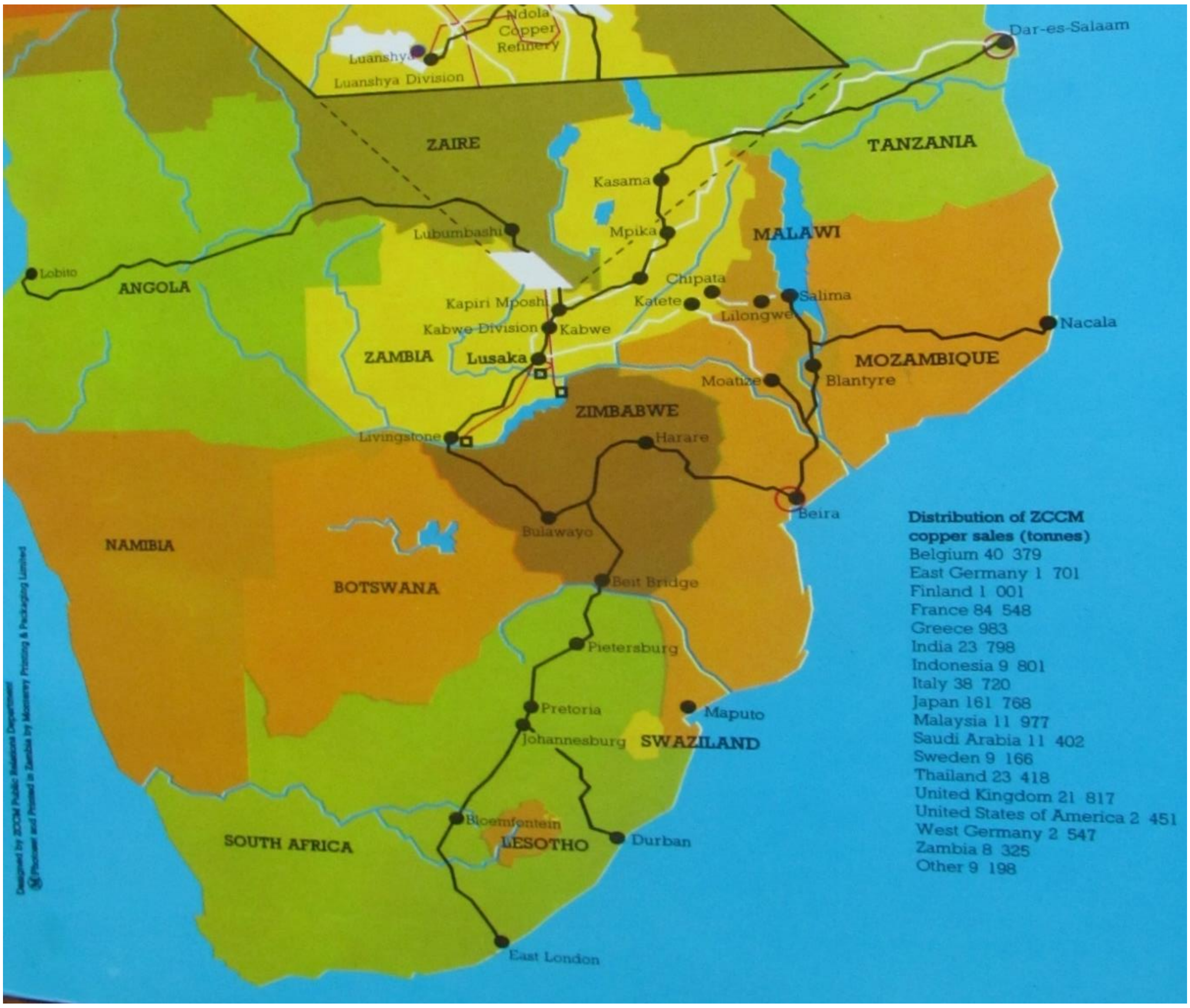


Figure 5.1: Transport routes and distribution of copper sales for Nkana Mine Division and ZCCM-owned mines during 1990. Source: ZCCM 11.1.1F, *ZCCM Limited: 1990 Annual Report* (Lusaka: ZCCM Head Office, 1990), 44.

As a result of a general rise in the price of fuel and spare parts, TAZARA increased its rates for exports and imports by 20% and 22% respectively, effective 1 February 1985.[1024] This resulted in extra transport costs for the ZCCM mines of approximately K7 million per year. Furthermore, a decision was taken by TAZARA to charge the ZCCM and other Zambian customers in foreign exchange for the Tanzanian section of the rail, amounting to an estimated K20 million a year.[1025] But alternative routes to the Tanzanian one were in short supply because of the volatile Southern African political environment. The Benguela railway-line, stretching

[1023] ZCCM 11.7.9C, *ZCCM Paper on Proposed Measures for Increasing Metal Production and Reducing Costs*, 4 March 1983, 5.
[1024] ZCCM 11.7.9C, *ZCCM Management Report on Operations Covering the Quarter ended 31 December 1984*, 23.
[1025] *Ibid*.

1,340km from the Copperbelt to Lobito, had been destroyed in 1975 because of the civil war in Angola.[1026] Similarly, the Beira route through Mozambique was unreliable because of the civil war.[1027]

These were not the only major politically oriented transport challenges for Zambia's copper mining industry. After 1985, political relations between Zambia and South Africa were strained over the former's open support for freedom fighters opposed to the Apartheid regime.[1028] The headquarters of the African National Congress (ANC) of South Africa were based in Lusaka. President Kaunda also called on the International Community to impose mandatory economic sanctions against South Africa to bring down the Apartheid regime.[1029] Pretoria responded by stepping-up aggression against countries supporting freedom fighters in the region in what became known as the 'destabilisation campaign'. Between 1983 and 1986, P.W. Botha's government sent special-forces who carried out attacks in suspected suburbs believed to be harbouring insurgents against the Apartheid regime in Lusaka and Livingstone (Zambia), Harare (Zimbabwe) and Gaborone (Botswana).[1030] In retaliation, suspected freedom fighters carried out bomb attacks in Johannesburg and elsewhere.[1031]

As a result, in November 1986 the ZCCM stopped sending copper exports through South Africa.[1032] The mines resorted to airlifting some imports and exports, further increasing transport costs. Copper exports and imports fell back on the Dar-es-Salaam route despite its many challenges, and between 1985 and 1991 this route accounted for not less than 80% of the mines' transport needs.[1033] However, delays in transport of cargo such as materials, spare parts, machinery and consumables to the Copperbelt continued the decline in production at Nkana. In addition to all these factors, there were other transport and sales related charges. For instance, in January 1985, the government increased the rate of sales tax on imported goods from 12.5% to 15%, and cost Rokana and the other ZCCM mines an additional K26 million per year.[1034]

[1026] *Times of Zambia*, 1 May 1987, 27 November 1987.
[1027] J. Pearce, 'Control, Politics and Identity in the Angolan Civil War', *African Affairs*, 111, 444 (2012), 442–3.
[1028] *Times of Zambia*, 19 November 1985, 6 July 1987.
[1029] *Ibid*.
[1030] *Ibid.*, 1 August 1987.
[1031] *Ibid*.
[1032] *Ibid.*, 16 March 1987.
[1033] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1985–91.
[1034] ZCCM 11.7.9C, *ZCCM Management Report on Operations Covering the Quarter ended 31 December 1984*, 24.

At the same time, excise duty on petroleum fuels was increased and resulted in extra costs of about K1.8 million.[1035]

Nkana and the other ZCCM mines consequently became high-cost producers in the course of the 1980s. By comparison, other major copper mines in Zaire, Chile, Canada and USA were still low-cost producers. In 1988, the average cost per pound of copper produced was about US$0.89 in Zambia; $0.61 in the USA; $0.54 in Canada; $0.48 in Zaire; and about $0.39 in Chile.[1036] Production costs at Nkana and other Zambian producers ranked alongside Peru, where annual production costs per ton in 1988 averaged US$0.92.[1037]

While the factors discussed so far were responsible for the increase in the Copperbelt mines' production costs, the increase was also attributable to the ZCCM's low investment in advanced machinery and technology. By contrast, the government-owned CODELCO-Chile, whose ore reserves were lower than the ZCCM's enjoyed extremely low costs.[1038] CODELCO-Chile, unlike the ZCCM, reduced production costs by successfully devaluing the peso, coupled with other exchange-rate policy changes designed to deal with rising unemployment and declining output.[1039] These measures lowered production costs and improved expanded investment in mining operations. CODELCO-Chile, like the ZCCM, relied on borrowed money for capital projects, but the former invested all such funds into new mines, machinery and technology while the latter diversified part of the borrowed money into other sectors such as agriculture, construction and hospitality, denying its mines much needed capital.[1040] Although the average grades in 1980 of ore reserves for CODELCO-Chile at 1.68% copper were less than those of the ZCCM, averaging over 2.3% copper, CODELCO-Chile produced more copper at lower costs than the ZCCM between 1982 and 1991 because of investments in new mines and

---

[1035] *Ibid*.
[1036] J.W. Jolly and D.L. Edelstein, 'Copper', *Bureau of Mines Minerals Yearbook 1988, Vol. 1* (Washington: US Bureau of Mines, 1988), Table 7, 334. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=article&did=EcoNatRes.MinYB1988v1.JJolly&id=EcoNatRes.MinYB1988v1&isize=M. Accessed on 25 September 2017.
[1037] *Ibid*.
[1038] J.W. Jolly and D.L. Edelstein, 'Copper', *Bureau of Mines Minerals yearbook metals and minerals 1982, Vol. 1* (Washington: US Bureau of Mines, 1982), 281. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=article&did=EcoNatRes.MinYB1982v1.JJolly&id=EcoNatRes.MinYB1982v1&isize=M. Accessed on 25 September 2017.
[1039] *Ibid*.
[1040] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 12.

advanced equipment.[1041] Similarly, the government-owned Gecamines in Zambia's neighbour, Zaire, invested in new mines, machinery and technology in order to reduce costs.[1042]

5.3.4 Overall Profitability of Nkana Division and the ZCCM-owned Mines

Between March 1981 and September 1982, Nkana together with other ZCCM mines experienced economic and financial challenges, not least because of depressed metal prices on the world market (see Table 5.8). The metal market on the LME in London and the Commodity Exchange (COMEX) in New York, where Zambian producers sold their copper, experienced intermittent setbacks from long recession dating back to the 1970s. The average copper price of K1,522 per ton in 1982 was lower than the average of K1,620 for 1981.[1043] The decline in copper prices was caused by a slackening of industrial activity in the West against a background of rising stocks. From March 1981 to 1982, the world stock of copper increased from 1.19 million tons to 1.35 million tons, with a corresponding decrease in the copper price from K1,578 to K1,487 per ton.[1044] Similarly, the West's demand for cobalt declined because of major reductions in consumption of super and magnetic alloys and tool steel industries.[1045]

Between October 1982 and February 1983, the copper price increased because of improved Western demand. This demand was partly a result of the 4% decrease to 6.24 million tons of copper output among major producing countries in 1982.[1046] The decrease in copper stocks resulted from 'steep production cutbacks of 400,000 to 500,000 tons in the United States of America and Canada, and to lesser output cuts in Zaire, Zambia and the Philippines. Chile and Peru recorded increases'.[1047] This cutback, however, was not done by mutual agreement among these producers. After independence it became difficult to form a big cartel like Copper Exporters Inc. of the early 1930s to control the market, for a number of reasons. In the colonial-era, the copper business was dominated by the private sector.[1048] After nationalisation in Africa and South America, the mining companies were either private firms or government

---

1041 Jolly and Edelstein, 'Copper', *Bureau of Mines Minerals yearbook metals and minerals 1982*, 281.
1042 *Ibid.*, 283.
1043 ZCCM 11.1.1F, *ZCCM Limited: 1982 Annual Report* (Lusaka: ZCCM Head Office, 1982), 6.
1044 *Ibid.*, 9.
1045 *Ibid*.
1046 *Mining Mirror*, 29 April 1983.
1047 *Ibid.*
1048 M. Lonoff, 'An Economic Overview of the World Copper Market and Computation of the Elasticity of Demand Facing Chile and Peru', A Paper presented to the Seminaro Sobre Politics Commeciales Optimas, held from 22–24 June 1981, 4.

controlled.[1049] New producers also emerged after independence of such countries as the Philippines, Papua New Guinea, Australia, Indonesia, Panama, Brazil and Mexico.[1050] New major consumers included Japan, China, India and the Soviet Union.[1051]

With this expansion of the copper industry, it became extremely difficult to pursue a concerted policy in the copper business. Copper producers in the USA and Canada set their own cutbacks to protect their market on the COMEX in New York.[1052] CIPEC managed to woo some of the new producers, but failed to fine-tune production in line with demand because the Cartel only controlled 37% of world output.[1053] Since the army seized power, Chile was not an active member of CIPEC and the organisation collapsed in 1988 after being unable to maintain high copper prices.[1054] Craig observed, ‘the control of the international copper industry by the transnational companies was eroded by the establishment of…state mining enterprises which undermined the transnationals’ ability to stabilise the market through informal cooperation and led to greater price volatility’.[1055] Thus, the price of copper was largely influenced by other world output-driven-demand factors.

The above decline in output coincided with increased ‘USA copper consumption fuelled by promising housing and car industry figures, and to speculative activity linked to firmer precious metal prices’.[1056] Lower USA interest rates, strikes in Peruvian mines and the decline in the value of the British sterling against the US dollar all contributed to the price increase.[1057] These factors combined to push the monthly price of copper to a record of over K2,100 per ton in January 1983.[1058] This increase in the price of copper continued between 1984 and 1985.

[1049] *Ibid.*, 9. Private companies included: Kennecott, Phelps Dodge, ASARCO, Newmont, AMAX and Anaconda, all from the USA; Anglo American from South Africa. The major government controlled companies included: ZCCM, CODELCO-Chile, Gecamines, and Centromin (Peru).

[1050] Lonoff, ‘An Economic Overview of the World Copper Market and Computation of the Elasticity of Demand Facing Chile and Peru’, 4.

[1051] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91.

[1052] *Mining Mirror*, 29 April 1983.

[1053] J. Kooroshy and F. Preston, ‘Cartels and Competition in Minerals Markets: Challenges for Global Governance’, Research Paper (London: Royal Institute of International Affairs, 2014), 12. https://www.chathamhouse.org/sites/files/chathamhouse/field/field_document/20141219CartelsCompetitionMineralsMarketsKooroshyPrestonBradleyFinal.pdf. Accessed 13 October 2017. Chile, Peru, Zaire and Zambia were founding members of CIPEC. Yugoslavia and Indonesia joined later. Australia and Papua New Guinea became associates.

[1054] A. Trott et al., ‘Organisation of Petroleum Exporting Countries’, EEP Lecture Five Notes (Berkeley: University of California, 2009), 19. https://are.berkeley.edu/~sberto/lecture5_OPEC_Project.pdf. Accessed on 25 September 2017.

[1055] Craig, ‘State Enterprise and Privatisation in Zambia 1968–1998’, 52–3.

[1056] Trott et al., *Organisation of Petroleum Exporting Countries*, 19.

[1057] *Ibid.*

[1058] *Mining Mirror*, 28 January 1983.

Similarly, the cobalt market remained depressed, but its average price continued to improve primarily due to the 'tightness in the supply of spot material and a renewed bullish tone on the free market'.[1059] In March 1984, the price of cobalt, therefore, reached a three-year peak of US$12.60 (K20.32) per pound, and continued to improve thereafter.[1060]

From January 1985 until 1991 the price of copper increased dramatically. This was mainly because of fresh buying interests from the Far East, particularly Japan and China.[1061] This led to a drop in copper inventories. Between January and May 1986, stocks in the LME warehouses fell by about 20,900 tons from 153,500 tons to 132,600 tons.[1062] This fuelled a price spiral. On the other hand, 'the collapse of oil prices since 1981, which brought adverse influence on the metal markets, appeared to have waned and base metal prices including those of gold, silver, cobalt, lead and zinc were on the upswing'.[1063] The slump in oil, which had a dampening effect on the metal markets, 'was overtaken by new events in the wake of the US bombings of Libyan bases, which precipitated a new crisis in the supply of oil from the gulf countries and increased the price of fuel'.[1064] These factors combined to fuel a price spiral of the average monthly price of copper, which more than tripled from K3,125 per ton in January 1985 to K10,810 in May 1986. Subsequently, the average annual price of copper increased from record figures of K5,841 in 1986, through to K11,799 in 1987, to K16,525 per ton in 1988.[1065]

But the main reason for the sharp increase in the price of copper from 1989 to 1991 was supply problems among major producers, which reduced world and LME stocks (see Table 5.8).[1066] Overproduction in Peru was largely counterbalanced by a strike at CODELCO-Chile's 100,000 ton a year-producing San Salvador mine, which lasted for more than 60 days.[1067] At the same time, continued problems in the mines of Papua New Guinea, labour problems in the Highland Valley in British Columbia, coupled with the closure of the Cananea in Mexico, caused serious supply disruptions from these producers.[1068] These gyrations in various parts of the global

[1059] ZCCM 11.1.1F, *ZCCM Limited: 1984 Annual Report* (Lusaka: ZCCM Head Office, 1984), 13.
[1060] *Ibid*.
[1061] *Mining Mirror*, 25 April 1986.
[1062] *Ibid.*, 25 April and 30 May 1986.
[1063] *Ibid.*, 25 April 1986.
[1064] *Ibid*.
[1065] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1986–88.
[1066] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1989–91
[1067] *Mining Mirror*, 29 September 1989.
[1068] *Ibid.*, 26 May, 30 June and 29 September 1989. In Papua New Guinea, a conflict between militant land-owners and the Bougainville Copper Company forced the Company to declare a force-majeure on concentrates shipments. The mine was closed for a while in May 1989.

copper mining industry resulted in major supply disruptions and high copper price fluctuations from K28, 736.84 to K32, 175.44 per ton between May and September 1989.[1069]

The price of cobalt improved in 1985 because of the upward consumption of the metal which increased by 14% between 1983 and 1984 from about 15.4 million pounds to 17.9 million pounds, due to a continued demand for steel and super-alloys in the developed countries.[1070] Between 1986 and 1991, consumption, demand and prices of cobalt were mainly spurred by a shortage in the cobalt supply, when Zambia and Zaire, the main producers, stopped selling their metal on the open market, coupled with the latter's low supply due to constraints in production.[1071] A shortage in the cobalt supply also caused a minor panic among buyers who began stockpiling, causing the average annual price of the metal to double (see Table 5.8). However, the much anticipated metal boom, following the outbreak of the Gulf War between USA and Iraq, did not occur. The Gulf War disrupted supplies of crude oil from the Middle East, and increased the price of petroleum products.[1072] As a result of low supplies of petroleum, production, supply and general industrial activity slackened in the developed world, with a significant impact on the demand and price of metals.[1073] Price increases between 1984 and 1991 offset increased costs of sales. Table 5.8 shows the overall profitability of the ZCCM mines from 1982 to 1991.

[1069] *Mining Mirror*, 26 May, 30 June and 29 September 1989.
[1070] W.S. Kirk, 'Cobalt', *Bureau of Mines Minerals Yearbook metals and minerals 1984*, *Vol. 1 – Cobalt* (Washington: US Bureau of Mines, 1984), 271. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?id=EcoNatRes.MinYB1984v1. Accessed on 15 September 2017.
[1071] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1986–91; Kirk, 'Cobalt', *Minerals Yearbook 1984*, 271.
[1072] ZCCM 11.1.1F, *ZCCM Limited: 1991 Annual Report* (Lusaka: ZCCM Head Office, 1991), 4.
[1073] *Ibid.*, 13.

Table 5.8: Profitability of ZCCM mines between 1982 and 1991.[1074]

Year	Finished Production (Metric Tons)		Price per Ton		Value of Sales	Cost of Sales	Borrowing Interest	Total Tax	Net Profit (Loss)
	Copper	Cobalt	Copper (K)	Cobalt (K)	Millions (K)	Millions (K)	Millions (K)	Millions (K)	Millions (K)
1982	591,853	2,686	1,522	24,904	977.1	1,082.7	69.1	6.1	(173.6)
1983	575,518	2,212	1,475	14,656	973.1	1,035.8	47.1	4.5	(127.5)
1984	551,021	2,748	2,170	18,864	1,426.0	1,171.2	113.0	95.9	(1.0)
1985	525,811	3,654	2,796	45,389	1,862.0	1,484.0	146.7	144.3	0.7
1986	463,354	4,565	5,841	90,719	4,097.0	2,911.0	318.0	358.0	(56.0)
1987	470,982	4,160	11,799	80,858	6,976.0	5,628.0	793.0	773.0	(562.0)
1988	473,084	4,694	16,525	108,671	11,882.0	9,703.0	671.0	272.0	372.0
1989	415,645	4,871	25,721	130,903	18,135.0	14,114.0	758.0	891.0	1,832.0
1990	448,468	4,447	45,475	328,674	32,878.0	22,430.0	1,819.0	2,970.0	2,586.0
1991	421,590	4,674	95,723	657,210	65,559.0	47,020.0	4,544.0	6,036.0	5,189.0

Note: Value of sales refers to total revenue from all the metals including lead and zinc from Broken Hill/Kabwe mine. Net profit/(Loss) was arrived at after subtracting Cost of Sales; adding share of associated/subsidiary company profit, interest paid or charged on borrowings, exchange rate loss/gain based on the prevailing major currencies (which is not indicated in this table, but are indicated in the Company's annual reports), and taxes (Total Tax). There are no figures for individual mines except for the total for all ZCCM-owned mines.

Tables 5.7 and 5.8 indicate that between 1982 and 1991, Nkana Division produced 1,387,401 metric tons of copper and 18,485 tons of cobalt, representing about 28.1% and 47.8% of the ZCCM's total production of these two metals, respectively. In terms of finished copper production, Nkana Division ranked third after Nchanga and Mufulira divisions, and Nchanga alone produced almost half of the ZCCM's total output.[1075] But, Nkana Division produced almost half of the ZCCM's cobalt output. Mainly because of the factors discussed in the foregoing, copper output from the Copperbelt mines declined between 1983 and 1991, and the ZCCM was surpassed by producers from the USA, the Soviet Union, Chile and Canada.[1076]

The financial performance of Nkana in particular and the ZCCM in general reflected the effects of various factors including price of metals, cost of sales, devaluation of the kwacha, loan payments and tax applicable to the Company. Table 5.8 indicates that in the 1982 and 1983 financial-years the ZCCM incurred a loss of K173.6 million and K127.5 million, respectively, mainly because of the increase in the cost of sales, which were beyond the total value of sales. The increase in production and transport costs against a background of volatile metal prices on the LME and COMEX reduced revenue from copper sales. Between 1984 and 1986, the

[1074] Table 5.8, drawn from ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91.
[1075] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91.
[1076] *Bureau of Mines Minerals Yearbooks – Metals and Minerals – Copper,* 1982–91. https://minerals.usgs.gov/minerals/pubs/usbmmyb.html. Accessed on 25 September 17; ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 18.

difference between the annual value of sales and the cost of sales indicate that Nkana and the Copperbelt mines' financial results were better than in the previous years, before falling away again in 1987. As discussed above, the increase in copper and cobalt kwacha-denominated prices offset increased production and transport costs in this period. Generally, Nkana and the other ZCCM mines made a substantial gross profit (see Table 5.8). But, the net annual losses resulted mainly from heavy borrowing-interests and taxes. Equity Levy and MET raised 'the Government's share of the profit to about 87% of the total'.[1077] Between 1988 and 1991, however, Nkana Division and the other ZCCM mines realised healthy net profits because they were exempted from the Equity Levy and MET.[1078] It can be seen that the fluctuation of metal prices against a background of rising costs, coupled with an increase in loan interests and tax, were responsible for the decline in ZCCM's earnings. Table 5.9 compares the distribution of capital, revenue from tax and dividends of ZCCM.

Table 5.9: Breakdown of Capital, Tax Revenue on and Dividends of ZCCM all in Millions of Kwacha, 1982-1991.[1079]

Year	**Capital Expenditure in millions of Kwacha**					**Capital Employed**	**Taxation**			**Dividends**	
	ZCCM Total	**All Mines**	**Nkana Mine**	**Diverted**	**Losses**	**Total**	**Export Tax**	**Income Tax**	**Equity Levy**	**"A"**	**"B"**
1982	273.2	246.0	85.0	27.2	-	2,117.5	1.7		4.4	-	-
1983	252.1	243.4	55.1	8.7	82.6	2,291.2	0.8		3.7	-	-
1984	214.8	204.6	0.0	10.2	83.2	2,538.4	91.1	0.6	4.2	-	-
1985	291.0	263.0	0.0	28.0	67.4	4,960.8	140.6	3.3	0.4	-	-
1986	1,229.0	1,123.0	0.0	106.0	599.0	17,175.0	357.0	1.0	-	-	-
1987	1,097.0	789.0	27.0	308.0	219.0	25,614.0	760.0	13.0	-	-	-
1988	870.0	754.0	71.0	116.0	52.0	19,976.0	255.0	17.0	-	-	-
1989	1,191.0	940.0	187.0	251.0	103.0	23,176.0	-	891.0	-	80.8	53.2
1990	3,090.0	2,763.0	387.0	327.0	225.0	39,060.0	-	2,970.0	-	80.8	53.2
1991	6,357.0	1,979.0	838.0	709.0	385.0	122,667.0	-	2,088.0	-	80.8	53.2

Note: Capital Expenditure was partly charged on profits and through short-term loans between 1982 and 1991. It was also obtained from retained earnings which averaged about 25% of total capital expenses between 1982 and 1988, and increased to 40% between 1989 and 1991. This Expenditure was mainly utilised on big or capital projects. Capital Employed includes capital expenditure, capital on investments, retained proceeds, loans obtained, overdrafts, subordinated borrowings, and shareholders' funds. No new dividends were declared between 1982 and 1988 because of the losses incurred. However, shareholders were still paid deferred dividends which are not indicated in the Company's reports.

The decline in earnings was aggravated by the lack of adequate capital expenditure at Nkana, especially between 1984 and 1986, when the ZCCM did not initiate any capital project at the mine. In particular, Nkana and the other Copperbelt mines bore the brunt of the foreign exchange losses following the devaluation of the kwacha, heavy loan interests, and heavy

[1077] Sardanis, *Zambia: The First 50 Years*, 81.

[1078] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1988–91.

[1079] Table 5.9, compiled from ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91; ZCCM 12.3.3B, *ZCCM: Export Rehabilitation and Diversification Project-Financial Assessment Proposal*, 5.

MET, Income Tax and Equity Levy, which corroded into net profits, dividends and retained earnings (see Tables 5.8 and 5.9). As a result, the ZCCM failed to declare a dividend before 1989 when the taxes were relaxed.

The decline in capital expenditure was also related to the diversion of funds into other Company projects, rather than mining. In the face of volatile metal prices and limited revenue from the mines, the government and the ZCCM decided in 1985 to strengthen the Company's diversification ventures in industrial enterprise, agriculture, tourism, construction and manufacturing.[1080] As a result, a local broad based company named Mulungushi Investments Limited (MIL) was formed in 1986, as a holding company of the ZCCM's industrial and commercial enterprises.[1081] The purpose of this diversification plan was to make the ZCCM's divisions more autonomous and save costs. However, the ZCCM only managed to accumulate a meagre profit of about K273.3 million after spending over K1,891.1 million on subsidiary companies between 1982 and 1991.[1082]

The ZCCM's financial problems impacted on the national economy, as mining was and still is the mainstay of the Zambian economy. Throughout the 1970s, Nkana and the other Copperbelt mines accounted for 30% of real Gross Domestic Product (GDP) each year, and around 96% of the foreign exchange earnings.[1083] But by the early 1980s, the mines' contribution to annual GDP fell by over half to 13.8% despite still accounting for 92.2% of foreign exchange earnings.[1084] As shown by Table 5.8, reduced revenue from mining in 1986 coincided with high interest rates on foreign payments, which 'created a crisis that entailed a backlog of arrears on payments abroad and substantial foreign borrowing'.[1085] Zambia's economic situation continued to worsen, obliging it to seek more assistance from the IMF, the WB and other lending institutions. A backlog of arrears meant that Zambia had to agree to tough economic measures before financial help was made available by the IMF and the WB. The introduction of Structural Adjustment Programmes included 'cuts in civil service, relinquishing control of

[1080] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 4.
[1081] ZCCM 11.1.1F, *ZCCM Limited: 1986 Annual Report*, 6–7. MIL comprised the following subsidiaries; Nchanga Farms Limited, Ndola Lime Company, Mpelembe Properties Limited, Mpelembe Drilling Company, Circuit Sawmilling and Joinery Limited, Circuit Engineering and Tooling Limited, Circuit Construction Limited, and Circuit Safari Limited.
[1082] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91.
[1083] ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 3.
[1084] ZCCM 12.1.9C, *Zambia Mining Yearbook 1985*, 20.
[1085] T.O. Glover, 'The Mineral Industry of Zambia', *Bureau of Mines Minerals Yearbook Area Reports: International 1986, Vol. 3 – Zambia* (Washington: US Bureau of Mines, 1986), 965. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1986v3. Accessed on 13 September 2017.

interest rates, elimination of price subsidies, and bolstering of agriculture prices to the producers'.[1086]

In mid-1986, food riots started at Nkana Division and spread to the other Copperbelt mines and compounds because of a 120% rise in the price of one of the staple foods, mealie-meal.[1087] The riots were one of the many symptoms of public resentment toward the government. Repeated industrial unrest and food riots in the mine-compounds and in the public sector followed in 1987 and 1988, and by 1989 the UNIP Government was extremely unpopular.[1088] The leadership of MUZ and Zambia Congress of Trade Unions (ZCTU) took advantage of UNIP unpopularity and in May 1990 adopted 'a resolution to support and champion the return of multi-party politics'.[1089] Subsequently, political pressure from the donor community, IFIs and the public forced the UNIP Government to reintroduce democracy, and elections were scheduled for 1991. The labour movement formed the Movement for Multiparty Democracy (MMD) led by ZCTU Chairman, Frederick Chiluba.[1090]

In Kitwe, the MMD launched vigorous campaigns at Nkana's mine compounds of Wusikili, Chamboli and Mindola.[1091] Mainly because of being central to the Copperbelt, Nkana-Kitwe and their compounds became a political base for the MMD.[1092] Additionally, the headquarters of MUZ, which supported the MMD, was also based in Nkana-Kitwe's Wusikili mine compound. The MMD, which promised to liberalise the economy and privatise state enterprises, won the 1991 election with a landslide against UNIP, especially on the Copperbelt.[1093] In line with their Party manifesto, the MMD privatised the ZCCM in order to attract foreign investment in the mining sector. Even so, privatisation of the mining sector was delayed until 1997, partly for political and personal reasons among the senior members of the MMD.[1094] From 1997 to the present, Nkana and the Copperbelt mines remain privatised.

[1086] T.O. Glover, 'The Mineral Industry of Zambia', *Bureau of Mines Minerals yearbook area reports: International 1987, vol. 3 – Zambia* (Washington: US Bureau of Mines, 1987), 977. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatResidx?type=article&did=EcoNatRes.MinYB1987v3.TGlover6&id=EcoNatRes.MinYB1987v3&isize=M. Accessed on 25 September 2017.
[1087] Glover, 'The Mineral Industry of Zambia', *Bureau of Mines Minerals Yearbook Area Reports: International 1986*, 965.
[1088] Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime', 12.
[1089] MUZ HQ, *A Historical Analysis of MUZ*, 11.
[1090] Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime', 12.
[1091] J. Chayinda interviewed by author, Kitwe, 10 October 2017; J. Chiwize interviewed by author, Kitwe, 13 October 2017; F. Mutale interviewed by author, Kitwe, 19 October 2017.
[1092] Mulenga interviewed by author, 16 September 2017; Muchimba interviewed by author, 28 October 2017.
[1093] Lungu, 'The Politics of Reforming Zambia's Mining Tax Regime', 12.
[1094] Burawoy, 'The Colour of Class Revisited', 976.

5.4 Conclusion

This chapter demonstrated that Nkana was one of the most important divisions to ZCCM. The Division's large metallurgical facilities were central to the productive capacity of ZCCM as a whole. Despite Nkana ranking in third place after Nchanga and Mufulira in terms of copper production, the former was the largest producer of cobalt. Between 1982 and 1991, Nkana cooperated in implementing ZCCM's policies. In line with the policy of Zambianisation the Division reduced the number of expatriate workers, but could not Zambianise all managerial, supervisory and technical positions due to shortages of local workers suitable to take up these positions. Between 1983 and 1990, the number of workers at Nkana increased from 11,518 to 14,127 mainly because of labour redeployed from other divisions.[1095] This redeployment exercise was in line with cost-saving measures under ZCCM's new FYPIP, dictated by the IMF and WB, designed to increase the Company's productivity and overall profitability.

Table 5.7 shows that ore reserves and finished production at Nkana were stable. However, production did not increase substantially due to the effect of deep level mining and the resultant dilution, coupled with low labour productivity and poor availability of spare parts and consumables to maintain production. Similarly, ZCCM's 'aim of the [FY]PIP to stabilise production at a level of 540,000 tons per annum was not achieved as production between [1986 and 1991] averaged only [448,854 tons] per annum'.[1096] The FYPIP 'was [largely] undermined by the Government's inability to provide ZCCM with sufficient foreign exchange and by increasing the taxation of the company through a mineral export tax [which corroded into the Company's earnings and capital]'.[1097] The cost-saving measures failed for two main reasons. Diversification of capital into non-mining activities deprived Nkana and the other Copperbelt mines of the much needed capital expenditure. Cost of sales escalated due to increased production and transport costs owing to the effects of the global recession and the resultant inflation, depreciation of the kwacha against the dollar and pound, and increased cost of stores to maintain production. This, coupled with volatile copper and cobalt prices between 1982 and 1984 on the LME and COMEX reduced ZCCM's earnings. The dramatic increase in metal prices between 1985 and 1989 increased the Company's earnings, though the high MET corroded net profits. The financial liquidity of Nkana and other Copperbelt mines, therefore, improved after 1989 when MET was abolished.

[1095] ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1983–90.
[1096] Craig, 'State Enterprise and Privatisation in Zambia 1968 – 1998', 95.
[1097] *Ibid*.

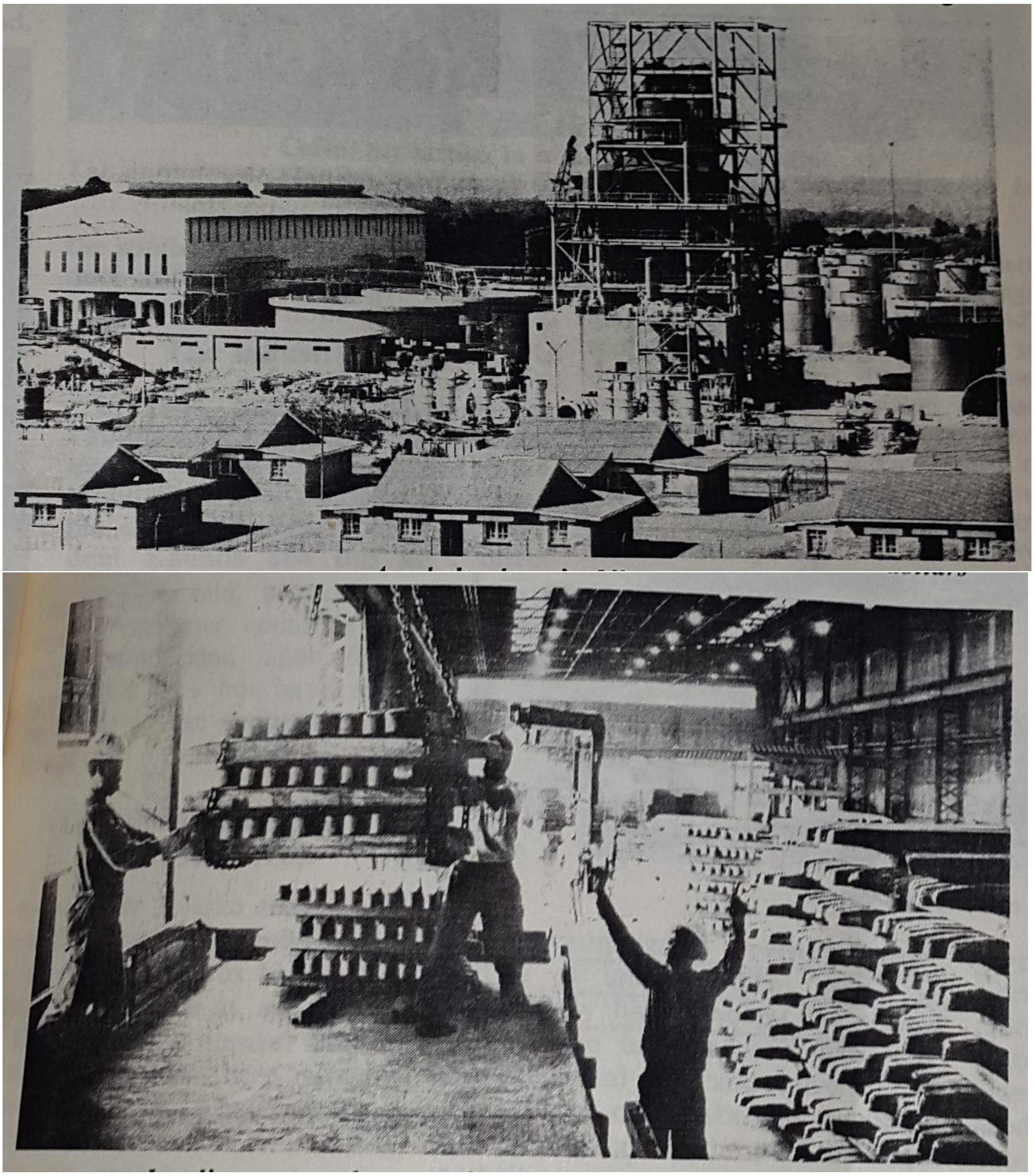


Figure 5.2: Top picture shows Nkana's new Roast Leach Electro-win Cobalt Plant in June 1984, with a capacity of 2,400 metric tons of cobalt metal per year. The bottom photograph shows workers loading copper bars at Nkana Division. Source: Both pictures taken from *The Courier*, No. 85 (1984), 20–1.

Chapter Six: Conclusion

This thesis explored Rhokana/Nkana's history from 1928 to 1991. The examination was centred on three major themes in the history of this Company; corporate structure, labour relations and profitability. Whereas previous studies have looked at these themes individually, this study combined them in a single narrative over a long period, in order to offer a comprehensive understanding. The thesis utilised primary material from four Zambian archives, interviews and the historiographical body of literature associated with the economic and social history of the copper mining industry in Zambia. It has to be acknowledged that the major weakness of the archival sources used, is that, they do not provide detailed information on the profitability of individual Copperbelt mines for the years after 1970. As mentioned in Chapter One, this is because surviving primary sources focus on the performance of the parent companies after nationalisation. Nonetheless, the overall trend can still be seen from the performance of the parent companies, as demonstrated in Chapters Four and Five.

The study has sought to advance as detailed as possible an understanding of the corporate profitability of an individual mine. In this manner, it has built on Phillips's pioneering analysis of big business and the Roan Antelope mine owned by Rhodesian Selection Trust (RST).[1098] By contrast to studies by Berger, Daniel, Mhone, Parpart and Perrings, emphasising the impact of labour on mining fortunes, this thesis has argued that corporate profitability was also significantly affected by national, regional and global issues. As discussed for each period, Rhokana's profitability between 1928 and 1991 was affected by the quantity and quality of ores, the utilisation of fuel, power, machinery and technology, and by modes of transport. Also important were changing prices of copper and tax regimes.

The formation of the Rhokana Corporation and development of its Nkana mine in 1931 were the result of the convergence of multinational interest and capital from South Africa, Britain and the United States of America (USA). However, this coincided with the acceleration of the Great Depression, which threatened the rapid development of Nkana mine and the overall profitability of the Rhokana Corporation. Because of falling commodity prices, copper production initially fell, although as it turned out the Great Depression proved to be only a transitory setback for the Copperbelt mines. A range of factors from interlocking corporate strategy, through to the rationalisation of labour supplies, to the quality of ore milled, all

[1098] Phillips, 'Roan Antelope'.

enhanced the financial performance of Rhokana and the other Copperbelt companies between 1932 and 1939.

At the climax of the Great Depression between 1932 and 1934, the price of copper on the London Metal Exchange (LME) fell from an average of £36.4 to £33.7 per long ton (see Table 2.2, p.46). As discussed in Chapter Two, Copper Exporters Inc., a cartel to which Rhokana and the Copperbelt companies all belonged, encouraged its members to cut back on production in order to reduce world stocks and help to improve the price. But this measure failed, as the price of copper only averaged £35.6 per ton, and the Cartel collapsed in 1932. Between 1932 and 1935, production and transport costs to buyers in Europe and America per long ton of copper averaged £24.7 for Rhokana, compared to £27.7 for the mines controlled by the RST, and ranged from £40 to £45 for the mines in USA (see Table 2.2, p.46).[1099] The low production and transport costs for Rhokana were greatly enhanced by cheaper coal supplies from Wankie and special railway rates on the Rhodesia Railways; relative cheapness of African labour, and the quality of the ore treated. These three factors were the main reasons behind the profitability of Rhokana and the Copperbelt mines during the Great Depression. For all of these reasons, Rhokana was a low-cost producer. At the same time, the copper market improved because of a boom in the automotive industry and the rearmament in Europe.

Even as capital's strength grew between 1932 and 1939 (see Table 2.3, p.47), not least because of development at the Nkana mine and the reopening of Nchanga, so African labour flexed its muscles. African wages reduced between 1932 and 1934 because of slowing mining development following the economic downturn, but thereafter, wages increased (see Table 2.1, p.44). This was because of a major strike in 1935 by African workers demanding better conditions. Production of copper at Nkana increased despite restrictions on output (see Table 2.3, p.47). Between 1935 and 1939, the value of sales totalled £19,694,696 compared with the cost of sales totalling £11,069,191. From a gross profit of £8,625,505, provision for tax and other expenses amounted to about £1,947,719. Dividends paid totalled £5,464,751, leaving unappropriated or net profits of £1,213,035, which were reinvested. These figures show that Rhokana was making significant profit despite the global economic recession.

After the Great Depression, Rhokana and the Copperbelt companies remained competitive vis-à-vis their established counterparts in North America because the former continued to be low-

1099 *The Times*, 9 July 1931; Parpart, *Labour and Capital on the African Copperbelt*, 21; Phillips, 'Roan Antelope', 201.

cost producers. Nkana and the other Copperbelt mines supplied the bulk of Britain's copper needs following the outbreak of the Second World War in 1939. Due to a high demand for minerals to sustain war efforts, there was an increased partnership between the British Government and the mining companies in the colonies. The latter functioned as a direct appendage of the former's war economy between 1940 and 1945. As argued by Dumett, the War not only gave impetus to mineral exploitation but also, for the first time since the First World War, it extended government control over the mining sector.[1100] While all the Copperbelt mines contributed greatly to the war economy, this study has contended that Nkana was particularly strategic for Britain's war effort because it supplied both copper and cobalt to the Ministry of Supply. Cobalt was particularly important in the making of aeroplane engines. Nkana, though, sometimes failed to meet the target of 9,500 short tons of copper per month requested by the Ministry of Supply. Largely, this was because of shortages of plant materials and equipment to replace worn out ones due to closed capital markets and shipping delays emanating from hostile enemy action, coupled with inadequate supplies of fuel. These problems raised the cost of producing copper and transporting it to England from about £25 per ton during the Great Depression to almost £31 in this period.

In line with Berger, Dumett and Phillips, this study observed that the increase in production costs was partly due to improvement in wages. African wages per man per shift increased from 1.04s in 1940 to 1.47s by 1945 (see Table 2.6, p.58). The increase was partly due to a strike by African workers in 1940, demanding, among other things, wage increments. A critical shortage of labour also increased African wages during the war. European workers took advantage of this and did not only demand a wage increase during a strike in 1940, but also secured a closed shop. Chapter Two noted that the shortage of labour obliged Rhokana to turn to women to do certain surface jobs. Contrary to the argument made by Chauncey, Parpart, and Dandule that women only played the reproductive role of stabilising mine labour on the Copperbelt, this study found that the war effort brought women at Nkana to wage labour.[1101]

Still, it was cheaper for Nkana to utilise a higher-labour than capital-intensive mode of production due to lack of capital, inadequate machinery and spare parts throughout the war. Rhokana's African labour force increased from 7,784 in 1940 to 9,490 in 1944 (see Table 2.6,

[1100] Dumett, 'Africa's Strategic Minerals during the Second World War', 381.
[1101] Chauncey, 'The Locus of Reproduction: Women's Labour in the Zambian Copperbelt, 1927-1953', 135–64; Parpart, 'The Household and the Mine Shaft: Gender and Class Struggles on the Zambian Copperbelt, 1926-1964', 36–56; Dandule, 'Women and Mineworkers' Struggles on the Zambian Copperbelt, 1926–1964'.

p.58). By comparison, capital expenditure on major projects fell from £474,848 to £84,538. As discussed in Chapter Two, Dumett, Phillips and Butler have attributed reduction in capital for Rhokana and the other Copperbelt companies to financial measures introduced by the British and Northern Rhodesian governments during the war. These were the fixed price of copper on the LME and double taxation in the form of Income Tax, Excess Profits Tax and national defence contribution. This study observed that the fixed price of copper at £62 per ton was double the cost of sales per ton which averaged almost £31 for Rhokana during the war. This is further confirmed from the value of sales totalling £33,685,643, against the total cost of sales of £20,278,366 between 1940 and 1945. But, and as noticed by the above mentioned scholars, provision for double taxation corroded into the Corporation's profits and dividends. However, since total dividends paid by Rhokana throughout the war averaged 25%, it served to keep the major shareholders; Rhodesian Anglo American (RAA), Rio Tinto, Newmont and Kennecott, satisfied. Britain was able to save during the war in terms of foreign exchange, as well as benefit from taxes paid (see Chapter Two). For its part, Rhokana relied on loans and debentures for capital projects due to inadequate revenue from metal sales. In 1940, the value of loans and debentures for the Corporation stood at £788,294, but by the end of the war in 1945 the estimated liability in this regard almost doubled to £1,475,544.[1102] Overall, the Second World War weakened the financial position of the Rhokana Corporation. But this was not the only problem.

After the war, Nkana and the other Copperbelt mines were exhausted by wear and tear. Rehabilitation and developmental work at Nkana increased capital expenditure and the demand for labour. As discussed in Chapter Two, there was a corresponding increase in operating costs. However, four major factors combined and gave a boost to Rhokana and the other Copperbelt mines. These were post-war reconstruction in Europe, boom in the electrical and automotive industry in the USA, disruption of world production by strikes in America, and the 44% devaluation of the pound sterling against the US dollar. The devaluation of the pound was by far the most important development, since the price paid for copper from the Copperbelt by the British Government was not only based on the dollar price but also increased it by the same percentage. These combined factors almost doubled the annual average price of copper per ton on the LME from £62 between 1940 and 1945 to about £118.7 between 1946 and 1949. This

[1102] ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Report and Accounts, 20 November 1940* (London: Rhokana Corporation Ltd, 1940), 4; ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts for the Year ended 30th June 1945*, 4.

copper price more than tripled beyond the average operating cost of £33 per ton, and offset the increase in production and transport costs after the war. This study supports Sklar and Phillips's argument that the price level determined the overall profitability of mining.

The increase in the copper price coupled with double taxation relief in 1947 enhanced profitability of the Copperbelt mines. 1949 marked a milestone for both the financial history of Rhokana and the other Copperbelt companies and the history of the dual labour structure. That year, the African Mineworkers Union (AMU) was formed on the Copperbelt. But this was long after the Northern Rhodesia (European) Mineworkers' Union (NRMWU) had been founded, secured better conditions of service and a closed shop which reserved highly skilled jobs for its members. Workers at Nkana were not only the most militant on the Copperbelt, but also played a significant role in the formation of the European and African trade unions. As observed by Ferguson and noted in this thesis, Nkana-Kitwe was the 'hub of the Copperbelt, a bustling industrial city' with the largest multiracial population.[1103] Most people were attracted not only by employment opportunities but also by this town's centrality on the Copperbelt. Initially, Rhokana and the other companies were not bothered with the monopoly status of European workers given that they relied more on cheap African labour. But it was not to be taken for granted now that the legal basis of trade unions was placed on a colour-blind footing. The formation of the AMU transformed industrial relations at Nkana and in the other Copperbelt mines. Like the NRMWU, AMU fought for better wages and other conditions of service for its members. This increased labour costs in particular and operating expenses in general. However, the financial performance of Rhokana and the other Copperbelt companies was further enhanced by the outbreak of the Korean War in 1950.

During the Korean War, from 1950 to 1953, demand was stimulated by the strategic stockpiling of copper by the USA. Unlike the British Government, which fixed the price of copper during the Second World War, the USA was willing to purchase copper at higher prices on the market. The cost of production increased to about £57 due to shortages of coal from Wankie in Southern Rhodesia, forcing Rhokana to look for alternative sources. Production costs also increased because of the dramatic increase in labour costs. As observed by Mhone and Berger, and ascertained in Chapter Two, between 1950 and 1953 the AMU staged a series of strikes against

[1103] Ferguson, *Expectations of Modernity*, 18. See also T. Howard, 'The Copperbelt's 100 African Tribes', *Horizon*, 3, 11 (1961), 24–9; T. Scannell, 'Secondary Industry on the Copperbelt', *Horizon*, 3, 11 (1961), 10–14; RST, 'Cosmopolitan Copperbelt', *Horizon*, 5, 3 (1963), 12–15. By 1963, Europeans from more than 40 countries and Africans of more than 100 tribes made up the Copperbelt's population, most of them staying and working in Nkana-Kitwe.

low wages. These strikes forced Rhokana and the other companies to increase African wages by over 77% for surface and 63% for underground workers in this period. Accordingly, average African wages per man per shift at Nkana increased from about 1.69s in 1946 to 3.23s by 1952. The improved price of copper on the market, at an average of £229 per ton throughout the Korean War, almost quadrupled beyond the above stated cost of producing copper.

After nearly thirty years, large-scale mining in Northern Rhodesia was beginning to pay handsomely. Even more, the improved price level increased the value of sales, which almost doubled beyond the operating costs. Besides copper, Nkana sold cobalt to the USA and Europe. Investment in other properties on the Copperbelt also began to pay off for Rhokana. Profits from Mufulira and Nchanga contributed about one-third of the Corporation's total net profit. Annual dividends for the Corporation improved substantially from an average of £699,183.7 during the Second World War to almost £4,812,545 during the Korean War. Between 1950 and 1953, total tax paid by Rhokana to the BSA Company, the Northern Rhodesian and British governments was over £12,065,542.[1104]

For the first time in the history of Nkana and the Copperbelt mines since the end of the Great Depression, there was expansion and diversification of the mining industry, mainly due to the accumulation of capital and profit. Rhokana contributed half of its profits to open new mines, Bancroft and Kansanshi, in 1953. Similarly, the profits from Roan Antelope and Mufulira were partly invested in Baluba, Chambishi and Chibuluma. The aim was to double production to maximise profits following the improved price level. Consequently, Rhokana would become the most important commercial unit in the new Federation of Rhodesia and Nyasaland.

The formation of the Federation of Rhodesia and Nyasaland in September 1953 was one of the most important political developments in British colonial Africa. The idea of amalgamating the three Central African states, however, dated back to the 1930s. Then, Rhokana and the other Copperbelt companies rejected amalgamation, citing differences in the labour policies of the states (see Chapter Three). But when the idea of a Federation was revived in the late 1940s and early 1950s, management at Nkana and in the other mines supported it. Navin, Cohen and Money have attributed this shift in attitude to changes in leadership and management styles in the Copperbelt mines. Accordingly, this study noticed that the new General Manager of Rhokana, O.B. Bennett, was a liberal thinker just like H.F. Oppenheimer, who became chairman of Anglo American Corporation (AAC) in Southern Africa. Like their counterparts,

[1104] ZCCM 12.7.2F, *Rhokana Corporation Limited Annual Reports*, 1950–3.

these two leaders felt that their mines would benefit from the idea of partnership among races. Other compelling economic factors included the expanding influence of Southern Rhodesia as the main source of coal and the link to the southern railway network. For these reasons, Rhokana/AAC and RST funded the United Central Africa Association, an organisation supporting Federation. After the Federation was formed Rhokana also shifted its head offices from Nkana-Kitwe in Northern Rhodesia to Salisbury (Southern Rhodesia) the Federal capital, where its parent company AAC was based.

As detailed in Chapter Three, Rhokana and the Copperbelt mines were the major sources of Federal and territorial tax revenues between 1954 and 1963. Both an investment and mining firm, Rhokana was a large organisation in the Federation, and making additional profit indicating it provided more tax revenue. In this period, the increase in production costs and the fluctuating price of copper on the LME influenced the overall profitability of Rhokana. Throughout the Federal period, the cost of producing and transporting a long ton of copper to buyers in Europe and USA averaged £160. By comparison, the annual price of copper per ton averaged £264.1 between 1954 and 1959, and was reduced to £236 between 1960 and 1963 (see Table 3.3, p.94). The Rhokana Corporation was now an intermediate-cost producer for a number of reasons. In addition to an increase in labour and transport costs, production costs increased due to power and fuel shortages and technical problems associated with deeper level mining such as dilution of ore, flooding and the decline in the grade of ore milled. In the same period, the price of copper was affected by a combination of factors such as strikes, industrial unrest, international tension, political disturbances and government measures (see Chapter Three).

Since the copper price was unstable, Rhokana and the Copperbelt companies were kept afloat by moderating production costs. As observed by Perrings, Mhone, Berger, Parpart and Phimister, and advanced in Chapter Three, the Copperbelt mines opted for rationalisation of labour and capital. Thus, Rhokana supported African Advancement on the Copperbelt in order to save labour costs. The historical literature praised RST for taking centre stage in pursuing the African Advancement policy with the NRMWU. However, this thesis posits that behind the scenes Rhokana Corporation and the other RAA-owned mines were preparing a workable solution, and hence were the first to sign an agreement with the NRMWU (see Chapter Three). Consequently, the final agreement contained substantially resolutions from the RAA's Scheme. Between 1954 and 1957, labour and capital expenditure for the Corporation increased because of its investment in new projects, mines and machinery (see Chapter Three). Between 1958 and 1963, mechanisation, stabilisation of labour and African Advancement gave Rhokana the rationale to reduce black labour and capital in order to save costs. Mechanisation and stabilisation of labour were also responsible for the generally improved production at Nkana between 1956 and 1963. Even so, Nkana stops being largest producer on the Copperbelt in the 1960s (see Chapter Three, pp. 94, 110). To cushion fuel shortages, Rhokana and the other Copperbelt companies also invested in hydro-electric power (see section 3.2.4, pp.86–9). Besides, major copper producers in Africa and America voluntarily tried to adjust output to the requirements of consumers to prevent wide fluctuations in price.

Because of these factors, the total cost of sales for the Corporation were below the total value of sales throughout the Federal period. As detailed in Chapter Three, Rhokana earned record profits, and contributed about 20% of the total tax paid to the Northern Rhodesian and Federal governments. Additionally, Rhokana contributed almost 20.2% of the total BSA Company royalties between 1954 and 1963. But as explained in Chapter Three, the structure of the Federal economic policy failed to hold a proper balance between the economic interests of its territories, partly contributing to the collapse of the Federation. Also, the rise of African nationalism undermined the future of the Federation after 1959. The Federal Government would soon cease to exist. As explained by Butler, RST was quick to identify with emerging nationalist politicians in the hope of safeguarding its investment on the Copperbelt. As argued by Cohen, and also advanced in Chapter Three, Rhokana and the AAC were more conservative, until the collapse of the Federation became a reality. One indication that Rhokana and AAC did not see decolonisation was that in February 1962 Bennett resigned as General Manager of the former and took a political appointment as ambassador for the Federation of Rhodesia and Nyasaland in the USA.[1105] Rhokana only relocated its head offices to Northern Rhodesia after the Federation was dissolved in 1963.

As explained in Chapter Three, the main economic problem at independence in 1964 was Zambia's reliance on external forces for its internal development. The mining industry was not only controlled by private companies, but also depended on foreign capital and markets. Kenneth Kaunda's Government was, thus, cautious to antagonize foreign investment in the early years of independence. But it was easier for the government to claim the mineral rights from the BSA Company. The problem, though, was that the mineral royalty was not only increased but also paid on the BSA Company standard, based on the price of copper on the

[1105] ZCCM 12.7.2F, *Annual Report: Rhokana Corporation Limited, 30 June 1962*, 13.

LME. Attention was also given to labour issues in the mining sector. As discussed in Chapters One and Three, the government had three tasks in terms of labour organisation, which, according to Burawoy, Berger, Bates and Daniel, it struggled to promote.

Firstly, the Zambianisation of labour was meant to replace expatriates and foreign Africans by locals in managerial, supervisory and technical positions. At Nkana, and in the other mines, Zambianisation was slowed by two main factors. As argued by Burawoy and also noted in Chapter Three, Zambianisation was undermined by the companies' practice whereby an expatriate displaced by a Zambian was employed in a newly created position within the department and earned more than his local counterpart. Zambianisation was also slowed by inadequate skilled local workers in the industry to replace expatriates. Even so, this study observed that Rhokana and the Copperbelt mines were successful in replacing foreign Africans since they were frozen in their positions.

Secondly, the government failed to mobilise the mineworkers to support national development. The African mineworkers were not concerned with national development but with improvement in the conditions of service notably wages. Bates observed that there was discrepancy between the MUZ headquarters and its local branches with the former disseminating government policy to the latter but the branches would not explain policy matters to the workers. The third task of expanding mineral output while indigenising and Zambianising the labour force with average wage increases proved difficult. African workers got agitated with the fact that political independence did not bring about equal wages with their European counterparts. They continued to fight through work stoppages and strikes forcing the government to accept a 22% increase for African wages in 1966 (see Chapter Three). But when the government realised that average wages in Zambia were in 1967 85% more than wages in Tanzania and 45% more than those in Kenya, a wage-freeze was introduced in 1969.[1106]

The new tax regime, indigenisation and Zambianisation of labour, and the new employment conditions had a significant effect on Rhokana's corporate profitability between 1964 and 1969. In this period, both capital and labour increased. But as examined in Chapter Three, labour productivity declined because of a breakdown in industrial discipline characterised by wildcat strikes, work stoppages and the absenteeism of African workers. The decline in the grade of ore hoisted and ore milled at Nkana was the other major factor responsible for the relative decline in labour productivity and general production. Operating costs increased on

[1106] Berger, *Labour, Race and Colonial Rule*, 226.

account of several factors including taxes, capital expenditure, labour costs, stores and transport expenses (see Table 3.7, p.107). Meanwhile, the copper price almost doubled between 1964 and 1969, which offset the increase in operating costs. Consequently, Rhokana realised huge net profits and paid record dividends in 1968 and 1969 despite the increase in taxes (see Table 3.8, p.109). The Zambian Government was angered that Rhokana and the Copperbelt companies paid and externalised dividends of up to 80% without meaningful investment in the sector. Therefore, the government decided to nationalise the mining sector.

Nationalisation of the mining sector in Zambia evolved in three stages; in 1969, 1973 and 1982. In line with the new corporate structure, Rhokana lost its investments on the Copperbelt. Its name was changed to Rokana, and became a division under Nchanga Consolidated Copper Mines (1970–1981), and Zambia Consolidated Copper Mines (1982–1991). Its owners, AAC, became minority shareholders in the Zambian mining sector. Nonetheless, it is noted in chapters Four and Five that the Rokana/Nkana Mine Division remained central to the mining, refining and smelting operations of both NCCM and ZCCM, because it produced both copper and cobalt, and owned the largest mining and metallurgical facilities in the industry.

During nationalisation, Nkana's corporate policies reflected the impact, not only of nationalisation and Zambianisation of labour, but also the fiscal measures dictated by the financial lending institutions, the International Monetary Fund (IMF) and the World Bank (WB). In the same period, production was affected by the progressive decline in the quantity and quality of ores, deeper level mining and dilution of ore, inadequate capital, low equipment availability owing to insufficient spare parts, decline in labour productivity, unreliable transportation, and a shortage of consumables (see Chapters Four and Five). The financial performance of Nkana - and by extension the NCCM/ZCCM - demonstrates the impact of cost of sales, which increased tremendously against relatively high but volatile metal prices on the LME in London and Commodity Metal Exchange in New York. Also, the impact of the devaluation of the kwacha against the dollar and sterling, loan interests, and high tax affected the financial position and profitability of Rokana and its parent companies. Loan interests and high taxes corroded net profits, dividends and retained earnings. The Zambian economy was severely hit by the reduced revenue from metal sales and the resultant economic woes, such as unbalanced payments due to expensive imports, a chronic shortage of foreign exchange and inputs, budget deficits, inflationary pressures, and increased borrowing. With all these economic problems, it became difficult for the United National Independence Party to govern, hence the Party was removed from power in 1991. The Movement for Multiparty Democracy

(MMD) Government stopped supporting ZCCM and privatised Nkana and the other Copperbelt mines in 1997.

As highlighted in this study, the organisation of the Northern Rhodesian/Zambian mining sector evolved in line with trends in the national, regional and global political economy. At the time that Nkana and the other Copperbelt mines were developing, there was less government involvement. Thus, large-scale mining in Northern Rhodesia was started by private enterprise initiated by the BSA Company. During the Great Depression, Second World War, Korean Crisis, Federation and nationalisation, there was increased government intervention in operations of the mines. Clearly deducible from the thesis is that, Rhokana Corporation and its Nkana mine cooperated with stakeholders in implementing new policies, at times under difficult conditions, to safeguard their operations. This in itself, is a reflection of the business acumen of the mining corporation.

Between 1928 and 1969, the Northern Rhodesian/Zambian mining industry was dominated by two groups of companies, Rhodesian/Zambian Anglo American (RAA/ZAMANGLO) and Rhodesian/Roan Selection Trust (RST). Rhokana's relationship with these companies and their subsidiaries was mutually good. As demonstrated throughout this thesis, the Corporation belonged to the Anglo American group, together with Nchanga, Bancroft, Bwana Mkubwa and Kabwe divisions. Apart from Anglo American, other shareholders in the Corporation were Rio Tinto, Kennecott and Newmont.[1107] In this period, Rhokana performed three major functions in the two groups of companies. Firstly, it operated the Nkana mine. Secondly, until late 1950s when Nchanga was turned into an open-pit and became the second largest open-cast mine in the world, Rhokana was the main source of income for the Anglo American group on the Copperbelt. Thirdly, as an investment company, Rhokana were consulting engineers to the Copperbelt companies on behalf of AAC. Consequently, the Corporation owned shares in most of the other RAA and RST mines and service properties on the Copperbelt. Thus, Rhokana was the main link through which corporate strategy of the AAC was implemented on the Copperbelt

[1107] Newmont and Kennecott pulled put out of the Copperbelt after 1952. It is difficult to ascertain why the two companies exited the Northern Rhodesian mining sector at a time of boom and burst on the Copperbelt. Navin argued that the two firms sold out their shares in the RAA to Anglo American because they became disenchanted with slow return on their investment and, therefore, wanted to concentrate on their diversification plans. But the two firms could still have diversified into other sectors and at the same time maintained their investment on the Copperbelt, like the American Metal Company (AMC) which diversified into molybdenum production but kept its investment in RST. Probably, Kennecott and Newmont were frustrated by being minority shareholders in RAA and Rhokana (see Chapter Two). Also, the two companies may have been further frustrated by the change in management staff of the Copperbelt companies and the new leadership's support for a federation of the three Central African states. For further details, see Navin, *Copper Mining and Management*, 66-7, 288–9.

in particular and in the Northern Rhodesian/Zambian mining industry in general. RAA (1928–1964), ZAMANGLO (1964–1969) and Zambia Copper Investment (1970–1991) were shareholding companies in the Northern Rhodesian/Zambian mining sector on behalf of AAC. As a result of nationalisation after 1970, Rokana lost its investments in the Zambian mining sector, though remained important to the mining and processing operations of Roan Consolidated Mines (RCM) (formerly RST), NCCM and ZCCM.

In addition to trade links, Rhokana also benefited from the interlocking corporate organisation of Anglo American and the BSA Company in Southern Africa and Southern Rhodesia, respectively. In fact, these companies shared some of their core directors. Rhokana also cultivated sound relations with the Colonial and Federal governments between 1928 and 1964 by paying tax and identifying with the host nation. When the government requested the corporate companies to be incorporated in Northern Rhodesia in the early 1950s, Rhokana shifted its head offices from London to Kitwe. It was also a way of easing the burden of double taxation. During the Federation, Rhokana's headquarters were shifted to Salisbury. However, between 1968 and 1973 when nationalisation was initiated, the relationship between the mining companies and the Zambian Government soured. The government accused the companies of price-transferring, contractual loans, externalising huge profits/dividends and holding vast concessions, at the expense of investment in the industry (see Chapters Three and Four). Rhokana in particular was guilty of these accusations since it was the largest corporate company on the Copperbelt.

The financial performance of Rhokana and the mining sector in general between 1928 and 1991 reflected the impact of operating costs and the copper price. As indicated in the study, operating costs kept on increasing as a result of rising expenses on labour, mining, treatment and processing of ore, transport, and taxes. To maintain production costs, Nkana and the other Copperbelt mines rationalised capital, machinery and labour. The Copperbelt mines also tried to lower costs by investing in alternative sources of fuel, power and transport. Generally, Nkana and the Copperbelt mines were a cash-cow, milked without meaningful investment in exploration, capital projects or machinery. The only period after the Great Depression, Rhokana invested in capital projects was in the 1950s and early 1960s. Under NCCM and ZCCM, capital expenditure declined substantially. Inadequate capital, machinery and technology contributed to the increase in production costs. Labour costs also increased after independence because the mines could not reduce excess labour. This was due to the political role of mineworkers in Zambia. As observed by Cunningham, the major economic problems after independence were clearly outside the Zambian Government's control.[1108] But this study supports McPherson and Craig's proposition that the government could have done better in tackling the problems to reduce costs.[1109] For example, it should have encouraged NCCM, RCM and ZCCM to invest more in machinery and technology to reduce excess labour in order to save costs. Following the economic downturn from the mid-1970s, the government should have stood its grounds against pressure from the IMF and WB, and therefore, not agreed to devalue the kwacha without meaningful investment. The government should also have reduced costs by promoting local sourcing of inputs. Additionally, NCCM, RCM and ZCCM should not have diverted part of the capital into non-mining activities. The copper price was dependent on trends in the market. This study discussed a number of factors in this regard. The Copperbelt mines and other major producers managed to control the copper price through concerted efforts during the Great Depression of the 1930s but failed to do so after 1974. It became so difficult to organise state-controlled and private-owned companies in Africa, South America, the Soviet Union and the USA after independence. Consequently, the influence of the Inter-Governmental Council of Copper Exporting Countries (CIPEC) was limited compared to the copper cartels of the 1930s, which were controlled by private companies.

In the Federal era the mines paid royalties and income taxes averaging 40% of the profits, and were lower than those paid by their counterparts elsewhere in the copper industry (see Chapter Three). After nationalisation, the new tax regimes increased government's share of profits above 80%. As discussed in Chapters Three to Five, Rokana and the Copperbelt mines complained of remaining with meagre profits and capital for investment because of high taxes. The government increased taxes to punish the companies for externalising large dividends at the expense of investment. During the 1969 and 1973 takeovers, the government wondered why the companies entered into separate agreements with their parent and associated companies abroad. These separate agreements included contractual loans, charged at a higher rate than what was obtained on the market. It was a way of evading high taxes and externalising profits. To curb this, the government should have either encouraged local borrowing or ensured that more than half of the loan was obtained from local companies. To the present day, Zambia is still grappling with tax avoidances and evasions. Some mining companies are price-

[1108] Cunningham, 'Nationalization and the Zambian Copper Mining Industry', 294.
[1109] Craig, 'State Enterprise and Privatisation in Zambia, 1968 – 1998', 95; McPherson, *The Sequencing of Economic Reforms*, 6–9.

transferring and under-declaring production, sales and profits. Even more, others repatriate and siphon profits under the guise of loan repayments to International Financial Institutions.

While there have been, as observed in Chapter One, many studies of labour; some studies of the technology employed; some studies of corporate organisation and profits of the Copperbelt mines; all of them have been limited by period or narrow focus. This study is the first, building on Phillips's work, to develop a comprehensive account of corporate structure, capital, labour and profits of an individual mine, in a regional and global context, over a long period, 1928–1991. The experiences of Rokana/Nkana in the privatisation era of MMD requires a new study in its own right.

Appendices

Appendix I: Questionnaire for former Politicians/Management Level Employees

University of the Free State

Centre for Africa Studies

Interview Guide/Questionnaire

Name of Respondent…………………………………………………………………….......

Age………..……………………………………………………………………………….

Place of Birth………………………………………………………………………………

Position(s) Held and Year(s) in the Mining Groups (NCCM, RCM, ZCCM), Labour Movement (MUZ or ZCTU) ……………………………………from……to………………

Date …………………………………………..………………………………………

Introduction: My name is Hyden Munene, a student at the University of the Free State (South Africa) (SIN 2013173063) pursuing a PhD in Africa Studies (see attached introductory letter). I am currently carrying out a research on the history of Nkana (Rokana) mine. Accordingly, the study relates the history of the copper industry to Nkana mine during the colonial era through the interim years of independence (1929 – 1969) and during nationalisation of the mining industry by the Zambian Government (1970 – 1991). It should be noted that, the questionnaire covers information relating to the impact of nationalisation of mining. You are kindly invited to participate in this research by providing your views which will help in completion of the study. The information to be collected is intended for academic purposes only.

UFS **2016**

Section A: 1970 - 1981

1. What were the motivating factors for the 1969 takeover of the mining sector? …………...
………………………………………………………………………………………………
………………………………………………………………………………………………
……………………………………………………………………………………………….
…………………………………………………………………………………………..…
……………………………………………………………………………………………..

2. What do you remember about the reaction of the following stakeholders to the 1969 takeover of the Zambian copper industry?

a. The parent mining companies (Anglo American Corporation and American Metal Climax)
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………

b. Opposition political parties……………………………………………………………...
………………………………………………………………………………………………
……………………………………………………………………………………………..

c. The countries of origin for the multinationals (South African, British and American governments) ……………………………………………………………………………...
……………………………………………………………………………………………..

d. European and local (African) mineworkers and their respective trade unions……………....
……………………………………………………………………………………………..
…………………………………………………………………………………………......

3. Why did government redeem some bonds in Nchanga Consolidated Copper Mines Ltd and Roan Consolidated Mines Ltd in 1973? ……………………………………………………….
……………………………………………………………………………………………….

4. How did the AAC and AMAX react to the 1973 takeover especially that they received the new development as a surprise? ……………………………………………………………..
……………………………………………………………………………………………..…
……………………………………………………………………………………………….
……………………………………………..
……………………………………………………………………………………………….

5. What impact did the liberation struggle in Zimbabwe, Angola, Mozambique and Zaire have on the copper industry in Zambia? ……………………………………………………….

………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
6. Explain how the copper industry in Zambia performed between 1970 and 1981? …..........
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
……………………………………………………………………………………………….

Section B: 1982 – 1991

1. The formation of Zambia Consolidated Copper Mines Ltd in 1982 increased government's interest in the copper industry to about 60.3% of the issued share capital and ZCCM became the second largest mining group in the world after CODECO of Chile. But for the third time the Zambian government opted for partial-nationalisation of the mining sector. In your opinion why did government amalgamate NCCM and RCM into a single company? ………..
……………………………………………………………………………………………….
……………………………………………………………………………………………….
2. How did the AAC and AMAX react to the 1982 amalgamation? …………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
3. What do you think were the major challenges, successes and failures of ZCCM?
a. Challenges………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
b. Successes.…………………………………………………………………………….
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
c. Failures …………………………………………………………………………………

……………………………………………………………………………………………
……………………………………………………………………………………………
…………………………………………………………………………………………….

Section C: Labour Relations, 1970 - 1991

1. What do you remember about policies of government and the mining companies towards...?

a. Employment of local or Zambian labour……………………………………………….

……………………………………………………………………………………………

b. Employment of expatriate or European workers………..

……………………………………………………………………………………………
……………………………………………………………………………………………

c. Employment of Africans from other countries……………………………………………

……………………………………………………………………………………………
……………………………………………………………………………………………

d. Employment of females………………………………………………………………..

…………………………………………………………………………………………….

…………………………………………………………………………………………….

e. the dual (expatriate and local) wage structure…………………………………………….

……………………………………………………………………………………………
……………………………………………………………………………………………

2. What were the major challenges, successes and failures of Zambianisation of labour in the copper industry?

a. Challenges…………………………………………………………………………..
.……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………

b. Successes…………………………………………………………………………...
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………

c. Failures………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………

Appendix II: Questionnaire for former Workers

University of the Free State

Centre for Africa Studies

Interview Guide

Name………………………………………………………………………………………

Age………..……………………………………………………………………………….

Place of Birth………………………………………………………………………………

Year(s) in Employment at Nkana (Rokana) Mine: From………………….to.……………….

Job(s)/Position(s) Held……………………………………………………………………

Date………………………………………………………………………………………..

Introduction: My name is Hyden Munene, a student at the University of the Free State (South Africa) (SIN 2013173063) pursuing a PhD in Africa Studies (see attached introductory letter). I am currently carrying out a research on the history of Nkana (Rokana) mine. Accordingly, the study relates the history of the copper industry to Nkana mine during the colonial era through the interim years of independence (1929 – 1969) and during nationalisation of the mining industry by the Zambian Government (1970 – 1991). It should be noted that, the questionnaire covers information relating to the impact of nationalisation of mining. You are kindly invited to participate in this research by providing your views which will help in completion of the study. The information to be collected is intended for academic purposes only.

UFS **2016**

Labour Organisation, 1964 – 1991

1. How did you wish to benefit from the government takeover of the mining industry? …….
…………………………………………………………………………………………………
…………………………………………………………………………………………………
………………………………………………………………………………………………….

2. What was your experience working under Nkana mine, NCCM and/or ZCCM? ………….
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………

3. Where you working with whites and Africans from other countries? If yes, explain how you related to each other? ………………………………………………………………………….
…………………………………………………………………………………………………
……………………………………………………………………………………………....

4. Where some Africans from other countries promoted into supervisory jobs at Nkana and in the other mines on the Copperbelt after independence? If yes, in what kind of jobs were they promoted? ……………………………………………………………………………...........
………………………………………………………………………………………………….
…………………………………………………………………………………………….....

5. In your section/department, where you paid equal salaries as European workers? If not, explain why? …………………………………………………………………………………..
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………

6. Where there African and/or European female workers at Nkana mine? If yes, what kind of jobs did they do? ……………………………...
…………………………………………………………………………………………………
…………………………………………………………………………………………………

7. How did the government, NCCM and ZCCM deal with the mineworkers and their trade union leaders in times of work stoppages and strikes? ……………………………………….
…………………………………………………………………………………………………
…………………………………………………………………………………………………

…………………………………………………………………………………………………

……………………………………………………………………………………………...

8. What do you remember about the 1981 strike? ………………………………………….

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

9. What were some of the major problems experienced by mineworkers in Zambia and at Nkana mine in particular? ……………………………………………………………….

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

10. What do you do for your living? ………………………………………………………

…………………………………………………………………………………………………

………………………………………………………………………………………………….

I1. What advice can you give to the young mineworkers and their trade union leaders? ……..

…………………………………………………………………………………………………

…………………………………………………………………………………………………

………………………………………………………………………………………………….

Appendix III: Respondents' Profile

Name	Age	Place of Birth	Area/Place of work, position held and period	Date
High Profile People				
Francis Kaunda	70	-	- RST Executive Secretary for Business and Sales, 1969-1972 - MEMACO Managing Director, 1973 – 74 - NCCM Managing Director, 1974 – 81 - ZCCM Chief Executive, 1982 – 91	25/08/2017
Andrew Sardanis	85	-	- INDECO Chief Executive, 1965 – 68 - MOSP and MOF Permanent Secretary, 1969 – 71	24/08/2017
Mama C. Kankasa	80	- Mpika/N.P	- Nationalist Activist, 1955 – 64 - Member of the Central Committee of UNIP, 1972 – 86 - High Commissioner to Kenya, 1988 – 92	23/09/2017
Charles B. Muchimba	53	- Choma/S.P	- Director of Research of MUZ, 1989 to Date	28/10/2017
Former Nkana Mineworkers				
Boars Ngosa	65	- Nakonde/N.P	- Machine Operator, 1974 – 2009	15/08/2017
John Nsamba	72	- Kasempa/N.W.P	- Supervisor, 1966 – 2000	15/08/2017
Luka Chikote	65	- Mwinilunga/N.W.P	- Stripper Supervisor, 1970 – 2000	16/08/2017
Muka Situmba	70	- Zambiezi/N.W.P	- Machine Operator, 1962 – 1987	16/08/2017
Thomas Musalu	64	- Mbala/N.P	- Workman, 1973 – 2008	17/08/2017
William Banda	61	- Kitwe/C.P	- Workman, 1973 – 2008	17/08/2017
Friday Chanda	57	- Mbala/N.P	- Section Boss, 1985 – 2015	18/08/2017
Mushota Miseshe	67	- Mansa/L.P	- Workman, 1978 – 93	18/08/2017
Vincent Choongo	66	- Kabwe/C.P	- Timberman, 1974 – 83	04/09/2017
James Banda	70	- Kitwe/C.P	- Shift Boss, 1965 – 2000	04/09/2017
Bornface Kabungo	76	- Kitwe/C.P	- Training Officer, 1965 – 2001	06/09/2017
Kelvin Kasote	62	- Chingola/C.P	- Supervisor Plumbing, 1973 – 2000	06/09/2017
Given Sinkamba	63	- Kasama/N.P	- Workman, 1973 – 2010	12/09/2017
Steve Mulenga	67	- Mpika/N.P	- Forklift Driver, 1972 – 2007	16/09/2017
Cosmas Kabanda	66	- Chinsali/N.P	- Stick Handler, 1972 – 2007	17/09/2017
Martin Musukwa	65	- Kasama/N.P	- Crane Driver, 1974 – 2009	17/09/2017
John Mukunka	70	- Nakonde/N.P	- Driver, 1967 – 1989	18/09/2017
Charles Nyerenda	69	- Chingola/C.P	- Crane Driver, 1975 - 2009	18/09/2017
Edward Kabwela	71	- Luanshya/C.P	- Machine Operator, 1965 - 2000	10/10/2017
Joseph Chayinda	66	- Kabompo/N.W.P	- Supervisor Production, 1975 - 2009	10/10/2017
Viyani Viyani	73	- Kaoma/W.P	- Crane Driver, 1959 – 91	
Martin Kalunga	61	- Mwinilunga/N.W.P	- Section Boss, 1975 – 99	12/10/2017
Mwamba Bwalya	63	- Mporokoso/M.P	- Forklift Driver, 1974 – 2009	13/10/2017
John Chiwize	66	- Ndola/C.P	- Section Boss, 1972 – 97	13/10/2017
Mumbi Chanda	64	- Chingola/C.P	- Workman, 1974 – 99	14/10/2017
Banda Flat	66	- Chinsali/N.P	- Cage Tender, 1974 – 99	15/10/2017
Chabala Flat	62	- Chinsali/N.P	- Mine Police/Sulphur Plant Supervisor, 1974 – 99	15/10/2017
Obed Muleya	61	- Mporokoso/M.P	- Electrician, 1974 – 2009	19/10/2017
Mutale Flat	64	- Chinsali/N.P	- Spanner Man, 1975 – 92	19/10/2017

Oswald Phiri	68	- Ndola/C.P	- Section Inspector, 1971 – 96	19/10/2017
Paul Daka	62	- Mansa/L.P	- Crane Driver, 1974 – 99	20/10/2017
James Lungu	72	- Mukushi/C.P	- Commercial Operator, 1964 – 95	20/10/2017
Mundia Lubasi	75	- Kabompo/N.W.P	- Machine Operator, 1967 – 89	20/10/2017
Jackson Chisha	65	- Mpika/N.P	- Loader Driver, 1978 – 90	21/10/2017
Joel Mbula	66	- Mwinilunga/N.W.P	- Workman, 1972 – 81	21/10/2017
Loyd Kalama	64	- Kitwe/C.B	- Electrical Artisan, 1972 – 2002	21/10/2017
Langford Mulundu	63	- Kawambwa/M.P	- Machine Operator, 1973 – 2005	27/10/2017
Joel Nkole	43	- Kitwe/C.B	- Machine Operator, 1996 – 2005	27/10/2017

Note: "C.P" stands for either Central Province or Copperbelt Province. To identify the exact province, consider the town or district indicated. "L.P" stands for Luapula Province. "M.P" stands for the newly created Muchinga Province which was part of Northern Province ("N.P"). "N.W.P" stands for North Western Province. "S.P" for Southern Province, and "W.P" for Western Province.

Appendix IV: Capital Expenditure, Labour, Copper Production, Price and Profitability of Rhokana, 1932-1953.[1110]

Year	Capital £	No. of Workers	Wages - Shillings	Production Long Tons	Price £	Value of Sales £	Cost of Sales £	Net Profits £	Dividends £
1932	14,113	5,393	0.98	15,812	36.4	108,173	-	56,742	-
1933	74,788	4,203	0.85	48,579	36.7	1,792,275	1,276,674	40,862	-
1934	556,302	7,965	0.84	62,180	33.8	2,339,374	1,721,962	389,044	-
1935	693,693	6,697	0.90	69,234	35.7	2,549,662	1,973,793	287,681	331,849
1936	465,466	5,693	0.96	50,399	42.9	2,635,059	1,811,315	206,642	509,900
1937	512,025	7,378	0.98	75,254	60.1	4,417,512	2,250,602	231,507	1,645,000
1938	607,415	7,678	1.00	76,275	45.8	4,647,857	2,489,371	255,404	1,645,501
1939	474,848	7,421	1.04	82,501	49.8	5,444,606	2,544,410	231,801	1,332,501
1940	126,028*	8,840	1.04	93,146	62.0	5,777,606	2,907,628	215,601	1,082,501
1941	93,906*	9,989	1.30	79,895	62.0	4,927,403	2,755,205	214,860	832,500
1942	85,746*	10,470	1.39	69,540	62.0	4,788,221	2,997,096	254,628	457,600
1943	85,422*	11,674	1.46	82,413	62.0	6,124,553	3,621,537	441,797	707,500
1944	84,538*	10,703	1.45	81,407	62.0	5,938,198	3,965,702	510,002	707,500
1945	295,361	10,813	1.47	80,019	62.0	6,129,662	4,031,198	507,975	707,501
1946	217,989	10,771	1.69	69,166	77.2	6,513,232	4,395,120	490,484	1,581,906
1947	241,747	10,394	1.83	66,231	130.6	7,555,325	4,667,818	491,326	2,204,918
1948	225,963	10,928	2.15	69,358	134.0	9,623,205	5,232,218	491,589	2,579,562
1949	423,562	11,797	2.31	74,982	133.0	10,832,455	6,089,175	560,270	2,579,401
1950	891,202	11,742	2.58	80,540	179.0	12,768,647	7,066,027	556,249	3,079,021
1952	-	12,171	3.23	82,764	259.5	21,135,626	11,061,546	454,349	5,687,488
1953	2,968,000	12,321	-	74,216	256.3	22,026,344	12,141,185	366,750	5,671,126

Note: Capital refers to new expenditure on prospecting, properties (plants), machinery, mine development, building, administrative and overheads expenses. Figures for the period from 1940 to 1944 show the amounts reserved for new capital expenditure. Number of workers include both European and Africans. Average wages are only for underground and surface African workers per shift worked. Total copper sold was more or less than produced in a financial-year depending on the demand. Similarly, value of sales was more or less depending on the demand and price of the metal. Cost of sales included: operating costs incurred on mining, concentrating, smelting, and royalty; realisation and refining charges expended on rail-age, handling, freight, refining, selling costs and other related expenses. The difference between value of sales and cost of sales was known as operating profit (gross profit). The net profit was arrived at after deducting depreciation reserve, development reserve, debenture interest, loan interest, income tax and balance on exchange account. Dividends include that paid on preference and ordinary (interim and final) shares at the end of each financial year. Between 1931 and 1934, Rhokana failed to declare dividends because the Company was under-capitalised in relation to the rapid expansion

[1110] Appendix IV, constructed from ZCCM 3.7.2B, attachment to letter from Secretary – Northern Rhodesia Chamber of Mines, 21 May 1953; ZCCM 3.8.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1931-1944; ZCCM 12.1.9C, *Northern Rhodesia Chamber of Mines Yearbook 1956*, 60; ZCCM 12.7.2F, *Rhokana Corporation Limited Annual Reports*, 1946-1953; ZCCM 19.2.4F, *Rhokana Corporation Limited: Annual Report and Accounts for the Year ended 30 June 1945*, 2–20.

and magnitude of the Corporation's undertakings on the Copperbelt, which compelled the Firm to use all its profits as working capital.

Appendix V: Capital Expenditure, Labour, Copper Production, Price and Profitability of Rhokana, 1954-1969.[1111]

Year	Capital £	No. of Workers	Earnings £	Prod. Long T.	Price £	Value of Sales £	Cost of Sales £	Total Net Profits £	Dividends £
1954	5,600,000	11,494	350	79,755	249.3	23,995,987	14,669,289	9,504,000	6,250,000
1955	5,123,294	10,415	413	71,288	351.7	26,611,844	16,762,728	10,022,000	6,563,000
1956	2,300,000	10,943	489	81,566	328.7	36,422,691	19,844,403	15,937,000	8,750,000
1957	3,300,000	10,418	451	88,306	219.4	29,124,251	21,349,025	9,872,000	5,625,000
1958	1,690,000	9,221	444	86,216	197.7	22,054,391	19,647,424	4,259,000	3,125,000
1959	1,180,000	9,269	501	76,983	237.7	23,093,996	18,187,450	5,625,457	5,000,004
1960	1,800,000	9,291	585	103,981	245.8	31,899,608	21,672,140	11,534,278	8,750,007
1961	960,000	9,363	572	106,881	229.7	30,397,770	22,068,256	10,955,993	8,750,007
1962	1,270,000	10,782	556	104,476	234.0	31,339,683	22,928,369	10,742,214	8,750,007
1963	1,400,000	10,919	589	97,979	234.4	20,684,000	14,512,000	9,338,000	8,750,000
1964	1,565,000	11,404	648	107,014	372.0	31,054,331	22,601,000	8,682,000	8,438,000
1965	2,685,000	11,535	695	99,995	469.0	28,303,552	21,856,000	9,198,000	8,750,000
1966	1,606,000	12,596	820	96,587	541.0	32,781,000	25,173,000	9,264,000	8,750,000
1967	2,649,000	12,365	1,056	81,929	418.0	40,659,020	28,144,000	9,861,000	7,500,000
1968	3,076,850	12,365	1,110	90,272	517.0	43,682,946	36,899,190	16,604,960	13,750,000
1969	4,230,520	-	1,088	96,638	617.0	74,458,971	38,038,720	25,830,300	21,250,000

Note: Average earnings per employee were for all workers, both Europeans and Africans, which included: the basic salary, allowances, and costs on food rations, per year. Total copper and cobalt sold were more or less than produced in a financial-year depending on the demand. Value of sales include returns from sales of cobalt. Value of sales was more or less depending on the demand and price of copper and cobalt. Total net profits came from both the mine and investment income from other properties. Final dividends were charged on total net profits after tax.

Appendix VI: Capital Expenditure, Labour, Copper Production, Price and Profitability of RokanaNkana Mine Division under NCCM, 1970-1981.[1112]

Year	Capital K'M		No. of Worker	Averag. Wage K	NCCM Product. Met. T.	LME Price K	Value of Sales K'M	Cost of Sales K'M	Net Profits K'M	Total Dividends K'M
	NCCM	Nkana								
1970	-	-	12,388	181.5	395,511	1,016	365	-	-	-
1971	43.4	-	12,252	148.9	494,816	916	449	246	97	51
1972	42.0	-	12,272	214.0	401,283	713	348	-	68	36
1973	58.8	-	12,704	167.3	440,077	1,085	363	262	82	36
1974	69.0	9.0	-	-	408,753	1,300	555	276	113	67
1975	59.4	5.6	13,032	284.3	408,666	1,087	479	340	59	17
1976	39.4	4.0	13,332	312.4	385,414	768	327	366	Loss	None
1977	16.1	-	-	-	427,810	1,072	506	403	34	None
1978	23.2	-	-	-	277,156	1,002	422	-	6.5	None

[1111] Appendix V, compiled from NAZ MLSS 1/18/3, Minutes of Meeting of the Committee on Zambianisation in the Mining Industry, 19 April 1967; NAZ MLSS 1/25/121, Strikes and Disputes Lab Form 4: Kitwe-Nkana, November 1962-December 1963; NAZ MLSS 1/25/137, Strikes and Disputes Kitwe General, February 1964-December 1967; NAZ 11/57C, NRG, *Report of the Commission of Inquiry into the Mining Industry 1966*, 160; ZCCM 12.1.9C, *Northern Rhodesia Chamber of Mines Yearbooks*,1956-64; ZCCM 12.1.9C, *Copperbelt of Zambia Mining Industry Yearbooks,* 1965-69; ZCCM 12.7.2F, *Rhokana Corporation Limited Annual Reports*, 1954-69; Bates, *Unions, Parties, and Political Development*, 81 and 250; Berger, *Labour, Race and Colonial Rule*, 208; Mhone, *The Political Economy of a Dual Labour Market in Africa*, 163.

[1112] Appendix VI, drawn from ZCCM T8.2A, Employment Returns: Nkana Division, from 1970 to 1976; ZCCM 11.1.1F, *NCCM Limited: Annual Reports, 1971-1981*; ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey*, 32; ZCCM 12.1.9C, *MINDECO Mining Yearbooks of Zambia*, 1971-72; ZCCM 12.1.9C*, Zambia Mining Yearbooks*, 1973-85.

1979	29.0	13.0	-	-	368,332	1,159	489	-	26	None
1980	63.0	22.0	-	-	359,816	1,690	702	-	56	9
1981	108.0	64.0	-	-	356,541	1,629	657	-	32	5

Note: Average earnings per employee per month for both Europeans and Africans included: the basic salary, allowances, and costs on food rations. Total copper and cobalt sold were more or less than produced in a financial-year depending on the demand. Value of sales included returns from sales of cobalt, lead and zinc. Value of sales was more or less depending on the demand and price of these metals.

Appendix VII: Capital Expenditure, Labour, Copper Production, Price and Profitability of Rokana/Nkana and ZCCM, 1982-1991.[1113]

Year	Capital K'M		Number of Workers	Basic Wage K	Copper Production Metric Tons		Price K	Value Sales K'M	Cost of Sales K'M	Net Profit K'M
	ZCCM	Nkana			Nkana	ZCCM				
1982	273.2	85.0	12,309	-	149,706	591,853	1,522	977.1	1,082.7	Loss
1983	252.1	55.1	11,518	-	126,770	575,518	1,475	973.1	1,035.8	Loss
1984	214.8	None	11,565	-	141,733	551,021	2,170	1,426.0	1,171.2	Loss
1985	291.0	None	14,295	-	148,244	525,811	2,796	1,862.0	1,484.0	0.7
1986	1,229.0	None	14,412	-	135,888	463,354	5,841	4,097.0	2,911.0	Loss
1987	1,097.0	27.0	13,649	830	130,673	470,982	11,799	6,976.0	5,628.0	Loss
1988	870.0	71.0	14,791	971	142,088	473,084	16,525	11,882.0	9,703.0	372.0
1989	1,191.0	187.0	14,772	1500	126,757	415,645	25,721	18,135.0	14,114.0	1,832.0
1990	3,090.0	387.0	14,127	1,668	138,272	448,468	45,475	32,878.0	22,430.0	2,586.0
1991	6,357.0	838.0	13,631	6,139	147,270	421,590	95,723	65,559.0	47,020.0	5,189.0

Note: The basic wage or salary per employee per month was increased every year. There are no comprehensive figures from the sources utilised in this study for the basic salary before 1987. Total net profits came from metal sales and investment income from other subsidiary or associated companies to ZCCM.

Appendix VIII: Origin of African Labour Employed on the Copperbelt Mines during July, 1938.[1114]

Province	Roan	Nkana	Mufulira	Nchanga	Total
Northern	2922	3713	3737	1498	11870
Barotse	1055	1538	731	625	3949
Western	764	622	380	1075	2841
Eastern	1252	530	363	294	2439
Central	1161	699	437	88	2385
Southern	209	103	45	40	397
Foreign/Alien Africans					
Nyasaland	486	363	110	67	1026
Tanganyika	24	48	24	5	101
Belgian Congo	23	28	24	5	80

[1113] Appendix VII, constructed from MUZ HQ, Memoranda of Agreements between The Association of Copper Mining Employees and the Mineworkers' Union of Zambia, dated 14 April 1987; 21 April 1989, and 26 November 1991; ZCCM 1.3.1H, Establishments: Labour Figures, November 1983 – December 1985; ZCCM 1.3.1H Establishment/Labour Figures/Statistics, January 1988 – December 1988; ZCCM *5.5.*2B Parliamentary Questions, December 1991 – December 1998, Order Book No. 334-Zambianisation; ZCCM 11.7.9C, Survival-Cost Saving Measures, June 1982 – April 1983; ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91; ZCCM 12.1.9C, *Zambia Mining Yearbooks*, 1985, 21; ZCCM 12.3.3B, *ZCCM: Export Rehabilitation and Diversification Project-Financial Assessment Proposal*, 5.

[1114] Appendix VIII, compiled from NAZ/KDD/KTW 2/*1* Barovale District Notebook, Vol. VII, Origins of Labour Employed on Northern Rhodesia during July*,* 1938; NAZ/SEC 3/48 Vol. II, Immigration Organisation: General Control of Immigration, 1935–48.

P.E.A	36	35	6	3	86
P.W.A	36	34	19	11	100

Note: Currently, Zambia has ten provinces, of which the names used in the colonial administration, if used today to mean the current provinces can be misleading. Accordingly, Northern Province of 1938 covered today's Northern, Luapula and Muchinga provinces. Barotseland represented the current Western Province, excluding Balovale (Zambezi) District, which now falls under the current North-Western Province. Western Province encompassed modern-day North-Western and Copperbelt provinces. In similar fashion, Central Province of 1938 covered today's Lusaka and Central provinces. However, Eastern and Southern provinces remain unchanged to date.

Appendix IX: Past and Current President of the AMU and MUZ, 1949 to Date.[1115]

Name		Period
Lawrence Katilungu	(AMU)	1949 - 1961
John Chisata	"	1961 - 1964
Abel T.K. Musonda	"	1964 - 1965
Kosam Milambo	"	1965 - 1967
David Mwila	(MUZ)	1967 - 1982
Timothy Walamba	"	1982 - 1990
Jonathan Simakuni	"	1990 - 1991
Francis Kunda	"	1991 - 1997
Paul Kafumbe	"	1997 - 1998
Andrew Mwanza	"	1998 - 2005
Rayford Mbulu	"	2006 - 2011
Oswell Munyenyembe	"	2011 - 2012
Nkole Chishimba	"	2012 - Date

Appendix X: Status in the African Mineworkers' Union (AMU) and the Northern Rhodesia African National Congress (NRANC) of those detained during Emergency Regulations, 11-14 September 1956.[1116]

Name	AMU Status	NRANC Status
Nkana Mine:		
N.D. Nkoloma	General-Secretary	Nkana Branch Chairman
J.R. Namitengo	Branch President	Member
G.C. Chindele	Paid Branch Secretary	Member
J. Ponde	Ex-Union Official	Buchi Branch Chairman
C.J. Katongo	Branch President	Trustee/Committee Member
A. Kalumbe	Branch Treasurer	Secretary-Nyasaland ANC
A. Malitongo	Vice President	Member
K. Chishimba	Committee Member	Branch Committee Member
Nchanga Mine:		
H. Kapaya	Member	Nchanga Branch Chairman
C. Musonda	Branch President	Member
M.R. Mwendapole	Branch Secretary	Member
S. Sinkamba	Branch Vice-President	Member
R. Sichela	Treasurer	Believed Member
Bancroft Mine:		

[1115] Appendix IX, taken from MUZ HQ, *Summary Notes on Mineworkers' Union of Zambia Leadership Change since 1949*, 1–8.

[1116] Appendix X, taken from ZCCM T18.6D, O.B. Bennett's submission on events leading to declaration of the State of Emergency, to Board of Directors, Salisbury, 15 October 1956.

W. Munthali	Branch Trustee	Committee Member
H. Bweupe	Committee Member	Committee Member
F. Mukupa	Committee Member	Committee Member

Bibliography

1. Primary Sources

1.1 Mineworkers’ Union of Zambia Headquarters (MUZ HQ)

1.1.1 General Correspondence, Memoranda and Minutes of Meetings

MUZ HQ, attachments to Letter from Executive Director-Personnel Services, Lusaka, to Divisional General Managers – Nchanga, Mufulira, Nkana, Luanshya, Kabwe, Central Services and Power Company, 12 March 1986.

MUZ HQ, attachments to Letter from Executive Director-Personnel Services, Lusaka, to ZCCM Divisional General Managers, 12 March 1986.

MUZ HQ, Letter from Chief Industrial Relations Officer, Kitwe, to Deputy Director of Personnel-Manpower Services and Training, Kitwe, 17 July 1985.

MUZ HQ, Letter from University of Zambia Graduates, Lusaka, to the Chairman and Chief Executive-ZCCM, Lusaka, 30 June 1990.

MUZ HQ, Memoranda of Agreements between The Association of Copper Mining Employees and the Mineworkers’ Union of Zambia, dated 14 April 1987; 21 April 1989; and 26 November 1991.

MUZ HQ, Memorandum of Agreement between The Association of Copper Mining Employees and the Mineworkers’ Union of Zambia, 26 November 1991.

MUZ HQ, Minutes of the First Meeting of the Mines Joint Industrial Council held on Monday, 19 April 1993.

MUZ HQ, The Employment Amendment Act No. 18 of 1982, 21 August 1982.

MUZ HQ, ZCCM Limited Head Office: Attachment to Letter from ZCCM Deputy Director of Operations, Kitwe, to ZCCM Director–Human Resources, Lusaka, 15 August 1989.

1.1.2 Reports and Notes

MUZ HQ, *A Historical Analysis of MUZ in the Harmonisation of Industrial Relations in ZCCM: An Overview of MUZ Objectives*, 1990.

MUZ HQ, *Mining Industry Manpower Report*, June 1984 (unpublished report).

MUZ HQ, *Report of the Zambianisation Tour of all the Mines on the Copperbelt*, 29 April 1977 (unpublished report).

MUZ HQ, *Secretarial Report for the Period from April 1988 to March 1990*, presented to the Conference held in Livingstone from 15–17 March 1990.

MUZ HQ, *Summary Notes on Mineworkers' Union of Zambia Leadership Change since 1949*.

MUZ HQ, *Zambia Congress of Trade Unions (ZCTU): Report of the General Secretary*, presented to the 4th Annual Conference held in the Rokana Cinema in Kitwe, 21–24 May 1970.

MUZ HQ, *ZCCM Management Report on Operations Covering the Quarter ended 31 March 1988* (unpublished report).

1.2 National Archives of Zambia (NAZ)

1.2.1 Ministry of Labour and Social Services (MLSS)

NAZ MLSS 1/25/137, Strikes and Disputes Kitwe – General, February 1964-December 1967.

NAZ MLSS 1/25/121, Strikes and Disputes Lab Form 4: Kitwe-Nkana, November 1962–December 1963.

NAZ MLSS 1/18/3, Zambianisation Committee (Mines)–General, 1966–70.

NAZ MLSS 1/26/18, Nkana African Mineworkers Union – All Correspondence between 1948 and 1962.

1.2.2 Secretariat and District Notebook

NAZ SEC 3/48 Vol. II, Immigration Organisation: General Control of Immigration, 1935–48.

NAZ KDD/KTW 2/*1* Barovale District Notebook, Vol. VII, Origins of Labour Employed on Northern Rhodesia during July, 1938.

1.2.3 Official Publications

NAZ 11/57/C, Northern Rhodesia Government, *Evidence Taken by Commission Appointed to Enquire into Labour Disturbances in the Copperbelt, Vol. II* (Lusaka: Government Printers, 1935).

NAZ 11/57/H, Northern Rhodesia Government, *Report of the Commission Appointed to Inquire into the Unrest in the Mining Industry in Northern Rhodesia in Recent Months* (Lusaka: Government Printers, 1956).

NAZ 11/57C, Government of the Republic of Zambia, *Report of the Commission of Inquiry into the Mining Industry 1966* (Lusaka: The Government Printer, 1966).

NAZ 11/57F, United Nations, Economic Commission for Africa, and Food and Agriculture Organisation (UN/ECA/FAO), *Report on the Economic Development of Zambia* (Ndola: Falcon Press Limited, 1964).

NAZ ML 8/4/18, Northern Rhodesia Mines Department (NRMD), *Annual Reports*, 1950–4.

1.3 United National Independence Party (UNIP) Archives

UNIP 1-3-9, Speeches by His Excellency on State Participation in the Mining Industry.

UNIP 1-3-17, Speeches: ‘Hard Work is the Answer’-Addresses to and Resolutions of the United National Independence Party at the Mulungushi Hall, Lusaka, 14-17 December 1974.

1.4 Zambia Consolidated Copper Mines (ZCCM) Archives

1.4.1 General Correspondence, Memoranda and Minutes

ZCCM 11.7.9C, Survival-Cost Saving Measures, June 1982 – April 1983.

ZCCM 1.3.1E, Complaints, Disputes, Strikes and Disciplinary Cases, January 1985 – June 1986.

ZCCM 1.3.1H, Establishment/Labour Figures/Statistics, January – December 1988.

ZCCM 1.3.1H, Establishments: Labour Figures, November 1983 – December 1985.

ZCCM 6.10.1A, Discipline, November 1966 – September 1991.

ZCCM 3.8.2A, Arbitration for European Miners, May 1940–July 1941.

ZCCM 3.7.2B, Conrespondence–African Labour Efficiency Returns and Costs, June 1951 – July 1957.

ZCCM 3.8.1A, Trade Union Relations-Nkana Division: Native Strike, March 1940–June 1941.

ZCCM 3.8.2A, Rhokana Corporation Limited: Directors Minutes of Meetings, August 1954 – December 1955.

ZCCM 5.5.1S, Memorandum of Agreement between the Association of Copper Mining Employees and the Mineworkers' Union of Zambia, 14 April 1987.

ZCCM 10.7.9A, General Correspondence – Northern Rhodesia Mineworkers' Union, October 1934 – April 1937.

ZCCM 10.7.9A, Northern Rhodesia Mineworkers' Union – General Correspondence, November 1954 – February 1955.

ZCCM 11.7.8A, The Amalgamation of Mining Companies (Special Provisions) Act, 5 March 1982.

ZCCM 16.2.2D, Roan Antelope Copper Mines Minutes of Meetings, August 1928 – October 1929.

ZCCM 16.2.3C, File Reviewed – by the Royal (Bledisloe) Commission appointed to Report whether any, and if so what, form of closer cooperation between Southern Rhodesia, Northern Rhodesia and Nyasaland is desirable and feasible, 31 March 1939.

ZCCM T8.2A, Employment Returns: Nkana Division, from 1970 to 1976.

ZCCM T18.6D, Board of Directors Correspondence, from March to October 1956.

1.4.2 Unpublished Reports, Papers and Notes

ZCCM 1.2.5I, *Zambia Consolidated Copper Mining Industry-Historical Background* – A Paper by B.K. Shamutete presented at the Seminar on Investment Opportunities in Zambia organised by Price Water-House held in Johannesburg on 25 February 1993.

ZCCM 3.8.1C, *Rhokana Corporation Limited: Utilisation of African Labour Reports*, 1945–1957.

ZCCM 3.8.2B, *Rhokana Corporation Limited: Annual Reports*, June 1931–June 1935.

ZCCM 4.10.2E, *History of ZCCM Limited: Birth of a Giant*, A Paper by B.K. Shamutete, 1992.

ZCCM 10.5.5D, *Inspection Report at Mufulira Mine* by A. Walden, Mines Inspector, 14 April 1970.

ZCCM 11.7.8A, *Brown Commission of Inquiry: Productivity and Efficiency of African Labour from 1956 to 1966*, 26 May 1966.

ZCCM 11.7.9C, *Zambianisation Report: Comparison of 1974, 1975 and 1976 Records of Actual Achievement*, 29 April 1977.

ZCCM 11.7.9C, *ZCCM Board: Quarterly Reports*, September 1984 – February 1985.

ZCCM 11.7.9C, *ZCCM Paper on Proposed Measures for Increasing Metal Production and Reducing Costs*, 4 March 1983.

ZCCM 11.8.3C, *Labour Relations on the Copperbelt*, 1930 – 1982.

ZCCM 12.3.3B, *ZCCM: Export Rehabilitation and Diversification Project-Financial Assessment Proposal*, October 1985.

ZCCM 16.2.6D, *Rhodesia Selection Trust: Discussion Notes*, 7 September 1951.

1.4.3 Official Publications

Government of the Republic of Zambia (GRZ), *The Mufulira Mine Accident: Final Report on the Causes and Circumstances of the Disaster Which Occurred on 25 September 1970* (Lusaka: Government Printer, 1971). (no reference number)

Manpower Planning Training and Zambianisation (MPTZ), *Opportunities for Graduates for Zambia's Mining Industry* (Kitwe: Copper Industry Service Bureau, 1978). (no reference number)

ZCCM 11.1.1F, *Nchanga Consolidated Copper Mines Limited: Annual Reports*, 1971–81.

ZCCM 11.1.1F, *Roan Consolidated Mines Limited: Annual Reports*, 1970–81.

ZCCM 11.1.1F, *ZCCM Limited: Annual Reports*, 1982–91.

ZCCM 11.7.9C, ZCCM Industrial Projects Department, *Zambia Copper Sector Survey* (Kitwe: IPD, 1981).

ZCCM 11.7.9C, *ZCCM Merger Benefits Plans* (Lusaka: ZCCM Head Office, 1983).

ZCCM 12.1.9C, *Copperbelt of Zambia Mining Industry Yearbooks*, 1965–8.

ZCCM 12.1.9C, Mining and Industrial Development Corporation (MINDECO), *MINDECO Mining Yearbooks of Zambia*, 1970–3.

ZCCM 12.1.9C, Mining and Industrial Development Corporation (MINDECO) Limited, *Zambia Mining Industry* (Lusaka: MINDECO, 1972).

ZCCM 12.1.9C, *Mining Industry Yearbook of Zambia 1969* (Kitwe: Copper Industry Service Bureau, 1969).

ZCCM 12.1.9C, Northern Rhodesia Chamber of Mines (NRCM), *Northern Rhodesia Chamber of Mines Yearbooks*, 1956–64.

ZCCM 12.1.9C, *Zambia Mining Yearbooks*, 1973–85.

ZCCM 12.6.1E, *Roan Selection Trust Limited: Annual Reports and Accounts*, 1931–9.

ZCCM 12.7.2F, *Rhokana Corporation Limited: Annual Reports and Accounts*, 1946–69.

ZCCM 19.2.2B, *British South Africa Company Reports and Accounts*, 1929–39.

ZCCM 19.2.4F, *Rhodesian Anglo American Corporation Limited: Reports of the Directors and Statements of Accounts*, 1950–3.

ZCCM 19.2.4F, *Rhokana Corporation: Annual Report and Accounts for the Year ended 30th June 1945* (London: Rhokana Head Office, 1945).

ZCCM 19.2.6D, *Roan Antelope Copper Mines Limited: Summary of Operations for the Six Years ended 30th June 1945* (Luanshya: RACM, 1945).

ZCCM 3.8.2F, *Rhokana Corporation Limited: Directors' Reports and Statement of Accounts*, 1931–44.

ZCCM 5.6.3I, *ZCCM: Disciplinary Code and Grievance Procedure* (Kitwe: Copper Industry Service Bureau Limited, 1988).

ZCCM W2.2.2G, Government of the Republic of Zambia, *A Submission to the World Bank: Rehabilitation Projects within the Zambian Copper Mining Industry* (Lusaka: Government Printer, 1982).

1.4.4 Hansards of the Parliament of Zambia

ZCCM 5.5.2B Parliamentary Debates, December 1991 – December 1998, Order Question No. 174 – ZCCM Female Employees by 22 January 1987.

ZCCM 5.5.2B Parliamentary Debates, December 1991 – December 1998, Order Book No. 334 – Zambianisation.

ZCCM 5.6.3C, Parliamentary Debates, 20–25 February 1985: Reply on Parliamentary Question about Manpower Utilisation and Zambianisation.

1.5 Newspapers and Periodicals

Birmingham Post, 1951.

City Press, 1952.

Copperbelt Times, 1934.

Financial Times, 1934.

Horizon, 1959, 1961–3.

Liverpool Daily Post, 1951.

Mining Mirror, 1973–6, 198–3, 1985, 1986–9, and 1991.

Northern News, 1951, 1954–5, and 1957.

Northern Rhodesia Advertiser, 1935.

Optima, 1951, 1953, 1955–6, 1961 and 1969.

Rhokana Review, 1959.

The Courier, No 85 1984.

The Rhodesia Herald, 1955.

The Times, 1931–2, 1934–5, 1937, and 1940.

Times of Zambia, 1973, 1982, 1985, 1987–8.

1.6 Interviews

A. Sardanis interviewed by author, Lusaka, 24 August 2017.

C. Kabanda interviewed by author, Kitwe, 17 September 2017.

C. Nyerenda interviewed by author, Kitwe, 18 September 2017.

C.B. Muchimba interviewed by author, Kitwe, 28 October 2017.

F. Kaunda interviewed by author, Lusaka, 25 October 2017.

F. Mutale interviewed by author, Kitwe, 19 October 2017.

G. Sinkamba interviewed by author, Kitwe, 12 September 2017.

J. Chayinda interviewed by author, Kitwe, 10 October 2017.

J. Chiwize interviewed by author, Kitwe, 13 October 2017.

J. Mukunka interviewed by author, Kitwe, 18 September 2017.

K. Chibesakunda interviewed by author, Lusaka, 23 September 2017.

L. Mulundu interviewed by author, Kitwe, 27 October 2017.

M. Kalunga interviewed by author, Kitwe, 12 October 2017.

M. Lubasi interviewed by author, Kitwe, 20 October 2017.

O. Muleya interviewed by author, Kitwe, 19 October 2017.

S. Mulenga interviewed by author, Kitwe, 16 September 2017.

2. Secondary Sources

2.1 Books

Baldwin, R.E., *Economic Development and Export Growth* (Berkeley and Los Angeles: University of California Press, 1966).

Bancroft, A.J., *Mining in Northern Rhodesia: A Chronicle of Mineral Exploration and Mining Development* (Bedford: The Sidney Press Limited, 1961).

Bates, R.H., *Unions, Parties and Political Development: A Study of Mineworkers in Zambia* (New Haven and London: Yale University Press, 1971).

Bell, P.M.H., *The Origin of the Second World War* (London: Longman Group Limited, 1986).

Berger, E.L., *Labour, Race and Colonial Rule: The Copperbelt from 1924 to Independence* (Oxford: Clarendon Press, 1974).

Bostock, M., and Harvey, C., (eds.), *Economic Independence and Zambian Copper: A Case Study of Foreign Investment* (New York: Praeger Press, 1972).

Bowman, L.W., *Politics in Rhodesia: White Power in an African State* (Cambridge: Harvard University Press, 1973).

Burawoy, M., *The Colour of Class on the Copper Mines: From Advancement to Zambianisation* (Manchester: Manchester University Press, 1972).

Butler, L.J., *Copper Empire: Mining and the Colonial State in Northern Rhodesia, c. 1930–1964* (New York, Palgrave Macmillan, 2007).

Clarke, P., *Hope and Glory: Britain 1900–1990* (London: Penguin, 1997).

Cohen, A., *The Politics and Economics of Decolonization in Africa: The Failed Experiment of Central African Federation* (London and New York: I.B. Tauris, 2017).

Coleman, F.L., *The Northern Rhodesia Copperbelt, 1899–1962: Technological Development up to the end of the Central African Federation* (Manchester: Manchester University Press, 1971).

Cunningham, S.J., *The Copper Industry in Zambia: Foreign Mining Companies in a Developing Country* (New York: Praeger Publishers, 1981).

Daniel, P., *Africanisation, Nationalisation and Inequality: Mining Labour and the Copperbelt in Zambian Development* (London: Cambridge University Press, 1979).

Davis, J.M., *Modern Industry and the African: An Enquiry into the Effect of the Copper Mines of Central Africa upon Native Society and the Work of the Christian Missions* (London: MacMillan and Co., 1933).

Epistein, A.L., *Politics in an Urban African Community* (Manchester: Manchester University Press, 1958).

Ferguson, J., *Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt* (Berkeley: University of California Press, 1999).

Fortman, B.G., *After Mulungushi: The Economics of Zambian Humanism* (Nairobi: East African Publishing House, 1969).

Fraser, A. and Larmer, M., (eds.), *Zambia, Mining and Neoliberalism: Boom and Bust on the Globalized Copperbelt* (New York: Palgrave Macmillan, 2010).

Gann, L.H., *A History of Northern Rhodesia: Early Days to 1953* (London: Chatto and Windus, 1964).

Gluckman, M., *Economy of the Central Barotse Plain* (Livingstone: RLI, 1941).

Gregory, T., *Ernest Oppenheimer and the Economic Development of Southern Africa* (London: Oxford University Press, 1961).

Lanning, G. and Mueller, M., *Africa Undermined: A History of the Mining Companies and the Underdevelopment of Africa* (Ontario: Penguin Books Limited, 1979).

Letcher, O., *South Central Africa* (Johannesburg: African Publications, 1932).

Martin, A., *Minding Their Own Business: Zambia's Struggle against Western Control* (London: Penguin Books, 1975).

McPherson, M.F., *The Sequencing of Economic Reforms: Lessons from Zambia* (Amsterdam: Ministry of Foreign Affairs Development Corporation, 1995).

Meebelo, H.S., *Reaction to Colonialism: A Prelude to the Politics of Independence in Northern Zambia, 1893-1939* (Manchester: Manchester University Press, 1971).

Mhone, G.C.Z., *The Political Economy of a Dual Labour Market in Africa, 1929–1969* (London and Toronto: Associated University Presses, 1982).

Mitchell, J.C., *The Kalela Dance: Aspects of Social Relations among Urban Africans in Northern Rhodesia* (Manchester: Manchester University Press, 1956a).

Navin, T.R., *Copper Mining and Management* (Arizona: University of Arizona Press, 1978).

Onslow, S. and van-Wyk, A. (eds.), *Southern Africa in the Cold War, Post-1974* (Washington DC: Wilson Center, 2013).

Palmer, R. and Colton, J., *A History of the Modern World* (New York: Doubleday and Company, 1992).

Parpart, J.L., *Labour and Capital on the African Copperbelt* (Philadelphia: Temple University Press, 1983).

Perrings, C.A., *Black Mineworkers in Central Africa: Industrial Strategies and the Evolution of an African Proletariat in the Copperbelt 1911–1941* (New York: Africana Publishing Company, 1979).

Phimister, I.R., and Van Onselen, C., *Studies in the History of African Mine Labour in Colonial Zimbabwe* (Gwelo: Mambo Press, 1978).

Phimister, I.R., *Wangi Kolia: Coal, Capital and Labour in Colonial Zimbabwe* (Harare: Baobab Books, 1994).

Powdermaker, H., *Copper Town Changing Africa: The Human Situation on the Rhodesian Copperbelt* (New York: Harper and Row, 1962).

Prain, R., *Reflections on an Era: An Autobiography* (Letchworth: The Garden City Press, 1981).

Saffrey, L.A., *A Report on some Aspects of African Living Conditions on the Copperbelt of Northern Rhodesia* (Lusaka: Mimeo, 1943).

Sardanis, A., *Africa Another Side of the Coin: Northern Rhodesia's Final Years and Zambia's Nationhood* (London and New York: I.B. Tauris, 2003).

Sardanis, A., Zambia: The First 50 Years (London and New York: I.B. Tauris, 2014).

Schmitz, C., *World Non-Ferrous Metal Production and Prices 1700–1976* (London: Frank Cass Publishers, 1979).

Silavwe, G.W., *Management of Human Resources in the Copper Mining Industry in Zambia* (Ndola: Mission Press, 1995).

Sklar, R.L., *Corporate Power in an African State: The Political Impact of Multinational Mining Companies in Zambia* (Los Angeles: University of California Press, 1975).

Thrush, P.W. (ed.), *A dictionary of Mining, Mineral, and Related Terms* (Washington: US Department of the Interior–Bureau of Mines, 1968).

Tischler, J., *Light and Power for a Multiracial Nation: The Kariba Dam Scheme in the Central African Federation* (Basingstoke: Palgrave Macmillan, 2013).

Van Onselen, C., *Chibaro: African mine labour in Southern Rhodeisa, 1900–1933* (London: Pluto Press, 1976).

Weinberg, G.L., *A World at Arms: A Global History of World War Two* (Cambridge: Cambridge University Press, 1994).

Whitworth, A., *Explaining Zambian Poverty: A History of (Non-Agriculture) Economic Policy Since Independence* (Islamabad: John Wiley and Sons Limited, 2014).

Wilson, G., *An Essay on the Economics of Detribalization in Northern Rhodesia* (Livingstone: RLI, 1942).

2.2 Book Chapters and Journal Articles

Alford, B.W.E. and Harvey, C.E., 'Copperbelt Merger: The Formation of the Rhokana Corporation, 1930-1932', *The Business Review*, 54, 3 (1980), 331–58.

Burawoy, M., ‘The Colour of Class Revisited: Four Decades of Post-colonialism in Zambia’, *Journal of Southern African Studies*, 40, 5 (2014), 961–79.

Burdette, M.M., ‘Industrial Development in Zambia, Zimbabwe and Malawi: The Primacy of Politics’ in Konczacki, Z.A., Parpart, J.J., and Shaw, T.M. (eds.), *Studies in the Economic History of Southern Africa, Vol. 1, The Front-line States* (London: Frank Cass and Co. Ltd., 1990), 75–126.

Butler, L.J., ‘Business and British Decolonisation: Sir Ronald Prain, the Mining Industry and the Central African Federation’, *The Journal of Imperial and Commonwealth History*, 35, 3 (2007), 459–84.

Chang-II, O., ‘The Causes of the Korean War, 1950-1953’, *International Journal of Korean Studies*, 14, 2 (2010), 19–44.

Chauncey, G., “The Locus of Reproduction: Women’s Labour in the Zambian Copperbelt, 1927–1953,” *Journal of Southern African Studies*, 7, 2 (1981), 135–64.

Cohen, A., ‘Business and Decolonisation in Central Africa Reconsidered’, *The Journal of Imperial and Commonwealth History*, 36, 4 (2008), 641–58.

Daimon, A., ‘Ringleaders and Troublemakers: Malawian (Nyasa) migrants and transnational labour movements in Southern Africa, c. 1910–1960’, *Labor History*, 58, 5 (2017), 656–75.

De Roche, A.J., ‘You Can’t fight guns and knives: National Security and Zambian Responses to UDI, 1965-1973’ in Gewald, J., Hinfelaar, M. and Macola, G. (eds.), *One Zambia, Many Histories: Towards a history of post-colonial Zambia* (Leiden: Brill, 2008), 77–97.

Dumett, R., ‘Africa’s Strategic Minerals during the Second World War’, *The Journal of African History*, 26, 4 (1985), 381–408.

Ferguson, J., ‘Mobile workers, modernist narratives: a critique of the historiography of transition on the Zambian Copperbelt [part one]’, *Journal of Southern African Studies*, 16, 3 (1990), 385–412.

…………., ‘Mobile workers, modernist narratives: a critique of the historiography of transition on the Zambian Copperbelt [part two]’, *Journal of Southern African Studies*, 16, 4 (1990), 603–21.

Gann, L.H., 'The Northern Rhodesian Copper Industry and the World of Copper: 1923–1952', The Rhodes-Livingstone Journal, 18 (1970), 1–18.

Guernsey, T.D., 'Summary of Early Prospecting in Northern Rhodesia', Transactions of the Institution of Mining and Metallurgy, 63 (1954), 1–9.

Gupta, A., 'Trade Unionism and Politics on the Copperbelt' in Tordoff, W. (ed.), *Politics in Zambia* (Berkeley and Los Angeles: University of California Press, 1974), 288–319.

Harington, J.S., McGlashan, N.D., and Chelkowska, E.Z., 'A Century of Migrant Labour in the gold mines of South Africa', *The Journal of the South African Institute of Mining and Metallurgy* (2004), 65–71. The volume and number of this publication are not indicated.

Harrison, M., 'Resource Mobilization for World War II: the USA, UK, USSR, and Germany, 1938-1945', *Economic History Review*, 41, 2 (1988), 1–26.

Kelly, M.P., 'Proletarianisation, the Division of Labour and the Labour Process', *International Journal of Sociology and Social Policy*, 8, 6 (1989), 48–64.

Klubock, T.M., 'Copper Workers, Organized Labor, and Popular Protest under Military Rule in Chile, 1973–1986', *International Labor and Working–Class History,* 52 (1997), 106–33.

Larmer, M., 'The Hour Has Come at the Pit: The Mineworkers of Zambia and the Movement for Multi-Party Democracy, 1982–1991', *Journal of Southern African Studies*, 32, 2 (2006), 293–312.

…………, 'Unrealistic Expectations? Zambia's Mineworkers from Independence to the One-Party State, 1964–1972', *Journal of Historical Sociology*, 18, 4 (2005), 318–52.

…………, 'Zambia's Mineworkers and the Labour Movement's Resistance to the One-Party State, 1973–1981', *South African Historical Journal*, 56, 1 (2006), 154–76.

Lungu, J., 'The Politics of Reforming Zambia's Mining Tax Regime', *Southern Africa Resource Watch*, 8 (2009), 1–28.

Mijere, N., 'One Industry, One Union: The Rise and Governmental Control of the Mineworkers of Zambia, 1930-1982' in Osei-Hwedie, K., and Ndulo, M. (eds.), *Issues in Zambian Development* (Nyangwe and Roxbury: Omenana, 1985), 374–95.

Musambachime, M.C., ‘The Archives of Zambia’s United National Independence Party’, *History in Africa*, 18 (1991), 291–6.

Parpart, J.L., “The Household and the Mine Shaft: Gender and Class Struggles on the Zambian Copperbelt, 1926–1964,” *Journal of Southern African Studies* 13-1 (1986), 36–56.

Pearce, J., ‘Control, Politics and Identity in the Angolan Civil War’, *African Affairs*, 111, 444 (2012), 442–65.

Perrings, C.A., ‘A Moment in the Proletarianization of the New Middle Class: Race, Value and the Division of Labour in the Copperbelt, 1946–1966’, *Journal of Southern African Studies*, 6, 2 (1980), 183–213.

…………., ‘Consciousness, Conflict and Proletarianization: An Assessment of the 1935 Mineworkers’ Strike on the Northern Rhodesian Copperbelt’, *Journal of Southern African Studies*, 4, 1 (1977), 31–51.

Phimister, I.R., ‘Corporate Profit and Race in Central African Copper Mining, 1946-1958’, *Business History Review*, 85, 4 (2011), 749–74.

Pratt, C., ‘Part Two: Why Federation was Supported’ in Leys, C., and Pratt, C. (eds.), A New Deal in Central Africa (New York: Frederick Praeger, 1960), 98–117.

Roberts, A.D., ‘Notes towards a Financial History of Copper Mining in Northern Rhodesia’, *Canadian Journal of African Studies*, 16, 2 (1982), 347–59.

Saasa, O.S., ‘Determinants of Zambia’s Policies towards the Mining Industry: 1964-1984’ in Osei-Hwedie, K. and Ndulo, M. (eds.), *Issues in Zambian Development* (Roxbury: Library of Congress, 1985), 355–72.

Sikamo, J., Mwanza, A. and Mweemba, C., ‘Copper mining in Zambia – history and future’, *The Journal of the Southern African Institute of Mining and Mettallurgy*, 116 (2016), 491–6.

Sklar, R.L., ‘Zambia’s Response to UDI’ in Tordoff, W. (ed.), *Politics in Zambia* (California: University of California Press, 1974), 320–62.

Slinn, P., ‘Commercial Concessions and Politics during the Colonial Period: The Role of the British South Africa Company in Northern Rhodesia 1890-1964’, *African Affairs*, 70, 281 (1971), 365–84.

…………., 'The Legacy of the British South Africa Company: The Historical Background' in Bostock, M., and Harvey, C.E. (eds.), *Economic Independence and Zambian Copper: A Case Study of Foreign Investment* (New York: Praeger Press, 1972), 365–85.

Sutcliffe, R.B., 'Zambia and the Strains of UDI', *Royal Institute of International Affairs*, 23, 12 (1967), 506–11.

Tembo, A., 'The Rhodes-Livingstone Institute and Interdisciplinary Research in Northern Rhodesia (Zambia), 1937–1964', *Strategic Review of Southern Africa*, 36, 1 (2014), 90–9.

Van Der Walt, L., 'The First Globalisation and Transnational Labour Activism: White Labourism, the 1WW, and the ICU, 1904-1934', *African Studies*, 66, 2–3 (2007), 223–51.

Vutukuri, V.S., and Singh, R.N., 'Mine Inundation: Case Histories', *Mine Water and the Environment*, 14, 9 (1995), 120–2.

2.3 Thesis/Dissertations, Notes and Papers

Chongo, C., 'Decolonising Southern Africa: A History of Zambia's Role in Zimbabwe's Liberation Struggle, 1964–1979' (PhD Thesis, University of Pretoria, Pretoria, 2015).

………....., 'The Impact of Rhodesia's Unilateral Declaration of Independence (UDI) on Zambia's Economic and Social-political Developments, 1965–1979' (MA Dissertation, University of Zambia, Lusaka, 2009).

Craig, J.R., 'State Enterprise and Privatisation in Zambia 1968–1998' (PhD Thesis, University of Leeds, Leeds, 1999).

Cunningham, S.J., 'Nationalisation and the Zambian Copper Mining Industry' (PhD Thesis, University of Edinburgh, Edinburgh, 1985).

Dandule, B., 'Women and Mineworkers' Struggles on the Zambian Copperbelt, 1926–1964' (MA Dissertation, University of Zambia, Lusaka, 2012).

Gwande, V.M., 'Foreign Capital, State and the Development of secondary in Southern Rhodesia, 1939–1956' (MA Thesis, University of the Free State, Bloemfontein, 2015).

Henderson, I., 'Labour and Politics in Northern Rhodesia, 1900-1953: A Study in the Limits of Colonial Power' (PhD Thesis, University of Edinburgh, Edinburgh, 1972).

Keeton, G., and Beer, M., 'MIASA Position on State Participation in Mining', Paper for the Mining Industries Association of Southern Africa (Johannesburg: MIASA, 2011).

Kraner, S., 'Causes of the Great Depression and the Great Financial Crisis' (PhD Thesis, Univerza Na Primorsken, Koper, 2010).

Larmer, M., 'Zambia's Mineworkers and Political Change, *1964–1991*' (PhD Thesis, University of Sheffield, England, 2004).

Locher, C., 'The Conflict with North Korea/North Korea as a source of Conflict: An analysis from a peace and conflict resolution studies perspective' (PhD Thesis, Fern Universitat Hagen, Berlin, 2008).

Lonoff, M., 'An Economic Overview of the World Copper Market and Computation of the Elasticity of Demand Facing Chile and Peru', Paper presented to the Seminaro Sobre Politics Commeciales Optimas, held from 22–24 June 1981.

Meller, P. and Simpasa, A.M., 'Role of Copper in the Chilean and Zambian Economies: Main Economic and Policy Issues', Global Development Network (GDN) Working Paper Series No. 43 (New Delhi: GDN, 2011).

Money, D., 'No matter how much or how little they have got, they cannot settle down: A social history of Europeans on the Zambian Copperbelt, 1926-1974' (PhD Thesis, University of Oxford, Oxford, 2016).

Mufinda, B., 'A History of Mining in Broken Hill/Kabwe: 1902–1929' (MA Thesis, University of the Free State, Bloemfontein, 2015).

Mususa, P.N., 'There Used Bo Be Order: Life on the Copperbelt After the Privatisation of the Zambia Consolidated Copper Mines' (PhD Thesis, University of Cape Town, Cape Town, 2014).

Phillips, J.G., 'Roan Antelope: Big Business in Central Africa, 1890-1953' (PhD Thesis, University of Cambridge, Cambridge, 2000).

Sakala, F., 'The Role of Women in Labour Stabilisation at Mufulira Mine, 1930–1964' (MA Dissertation, University of Zambia, Lusaka, 2001).

Santebe, M., 'The Colonial Government and the Great Depression in Northern Rhodesia: Administrative and Legislative Changes, 1929–1939' (MA Dissertation, University of Zambia, Lusaka, 2015).

Simutanyi, N., 'Copper Mining in Zambia: The Developmental Legacy of Privatisation', Institute for Security Studies (ISS) Paper Series No. 165 (Pretoria: ISS, 2008).

2.4 Internet Sources

Antonides, L.E. and Morgan, G.A., 'The Mineral Industry of Zambia', *Bureau of Mines: Minerals Yearbook Mineral Industries of Southern Africa 1989, Vol. 3 - Zambia* (Washington: US Bureau of Mines, 1989), 298–302. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1989v3Afr. Accessed on 13 September 2017.

…………., Morgan, G.A., Newman, H.R. and van Oss, H.E., 'The Mineral Industries of Southern Africa', *Bureau of Mines Minerals Yearbook 1988, Vol. 3 – Southern Africa* (Washington: US Bureau of Mines, 1988), 159–95. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1988v3. Accessed on 13 September 2017.

Bilbrey, J.H. and McDougal, D.T., 'Cobalt', *Minerals Yearbook, 1959*, Table 5, 363–73. http://images.library.wisc.edu/EcoNatRes/EFacs2/MineralsYearBk/MinYB1959v1/reference/econatres.minyb1959v1.jbilbrey.pdf. *Accessed on 25 January 2018.*

Bureau of Mines Minerals Yearbooks – Metals and Minerals – Cobalt, 1954–59. https://minerals.usgs.gov/minerals/pubs/usbmmyb.html. Accessed on 30 March 2017.

Bureau of Mines Minerals Yearbooks – Metals and Minerals – Cobalt, 1970–80. https://minerals.usgs.gov/minerals/pubs/usbmmyb.html. Accessed on 4 April 2017.

Bureau of Mines Minerals Yearbooks – Metals and Minerals – Copper, 1982–91. https://minerals.usgs.gov/minerals/pubs/usbmmyb.html. Accessed 25 September 2017.

Davis, H.W. and Buck, C.H., 'Cobalt', *Minerals Yearbook Review of 1954*, 349–62. http://images.library.wisc.edu/EcoNatRes/EFacs2/MineralsYearBk/MinYB1954v1/reference/econatres.minyb1954v1.hdavis.pdf. Accessed on 6 April 2017.

Davis, H.W., ‘Cobalt’, *Minerals Yearbook: Review of 1941*, 623–26. http://images.library.wisc.edu/EcoNatRes/EFacs2/MineralsYearBk/MinYB1941/reference/econatres.minyb1941.hdavis02.pdf. Accessed on 6 April 2017.

…………., ‘Nickel and Cobalt’, *Minerals Yearbook: Review of 1940*, 597–608. http://images.library.wisc.edu/EcoNatRes/EFacs2/MineralsYearBk/MinYB1940/reference/econatres.minyb1940.hdavis.pdf. Accessed on 6 April 2017.

Glover, T.O., ‘The Mineral Industry of Zambia’, *Bureau of Mines Minerals Yearbook Area Reports: International 1984, Vol. 3 – Zambia* (Washington: US Bureau of Mines, 1984), 925–29. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1984v3. Accessed on 21 October 2017.

…………., ‘The Mineral Industry of Zambia’, *Bureau of Mines Minerals Yearbook Area Reports: International 1982, Vol. 3 – Zambia* (Washington: US Bureau of Mines, 1982), 1041–49. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1982v3. Accessed on 13 September 2017.

…………., ‘The Mineral Industry of Zambia’, *Bureau of Mines Minerals Yearbook Area Reports: International 1985, vol. 3 – Zambia* (Washington: US Bureau of Mines, 1985), 975–79. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1985v3. Accessed on 13 September 2017.

…………., ‘The Mineral Industry of Zambia’, *Bureau of Mines Minerals Yearbook Area Reports: International 1986, Vol. 3 – Zambia* (Washington: US Bureau of Mines, 1986), 965–70. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatRes-idx?type=header&id=EcoNatRes.MinYB1986v3. Accessed on 13 September 2017.

…………., ‘The Mineral Industry of Zambia’, *Bureau of Mines Minerals yearbook area reports: International 1987, vol. 3 – Zambia* (Washington: US Bureau of Mines, 1987), 977–82. http://digicoll.library.wisc.edu/cgibin/EcoNatRes/EcoNatResidx?type=article&did=EcoNatRes.MinYB1987v3.TGlover6&id=EcoNatRes.MinYB1987v3&isize=M. Accessed on 25 September 2017.

Jolly, J.W. and Edelstein, D.L., ‘Copper’, *Bureau of Mines Minerals Yearbook 1988, Vol. 1 1988* (Washington: US Bureau of Mines, 1988), 309–64. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatResidx?type=article&did=EcoNatRes.MinYB1988v1.JJolly&id=EcoNatRes.MinYB1988v1&isize=M. Accessed on 25 September 2017.

…………., ‘Copper’, *Bureau of Mines Minerals yearbook metals and minerals 1982, vol. 1* (Washington: US Bureau of Mines, 1982), 271–308. http://digicoll.library.wisc.edu/cgi-bin/EcoNatRes/EcoNatResidx?type=article&did=EcoNatRes.MinYB1982v1.JJolly&id=EcoNatRes.MinYB1982v1&isize=M. Accessed on 25 September 2017.

Kirk, W.S., ‘Cobalt’, *Bureau of Mines Minerals Yearbook metals and minerals 1984, Vol. 1 – Cobalt* (Washington: US Bureau of Mines, 1984), 269–77. http://digicoll.library.wisc.edu/cgibin/EcoNatRes/EcoNatResidx?id=EcoNatRes.MinYB1984v1. Accessed on 15 September 17.

Kooroshy, J. and Preston F., ‘Cartels and Competition in Minerals Markets: Challenges for Global Governance’, Research Paper (London: Royal Institute of International Affairs, 2014. https://www.chathamhouse.org/sites/files/chathamhouse/field/field_document/20141219CartelsCompetitionMineralsMarketsKooroshyPrestonBradleyFinal.pdf. Accessed 13 October 2017.

Map of Zambia in Southern Africa from https://www.pinterest.co.uk/americaikos/zambia/. Accessed on 26 October 2017.

Trott, A., Holmberg, S. and Wong, W., ‘Organisation of Petroleum Exporting Countries’, EEP Lecture Five Notes (Berkeley: University of California, 2009). https://are.berkeley.edu/~sberto/lecture5_OPEC_Project.pdf. Accessed on 25 September 2017.