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# The Political Economy of the Coal Industry in Mozambique

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**University of the Witwatersrand**

**Faculty of Commerce, Law and Management**

**Wits School of Governance**

# The Political Economy of the Coal Industry in Mozambique

**Tomás Mário Selemane**

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*A thesis submitted to the Wits School of Governance, Faculty of Commerce, Law and Management, University of the Witwatersrand, in fulfilment of the requirements for the degree of Doctor of Philosophy*

**Supervisor:** Dr. Caitlin Blaser Mapitsa

February 2024

# ABSTRACT

Tete Province's coal industry has been at the core of national economic and political debates in Mozambique since its boom in 2007 when the Brazilian giant Vale signed a 35-year contract with the government of Mozambique. The debates ranged from positive to negative expectations created at local and national levels regarding the potential benefits that the extraction of coal would bring. Such contradictory expectations grew when, after Vale, another mining giant Rio Tinto arrived in Tete through the purchase of Riversdale's assets. With two big multinational coal companies in town, Tete seemed to be a province kicking away poverty.

After some years, the reality of the mining projects showed up the various angles of the coal industry, from how problematic the resettlement of peasants was to the loss of houses and arable land – a situation of accumulation by dispossession. There were unmet expectations of business opportunities for local and national enterprises. Moreover, there were unmet expectations of massive financial contributions by the coal mining companies to the local and national economy. The expected "development" has not come to Tete, although a handful of Mozambican companies have benefited from the coal industry, thus creating uneven development.

This thesis tackles the uneven development created in Tete by interrogating how socio-economic and environmental aspects of the Tete Province coal industry contribute to Mozambique's uneven development. Using the political economy analysis framework, the thesis investigates the particular underpinning reasons why Tete's coal industry has not transformed the local and national economies.

After a decade of operations, the actors in Tete changed. Rio Tinto departed leaving its assets with the International Coal Ventures Private Limited (ICVL). Vulcan overtook Vale. Indian companies currently dominate Tete coal mining. Despite the change of actors, the coalmine projects in Tete continue to be problematic: a source of accumulation by dispossession and a driver of uneven development.

**Keywords:** Tete's coalmines; political economy, extractive industry, accumulation by dispossession, uneven development, Mozambique.

# DECLARATION

I, Tomás Mário Selemane, hereby declare that this thesis is my unaided work except where due recognition has been given. The thesis is submitted for the degree of Doctor of Philosophy at the University of the Witwatersrand, Johannesburg, in the Republic of South Africa. It has not been submitted in part or full for any other degree or to any other university.

*Tomás Mário Selemane*



**Date:** 21 February 2024

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I was accepted at the Wits School of Governance on 1 November 2017. I took the 2018 Social Theory course. In 2019, I was accepted onto the PhD programme. Since then I have gone through a long way to complete this thesis. My preliminary discussions to enroll at a doctoral programme took place with my long-time friend Prof. Patrick Bond. He accepted to assist me as my supervisor until 2020 when he left Wits University for the University of Western Cape. Many thanks to Patrick Bond!

Caught up in the middle of the Covid-19 pandemic and its restrictions, I continued my research under the supervision of Prof. Erin McCandless who until then had acted as co-supervisor with Prof. Patrick Bond. Sometime later, Prof. McCandless also left Wits and I continued my journey with the diligent Dr. Caitlin Mapitsa until the completion of this thesis. Dr Mapitsa guided me with passion and patience. Many thanks Dr Mapitsa!

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Last but not least, many thanks to my friend Neide Pinto who assisted me with the formatting of this thesis. Many thanks!

## DEDICATION

To my children:
Noreen, Karen, Sarah, and Sarosh

# LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| **CGE** | *Conta Geral do Estado* (General State Account) |
| **CIP** | Centre for Public Integrity |
| **CSOs** | Civil society organisation |
| **CSR** | Corporate social responsibility |
| **DUAT** | *Direito de Uso e Aproveitamento de Terra* |
| **EITI** | Extractive Industries Transparency Initiative |
| **EVI** | Environmental Vulnerability Index |
| **EXIs** | Extractive industries |
| **FDI** | Foreign direct investment |
| **FIPAG** | *Fundo de Investimento e Património do Abastecimento de Água* |
| **FRELIMO** | *Frente de Libertação de Moçambique* |
| **GBS** | General budget support |
| **GDP** | Gross domestic product |
| **GoM** | Government of Mozambique |
| **HAEI** | High Authority of Extractive Industr |
| **HDI** | Human Development Index |
| **ICVL** | International Coal Ventures Pvt. Ltd |
| **IDEx** | *Índice de dependência externa* (External dependence index) |
| **IESE** | *Instituto de Estudos Económicos e Sociais* (Institute of Social and Economic Studies) |
| **IMF** | International Monetary Fund |
| **INE** | *Instituto Nacional de Estatísticas* (National Institute of Statistics) |
| **JA!** | *Justiça Ambiental* |
| **MDI** | Multidimensional Poverty Index |
| **MIREME** | *Ministério dos Recursos Minerais e Energia (Ministry of Mineral Resources and Energy)* |
| **MITADER** | *Ministério da Terra, Ambiente e Desenvolvimento Rural (Ministry of Land, Enviornment and Rural Development)* |
| **NDI** | National direct investment |

| | |
|---|---|
| **NGO** | Non-governmental organisation |
| **ODA** | Official development assistance |
| **OMR** | *Observatório do Meio Rural* (Observatory of Rural Environment) |
| **PEA** | Political economy analysis |
| **PESOD** | *Plano Económico e Social Distrital* (District Economic and Social Plan) |
| **PWYP** | Publish What You Pay |
| **RENAMO** | *Resistência Nacional Moçambicana* |
| **ROAPE** | Review of African Political Economy |
| **SAP** | Structural Adjustment Programme |
| **SETSAN** | *Secretariado Técnico* |
| **SOAS** | School of Oriental and African Studies |
| **SSA** | Sub-Saharan Africa |
| **SWF** | Sovereign Wealth Fund |
| **TA** | *Tribunal Administrativo* |
| **UNCTAD** | United Nations Conference on Trade and Development |
| **USA** | United States of America |

## TABLE OF CONTENTS

ABSTRACT ..... ii
DECLARATION ..... iii
ACKNOWLEDGEMENTS ..... iv
DEDICATION ..... vi
LIST OF ACRONYMS AND ABBREVIATIONS ..... vii
PART I ..... xiv
INTRODUCTION AND BACKGROUND ..... 1
**CHAPTER 1 – THESIS INTRODUCTION** ..... 2
1 Introduction and background ..... 2
1.1 Research problem and research questions ..... 8
1.1.1 Research problem ..... 8
1.1.2. Research questions ..... 10
1.2 Knowledge gap and justification of the study ..... 10
1.2.1 Knowledge gap ..... 10
1.2.2 Justification of the study ..... 11
1.3 Purpose statement ..... 13
1.4 Structure of the thesis ..... 13
1.5 Understanding the trajectory of Mozambique's coal industry: 1975-2023 ..... 15
1.5.1 Tete as a coalmine province ..... 15
1.6 The legal and institutional framework for the coal industry ..... 22
1.6.1 The Mozambique coal industry institutional framework ..... 33
1.7 Mozambique's adhesion to International Initiatives: PWYP, EITI and the Kimberley Process ..... 36
1.8 Conclusion: juggling reforms and whither transparency ..... 39
PART II ..... 41
LITERATURE REVIEW, CONCEPTUAL, THEORETICAL FRAMEWORK AND METHODOLOGY ..... 41
**CHAPTER 2 – UNPACKING THE LITERATURE REVIEW** ..... 42
2. Theoretical and conceptual framework ..... 42
2.0. Introduction ..... 42

2.1. Abundance and scarcity in natural resources economics ..... 44
2.1.1. What is natural resource abundance? ..... 44
2.2. From primitive capital accumulation to accumulation by dispossession ..... 48
2.2.1. Primitive capital accumulation ..... 48
2.2.2. Accumulation by dispossession: between applauds and critiques ..... 51
2.3. Dependency theory: evolution and prospects ..... 57
2.4. Foreign aid, aid dependence, and minerals dependence ..... 61
2.5. The extractive industry: 'Dutch Disease' and 'Resource Curse' Models ..... 65
2.6. The Dutch Disease and Resource Curse Models ..... 66
2.7. The intellectual collapse of the Dutch disease and resource curse models ..... 67
2.7.1. Questioning the Dutch Disease model ..... 67
2.8. Political Economy Analysis (PEA) in perspective ..... 70
2.9. Estimating Mozambique's degree of dependency ..... 71
2.11. Conceptual Framework ..... 87
2.12. Conclusion ..... 89
**CHAPTER 3 – MOZAMBIQUE'S UNEVEN DEVELOPMENT AND COMPARISON WITH NEIGHBOURING COUNTRIES** ..... 90
3.0. Introduction ..... 90
3.1. Assessing Mozambique's uneven development ..... 91
3.1.1. Multiparty democracy: 1994-2023 ..... 93
3.1.2. Corruption in Mozambique ..... 97
3.1.3. Freedom of speech as a governance condiment ..... 102
3.1.4. A look into Mozambique's economic performance ..... 105
3.1.5. Population rapid growth ..... 108
3.1.6. Human Development Index ..... 109
3.1.7. Education ..... 110
3.2. Comparison between Mozambique's coal industry and the neighbouring countries ..... 111
3.2.1. The Malawian case – the Salima Solar Project ..... 111
3.2.2. The South African case – coal mining in Witbank, Mpumalanga ..... 118
3.3. Conclusion ..... 121
**CHAPTER 4 - DISPLAYING AND EXPLAINING THE METHODOLOGY AND METHODS** ..... 122
4.0. Introduction ..... 122

4.1. Epistemology and Ontology ..... 122
4.2. Research method: qualitative research ..... 124
4.3. Case study design ..... 127
4.4. Target population and sampling ..... 127
4.5. Data collection and data analysis ..... 129
4.5.1. Data collection ..... 129
4.5.2. Data analysis: qualitative content analysis and thematic analysis ..... 132
4.6. Background to the study site and case study ..... 133
4.6.1. Vale's Moatize coal mining ..... 133
4.6.2. ICVL's Benga coal mining ..... 134
4.7. Ethical considerations ..... 135
4.8. Researcher's positionality ..... 135
4.9. Validity of the research ..... 137
4.10 Relationship between questions, theory, methods and outcomes ..... 137
4.11. Conclusion ..... 139
PART III ..... 140
PRESENTATION AND ANALYSIS OF ..... 140
FINDINGS AND CONCLUSIONS ..... 140
**CHAPTER 5 – PROBLEMATIZING RESETTLEMENT AS A PROCESS OF CAPITAL ACCUMULATION** ..... 141
5.0 Introduction ..... 141
5.1 Creation of space for the coal mines to operate in Tete ..... 141
5.2 Resettlement as an opportunity for local "development"? ..... 143
5.2.1 Lack of dialogue between companies, communities and state representatives ..... 145
5.2.2 Unrealistic and unmet promises by Vale and Rio Tinto ..... 148
5.2.3. Lack of improvement of people's living conditions ..... 152
5.2.4. Abandonment of the resettlement villages ..... 153
5.3. Civil society organisations fight against unfair resettlements ..... 155
5.4. Government responses to the resettlements failures ..... 156
5.4.1. The approval of the resettlement decree in 2012 ..... 156
5.4.2. The approval of the Corporate Social Responsibility policy in 2014 ..... 159

5.4.3. The government-led national conference on resettlements held in 2016 in Tete 160
5.5. Local participation in mining projects: between consultation and negotiation ..... 163
5.6. Conclusion ..... 164
**CHAPTER 6 – RECLAIMING TETE'S DEVELOPMENT THROUGH COAL-BASED LINKAGES** ..... 166
6.0. Introduction ..... 166
6.1. The linkages framework ..... 166
6.2. Analysing the linkages established in Tete's coal projects ..... 168
6.2.1. Backward linkages: a lost opportunity for Mozambican enterprises? ..... 169
6.2.2. Spatial linkages: making Tete an enclave ..... 173
Table 17: List of business interests in the Beira Development Corridor ..... 182
6.2.3. Knowledge linkages ..... 188
6.2.4. Forward linkages ..... 193
6.2.5. Fiscal linkages ..... 196
6.3. Conclusion ..... 201
**CHAPTER 7: INQUIRING INTO THE CONTRIBUTIONS OF THE COAL INDUSTRY TO THE NATIONAL ECONOMY** ..... 202
7.0. Introduction ..... 202
7.1. Financial contributions of Tete's coal mines to Mozambican economy ..... 204
7.2. Compensation for loss of the previous source of income ..... 216
7.3. Corporate social responsibility - Vale/Vulcan and Rio Tinto/ICVL ..... 222
7.4. Conclusion ..... 224
**CHAPTER 8 – ASSESSING THE ENVIRONMENTAL EFFECTS OF TETE'S COALMINES** ..... 225
8.0. Introduction ..... 225
8.1. Environmental dynamics in Mozambique ..... 226
8.2. Assessing the environmental effects of coal mining in Tete ..... 227
8.2.1. Description of the morphology of soils and coal in Moatize ..... 227
8.2.2. The local communities are exposed to the coal pollution in Tete ..... 229
8.3. Environmental and minerals inspections ..... 232
8.4. Conclusion ..... 238
**CHAPTER 9 – CONCLUSION: MY CONTRIBUTION TO KNOWLEDGE** ..... 240

Bibliography ..... 244
Annexes ..... 259
Annex 1: Ethics Protocol ..... 259
Annex 2: Confirmation letter from WSG to potential interviewees ..... 260
Annex 3: Consent letter from the Ministry of Mineral Resources and Energy – MIREME ..... 261
Annex 4: Consent letter from the Bar Association ..... 262
Annex 5: Consent letter from the Catholic University of Mozambique ..... 263
Annex 6: Consent letter from CSO based in Tete - AAAJC ..... 264
Annex 7: Consent letter from University of Cambridge ..... 265
Annex 8: Consent letter from Federal University of Rio de Janeiro ..... 266
Annex 9: Consent letter from the Brazilian Institute of International Relations ..... 267
Annex 10: Consent letter from VALE ..... 268
Annex 11: Participant Information Sheet ..... 269
Annex 12: Research Instruments ..... 270

## List of figures

Figure 1: Mozambique's endowment of mineral resources ..... 8
Figure 2: Map of Tete province with mining concessions ..... 15
Figure 3: Map of sites of original and resettled villages in Tete Province ..... 20
Figure 4: The conceptual framework of the political economy of the coal industry in Mozambique ..... 88
Figure 5: Mozambique's trend in the corruption Index 2014-2022 ..... 97
Figure 6: Mozambique population by age group, 2000-2035 ..... 108
Figure 7: Mozambique's Human Development Index – 2010-2021 ..... 109
Figure 8: Pupils enrolment in Mozambique 2011-2021 ..... 110
Figure 9: Establishing the seminal resource linkage ..... 167
Figure 10: Business interests in the Nacala Corridor ..... 176
Figure 11: Tete's coal potential linkages ..... 195
Figure 12: Mozambique GDP with contribution of the extractive industry ..... 202
Figure 13: Coal versus extractive industry revenue from 2011 to 2020 ..... 204
Figure 14: Coal revenue in 2011 Figure 15: Coal revenue in 2017 ..... 204
Figure 16: Occurrence of floods and number of affected people: 1980-2022 ..... 226
Figure 17: Occurrence of cyclones and number of affected people: 1980-2022 ..... 226
Figure 18: Occurrence of droughts and number of affected people: 1980-2022 ..... 227
Figure 19: Summary of environmental effects of coalmines in Tete ..... 229

## List of tables

Table 1: Companies extracting coal in Tete province ..... 21
Table 2: Types of mining titles in the Mozambican context ..... 24
Table 3: Summary of Mozambican legal framework for mining ..... 25
Table 4: Rates paid in the mining sector ..... 30
Table 5: Types of mining licenses ..... 31
Table 6: External Dependency Index - Scroing table for each sub-index and variable ..... 81
Table 7: IDEx Scales and Scoring ..... 83
Table 8: IDEx classification according to the points assigned to the index ..... 85
Table 9: IDEx Mozambique, 2015 – 2021 ..... 86
Table 10: Simulations of provincial GDPs, using ENDE 2023-2043 growth rates ..... 106
Table 11: Growth rates of GDP per capita with reduction of regional inequalities ..... 107
Table 12: Number of interviewees in the fieldwork ..... 126
Table 13: Codification and categorization of interviewees ..... 130
Table 14: Questions, sub-questions, theory, methods and outcomes of the research ..... 138
Table 15: Summary of resettlements in Moatize district ..... 143
Table 16: List of protests undertaken in Moatize coal mines ..... 150
Table 17: Goods and services providers to the coal industry in Tete ..... 171
Table 18: List of business interests in the Beira Development Corridor ..... 182
Table 19: International experience on spatial linkages ..... 186
Table 20: Teaching institutions and the new courses started to respond to mining companies' skilled labour demand ..... 191
Table 21: Summary of projects financed with the 2.75 per cent ..... 209

# PART I

# INTRODUCTION AND BACKGROUND

# CHAPTER 1 – THESIS INTRODUCTION

## 1 Introduction and background

The development of coal mines in Tete Province in the early 2000s (a province located in the central region of Mozambique, at the border with Malawi, Zambia and Zimbabwe) inaugurated a new era for the Mozambican central province previously known for its extraordinarily high temperatures, dried and salted fish (popularly known as *chicoa),* and goat meat. At national level, the extractive industry has served as a core driver of Mozambique's development for the past 20 years, shifting the country's dependence on aid to a dependence on minerals and gas dependence. This shift has come with increasing socio-political instability, trade imbalances, increasing rates of unemployment, malnutrition and environmental damage.

In fact, after independence from Portugal in 1975, Mozambique has never enjoyed a stable political and economic situation. As documented (Hanlon, Forthcoming), "Mozambique came to independence in 1975 facing economic chaos. Frelimo and President Samora Machel were nominally socialist, but their image of socialism was Swedish social democracy. Health, education and rented property were nationalized, but Frelimo tried not to interfere in economic sectors, and few companies were nationalized."

Just two years after independence, the country entered into a civil war in 1977. The civil war had both internal and external motivators. As documented in the book *Mozambique at a fork in the road: an institutional diagnostic* (Cruz et al., 2023):

> Mozambique's independence posed threats to Rhodesia and South Africa, which feared a communist onslaught. They therefore supported and financed Renamo (the Mozambican National Resistance, originally designated MNR), which opposed Frelimo's socialist orientation. Renamo gathered Frelimo dissidents under the leadership of André Matsangaíssa (1977–79) and Afonso Dhlakama (1979–2018). The Renamo leadership came from the centre of Mozambique (Manica and Sofala provinces), but the movement was also constituted by members from elsewhere in the country. Frelimo has over the years pursued a policy of having

> representatives from all relevant ethnic groups in high positions in the party, and in the government, yet prominent representatives from the centre and the north have felt ostracized (p.53).

This thesis investigates 'how' and 'why', instead of promoting wealth, the coal industry is proving harmful to people's livelihoods in Tete province, jeopardizing domestic businesses, polluting the environment (water, air and soil), and undermining the integrity of the Mozambican state.

Using classical political economy to construct the analytical framework, this study seeks to understand the contradiction posed by the co-existence of mineral abundance (in this case coal) and a lack of socio-economic improvement in the country. The research investigates the socio-economic, political, and environmental factors that shape Mozambique's development path, given the context of primitive capital 'accumulation by dispossession' and excessive resource dependence, particularly on coal (Castel-Branco, 2014; Bond, 2019; Hanlon, 2017; Harvey, 2003; Luxemburg, 2015; Macuane et al., 2017; Rosser, 2006).

### *Mozambique's socio-political background*

On 9 October 2024, Mozambicans will be called to participate in the seventh presidential, legislative and provincial elections following prior polls in 1994, 1999, 2004, 2009 and 2014 and 2019. The 2019 elections were among the most violent in recent years, as around 40 people died during the campaign. Among the political causes of violence, were numerous cases of ballot-box stuffing and other irregularities. As a result, none of the opposition parties accepted the results. The pattern of conflict that has occurred after each election has led to certain changes in the electoral law, including politicization of the National Elections Commission (Hanlon & Fox, 2006; Nuvunga & Salih, 2010; Nuvunga, 2017; Viig Jørgensen & Braathen, 1998;). After the 2014 election, violence resulted in more radical political-administrative changes, including changing the system of provincial governor appointments by the president of the republic to a new system where the provincial governors are elected.

The three most urgent economic and socio-political problems Mozambique is currently facing are: political instability as a result of the allegations of the elections having been

rigged by Frelimo's ruling party; public debt crisis (largely due to corrupt Swiss-Russian bank loans); and military attacks by Islamic extremists in the northern province of Cabo Delgado, following an estimated US$130 billion oil and gas discovery.

Other long-standing problems are about uncompensated resource depletion, ongoing political corruption, and vulnerability to extreme weather events. The latter included floods and two cyclones in 2019, in addition to the 2016 and 2018 droughts attributed to climate change. Mozambique's fragility in this entire context arises from two main roots: the uneven socio-political trajectory the country has followed since its independence in 1975; and the late-1980s shift from socialism to capitalism, particularly in the context of the country's subsequent minerals bonanza.

***Political instability and terrorism in Mozambique***

Mozambique's political instability comes from the troubled socio-political trajectory that was heavily marked by violence which started in 1977, just two years after the country gained independence from Portugal on 25 June 1975. Immediately after independence, the eruption of civil war killed around one million Mozambicans (8 per cent of the population at the time) and damage exceeded US$20 billion (Hanlon, 2003). The war resulted from an internal contestation of the liberation movement's FRELIMO Marxist-Leninist regime by the then guerrilla movement RENAMO – currently the biggest opposition party – that was initially backed by the apartheid South Africa and the Rhodesian Ian Smith regime.

The support given by the Rhodesians and South Africans to RENAMO against FRELIMO made Mozambique a formidable battlefield for the Cold War. Mozambique was, ideologically, a Swedish-style socialist government at the time, albeit under conditions of widespread poverty and extreme colonial-era sabotage of the country's majority (Hanlon, 2017). The country's main energy source, the Cahora Bassa Dam on the Zambezi River, was not controlled by the Maputo government, but by Portugal's business interests in the *Companhia Hidroeléctrica de Cahora Bassa* (HCB).

At the close of the civil war in 1992, the path of violence was not over. The subsequent Rome Peace Agreement in 1994 was not accompanied by a national reconciliation

plan amongst the Mozambican people themselves. As pointed out by various authors e.g., Feijó & Maquenzi (2019); Israel (2019); Macuane & Muianga (2020), besides the post-electoral conflicts, Mozambican society has since been marked by ongoing episodes of violence. Some episodes of violence are related to community resistance to foreign-funded projects in agriculture, forest plantations or mining, including the Tete coal fields.

Other episodes of violence have involved popular contestation against government programmes in public health; for example, government initiatives to combat cholera using chlorine in the rural areas of northern Mozambique have been widely sabotaged (Serra, 2003). However, the current political instability is fostered by the allegations of fraud in all the past elections. In fact, since the first multiparty elections in 1994 Mozambique has faced post-electoral conflicts due to allegations of fraud because Frelimo's ruling party is constantly accused of rigging the elections.

The 2023 municipal elections followed the same trend of lack of credibility due to confirmed widespread fraud, involvement of police in the electoral operations, detention of opposition representatives, and intimidation of voters as documented by the Centre for Public Integrity (CIP) in the Bulletin "2023-2024 Elections" (Hanlon, 2023).

***Terrorism in Northern Mozambique***

The military attacks in Cabo Delgado are the third major problem that Mozambique currently faces. The province hosts the biggest extractive industry project in the country: the gas fields in the Rovuma basin where big oil and gas multinationals such as TOTAL, ENI, Mistui and Chevron are operating. Although Cabo Delgado Province is known for its long history of tribal and religious violence, the new wave of violence involving armed attacks on civilians, police stations, military facilities and public infrastructure represents a new trend (Feijó & Maquenzi, 2019a; Feijó & Maquenzi, 2019b; Israel, 2019).

Before the Cabo Delgado gas bonanza, the South African/USA firm SASOL was extracting gas from the southern province of Inhambane. Since 2004, that gas has

been replacing South African coal, which feeds into a liquid petroleum plant in Secunda, in Mpumalanga, South Africa. That facility is considered the single greatest point source of CO2 emissions in the world. Although protests against SASOL have occurred as a result of the Mozambican people's angry reaction to South African citizens' xenophobia (forcing some Mozambican skilled artisanal workers to return home, for example in 2015), there has never been armed violence in this gas field. What factors make one gas site violent and another site less so with minor worker and community protests is a matter to be studied separately, but it mainly relates to geographical proximity to the Islamic coastal regions of neighbouring Tanzania.

***How did Mozambique shift from socialism to capitalism?***

According to Joseph Hanlon's accounts, at the end of the cold war, in an attempt to *rapidly* turn [Mozambican] communists into capitalists, the West, led by the IMF, imposed "shock therapy" on the former socialist countries – including Mozambique. They targeted senior party people with access to resources, which could be quickly mobilised for the benefit of western banks and transnational corporations. Those people became rich and powerful and came to be called oligarchs (Hanlon, Forthcoming).

Mozambique's problematic transition from socialism to capitalism is thoroughly documented in Marc Wuyts's 1986 doctoral thesis "Money and Planning for Socialist Transition: the Mozambican Experience" (Wuyts, 1986) in the following terms:

> This period of transition was characterized by an intense struggle against economic sabotage. Production and commercial enterprises were de facto taken over not because the state had developed the capacity to run them efficiently, but because the state was *compelled* to intervene. The task of developing the capacity to manage these enterprises could not yet be taken on now (p. 73).

Hans Abrahamsson and Anders Nilsson, two Swedish authors who worked for many years in Mozambique after independence in a research and policy advisory capacity, published a widely cited book *Mozambique: the troubled transition from socialist construction to free market capitalism* (Abrahamsson & Nilsson, 1995) in which they argue that Mozambique's shift from socialism to capitalism was "a transition in turmoil."

Mozambican political economist Carlos Nuno Castel-Branco (Castel-Branco, 2017a) provides an account of the transition of Armando Guebuza, who was a Marxist political commissar in the 1980s. However, when he became President of Mozambique during the period 2004-2014, he told a party meeting in the capital Maputo about "the need for the party to build a national capitalist class by reorienting national policy to promote national capitalist accumulation". According to Castel-Branco's accounts, the shift was possible thanks to six factors. Firstly, both colonialism and the government of post-independence Mozambique limited and structured the development of national capitalist classes, which resulted in the underdevelopment of the national bourgeoisie.

Secondly, the historical colonial heritage, class formation and class tensions (including the formation of capitalist and proletarian classes) developed along racial and ethnic lines in the sense that only white and Indian Mozambicans had access to the capital accumulation processes, while black Mozambicans were left out.

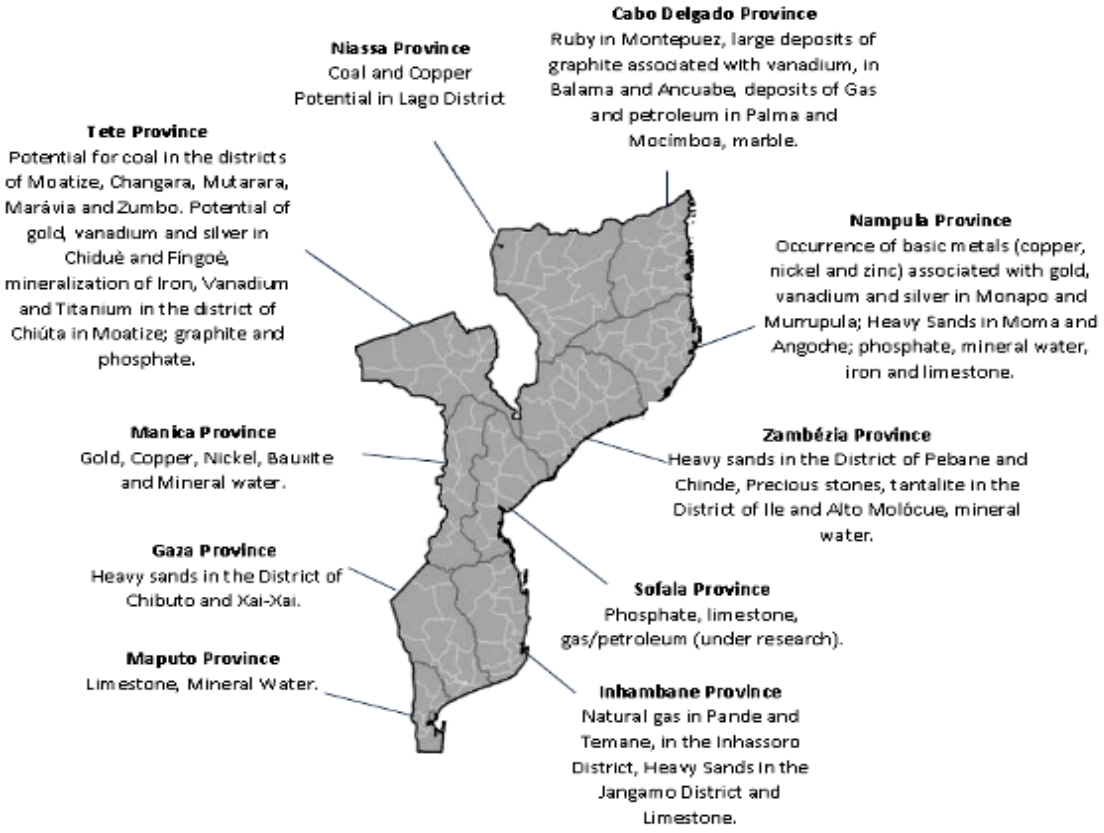
Thirdly, the analysis of the process of primitive capital accumulation was limited to one of the factors of the equation, the formation of the national capitalist bourgeoisie (Castel-Branco, 2017c). Fourthly, the focus of the analysis was placed on material resources that could be used as a springboard to form the national bourgeoisie, with little thought given to such vital factors as the formation and sustenance of the social reproduction of the labour force that determines the forms of organization and articulation of production and economy. Fifthly, there is the recognition of the emerging national capitalist bourgeoisie as representing the highest aspirations of the nation, nationalism and the 'African renaissance', which should and could have an organically separate existence from global capitalism, even if historically dependent on it and associated with it. The sixth, and most relevant factor, was the need to expropriate the state from its control of natural resources, business, technical skills, and a skilled workforce (Castel-Branco, 2014).

### *Mozambique's endowment of natural resources*

Various sources from government and international organisations depict Mozambique as one of the richest countries in terms of endowment of natural resource reserves. The below map presents the different natural resources each Mozambican province

possesses as of the year 2018. From natural gas to iron ore to rubies and gold, the country is a conglomerate of non-renewable natural resources as presented in figure 1 below:

**Figure 1: Mozambique's endowment of mineral resources**




Source: Deloitte & EITI Mozambique (2018)

## 1.1 Research problem and research questions

### 1.1.1 Research problem

The map presented in figure 1 shows that Mozambique possesses almost all types of natural resources and minerals. However, the country faces a paradox of co-existence of massive coal exploitation and exports and persistent levels of poverty and unemployment. The logical expectation would be an improvement of the living standards because of coal extraction and exports. However, coal and gas exploitation has not brought development.

Mozambique had been one of the biggest recipients of foreign aid from 1992 to 2016 and one of the fastest growing economies (gross domestic product – GDP growing at 7.5 per cent per annum). Moreover, from 2000 to 2016 Mozambique beacame the current emerging coal and gas giant and a heavily indebted country (Castel-Branco, 2017a; Castel-Branco, 2017b; De Renzio & Hanlon, 2007; Hanlon, 2017).

As documented by Patrick Bond (Bond, 2022), there are three long-standing problems related to (i) economically-uncompensated resource depletion; (ii) political corruption; and (iii) vulnerability to extreme weather events such as floods and two cyclones in 2019 – Cyclone Idai that devastated the central region and Beira city, and Cyclone Kenneth that affected the northern province of Cabo Delgado. In addition, there were droughts in the southern provinces of Inhambane, Gaza and Maputo attributable to climate change.

Kerlinger (1973) cited by Marczyk, De Matteo, & Festinger (2005), defines three criteria for a good research problem, and this problem satisfies all those criteria. First, the problem must describe the relationship between two variables: in this case extraction of coal and socio-economic development. Second, the research problem should translate into a question. Third, the research problem must be capable of being tested empirically or theoretically: in this specific case, the relationship between coalmines and the well-being of people is testable both theoretically and empirically throughout this thesis.

Similarly, Kebritchi (2017) deems a research problem as appropriate “when it is supported by the literature, and considered significant, timely, novel, specific, and researchable”, which is the case in this study.

The research problem can only be properly tackled by interrogating it. To do so, in this thesis I ask one main question and two intertwined questions.

### 1.1.2. Research questions

This research has been driven by the following main question: What are the socio-economic and political factors and conditions of the coal industry that shape Mozambique's uneven development trajectory?

Building upon certain researchers (Bond, 2018; Collier, 2005; Collier & Hoeffler, 2004; Hirschman, 1968; Hotelling, 1931), this study unpacks and responds to the core question by addressing two intertwined sub-questions:

i How do socio-economic factors of the Tete province coal industry contribute to Mozambique's uneven development?
ii And similarly, how do environmental factors of the Tete province coal industry contribute to Mozambique's uneven development?

## 1.2 Knowledge gap and justification of the study

### 1.2.1 Knowledge gap

This study intends to fulfil a remarkable knowledge gap in terms of the combination of socio-political and environmental factors that affect the development trajectory of the Mozambican economy, using the coal industry as an illustration. That combination is theoretically grounded in the long-established scholarly tradition of classic political economy with four groups of literature.

First, during the time of the predominance of aid dependence (1992-2015), when above 60 per cent of Mozambican state budget came from different modalities of foreign aid (De Renzio & Hanlon, 2007b), a significant number of studies on Mozambique's development researched the effects of the shift from socialism to capitalism (Abrahamsson & Nilsson, 1995; Castel-Branco, 2010; Castel-Branco, 2014; De Renzio, 2011; De Renzio & Hanlon, 2007; Saul, 1991, 2011; Wuyts, 1996).

A second distinguished body of literature focuses on development outcomes (Castel-Branco, 2015; Hanlon, 2004; Hanlon & Mosse, 2010; Lawson & De Renzio, 2009; Stasavage, 1999), while a third remarkable group of literature has investigated the effects of Mozambique's mining boom (Castel-Branco, 2016; Castel-Branco, Langa,

& Mandlate, 2015; Macuane et al., 2017; Mosca & Selemane, 2011; Resenfeld, 2012; Selemane, 2009).

A fourth notable body of research has focused on labour, social conflicts, resettlements, pollution and ecological damage, as well as the corporate social responsibility and human rights violations registered in the mining sites (Cambaza, 2009; Mosca & Selemane, 2012; Varia, 2013; Kabemba & Nhancale, 2012; Selemane, 2016; Marshall, 2017; Osório & Silva, 2017; Lesutis, 2019; Selemane, 2022).

There are two recent doctoral theses conducted in Tete coal mines, both in 2019, each of them with a particular focus. One is the thesis by Gediminas Lesutis titled: “Spaces of extraction and suffering: Neoliberal enclave and dispossession in Tete, Mozambique” (Lesutis, 2019), and the second thesis is by Celso Monjane with the title: “Rethinking the political economy of commodity-based linkages: insights from the coal sector in Mozambique” (Monjane, 2019).

Lesitus’ thesis concentrates its analysis on the deterioration of the living conditions of the people affected by the coalmining projects in Tete, whereas Monjane’s thesis focuses on the linkages formation between the multinational coalmining companies with local enterprises.

However, there is no research seeking to understand through a holistic approach the uneven development of the Mozambican economy – the paradox of resource abundance and persistent poverty, social and political instability. This research intends to fill that gap by using classical political economy analysis to respond to the two intertwined sub-questions outlined above.

### 1.2.2 Justification of the study

The justification of this study consists of three inter-related dimensions: theoretical, empirical and ontological. Firstly, the characteristics of a mineral dependence economy (namely, environmental damage and its contribution to climate change,

natural capital depletion, creation of few job opportunities and limited revenues) would suggest that no country should pursue extractivism as a development option.

However, evidence from a wide range of countries shows that despite the prejudicial impacts of mining extraction, many countries worldwide pursue extractivism (Bond, 2018b; Grove, 2017; Saad-Filho & Weeks, 2013) not only as one of their national development priorities but as if it is the only available option to rescue their societies from miserable economic conditions. The first justification of this study, therefore, will be theoretical in the sense of grasping the explanations and motives that drive the extractive industry.

The second dimension of the justification will rest on empirical grounds. The study seeks to unpack Mozambique's development dynamics by examining the interconnections between the shifts from socialism to capitalism, and from aid dependence to minerals dependence through a case study of Tete's coal industry. The interrogation has been conducted using classical political economy analytical methods (Bond, 1998; Castel-Branco, 2017b; Chang & Evans, 2005; Harvey, 2003; Luxemburg, 2015; Milonakis & Fine, 2009; Mkandawire, 1992) to fill the above indicated knowledge gap.

The third dimension of the justification is ontological as it deals with the philosophical dichotomy of appearing economically better off (an illusory development that mining extraction generates) and the reality that effectively results from minerals extraction – namely, global warming; air, water and soil pollution; as well as current account deficits and trade imbalances.

For its approach, two intertwined methods have been chosen. The first is the classical political analysis understood to be an interdisciplinary socially and historically orientated approach (political science, economics and history) to the development of a specific economy like Mozambique's by looking at its regional and international contexts (Leftwich, 2011; Milonakis & Fine, 2009; Mkandawire, 1992, 2011; Moran & Pitcher, 2004).

A political economy approach is essential in this type of research, as argued by Power.et al. (2016). This is because engaging with political economy: (i) enables a better understanding of the discourses, institutions and interests that shape energy transitions; (ii) enhances an understanding of who sets the terms of energy transition and whose interests are served as a result; and (iii) explores how relations of power relate to each other.

The second intertwined method is political ecology; unpacking both the ecological and the political dimensions of environmental issues in a more balanced and integrated manner as posited by Zimmerer & Bassett (2003) and developed by Patrick Bond (Bond, 2018b). This approach is fundamentally motivated by the contributions of coal mines to climate change both at the sites of excavation and at the sites of burning. For this reason, the political ecology approach seeks to understand the relationship between economically driven environmental processes and their corresponding social processes (Bond, 2018a).

## 1.3 Purpose statement

The purpose of this research is to investigate the socio-economic and political factors and conditions – the political economy – of the coal industry in Mozambique's Tete Province as a way of understanding the country's uneven development trajectory.

## 1.4 Structure of the thesis

This thesis contains nine chapters organized into three parts. Part I contains the chapter with the introductory elements. In it, I present the research problem and the research questions – the main research question and the two intertwined sub-questions. I also present the knowledge gap, the justification of the study as well as the purpose. In the same chapter 1, I have included an account of trajectory of the coal industry in Mozambique as the basis to understand the remainder of the discussion in the thesis.

Part II of this thesis consists of three inter-related chapters. Chapter 2 unpacks and thoroughly discusses the literature on political economy and the extractive industries, as presented by the different schools of thought. Throughout the discussion, and

precisely at the end of that discussion, I position myself in the classical political economy strand, with Marxist orientation by using the Marxist modes of interpretation of the economic phenomena – mainly dependency and structuralist theories, as opposed to the neoclassical school of thought.

In chapter 3, I present and discuss the internal elements that configure Mozambique's uneven development. The chapter is organized in two distinct parts. The first contains an analysis of Mozambique's features in terms of history, politics and governance. The second part of chapter 3 is a comparative analysis of two neighbouring countries: Malawi and South Africa. The former has energy projects with similar problems as the ones faced by Mozambican communities, whereas the latter is a big producer of coal.

In chapter 4, I display and explain the methodology used in researching this thesis. Although I deploy some quantitative methods where applicable and appropriate, such as economic indicators (e.g., gross domestic product – GDP), the thesis has been crafted using qualitative methods. In this chapter, I present a table showing the relationship between the theory I have deployed, the research questions I am investigating, and the methods used to generate the responses in the form of outcomes and individual chapters of the thesis.

Part III of the thesis is the biggest, with five chapters that present and analyze the findings of the research in categories, for a better understanding. I start part III with a discussion – chapter 5 – around the resettlement of people affected by the coal mines in Tete, the underpinning theoretical grounds, the legal and institutional framework, the relations of power between the different actors involved in that process, and a link to the broader theory of accumulation by dispossession.

In chapter 6, I search for the gains obtained by the Tete local economy and the Mozambican national economy from the coal industry using the lens of the linkages framework. I do so on the basis that one of the claims of the defendants of the coal industry is that there are linkages created that expand and trickle-down the benefits of coal extraction. The same inquiry continues in chapter 7 with an analysis of the financial and non-financial benefits of the coal industry. The two chapters (6 and 7) seek to respond to the first research sub-question: "How do socio-economic factors of the Tete province coal industry contribute to Mozambique's uneven development?"

Chapter 8 weighs the effects of the environmental factors of the coal industry. The chapter addresses the second research sub-question: “How do environmental factors of the Tete province coal industry contribute to Mozambique’s uneven development?”

The analysis conducted in chapters 6, 7 and 8 is framed in the historical, political and economic spectrum.

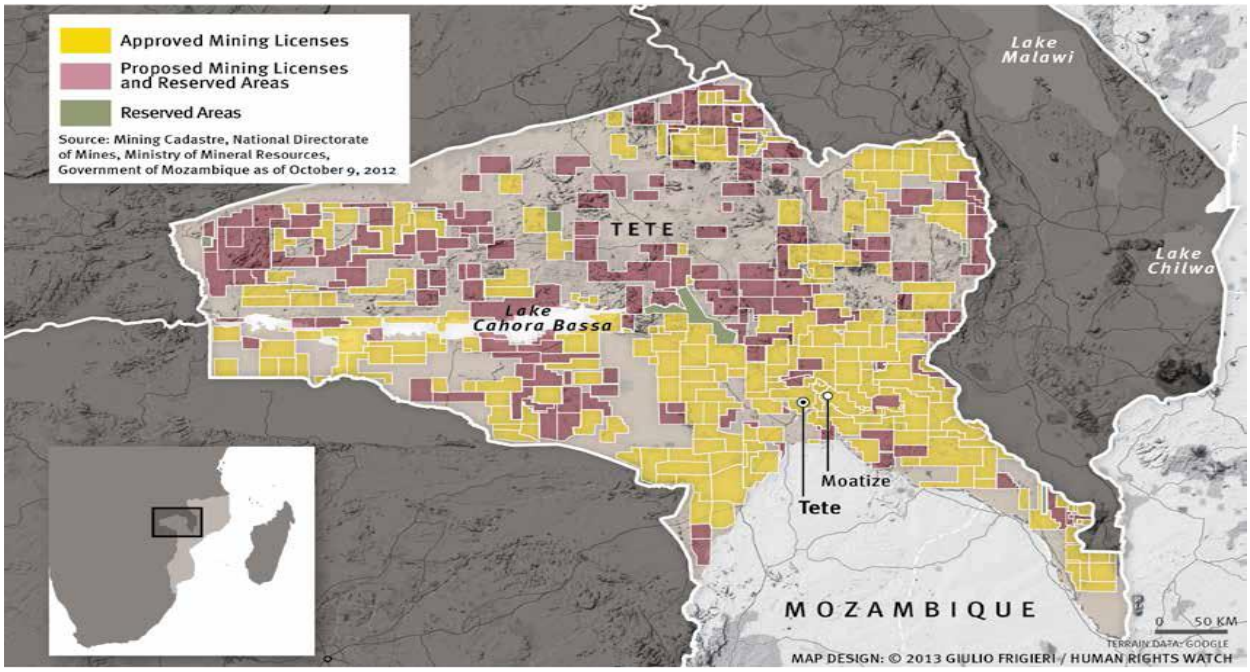
I reserved the final chapter 9 – conclusions – to explain in detail my contribution to knowledge through this thesis.

## 1.5 Understanding the trajectory of Mozambique’s coal industry: 1975-2023

### 1.5.1 Tete as a coalmine province

The map below presents the overwhelming situation Tete province lives with in terms of occupation by the mining interests. Almost the entire province has been divided into hundreds of mining concessions with different types of licenses.

**Figure 2: Map of Tete province with mining concessions**




Source: Mining Cadastre, Ministry of Mineral Resources and Energy (MIREME), 2023

Tete province is historically the Mozambican coal mining province. The huge reserves of coal in Tete were not discovered in 2006 as claimed by Gediminas Lesitus in his 2018 doctoral thesis “The Politics of precarity and global capitalist expansion: The case of mining dispossession and suffering in Tete, Mozambique” (Lesutis, 2018). In fact, during the colonial period, before the 1975 independence of Mozambique from Portugal, Tete province was already a coal mine giant with the company Carbomoc, EE. (*Empresa Estatal,* state company).

In terms of potential, Tete province possesses one of the largest coal deposits in the world (open pit exploration) with approximately 6 billion tons. According to data provided by the Ministry of Mineral Resources and Energy, Tete province has five main sites of coal deposits as presented below.

### *i Benga*

Mallyon (2010) cited by (Callaghan, 2011) has compared the quality of the coking coal at Benga to that at Bowen Basin in Australia, which is considered amongst the best in the world. The first concessioner of the Benga coalmines – Riversdale – had a 40 per cent life of mine (LOM) off-take agreement with Tata steel, and a 10 per cent LOM off-take agreement.

### *ii Kambulatsitsi*

The Cambulatsitsi area is near Tete city as part of both Moatize and Tete municipalities. Initial exploration of the area led to an independent estimate of an approximate resource of 35 million tonnes. The Essar Group has entered into a Memorandum of Understanding (MoU) with CCFB (consortium of CFM-RITESIRCON) for transporting the coal to Beira port (Callaghan, 2011).

### *iii Zambeze*

Former Riversdale’s Zambeze coal project lies adjacent to the Benga project, which will allow possible production and administration synergies. Like Benga plans, the Zambeze mines produce and export quality coking and thermal coal. The deposit occurs in a precambrian aged down-faulted basin (Callaghan, 2011).

### *iv Nkondezi*

The Ncondezi Coal Company has a large prospect to the northeast of Tete. The Ncondezi Coal Project covers an area of 38,700 ha in the coal-bearing Zambezi Basin. The Ncondezi Project comprises licenses of 804L and 805L. A total 122 boreholes (16,737 m) have been drilled in prospecting the area and a Joint Ore Reserves Committee (JORC)[1] - compliant resource of 1.8 billion tones has been identified.

### *v Moatize*

This is the most important site for this study – the biggest case study of this thesis (Vulcan, former Vale) is located in Moatize. The estimate of the total operational capacity of the Moatize mines is 22 million tons per annum (tpa).

The exact date on which the Moatize coal deposits were effectively discovered is not known. However, Bordalo (1859) as cited by Dias (2018) establishes in his work on Mozambican statistics that the first references to Moatize coal are to be placed at the early stages of Portuguese presence on Mozambican land.

Some reports (Dias, 2018) suggest that in the 16th century, when the Portuguese entered the Zambezi River and founded the towns of Sena and Tete, they were aware of the occurrence of coal in the region.

The most detailed work, which would mark the beginning of effective coal exploration in Moatize was carried out by engineers from the *Societé Belge Minière et Géologique du Zambéze* (SMGZ), a subsidiary of the *Cominière* group, from 1920 onwards, which consisted of recognizing and mapping the outcrops. The emphasis of the SMGZ studies, in addition to the above, was given to the exploration of coal from the André, Bananeiras and Chipanga layers, corresponding to 20,000 tons per year (Dias, 2018).

In 1948 it was the *Companhia Carbonífera de Moçambique's* turn (CCM), belonging to the *Entreposto* Group – a Portuguese industrial and commercial group, which continued the work carried out by SMGZ. Under the responsibility of the CCM, further studies were carried out which resulted in the creation of a topographic map at a scale

[1] In the mining industry, JORC refers to the mining industry's official code for reporting exploration results, mineral resources and ore reserves, managed by the Australasian Joint Ore Reserves Committee

of 1:10,000, including geological descriptions of the Zambezi Valley and the Karroo (Vasconcelos, 1995).

In the period following Mozambique's independence, CCM's exploration was marked by the tragedy at the Chipanga VI mine, which occurred on September 16, 1976, in which 96 Mozambicans and two Portuguese workers died. A new catastrophe shook the *Vila Carbonífera* de Moatize on August 2, 1977, more specifically the Chipanga III mine, which resulted in the death of 63 Mozambicans and one Portuguese, as documented in the studies conducted by Menezes (2014) and Vasconcelos (1995).

The death of the miners triggered popular unrest and a long strike that forced the government's decision to nationalize the Moatize coalmines. The nationalization gave birth to the parastatal company Carbomoc E.E., in 1978, through Decree nº 11/78 of 12 May. Carbomoc's project did not last for long as the economic situation was strongly affected by the 1976-1992 civil war. Carbomoc E.E. was extinguished in 2006 through the Decree from the Council of Ministers No. 34/2006 of 6 September, which ruled in four articles as follows:

> *Article 1.* The National Coal Company, E.E, is extinguished – Carbomoc.
> *Article 2.* Once the extinction process is complete, the shares held by Carbomoc E.E. Company, now extinct, will be transferred to the State under the management of IGEPE – Institute of Management of the State's shares in companies.
> *Article. 3.* Part of the assets of the Company Carbomoc, E.E, will be alienated.
> *Article. 4.* The Minister of Mineral Resources is responsible for appointing the Carbomoc Company Liquidation Committee, as well as the definition of their responsibilities and the deadline to be complied with in the liquidation process.

With the extinction of Carbomoc, the Mozambican state was paving the way for the new era of a market-oriented mineral regime. As such, the country was entirely engaged in the capitalist world economy, following the strict dictates of the International Monetary Fund (IMF) and the World Bank. The mining boom of the years

2000 onward made Tete province seem like an "Eldorado"[2], an imaginary place with plenty of riches and unlimited business opportunities. This image was documented by Thomas Selemane and João Mosca in their 2011 book "*Eldorado Tete – os mega-projectos de mineração*" Mosca & Selemane (2011).

After the 16-year civil war, it was only in 2007 that the government of Mozambique negotiated and further signed a contract with a giant coalminer, the Brazilian Vale. A new era of the extractive industry in Mozambique coincides with the energy crisis of the 2000s decade, when emerging economies such as India, China and Brazil were seeking for coal and other energy sources worldwide. Concomitantly, it was in that context that Mozambique started to host massive foreign direct investment (FDI) in the extractive sector, whereby BHP Billiton invested in the aluminium smelter Mozal in 2000. The Irish company, Kenmare, invested in the Moma heavy sand mines, having started production in 2007; and the Brazilian Vale invested in the Moatize coalmines, having started production in 2011 (Mosca & Selemane, 2011).

The arrival of Vale in Moatize inaugurated the new era in the coal industry. Since 2007, when the Moatize coal mines were concessioned to Vale Mozambique, there has been a lack of organized and coordinated government assessment about how, when, with which actors, in what dimensions to exploit coal and, most importantly, about how to use coal to promote broader economic and social development outside the coal industry. There has never been a harmonized and coordinated response from the government of the Republic of Mozambique (GRM) on issues related to the strategic option of exploring all the coal now or just part of it.

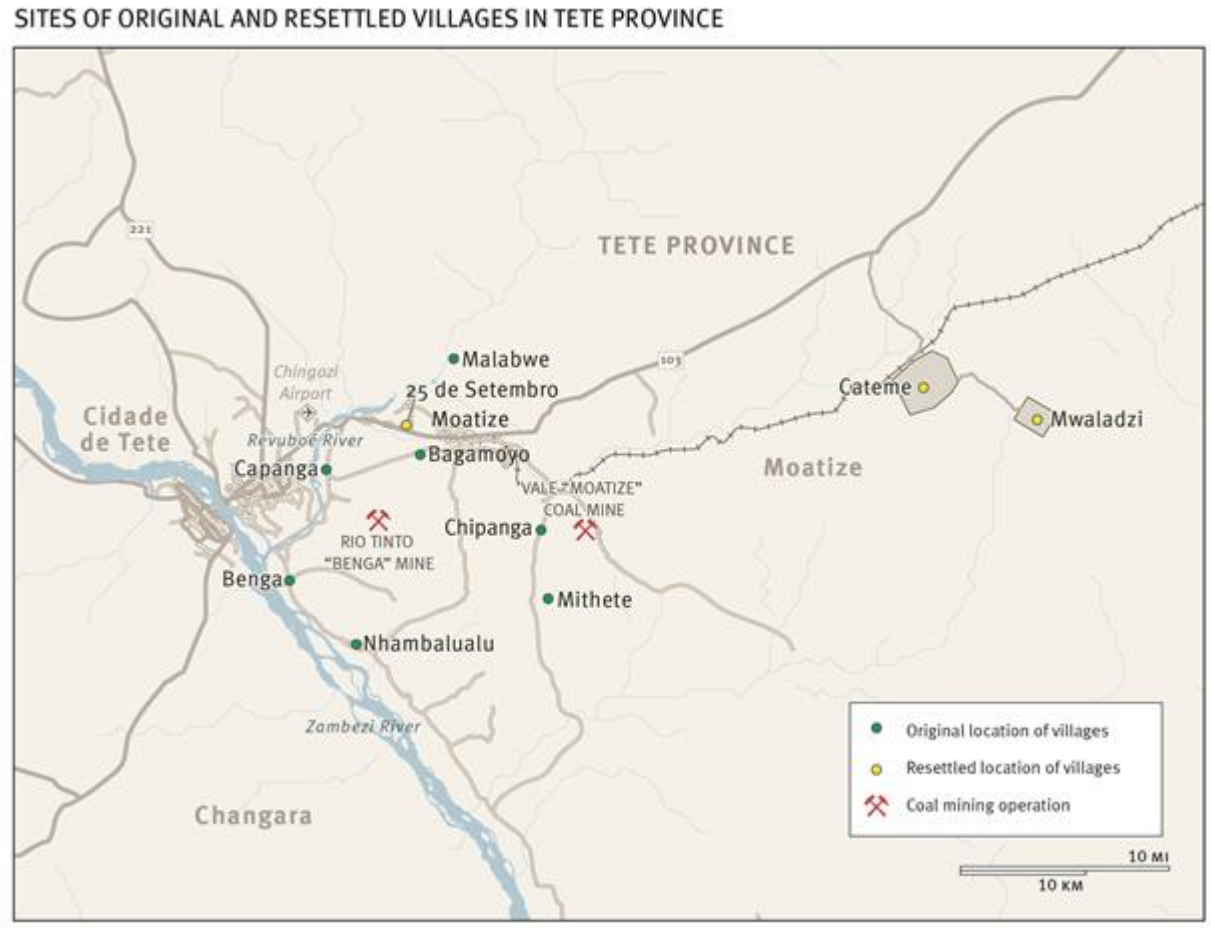
There is also the question whether to export all the coal extracted or export just part of it and spare the remaining for the development of local industry? The Mozambican policy-makers have never discussed this sort of question. The reason for that has been said to be a "strategy of not having a strategy" – the government simply chose not to

[2] According to the Britannica Dictionary, Eldorado was only one of the many mythical regions of great riches—Cíbola, Quivira, the City of the Caesars, and *Otro Méjico* being among the others. The search for these led to the rapid exploration and conquest of much of the Americas by Spaniards and others. Since then, Eldorado has come to mean any place where wealth can be quickly and easily gained. The name was given to towns in Latin America and the United States and to a California county. The story is often mentioned in literature, as in Milton's *Paradise Lost* and Voltaire's *Candide* (McKenna, 2023).

choose any of the possible ways as a strategy (Mosca & Selemane, 2011); Castel-Branco (2016).

The answers to these questions were always diverse, varying depending on the level of the government entity to which the question was posed. While provincial and district governments presented concerns around jobs, the central government officers put forward fiscal benefits and macroeconomic gains from the extractive industry (Castel-Branco, 2010; Selemane, 2014). This fact resulted in the lack of territorial planning, with chaotic physical implementation of precarious infrastructure and the creation of human settlements without the minimum living conditions such as water and sanitation as documented in several studies (see for example, Selemane, 2010; Mosca & Selemane, 2011; Mosca & Selemane, 2012; Varia, 2013; Dias, 2018).

**Figure 3: Map of sites of original and resettled villages in Tete Province**




*Source: Mozambique Mining Cadastre*

The table below presents the situation of coalmines in Tete by company; company's country of origin; each project's precise location in Tete; the shareholders and the projected production by each company (in million tons). This description shows how Tete province has become an international player in the global coal industry.

Table 1: Companies extracting coal in Tete province

| Company | Country of origin | Location and stage of project | Shareholders | Production (million tonnes) | |
|---|---|---|---|---|---|
| | | | | ***Coking coal*** | ***Thermal coal*** |
| Vulcan, former Vale Mozambique | India and formerly Brazil | Moatize 1 & 2 (Producing since 2015) | Vulcan International 100% | 17.16 (with 8.58 each in Moatize 1 & 2) | 5.2 (with 2.6 each in Moatize 1 & 2) |
| ICVL, former Rio Tinto and previously Riversdale | India | Benga *(Producing since 2012)* & Zambeze *(Producing since 2014)* | Indian Government through SAIL, NMDC and RINL | Benga, 6 & Zambeze, 13,5 | Benga, 4 & Zambeze, 9 |
| ICVL, former Jindal | India | Producing since 2013 | Indian Government through SAIL, NMDC and RINL | 3 | 2 |
| Eurasian Natural Resources Corporation (ENRC) | UK/ Kazakhstan | Cahora-Bassa, *(Producing since 2013)* | Kazakhmys 26% Alex Mashkevitch 14.6% Alijan Ibragimov 14.6% Patokh Chodiev 14.6% Kazakhstan State and privatization committee of the Ministry of Finance 11.6% | 6 | 4 |
| Arcem Resources, former Beacon Hill Resources | South Africa - Mauritius | Minas de Moatize, *(Producing since 2014)* | Paul Main, South African businessman 100% | 0,72 | 1,64 |
| Ncondezi Coal Mining | UK | Ncondezi *(Producing since 2014)* | Strata Limited 44.8 % Henderson Global Investors 8.6 % Investic Asset Management 7.2% Spearpoint 6% Ncondezi Trust No. 1 Ogier Employee Benefit Trustee Ltd 5.5% Evergreen Resources Holding (HK) Limited 4.9% Goldman Sachs Nominees 3.8% | 0 | 10,5 |
| Anglo-American | UK/USA | Revuboe; *(Producing since in 2015)* | Anglo-American 58.9%; Nippon Steel Corporation 33.3% & POSCO 7.8% | 5,1 | 3,4 |

Source: author's construction based on MIREME and companies' websites

## 1.6 The legal and institutional framework for the coal industry

As the coal industry dates back to colonial times, the current Mozambican legal framework also dates back to that time. Nevertheless, for the purposes of this thesis, I only consider the legal framework of the period after national independence. In this line of thought, the starting point for understanding the legal architecture of the coal mining sector at present day is 1984 – one year after the Fourth Congress of the Frelimo Party. The mention of this congress is important because it was there where the policies for the shift from socialism to capitalism were defined, in the middle of the Cold War.

In this year of 1984, the government of the Republic of Mozambique (GRM) approved the Foreign Direct Investment (FDI) law and signed the Inkomati Accord with the apartheid regime that was ruling South Africa. As documented by Hermele (1990), the agreement meant for South Africa the reduction or even the elimination of Mozambique's support for the ANC (African National Congress), weakening the resistance movement within South Africa and reducing the country's isolation on the international stage. Mozambique, in addition to responding to the international blackmail, aimed to encourage South African's capital investment in Mozambique and to eliminate that country's support for the guerrilla movement in Mozambique (RENAMO – National Resistance of Mozambique) in a manner that allowed the smooth flow of capital investment from South Africa to Mozambique.

This opened the possibility of being part of the Bretton Woods institutions. Six months after signing of this agreement, the country adhered to the precepts of the Bretton Woods institutions and, in January 1987, began the implementation of the Economic Rehabilitation Program (PRE, *Programa de Rehabilitação Económica* – in Portuguese). This PRE was the first Mozambican experience with a structural adjustment programme, oriented by the IMF.

***Where did the current legal framework come from?***

The current Mozambican legal framework for coal is a result of a long trajectory. It dates back to the time when the country was a Portuguese colony. As discussed above, the reforms that led to independence also included legal adjustments to shift from socialism to capitalism. In this regard, three intertwined moments and instruments

are crucial to look at. First, the Foreign Investment Law; second, the Regulation of the Land Law; and, third, the adhesion of Mozambique to the Bretton Woods institutions – the IMF and the World Bank. These events led to the 1986 Mining Law. The approval of that law formally revoked the Decree of September 20, 1906 referring to research and mining of mines, as well as revoking the Decree of November 3, 1905 relating to quarrying (Hermele, 1990; Matos & Medeiros, 2017).

The 1986 Mining Law, despite being approved at a time when the country demonstrated signs of a change in political-economic orientation, it appears to have continued to be a defender of state interests, that is, the state sector is the more privileged with this legislation. The 1986 Mining Law Regulation, approved in 1987, also goes in the same direction as the Mining Law, authorizing mining exploration only when the economic benefits prove to be quite generous for the national economy.

An important part of the past 30 years of legal reforms in Mozambique is the so-called "1990 Constitutional Revolution." After various decades of single-party rule in the country, towards the end of the 16-year civil war, the country adopted a constitution in 1990. The new constitution was seen as revolutionary, since it launched the basis for a multiparty a democratic Mozambique.

Among other things, the 1990 Constitution brought about four significant changes. Firstly, it opened space for private investment in the country. Secondly, it paved the way for the massive foreign direct investment that came to the national economy in the following decade. Thirdly, it created a space for the existence of other political parties apart from the sole Frelimo and, thus, the existence of a multiparty parliament. Fourth, it established the basis for the existence of privately owned media – radio, TV and newspapers.

In the new context, the land law did not respond to the investors' needs, in addition to granting significant privileges to the FRELIMO party, who was able to compete for the acquisition of land for speculative purposes, taking into account some approved legislation that promoted the formation and extension of national business, as documented by Matos & Medeiros (2017).

After the 1986 Mining Law, the Mozambican parliament approved the 2002 Mining Law as an improvement of the aspects related to i) benefits to local communities; ii) environmental protection; iii) corporate social responsibility; and iv) health and safety.

The Mozambican parliament reviewed the 2002 law in 2014, establishing the current legal regime.

**Table 2: Types of mining titles in the Mozambican context**

| | Type of mining title | Value (MTs) |
|---|---|---|
| 1 | Prospecting and Research License | |
| | Application registration fee | 4 000 |
| | Title issuance fee | 4 000 |
| | Fee for late submission of the request for extension | 4 000 |
| | Extension fee | 10 000 |
| 2 | Mining Concession | |
| | Application registration fee | 5 000 |
| | Title issuance fee | 7 000 |
| | Fee for late submission of the request for extension | 20 000 |
| | Extension fee | 50 000 |
| 3 | Mining Treatment License | |
| | Application registration fee | 10 000 |
| | Title issuance fee | 15 000 |
| | Fee for late submission of the request for extension | 30 000 |
| | Extension fee | 60 000 |
| 4 | Mining Processing License | |
| | Application registration fee | 10 000 |
| | Title issuance fee | 15 000 |
| | Fee for late submission of the request for extension | 30 000 |
| | Extension fee | 60 000 |
| 5 | Mining Certificate | |
| | Application registration fee | 2 000 |
| | Title issuance fee | 2 000 |
| | Fee for late submission of the request for extension | 5 000 |
| | Extension fee | 5 000 |
| 6 | Mining Pass | |
| | Application registration fee | 1 000 |
| | Title issuance fee | 1 000 |
| | Fee for late submission of the request for extension | 3 000 |
| | Extension fee | 3 000 |
| 7 | Authorisation for Extraction of Mineral Resources for Construction/Geological Research or Scientific Studies | |
| | Application registration fee | 2 000/1 500 |
| | Title issuance fee | 2 000/1 500 |
| | Fee for late submission of the request for extension | 5 000/3 000 |
| | Extension fee | 5 000/3 000 |
| 8 | Fees for requests for transfer of title | |
| | Prospecting and research license | 200 000 |

| | | |
|---|---|---|
| | Mining concession | 300 000 |
| | Mining Certificate | 50 000 |
| | Mining Pass | 5 000 |
| 9 | Title transfer registration fees | |
| | Prospecting and research license | 150 000 |
| | Mining concession | 200 000 |
| | Mining Certificate | 30 000 |
| | Mining Pass | 5 000 |
| 10 | Fees for request of areas' enlargement | |
| | Prospecting and research license | 200 000 |
| | Mining concession | 300 000 |
| | Mining certificate | 100 000 |
| 11 | Area Enlargement Endorsement Rates | |
| | Prospecting and research license | 20 000 |
| | Mining concession | 30 000 |
| | Mining Certificate | 10 000 |
| | Authenticated copy of any license/certificate | 1 000 |
| | Copy/extract of any archived record (per page) | 2 000 |
| 12 | Operator and subcontractor registration fees | |
| | Prospecting and research license | 100 000 |
| | Mining concession | 300 000 |
| | Mining Certificate | 50 000 |

Source: 2014 Mining Law complemented by interviews

The laws, regulations and resolutions listed below define the above fees and rates. Essentially, the legal framework has evolved over time in an attempt to obtaining maximum gains from the extractive sector.

**Table 3: Summary of Mozambican legal framework for mining**

| Mining Sector | | |
|---|---|---|
| Designation | Legal Instrument | Description |
| Laws | Law No. 20/2014, of 18 August. | Mining Law, revokes Law 14/2002 of 26 June |
| | Law No. 15/2017, of 28 December. | Amends and republishes the Specific Regime of Tax and Fiscal Benefits Regime for Mining Activities, approved by Law 28/2014 of 23 September |
| | Decree No. 26/2004, of 20 August | Environmental Regulation for Mining Activities. |
| | Regulation No. 5/2008, of 9 April. | Regulation of Specific Tax on Mining Activities, as amended by Decree No. 28/2015 of 28 December - Regulation of the Specific Tax and Fiscal Benefits Regime for Mining Activities |

| | | |
|---|---|---|
| Decrees | Regulation No. 20/2011, of1 June. | Regulation on the Marketing of Mining Products// Decree No 34/2019 and Decree No 25/2015 |
| | Decree nº 61/2006, of 28 December | Approves the Technical and Health Security Regulation for Geological Mining activities and revokes the legislation that contradicts this Regulation |
| | Decree No. 63/2011, of 7 December | Regulation on the Employment of Foreign Nationals in the Oil and Mining Sector |
| | Decree No. 22/2014 of 16 May | Approves the mineral resources policy and strategy. |
| | Decree No. 22/2015 of 17 September | Defines the attributions, competences and organisation of the National Institute of Mining |
| | Decree nº 13/2015 of 3 July | Mineral Labour and Petroleum Regulation. |
| | Decree No 28/2015 of 28 December | Regulation on the Specific Regime for Taxation and Tax Benefits for Mining Activities |
| | Decree No 25/2015 of 22 November 2015 | Regulation on the Trade of Diamonds, Precious Metals and Gems (revoked by Decree nº 63/2021, of 01 September) |
| | Decree No. 31/2015 of 31December | Mining Law Regulation/Amended by Decree nº 34/2019 of 02 May |
| | Decree No. 15/2017 of 28 December | Amends the Specific Taxation and Tax Benefits Regime for Mining Activities |
| | Decree No 78/2017 of 28 December 2007 | VAT Refund Regulation |
| | Decree No 32/2019 of 29 April 2009 | Regulation of the National System of Rescue and Rescue for theMining Industry of Mineral Resources |
| | Decree No 34/2019 of 2 May 2009 | Regulation on the Inspection of Mineral Resources and Energy |
| | Decree No 63/2021, of 01September | Regulation on the Commercialization of Diamonds, Precious Metals and Gems |
| Resolutions | Resolution No 89/2013, of 31 December. | Defines the principles and main actions for the management and exploitation of mineral resources to contribute to the economic and social development of Mozambique. |
| | Resolution No 21/2014, of16 May | Approves the corporate social responsibility policy for mineral resources in the mining industry |
| Diplomas | Ministerial Diploma No. 189/2006 of 1 December 2006 | Basic Environmental Management Standards for Mining Activities |
| | Ministerial Diploma No. 92/2017 of 11 June | Standards and Procedures for the Registration of Eligible Technicians for the Preparation of Research Reports and Work Programmes in Mining Projects |

Source: author's update based on legislation and EITI reports

The compilation provided in the above table contains some legal instruments that are worth discussing for two reasons: firstly, because they were approved due to contestation by civil society organisations (CSOs) or communities affected by mining explorations, especially coal; and secondly, for the reason that some of the legal instruments were approved in response to the pressure by the investors and international organisations, such as the World Bank or the Extractive Industries Transparency Initiative (EITI). The regulations are the following:

a *The 2014 Mining Law* – One of the main changes to this legislation is the elimination of the article that referred to the superiority of mining use over any other type of land use. The 2014 law differentiates the right of mining exploration from the Right of Use and Land Use (DUAT). The right to use the land as well as other pre-existing rights remains in custody of the state until the end of mining activity. This differentiation aims to distance the thought or analysis that may associate the holder of the mining exploration right with land ownership. However, a closer look to the 2014 law shows that both the supremacy of mining use over other uses (farming, tourism, others) and the "ownership" of the land by the holder is preserved in the following terms:

- Article 12 of the 2014 Mining Law considers that from the moment the holder of the mining exploration right pays fair compensation to users of the land, pre-existing rights to use and benefit from the land will be extinguished. Still in the same article, the legislator refers to the 1997 Land Law for the process of obtaining the DUAT and highlights that this right has duration equal to that defined in the mining title, which can be renewed automatically.
- The law considers that the DUAT, after users are extinguished, passes to the state; that is, the state has primacy over pre-existing rights of use and land use. Once this right has been acquired, the state transfers it even for holders of mining titles who will enjoy the land for the period while mining exploration continues.
- Holders of mining concessions (and mining titles) have the right to have access to the area and carry out on an exclusive basis the extraction activities of mineral resources. In the case of exploration of mineral coal and heavy sands, it appears that these activities are incompatible with the existence of other activities, even those considered fundamental to supporting the affected families, such as farming.

The above elements show that, contrary to what was expected from the 2014 Mining Law, in fact mining continues to take priority over other forms of land use, since the law mainly values the payment of fair compensation and the implementation of resettlement. Although this law continues to be favourable to mining exploitation, mainly by not offering the affected families the possibility to refuse compensation and

resettlement, legislation tends to create mechanisms that safeguard the interests of these families. This concern is evident in several articles of legislation, where it appears that in addition to the previous requirements summarized in the environmental license and obtaining the DUAT, the legislation adds the need for approval of the compensation and resettlement plan. In addition to concerns about compensation and the resettlement process, the legislation is concerned with the following aspects:

i the need to respect local communities and contribute to the preservation of community sociocultural aspects;
ii full compliance with the compensation and resettlement of the population, the protection of communities where mining activities will be carried out, at the same time that socioeconomic development is promoted in favour of their well-being;
iii the obligation of prior consultation with local communities about starting prospecting and research or extraction activities of mineral resources; and
iv the government must ensure the organization of communities achieved and create a mechanism for their involvement in mining projects.

To ensure that the rights of expropriated or displaced people are guaranteed, legislation argues that fair compensation (as presented below) must be included in a memorandum of understanding between the government, the company and the affected communities. The act may be witnessed by community-based organizations if requested by one of the parties. This legislation is in line with the one regarding the process of involuntary resettlement, stipulating that civil society members should be present, or institutions that can better advise local communities. Despite this limitation, the Mining Law, in its article 31 specifies what fair compensation would be. For the 2014 Mining Law fair compensation covers, among other elements:

- resettlement in decent housing by the concession holder, in better conditions than the previous ones;
- payment of the value of improvements in accordance with the Land Law and other applicable legislation;
- support for the development of activities on which life and health get improved and ensure the food and nutritional security of those covered;
- Preservation of the historical, cultural and symbolic heritage of families and of communities in modalities to be agreed by the parties.

*b* The communities affected by the mega-projects mining in Tete and other provinces

forced the approval of the ***Regulation on resettlement*** resulting from economic activities (Decree no. 31/2012, of 8 August) to respond to massive contestations. I discuss in detail the contestation of mining, the resettlement and compensations in chapter 6 of this thesis.

*c* ***The Mineral Resources Policy and Strategy*** (Resolution no. 89/2013, of 31 December 2013) and the Law on Petroleum (Law No. 21/2014, of 18 August), provide that "in the event of any environmental damage at the exploration site, sanctions must be enforced against the company involved".

*d* ***The Resolution on the Corporate Social Responsibility*** **Policy for the Extractive Industry of Mineral Resources** (Resolution No. 21/2014, of May 16) was approved to respond to the pressure exercised by the investors. This resulted from a long discussion about lack of local benefits from the extractive projects to the local communities in terms of housing, water, sanitation, jobs, education, and health services.

*e* ***The Internal Regulations for the Operation of the Technical Committee for Monitoring and Supervision of Resettlement in 2014*** (Ministerial Diploma No. 155/2014, of September 19), the Right to Information Law (Law No. 30/2014, of December 31) and the respective Regulation (Decree No. 35/2015, of December 31).

*f* ***Specific tax, fees and contributions of the Extractive Industry.*** In addition to the abovementioned taxes, other specific taxes, fees and contributions approved by specific legislation also became part of the Mozambique tax system. For the case of extractive industries, the applicable laws are Law No. 24/2014 and Law No. 27/2014, both of 23 September, which approve the Specific Taxation and Fiscal Benefit Regime of Mining and Petroleum Operations, respectively. It should be noted that Law No. 15 /2017 of 28 December for mining and Law No. 14 /2017 of 28 December for hydrocarbons updated these regulations.

***The most recent updates in the mining legal regime and their implications***

### *i Mining Area*

The Specific Tax Regime and Tax Benefits for Mining Activities, approved by Law No. 28/2014, of 23 September, entered into force on 1 January 2015. This regime applies to natural and legal persons engaged in mining activity in the national territory, which, in addition to the taxes specified in this regime, are subject to the general taxation regime.

Decree No. 28/2015, of 28 December, which entered into force on 1 January 2016, approved the regulation of this scheme. These regulations repealed the previous instruments that determined the rules of taxation in the mining area, namely Laws No. 11 and 13/2007 and Decree No. 5/2008. Law No. 24/2014 was updated by Law No. 15/2017, of 28 December, as previously indicated.

The Specific Tax and Fiscal Benefits Regime for Mining Activities provides for the Tax on Mining Production (IPM), the Surface Tax (ISS) and the Tax on Mining Resources Income (IRRM). In addition to these taxes, this regime has specific provisions for income tax.

### iii Mining Production Tax (IPM)

The Mining Production Tax is due monthly. It must be paid by natural or legal persons who own mining titles or not, and it is levied on the value of the mining product extracted, concentrates and mineral water. The IPM rates were defined according to each mineral extracted, as presented below:

**Table 4: Rates paid in the mining sector**

| Mineral | Rate |
|---|---|
| Diamonds | 8% |
| Gemstones, precious and semi-precious stones | 6% |
| Heavy sands | 6% |
| Basic metals | 3% |
| Coal | 3% |
| Ornamental rocks and other mining products | 3% |
| Sand and stone | 1,5% |

Source: 2014 Mining Law

### ii Surface Tax (ISS)

The surface tax is payable annually and is levied on the area subject to a prospecting and exploration license, mining concession or mining certificate, measured in square kilometres or hectares and, in the case of mineral water, shall be levied on each mining title.

The tax base for the surface tax is the number of square kilometres or hectares of the area subject to each prospecting and research license, mining concession or mining certificate.

The ISS rates are as shown in the below table per category: exploration and research licenses for all minerals; mining concessions; mineral water; and mining certificate.

**Table 5: Types of mining licenses**

| Description | Rate |
|---|---|
| **a) Exploration and research licenses for all minerals** | |
| i. No. 1st and 2nd year | 17,50 MT/ha |
| ii. No. 3rd year | 43,75 MT/ha |
| iii. No. 4th and 5th year | 91 MT/ha |
| iv. No. 6th year | 105 MT/ha |
| v. No. 7th and 8th year | 210 MT/ha |
| **b) Mining Concession** | |
| i. For mineral water | 85 000 MT/Mining Title |
| ii. For other mineral resources: | |
| From 1st to 5th year | 30 MT/ha |
| From 6th year onward | 60 MT/ha |
| **c) Mining Certificate** | |
| i. From 1st to 5th year | 30 MT/ha |
| ii. From 6th year onward | 50 MT/ha |

Source: 2014 Mining Law

### iv Mining Resource Income Tax (IRRM)

IRRM is a tax levied on the net cash flow under a mining bond, as soon as that flow gives rise to an internal rate of return, before the Corporate Tax (IRPC), equal to or higher than 18 per cent. This tax is due when there are accumulated net cash gains at the end of the fiscal year and the applicable rate is 20 per cent.

### v Specific rules on income tax

The taxpayers covered by the Specific Regime of Tax and Fiscal Benefits for Mining Activities, when determining the taxable income, shall consider the following rules:

- The tax profit shall be determined for each mining title (i.e., on an individual basis) for each prospecting and exploration license, mining certificate or mining concession.
- Each prospecting and exploration license, mining certificate or mining concession shall obtain a Tax Identification Number (NUIT).
- The deduction of general administration costs borne by the participating company or other associated company obtaining income from a mining title in Mozambican territory in a given tax year may not exceed 3 per cent of the total expenses of that company in that same year, excluding depreciation.
- The costs resulting from the following are not deductible:
    - prospecting and research without discovery;
    - wilful misconduct on the part of the taxpayer or anyone acting on their behalf with regard to the management of the mining activity;
    - contracts to cover risks or losses arising from these contracts, also known as ‘hedges”;
    - expenditure on vocational training of expatriates and training programmes if they do not comply with the terms required by the applicable legislation.

### *vi Tax Benefits*

The enterprises under the Mining Law benefit, during 5 fiscal years, from the date of beginning of mining Exploration, from exemption of:

Customs duties due on imports of equipment for mining prospecting and exploration operations, classified under Class K of the Customs Tariff.

Customs duties due on imports of goods listed in Annexure II of Law number 28/2014, which are equivalent to goods of class K of the Customs Tariff.

The enterprises carried out before the entry into force of Law 28/2014 could benefit from VAT and ICE exemption on the above-mentioned imports.

#### *vii Other Fees*

The Mining Law Regulation approved by the Decree number 31/2015 establishes different fees related to the processing of mining titles and necessary permits.

### 1.6.1 The Mozambique coal industry institutional framework

The coal industry institutional framework in Mozambique consists at central government institution level of the Ministry of Mineral Resources and Energy (MIREME), which has the following responsibilities, among others:

i proposals development and policy implementation in the mineral resources and energy sector;
ii inventory and management of the country's mineral and energy resources;
iii promotion of a legal and institutional framework suitable for sector development;
iv promotion and dissemination of the potential of the mineral resources and energy sector;
v promotion of technological development with a view to the sustainable use of mineral and energy resources at national level;
vi promotion of private sector participation in the development and use of potential mineral and energy resources and respective infrastructures;
vii promotion and control of prospecting and geological research and exploitation activities to ensure rational and sustainable use of mineral resources;
viii inspection and supervision of the sector's activities and control of the implementation of technical safety, hygiene, and environmental protection standards.

As noted above, MIREME has the mandate to carry out inspection and supervision of mining operations. The National Inspectorate General implements this mandate. At provincial level, the Provincial Directorates of Mineral Resources and Energy represent MIREME.

The above-listed tasks are the MIREME's responsibility to undertake in mining sites such as Moatize in Tete where the biggest coal mines are located. However, the

ministry does not fully comply with its mandate due primarily to: (i) lack of staff in quantity and quality; and (ii) lack of financial and material means to cover field trips and expenses resulting either from licensing of new projects or monitoring and evaluation activities.

The most problematic issue around lack of both human and material capacity in the MIREME is that the state lies in the hands of the investor who ends up covering all the expenses and thus gains a superior position in who must provide the "No Objection" for the project. The licensing of a new mine requires field visits to the mining site by the provincial and national authorities to see the place; to establish the boundaries; to talk to people who might be using part of all of the area to sustain themselves through farming, fishing in the nearby river, or hunting in the surrounding bush.

The fact that the investor who is supposed to be inspected by the civil servant relying on that very investor's means for travel and work creates a situation of state fragility, and results in a conflict of interest and a subjective decision-making process[3].

Another institutional aspect of MIREME is its mandate to represent the state in mining projects through commercial companies. From 1988 to 2013, MIREME had a Mining Development Fund (*Fundo de Fomento Mineiro,* FFM), which was responsible for providing technical support to small-scale miners. The Fund was also tasked with mitigating conflicts between big investors and small miners as well as purchasing the production of those small miners – gold, precious stones and other minerals.

The Fund was extinguished in 2013 by the Council of Ministers and in its place the government created the Mining Geological Institute (*Instituto Geológico Mineiro*). The Institute operated for only two years. In 2015, it was extinguished and its mandate was transferred to the National Institute of Mines (*Instituto Nacional de Minas,* INAMI*)*, an institution established by the parliament through the 2014 Mining Law.

According to Law No. 20/2014 of 18 August, INAMI is the regulatory authority for mining activities, responsible for defining the guidelines for public and private sector participation in research, exploration, treatment, export and import of mining products and their derivatives. In line with the cited law, INAMI has the following responsibilities:

[3] Interviews with MIREME technicians at central level and in Tete Province.

*a* propose development policies for the mining sector and monitor their implementation;

*b* analyze and approve projects and technical and economic studies for the opening of new mines as well as the rehabilitation and closure of mines;

*c* receive, prepare, organize and analyze processes relating to the granting of prospecting and research licenses, mining concessions and mineral water concessions, carrying out the acts attributed to it under the Mining Act regulations;

*d* promote, support and control, in coordination with other institutions, the prospecting, research and extraction, use and exploitation of mineral resources, excluding oil and gas;

*e* promote, support and control of small-scale mining, taking into account the minimization of negative environmental and social impacts resulting from the exercise of this activity – this is a responsibility inherited from the former Mining Geological Institute.

***Problematic commercial participation of the state in mining projects***

In 2010, the government created a commercial company, the Mozambican Mineral Export Company (*Empresa Moçambicana de Exploração Mineira,* EMEM) to participate in other mining projects with commercial interest. In 2021, the government announced, through Decree No. 31/2021 of June 29, the dissolution of the company, leaving more questions than answers in the public opinion for a number of reasons. Among them, firstly, in more than a decade of its existence, EMEM did not report any dividend to the state[4]; secondly, EMEM never published any audit report about its management; and thirdly, when the company was extinguished in 2021, about 70 employees lost their jobs with no possibility of their integration in the entity that absorbed EMEM's assets, INAMI. Since 2021, state participation in mining projects has been managed by INAMI.

[4] Interviews with MIREME staff

## 1.7 Mozambique's adhesion to International Initiatives: PWYP, EITI and the Kimberley Process

Because of the evolving situation of the extractive industry in Mozambique, the country joined the most relevant international initiatives. In part, that was a response to the international business community; it was a signal to investors who wanted to see some commitments by the government to acceptable "best practices", though such reform did not come without pressure. Development partners such as the International Monetary Fund (IMF), the World Bank and Norway (a long-time and technical assistance-providing partner to MIREME) wanted to see Mozambique become an important player in the extractive industry and so relevant institutional reforms needed to be adopted.[5]

In 2008, in Maputo (capital of Mozambique), a group of civil society organisations I coordinated through the Centre for Public Integrity (CIP, working on natural resources) started a platform to create synergies between research, advocacy and public awareness. The platform followed the standard of the global PWYP coalition. PWYP dates from December 1999, when Global Witness published "A Crude Awakening", an exposé of the apparent complicity of the oil and banking industries in the plundering of state assets during Angola's 40-year civil war. The major multinational oil companies' refusal to release financial information aided and abetted the mismanagement and embezzlement of oil revenues by the country's elite. The report launched a public call for the oil companies operating in Angola to "publish what you pay".

Currently present on all five continents, with more than 50 national coalitions and more than one thousand members, the PWYP coalition advocates for the extraction of natural resources to benefit everyone.

The Mozambican PWYP coalition advocated for the country's adhesion to the Extractive Industries Transparency Initiative (EITI).

EITI was launched in 2002, the result of the work carried out worldwide by the PWYP coalition. It comes from the work done by organizations such as Global Witness, along

[5] Interviews with academics and development partners in Maputo

with other founding members – Catholic Agency for Overseas Development, Open Society Foundations, Oxfam GB, and Save the Children UK. EITI is a multi-stakeholder platform that brings together representatives from governments, investors, and civil society organizations to monitor the match (or mismatch) between payments made by extractive companies and receipts declared by governments that extract and export minerals and other natural resources.

As documented by Coughlin et al., (2013), Mozambique's Publish What You Pay coalition was composed of organizations working on research, advocacy, and monitoring of socio-economic development, the environment and natural resources, budget transparency, and anti-corruption. The groups were based both in Maputo and in the provinces where prospecting and exploitation of natural resources occurs, including Tete, Zambézia, Nampula, and Cabo Delgado. The coalition played a key role in pushing the goverment to advance and adopt the EITI.

In that context, Mozambique joined the EITI in 2009 after various national and international entities pressured the government of President Armando Guebuza to do so (Coughlin et al., 2013; Selemane, 2014).

Mozambique was admitted as an EITI candidate country on 15 May 2009, and in February 2011, it published its first report on payments and revenues for 2008. Until 2023, the EITI has published ten annual reports comparing payments and receipts in the extractive sector. This is seen as a good sign of the country's commitment to transparency and accountability.

### *Mozambique adheres to the Kimberley Process*

Another notable reform adopted by Mozambique in recent years has been the adhesion to the Kimberley Process (KP). The Kimberley Process is a diamond certification scheme designed to prevent the buying and selling of blood diamonds, i.e. diamonds originating from areas of conflict, civil war, and human rights abuses. It was created in 2003 with the aim of preventing the financing of arms in African countries engaged in civil war. In 2000, several countries accepted the Kimberley Process, committing themselves to purchase only certified rough diamonds (with provenance confirmed by an official certificate) and to refuse imports from conflict

areas. It was an important attempt to break the link between the stimulation of civil wars and the commercialization of valuable natural resources.

Under the terms of theKimberley Process Certification Scheme (KPCS), participants must:

1. Meet "minimum requirements" and establish national legislation, institutions and import/export controls for diamonds and other minerals;
2. Commit to transparent practices and the exchange of critical statistical data;
3. Trade only with other members who also meet the fundamentals of the Kimberley Process;
4. Certify traded ores as conflict free and provide the certification.

With a view to joining this initiative, Mozambique created in 2015, through Decree No. 26/2015, of 20 November (subsequently updated by Decree No. 64/2021, of 1 September) the Kimberley Process, Precious Metals and Gems Management Unit, abbreviated to UGPK. This body is responsible for everything related to the implementation of the KP, namely managing the technical and administrative procedures of tracking, security and internal control of rough diamonds, within the scope of the KP and the commercialization of precious metals and gems.

As documented in the 10th Mozambique EITI Report[6] in 2016, the country was assessed by the Kimberley Process Participation and Presidency Committee, having received a set of recommendations to be admitted as a member and, consequently, began trading diamonds. In 2021, the Kimberley Process Participation and Presidency Committee admitted Mozambique to the business of this type of gemstone.[7]

### *Failure to establish the High Authority of the Extractive Industry*

While Mozambique's extractive sector has demonstrated positive institutional reforms towards transparency and accountability, there are still other crucial reforms to be implemented. For instance, the 2014 Mining Law establishes the need for setting up a High Authority of the Extractive Industry (HAEI, or *Alta Autoridade da Indústria Extractiva)* as a supreme governance body that would coordinate all the reforms in the

[6] The EITI Reports are available at http://www.itie.org.mz/download/decimo-relatorio-itie-mocambique-english/?wpdmdl=3385&refresh=654485103e8101698989328

[7] Interviews with MIREME staff.

sector. Since then, government has not been able to establish such an institution, to the frustration of civil society organisations and the extractive companies.

With the EITI multi-stakeholder committee in place and the Kimberley Process Cabinet operational, the government did not give priority to the HAEI. With the oil and gas boom in northern Mozambique, the government's priority shifted to the establishment of the Sovereign Wealth Fund (SWF). At the time of writing this thesis, the SWF was still under discussion in parliament with high possibilities of being approved. Under the 2014 Mining Law, the HAEI would be an independent body from government, but created by the government to oversee all the reforms.

## 1.8 Conclusion: juggling reforms and whither transparency

This introductory chapter has discussed the juggling reforms implemented by the Mozambican government in the extractive industry sector. Some legal and institutional reforms aimed at improving the performance of the industry fail to do so due to the lack of implementation of the policy measures undertaken.

For more than a decade, Mozambican civil society organisations have been advocating for the publication of the contracts signed between government and the companies operating in the extractive sector. The responses from both Government and companies were that the publication of contracts would jeopardize the essence of the commercial aspects of each project. This argument was debunked on various occasions using both theoretical and empirical evidence from various countries, which have proven the Mozambican case wrong (Castel-Branco & Cavadias, 2009; Mosca & Selemane, 2012; Selemane, 2014).

The publication of the contracts is crucial for an informed public debate and scrutiny to verify the extent to which the companies pay what they should as per their contract with the state. The public must have the ability to verify what and how much government institutions are receiving, and what the companies owe them (Coughlin et al., 2013).

In the revised 2014 Mining Law, the government finally agreed to publish only the contracts signed after the law's approval. This meant that the most important contracts

of Mozal, Vale (currently Vulcan), Kenmare, and Sasol would never be published. This has been interpreted as a limited progress towards the transparency of contracts. As noted by legal expects, the law never rules backwards if the effect will not be beneficial to the affected subjects.[8]

The publication of both new and old contracts would allow access to information on local economic development, land use, community rights (which, in many cases, are defined in the contracts), and permit an informed debate about whether, on behalf of its people, the government has signed fair and competitive contracts (Coughlin et al., 2013).

The discussion in this chapter has demonstrated the efforts undertaken by the Mozambican government to cope with mining, and particularly with the the coal boom. I have also presented the different perspectives and pressures from different stakeholders (such as investors, civil society organisations, and development partners – including the IMF and the World Bank).

The country-specific information included in this section serves as the basis for a thorough understanding of the Mozambican extractive industry in general, and the coal industry in particular. Tables 1 to 5 provide the differential details that make the Mozambican case unique.

[8]Interviews with the Mozambican Bar

# PART II

# LITERATURE REVIEW, CONCEPTUAL, THEORETICAL FRAMEWORK AND METHODOLOGY

# CHAPTER 2 – UNPACKING THE LITERATURE REVIEW

## 2. Theoretical and conceptual framework

### 2.0. Introduction

This chapter unpacks the theoretical framework that backs up the thesis. Dwelling on already documented information, the chapter starts by shedding light on abundance and scarcity in natural resource economics, moving on to two forms of accumulation, namely the Marxian primitive capital accumulation and David Harvey's accumulation by dispossession. Thereafter, a review of dependency theory is examined, where all the dependency forms are discussed, followed then by a discussion of the extractive industries and the inherent 'Dutch Disease' and 'Resource Curse' models. The political economy analysis is given in perspective, to close up with the uneven development framework.

This chapter critically outlines and engages the main debates on development theory and political economy related to resource-based development (natural resources economics) with particular emphasis on Mozambique. The review aims to establish the intellectual ground to respond to the two specific research questions:

i What and how socio-economic factors of the Tete Province coal industry contribute to Mozambique's uneven development?
ii What and why do environmental factors of the Tete Province coal industry contribute to Mozambique's uneven development?

Creswell (1994) has described the theoretical framework of a study to be dependent on the researcher's worldview, which culminates in the selection of a qualitative or a

quantitative paradigm. A theoretical framework also can be viewed as a set of theoretical assumptions that explain the relationships among a set of phenomena. However, a conceptual framework normally does not rise to the level of a theoretical framework itself, at least at the level of substantive theory.

A theoretical framework is built on a supportable premise or the extension of such premise through a logical path of reported research and clear reasoning. In contrast, a conceptual framework does not often reach the same level of sophistication. Depending on the nature of the research, it may be that an empirical study uses a well-articulated conceptual framework to serve as the backbone integrating various constructs and propositions in a meaningful way to serve as a guide for the research being conducted. Often conceptual frameworks present visual depictions of the relationships between constructs and the research questions or hypotheses that emanate from such a depiction.

Economists have studied natural resources from the earliest days of the profession and for good reason (Kneese, 1988). Natural resources are seen as the basis for national prosperity, power and wealth. In fact, the logical assumption any ordinary citizen from any country on the planet holds is that an abundance of natural resources (e.g., coal, gold, gas, oil, timber) must be transformed into the country's wellbeing.

As posited by Elissaios Papyrakis and Reyer Gerlagh, in their 2007 journal article "Resource abundance and economic growth in the United States", in contrast to the above perception, natural riches tend to frustrate rather than promote economic growth. Countries such as Japan, South Korea and Switzerland have experienced remarkably high rates of economic growth, despite their lack of natural resources. On the other hand, countries such as Mexico, Nigeria, Venezuela, and the so-called Oil States in the Gulf, becme examples of development failures, despite their extensive reserves of natural wealth (Papyarykis & Gerlagh, 2007).

Has natural resource abundance been theoretically or empirically proven as a barrier to economic growth and development? Not really! As both Papyarykis and Gerlagh acknowledge in their article "The negative correlation between economic growth and resource abundance still is a conceptual puzzle. There is no obvious reason why

natural resources should frustrate economic growth per se. Plentiful fertile land, rich fishing banks, diamond mines, and vast oil reserves should drive economic growth rather than restrain it" (Papyarykis & Gerlagh, 2007). I will come back to this particular debate later in Section 2.5, when I look into the plausibility of the resource curse thesis.

Worth noting for now is the fact that the ability to harness energy resources in new ways is recognized as, perhaps, the major factor underlying the industrial revolution (Kneese, 1988). The most advanced gadgets that our urban societies currently seem unable to live without – cellphones, computers, iPads, TV sets – would not exist without the transformation of precious minerals.

Resource-based economies have attracted considerable attention from academics. The exhaustible nature of minerals and other non-renewable resources has been subject to thorough research, dissertations and theses, journal articles and books. The common concern among all authors has always been natural resource scarcity. Natural resource scarcity is usually analyzed *vis-à-vis* natural resource abundance, in the sense that the more abundant a natural resource (e.g., coal, gold or oil) is, the more concerned with its possible depletion the government of that country becomes. I will clarify two apparently well-known but rather confusing concepts: natural resource abundance and natural resource scarcity within the resources economics discipline.

## 2.1. Abundance and scarcity in natural resources economics

### 2.1.1. What is natural resource abundance?

Natural resource abundance does not mean the same in different sciences. As noted by Papyarykis & Gerlagh, (2007), for natural scientists or environmental economists, resource abundance typically refers to the amount of potentially exploitable natural resources. For economists who study the Dutch Disease, resource abundance typically refers to the amount of already exploited natural resources and reserves proven economically exploitable. The proportion of potential resources that, in the end, becomes economically exploitable depends on many economic, political and technological factors. Building on the second category of abundance advanced by economists who study the Dutch Disease, this implies that a country can be naturally

endowed with enormous natural resources but, if not yet exploited due to limitations in economic, political and technological factors (as is the case for many Least Developed Countries), it may not be regarded as resource-abundant.

### 2.1.2. What is natural resource scarcity?

The notion of natural resource scarcity is directly associated with non-renewable resources. In plain terms, scarce resources are the ones that are not renewable. The depletion of certain natural resources (such as coal, gas, precious minerals and oil) with no possibility of renewal generates the idea of exhaustibility. This is different to renewable resources such as timber, forestry or water.

As documented by Allen Kneese in his 1988 article "The economics of natural resources", Thomas Malthus could be viewed as the first natural resource economist, even though he is most widely known for his work on population. In 1798, Malthus published his *Essay on the Principle of Population*, a clear and forceful version of the seminal idea of diminishing returns for increased effort in the presence of a scarce resource (Kneese, 1988).

Although classical economist Thomas Maltus dedicated time and effort to investigate the issues around the economics of natural resources, it was only after the 1960s that energy resources started to get major attention as a matter for theorizing, empirical testing, and policymaking – its emergence as a theoretical and empirical body. In the widely cited book *Scarcity and Growth*, economists Harold Barnett and Chandler Morse summarize Thomas Malthus's thesis in the following terms (Barnett & Morse, 2011):

> Malthus' famous Essay on Population may be credited with having widely propagated the belief that natural resource scarcity impairs economic growth. His doctrine is based on presumed natural law. That natural resources are limited and population multiplies continuously, subject to a biological restriction, are taken as nature-given facts. In the absence of social preventive checks, population increases to the limits of subsistence. The limits of nature constitute scarcity. The dynamic tendency of population to press continually to the borders of subsistence is the driving force. The incompatibility of a finite amount of agricultural land with provision of subsistence to a continually increasing population entails an eventual decline in output per capita and cessation of growth. This is the economic scarcity effect (p. 52).

After classical economists such as Thomas Malthus, David Ricardo, John Stuart Mill, Karl Marx and others, the first notable publication is the 1914 journal article “Rent under the Assumption of Exhaustibility” by Lewis Cecil Gray (1914). In it, Gray (using the graphical methods characteristic of the time) recognized that a depletable resource was different from an ordinary good in that it is limited in total quantity and is not producible. The assumption of exhaustibility of minerals seemed to hold.

The apparent consensus around the concern with scarcity lost merit with the publication of the seminal book *Scarcity and Growth* by Harold Barnett and Chandler Morse in which they reached the following conclusion (Barnett & Morse,2011[1963]):

> Our empirical test has not supported the hypothesis – let us call it the "strong hypothesis" that economic scarcity of natural resources, as measured by the trend of the real cost of extractive output, will increase over time in a growing economy. Observing the extractive sector in the United States from 1870 to 1957, we have found that the trend in the unit cost of extractive goods as a whole has been down not up (p. 199).

### 2.1.3. How does technology affect natural resource scarcity?

The notion of resource scarcity was first questioned almost 90 years after Harold Hotelling published his 1931 article “The Economics of Exhaustible Resources” in the US-based *Journal of Political Economy*, which was considered a seminal contribution to non-renewable resource economics. Hotelling proposed an extensive intertemporal optimization_analysis of extraction paths under various competitive conditions (Hotelling, 1931b). Hotelling’s thesis can be viewed as a follow-up of classical economist Thomas Malthus with his theory of scarcity as defined above.

The assumption of scarcity of natural resources was developed prior to and without considering modern technological developments. The exploitation of arable land, minerals (such as coal, gold, precious stones and others) had limited expansion at a time of only rudimentary technology.

As documented by Kneese (1988), it is axiomatic that technological progress is based mainly on an expanding knowledge base embodied in structures, including humanity.

Several themes resulting from the prior discussion can now be summarized in terms of their implications for economic growth:

i Because the economy is a dissipative structure, it depends on continuous energy and material flows from (and back to) the environment. Such links are precluded by closed neoclassical general equilibrium models, whether static or quasi-static.

ii The energy and physical material inputs to the economy have shifted over the past two centuries, from mainly renewable sources to mainly non-renewable sources.

iii Dynamic economic growth is driven by technological change (generated, in turn, by economic forces or deliberate government policy) that also results in continuous structural change in the economic system. It follows, incidentally, that a long-term survival path must eventually reverse the historical shift away from renewable resources.

With these basic notions of abundance and scarcity of natural resource as key factors of economic growth, I move to the discussion on the main theoretical strands, starting from the classical economists to the neoclassical and heterodox. Both economic and political economy scholarship is represented by plenty of authors with competing narratives about the role of natural resources in economic development.

The fact that authors from different schools of thought (e.g., Marxists, institutionalists, structuralists, Keynesians and Post-Keynesians) have addressed the same question has created competing narratives that currently persist among development economists.

The rivalry is more visible between neoclassical economists (e.g., Xavier Sala-i-Martin, Arvind Subramanian, Jeffrey Sachs, Andrew Warner, Paul Collier, Anke Hoeffler and Richard Auty) and heterodox economists, also known as progressive economists (e.g., Alice Amsden, David Harvey, Samir Amin, Raúl Prebisch, Patrick Bond, Ben Fine, Ha-Joon Chang and Alfredo Saad-Filho). The former group are associated with the neoliberal school of thought, whereas the latter group represents so-called heterodox development economics.

A long-established theory to understand the exploitation of resources in a way that does not benefit the entire society (or that benefits only a few rather than the majority of people) is Karl Marx's notion of primitive capital accumulation. Marx's theory (and Harvey's) are attempts to understand and explain the creation and reproduction of capitalism in economies driven by natural resource. I dedicate the next section to an analysis of the notion of 'primitive capital accumulation', including its expansion and reshaping undertaken by political economist David Harvey, with his theory of accumulation by dispossession.

## 2.2. From primitive capital accumulation to accumulation by dispossession

Karl Marx, according to Sassen (2010), saw a specific type of shift whereby pre-capitalist modes of production were incorporated into capitalist relations, a process marked by violence, destruction, and appropriation. Building on Arrighi's 1994 book – *The long twentieth century: Money, power, and the origins of our times* (Arrighi, 1994) – Sassen develops a new specific type of shift in capitalism, namely "the destruction of traditional capitalisms in order to extract what can be extracted for the further deepening of advanced capitalism".

### 2.2.1. Primitive capital accumulation

Karl Marx's core thought in political economy is the notion of primitive capital accumulation (Marx et al., 1955). As noted by Massimo De Angelis in his "Marx's Theory of Primitive Accumulation: A Suggested Reinterpretation" (De Angelis, 2000), Marx's concept of primitive accumulation indicates the historical process that gave birth to the preconditions of a capitalist mode of production. These preconditions refer mainly to the generation of a class within society with no other means of livelihood but their labour power to be sold in a nascent labour market (say for example, in a coal mine), and to the accumulation of capital that may be used for nascent industries. In this conception, the adjective "primitive" corresponds to a clear-cut temporal dimension, which becomes the condition for a capitalist future (De Angelis, 2000). Primitive here means original.

In the sense of the above-mentioned characterization, ‘primitive accumulation’ represents the historical process (past, present and future) of divorcing the producer from the means of production. It appears as primitive because it forms the pre-historic stage of capital and of the mode of production corresponding with it (Marx, 1992 as cited in Sassen 2010).

In the eight chapters of Part Eight of Volume One of Karl Marx’s *magnum opus Capital*, Marx discusses the notion of ‘primitive accumulation.’ As documented by (De Angelis, 2000), for any given time-period, the process of accumulation presupposes, of course, that some pre-accumulated capital was thrown into the process of production. It seems therefore that capitalist production as a whole presupposes some “original” or “primitive” accumulation. Although he never uses the term, Adam Smith was the first to refer to this notion by claiming that “the accumulation of stock” is a precondition for the division of labour and, consequently, for the improvement of the productive power of labour.

Within Marxist scholarship, the notion of ‘primitive capital accumulation’ had received different interpretations before David Harvey developed his theory of ‘accumulation by dispossession.’ The most prominent interpretations of Karl Marx’s theory came from Vladimir Lenin, Rosa Luxemburg and Karl Polanyi, although Massimo de Angelis identifies only two main interpretations of Marx’s primitive accumulation: Lenin and Luxemburg.

Lenin’s reading of Marx’s notion of primitive accumulation can be termed as ’historical primitive accumulation’; Rosa Luxemburg’s thesis, based on Marx’s primitive accumulation, can be called ’inherent-continuous primitive accumulation’; and Polanyi’s interpretation of Marx’s notion of primitive accumulation can be labelled as ’double movement’ (De Angelis, 2000).

### *Lenin’s historical primitive accumulation*

In Lenin’s 1899 study, “The development of capitalism in Russia”, the Marxist concept of ‘primitive accumulation’ is seen as the historical premise to the capitalist mode of

production and therefore focuses on the process of separation between people and the means of production in the moment of transition between modes of production. In his polemic against the populists (who believed that the absence of a developed market would prevent capitalist development in Russia) Lenin argued that the disappearance of the peasants and their expropriation along with that of their communities, were the conditions for the creation of the capitalist market in Russia. Lenin saw this process as inevitable and ultimately positive, although he often underlined the contradictions of this process (Lenin, 1987); De Angelis, 2000). However, these contradictions do not include patterns of peasants' resistance against expropriation and how such resistance could have contributed to create outcomes contradicting the requirements of the development of Russian capitalism.

### *Luxemburg's inherent-continuous primitive accumulation*

Rosa Luxemburg's 1913 *The Accumulation of Capital* is the author's reading of Karl Marx's concept of 'primitive accumulation', particularly Volume II of *Capital* (Luxemburg, 2015b). In Luxemburg's framework, Marx's expanded reproduction schemes are only a representation of the mathematical conditions for accumulation in the case in which there are only two classes. In reality, Luxemburg contends, capitalist production must rely on third parties (peasants, small independent producers, etc.) to be commodity buyers.

In the above sense, the enforcement of exchange relations between capitalist and non-capitalist production becomes necessary to realise surplus value. However, this exchange relation clashes with the social relations of non-capitalist production. To overcome the resistance to capital that arises from this clash, capital must resort to military and political violence (De Angelis, 2000; Luxemburg, 2015).

Luxemburg's approach is "inherent-continuous" in the sense that the characteristic extra-economic process of separation between people and the means of production is a continuous and inherent process of capitalist production (De Angelis, 2000).

***Polanyi's "double movement"***

Karl Polanyi's 1944 book *The Great Transformation* in which he developed his concept of "double movement" is acknowledged to be his positioning in relation to Marx's *Capital* (Maertens, 2008). In the book, Polanyi sets out his theory according to which, on one side, there is the historical movement of the market, a movement that has no inherent limit and that therefore threatens society's very existence. On the other side, there is society's natural propensity to defend itself, and therefore to create institutions for its own protection.

In Polanyi's terms, the continuous element of Marx's primitive accumulation could be identified in those social processes or sets of strategies aimed at dismantling those institutions that protect society from the market. The crucial element of continuity in the reformulation of Marx's theory of primitive accumulation arises therefore once we acknowledge the other movement of society (De Angelis, 2000).

The (re)structuring of the economy based on the ideals of the self-regulating market inevitably leads society to reassert itself against the commodification of land, labour and money (Polanyi, 1944). Referred to as the "double movement", this idea has been used by many scholars to challenge the underlying logic of free-market principles and to explain popular resistance to reforms based on it (Maertens, 2008).

Another notable Marxist theorist is David Harvey who developed the concept of 'accumulation by dispossession' based on Marx's theory of 'primitive capital accumulation' as interpreted by Rosa Luxemburg. I dedicate the next section to a critical review of Harvey's theory.

### 2.2.2. Accumulation by dispossession: between applauds and critiques

David Harvey dedicates the entire chapter 4 of his book *The New Imperialism* to the recasting of Karl Marx's theory of 'primitive capital accumulation' as reworked by Rosa Luxemburg. He does so by substituting the terms 'primitive' or 'original' capital accumulation with the term 'accumulation by dispossession'. As he argues, "it seems peculiar to call an ongoing process 'primitive' or 'original'" (Harvey, 2003a; p. 144).

Why does Harvey decide to reshape Marx's theory as 'accumulation by dispossession'? As noted by Das Raju, a political economist based at York University in Toronto, Canada, in his critique of Harvey's conceptualisation, Harvey gives dispossession two meanings. In its "restricted" meaning, dispossession means redistribution of assets. In its broad meaning, dispossession includes exploitation. Here there is a potential contradiction: his view that exploitation is a form of dispossession contradicts his claim that dispossession has become a more important aspect of capitalism than expanded reproduction, which is the site of exploitation. Thankfully, Harvey, for the most part, uses dispossession in its narrow meaning (Das, 2017). I will come back to Das Raju's thorough critique to include his own interpretation of Marx's framework of accumulation by dispossession.

Harvey provides the reasons for such choice in the same chapter 4 of *The New Imperialism*, in the following terms: "Primitive accumulation, in short, entails appropriation and co-optation of pre-existing cultural and social achievements as well as confrontation and supersession." In other words, the capitalist nature of appropriating public goods for private gains – creating over-accumulation – is seen by Harvey as one of the reasons to pursue a theoretical framework that will assist in healing the disease of over-accumulation. As he declares (Harvey, 2003a):

> Over-accumulation, recall, is a condition where surpluses of capital (perhaps accompanied by surpluses of labour) lie idle with no profitable outlets in sight. The operative term here, however, is the capital surplus. What accumulation by dispossession does is to release a set of assets (including labour power) at very low (and in some instances zero) cost. Over-accumulated capital can seize hold of such assets and immediately turn them to profitable use. In the case of primitive accumulation as Marx described it, this entailed taking land, say, enclosing it, and expelling a resident population to create a landless proletariat, and then releasing the land into the privatized mainstream of capital accumulation (p. 149).

Just as in the case of Tete province's coal mines, primitive accumulation as Marx depicts it – in the predatory sense – entailed a whole series of violent and episodic struggles. The birth of capital was no peaceable affair. It was written into the history of the world, as Marx put it, 'in letters of blood and fire' (Fine, 2006).

David Harvey's theory of 'accumulation by dispossession' is essentially an interpretation of how the capitalist mode of production, distribution and saving of wealth occurs – the capitalist exploits workers (dispossess them), then accumulates the surplus for further and expanded capitalism. This way of analysing capitalism has been subject to thorough debates within academia, with some authors applauding Harvey's brilliance and others questioning his reasoning.

Among the supporters of Harvey's theoretical framework is political economist Patrick Bond in his 1998 book *Uneven Zimbabwe – A Study of Finance, Development and Underdevelopment*. In the book, which resulted from Bond's doctoral thesis, the author praises Harvey's expanded Marxist conceptualisation of capitalism in the following terms: "I have found very useful the interpretations of David Harvey and Simon Clarke,[9] in which financial power is directly correlated with downturns in the accumulation process specifically, to the periodic condition of over-accumulation" (Bond, 1998; p. xx):

> Harvey understands the expansion of capital across all of its economic, political and ideological aspects, with its internal imperatives equally seeking external safety valves in what he terms, as a generalization of primitive accumulation, the accumulation of dispossession. Harvey's account is rich and expansive, both theoretically and empirically. Nevertheless, it is also problematic. My own preference is to use primitive accumulation in the precise and narrow sense suggested by Marx (p. 143).

Another well-known Marxist political economist who defends Harvey's contributions is Emeritus Professor of Economics at the School of Oriental and African Studies (SOAS), Ben Fine. In his 2006 article "Debating the New Imperialism" (Fine, 2006), not without criticism, Fine declares:

> Harvey's shift from primitive accumulation to accumulation by dispossession goes much further than a change in terminology in two major, and questionable, respects. First is the extraordinarily wide definition that he deploys. It ranges over the privatisation of housing, through Soviet shock therapy, to all forms of

[9] Simon Clarke was a British Marxist sociologist widely known for his work on progressive political economy. He died on December 27, 2022.

> privatisation, quite apart from the territorial fixes on the global stage. This is all evidence of confusion over the relationship between the internal and external; not least as well-defined value-analysis is abandoned (p. 143).

It is clear from the above citation that Fine is a supporter of Harvey's conceptual framework, but not in its entirety. As he says, he rather prefers the original Marxist version of 'primitive accumulation.' Ben Fine's reason for this position is in the fact that (Fine, 2006):

Another Marxist scholar who has deeply criticized David Harvey's "accumulation by dispossession" approach is Raju Das, in his 2017 article "David Harvey's theory of accumulation by dispossession – a Marxist Critique."

The central argument developed by Raju Das against David Harvey is that 'accumulation by dispossession' is a bad and chaotic concept. Citing Andrew Sayer's work on *Method in Social Science*, he continues by explaining that accumulation by dispossession is a bad concept in many ways even if it draws attention to some of the important processes in the contemporary capitalist world. More precisely, it is a chaotic concept: it puts together processes under its scope which should not be put together as they do not have a mutual relation of necessity, and it separates processes which should not be separated because they are internally related (Sayer, 1992 as cited in Das, 2017).

The criticism of Harvey's theory developed by Raju is not limited to The New *Imperialism*, but rather to Harvey's entire theoretical work, including *The Limits to Capital*.

### *From Harvey's accumulation by dispossession to Raju's accumulation by exploitation*

For Raju, Harvey's accumulation by dispossession conceptual framework is chaotic in the critical-realist philosophical sense: it includes processes which bear no internal relations, and it separates processes which should not be separated.

Raju finds in the accumulation by dispossession theory far too much inflation of the causal significance of the concept, and also sees Harvey as having mistakenly considered accumulation by dispossession to be the dominant moment of contemporary capitalism. Harvey fails to connect accumulation by dispossession of producers – Raju continues – to what he considers to be 'accumulation by exploitation' of proletarians and semi-proletarians (Das, 2017).

According to Raju Das (Das, 2017) there are four failures in Harvey's accumulation by dispossession(Das, 2017):

i ***Loss of coherence as a result of mixing up non-mixable categories.*** Given the way Harvey thinks about modern-day primitive accumulation processes, Raju Das argues, his concept of accumulation by dispossession loses its coherence to an extent that it is difficult to say what the totality of the practices of accumulation by dispossession explains or is explained by. It is indeed not clear what conceptual advantage one gains by clubbing together all these conceptually diverse processes that accumulation by dispossession is supposed to descriptively refer to: privatization of government-owned companies, mortgage fraud by banks, speculation in housing markets, increase in banks fees/interest and land rents, privatization of pension funds, forcible dispossession of small-scale owners, the International Monetary Fund (IMF) forcing open markets in a poor country, family farms outcompeted by agribusiness companies, collapse of stock markets and companies causing job loss, degradation of habitats and environmental depletion.

ii ***The link of dispossession to the dispossessed.*** Harvey's focus on dispossession is linked to his concept of the dispossessed. The dispossessed

includes, according to Das: (a) those who are dispossessed within the labour process because they do not own property, and (b) those who are being dispossessed of their property itself (including in means of production and subsistence). In terms of the second group of the dispossessed, his category is a cross-class category in that it includes three different classes: capitalists (who may lose their property via inter-capitalist competition); peasants and other small-scale producers; and wageworkers who are separated from their means of subsistence (e.g., savings, homes, permanent jobs, etc.). According to Harvey, as cited by (Das, 2017), the loss of workers' employment or pensions and the loss of peasants' land happen due to state policies, and therefore they both are accumulation-by-dispossession processes. This is a mistaken view in that the state is always involved in the reproduction of capitalist societies. The fact that the state is involved in economic activities, including in foreign territories, does not automatically make such a process a part of accumulation by dispossession.

iii ***Failure to differentiate many forms of privatization.*** Similarly, Raju Das notes, Harvey fails to distinguish between many forms of privatization of property**.** Privatization of village common property, which was of use to peasants working on their own land, should be seen as different from the privatization of government-funded education, which reproduces what is already a wage-labour class that existed before such privatization took place. Overall, Harvey elides a series of binaries or under-stresses their mutual differences.

iv ***Separation of processes, which should not be separated.*** More precisely, Harvey breaks the dialectical unity of Marx's original concept by, more or less, reducing accumulation by dispossession to the transfer of property to a few. For Marx, primitive accumulation does not merely mean the transfer of assets from one class to another. If it were so, Marx would be a mere Proudhonian.[10]

[10] From the French philosopher and sociologist Pièrre-Joseph Proudhon (15 January 1809 – 19 January 1865) considered to be the father of anarchism. His best-known assertion is that "property is theft!" contained in his first major work, What Is Property? On the other hand, an Inquiry into the Principle of Right and Government (*Qu'est-ce que la propriété? Recherche sur le principe du droit et du gouvernement*), published in 1840 (Zimmerman, 1984).

> If primitive accumulation was merely about the transfer of wealth to exploiting classes (by governmental force or intervention), there is nothing special about primitive accumulation because that has been happening for hundreds of years before primitive accumulation.

After a long and thorough critique of David Harvey's theoretical framework on accumulation by dispossession, Raju Das proposes to call the Marxist 'primitive accumulation' (PA) concept 'accumulation by exploitation.' However, he does not provide a clear definition of what he calls 'accumulation by exploitation' and, more importantly, in what exact terms does his concept differ from Harvey's one, apart from the 'failures' that he has indicated in Harvey's theory.

In his article "David Harvey's Theory of Accumulation by Dispossession – A Marxist Critique" dedicated to "debunk" Harvey's conceptual framework, Raju Das recommends a return to the original Marxist formula with no clear indication of what we can call Raju Das own perspective (Das, 2017). He writes:

> Given the numerous problems with Harvey's theoretical and political analysis of the modern-day version of PA, there is clearly a need for an alternative way of looking at it, one that appropriates his useful insights but one that is fundamentally based on Marx's own theory of PA, and that takes value and production as well as class and the working class more seriously than Harvey's approach allows for (p. 613).

Marxist political economy, including its reshaped versions by Rosa Luxemburg, Karl Polanyi and David Harvey, resulted in a broad theoretical ground known as dependency theory. I dedicate the next section to a survey of dependency theory.

## 2.3. Dependency theory: evolution and prospects

Dependency theory is founded on a Marxist worldview that sees globalization as the growth of market private enterprise and the abuse of labour and possessions as the West's historical achievements. Dependency theory promoted an inward-looking approach to growth and a bigger role for the government in removing barriers to

exchange, making internal ventures difficult, and nationalizing significant enterprises (Vang-Phu & Ayub Dar, 2022).

In a 2022 article “Understanding the Global Political Economy Using Dependency Theory” scholars Tran Vang-Phu and Mohamad Ayub Dar summarise the three basic premises of dependency theory as follows (Vang-Phu & Ayub Dar, 2022):

> 1. In poor countries, common assets and modest work are distributed. They established targets for out-of-date innovation and commercial sectors for affluent countries, without which the latter would not be able to live up to their expectations.
> 2. Wealthy countries use a variety of methods to promote a dependent state. Financial matters, media control, governmental issues, saving money, teaching, culture, gaming, and all aspects of human asset development, including the enrolment and preparation of specialists, could all have an impact.
> 3. Well-off countries efficiently counter all attempts by ward countries to challenge their persuasions by using monetary approval mechanisms, and possibly military force. The neediness of the countries on the periphery is due to how they are coordinated into the international framework, not because they are not coordinated into the world framework or because they are not entirely incorporated, as is frequently argued by free-market financial experts (pages 1-2).

This is also known as ‘the centre-periphery thesis’, originally used in the 1940s in Latin America by an Argentine economist, Raúl Prebisch, who is also known as the founder of structuralism (Love, 1980). In fact, dependency theory is the foundational basis of structuralism. The theory emerged from the disconnection between the continuing development of western countries (specifically the members of the Organization of Economic Cooperation and Development – OECD) and the continuing underdevelopment of southern countries (Latin America, Asia and Africa). Prebisch’s prescription to overcome the underdevelopment of the global south was so-called import-substitution: developing countries should embark on locally producing those goods that they used to import, and so replace the imported goods with locally produced ones (Ferraro, 1996).

In other words, according to Veltmeyer & Wise (2018), within the framework of the centre-periphery model constructed by the theorists of Latin American structuralism (dependency theorists such as Fernando Cardoso, Theotonio dos Santos and André Gunder Frank), development and underdevelopment can be regarded as two sides of

the same coin. The reason is that socioeconomic conditions are inextricably linked to the position that a country happens to occupy in the “world capitalist system.” Strictly speaking, “dependency” constituted a school of thought among likeminded scholars rather than a “theory.” It even included the proposition that development in the metropole (the industrialized countries) was founded on the “underdevelopment” of countries on the periphery — the “development of underdevelopment”, to use André Gunder Frank’s (Frank, 1970) very controversial but popular formulation.

***Types of dependency theory and their relationship with Tete’s coal industry***

Dependency theory has evolved into three different types. The first is the traditional theory founded by Raúl Prebisch and his Brazilian colleague Celso Furtado. Contemporary scholars associated with this school include Samir Amin who is the most prominent thinker of Marxist-oriented dependency theory which emphasises class struggles (Amin, 1972).

Other defenders of dependency theory, with variations, include political economists Ben Fine, who is more focused on a traditional Marxist analysis (Fine, 1989; Fine & Saad-Filho, 2004); Carlos Castel-Branco, with a Marxist perspective nuanced with the analysis of the alliances between foreign and domestic capitalists (Castel-Branco, 2017b, 2014); and Patrick Bond, who centres his Marxist analysis on uneven development, including the problem of sub-imperialism (Bond, 1998, 2018a).

As noted by Vang-Phu & Ayub Dar (2022), there is a group of non-Marxist structuralist dependency theorists. They oppose the stagnation viewpoint. The most well known writer among them was Fernando Henrique Cardoso – former President of Brazil, a well-known Brazilian sociologist and dependency theory advocate. Cardoso claimed that countries on the periphery experience a form of 'peripheral capitalism.' Economic stagnation (or, in the words of Andre Gunder Frank, the "development of underdevelopment") is one of the key characteristics of these economies'. According to Cardoso, as cited in Vang-Phu & Ayub Dar (2022), the dependent countries are not at a standstill. The economics and societies of the periphery are constantly changing. In the economic history of least developed countries (LDCs), there are three significant stages:

i The first is the colonial period's agro-export stage, when economic dualism was widespread. Pre-capitalist sectors such as artisans, petty producers, and peasant producers accounted for the majority of economic activity during this time.

ii The developmental alliance stage is the second. Following the World War II, some LDCs underwent significant transformations because of import substitution industrialization (ISI). A new social structure of accumulation is being established at this stage, one that is founded on the common interests of industrial workers, peasants, and capitalists.

iii The third stage is a corporatist dictatorship, which places severe restrictions on democracy, labour unions, colleges, and other spheres of society where opposition may occur. The second stage's populist orientation (which includes enhanced social security, minimum wage legislation, public health care, and public education) is broken (pages 3-4).

This strand of theory rather looks at class configuration that can be located both in the global north and in the south. As remarked by Bond (2018), the struggles against exploitation are not only a matter of the north against the south, but also about a class of exploiters against a class of the exploited from both hemispheres of the world. Another ramification of dependency theory is ’world systems theory, with Emmanuel Wallenstein as its top proponent (Wallerstein, 1987).

Being divided into two main categories, dependency theory attracts both neoclassical and heterodox economists. The latter promote the non-Marxist variant of the theory. Take the example of Andrés Velasco with his 2022 article “Dependency Theory”, where he declares (Velasco, 2022):

> Dependency came in two flavours: The radical one, cooked up by economists Andre Gunder Frank and Amir Samin (sic – Samir Amin, the Egyptian Marxist thinker, pioneer of the dependency theory), claimed that the center grew at the expense of the periphery. The only solution was to delink completely from the world economy. From the start, however, radical dependence faced its share of troubles. Armies of graduate students tried to find a positive correlation between expansion in the North and recession in the South, but failed (…) The milder version of dependency, pioneered by Cardoso and his co-author Enzo

> Faletto, and by others like Chile's Osvaldo Sunkel and Mexico's Pedro Paz, was **more useful** (bold added) – pages 44-45.

Dependency theory is currently encompassed in the debates on non-renewable resource depletion, such as coal, which can be measured by natural capital accounting (NCA) developed by the World Bank. Bond (2018) highlights the fact that the 2018 World Bank report "Changing Wealth of Nations 2018" is only the most recent reminder of how much poorer Africa is becoming by losing more than $100 billion annually from minerals, oil and gas extraction.

In the case of Mozambique, the application of dependency theory helps to explain the country's trajectory since its independence in 1975. Two years after independence there was a 16-year civil war in Mozambique. The war brought about dependence on foreign aid, as I discuss in the next section.

## 2.4. Foreign aid, aid dependence, and minerals dependence

The development literature defines aid, as the voluntary transfer of resources, be it financial or in kind, from one country to another for short-term humanitarian assistance or long-term development purposes. Different authors use different designations for aid, such as 'international aid', 'overseas aid' or 'foreign aid' (Easterly, 2002a, 2002b; Mkandawire, 2011; Oya & Pons-Vignon, 2010).

The literature around the concept of foreign aid can be divided into two sub-groups: the first is the group that considers foreign aid as a body of good intentions with bad enforcement outcomes, which includes the push of the Washington and post-Washington policy agenda (Amsden, 1992; Easterly, 2002a;2002b; Fine, 2003). Second, there is a body of literature that looks at foreign aid as a key investment input in countries with investment attractions, but which also poses questions on the relationship between the aid givers and aid receivers. Examples of this approach are Arvin, Barillas, & Lew, (2002); Arvin, Piretti, & Lew, (2003); Beynon (2002); and Hopkins (2000).

Both academic and policy documents coincide in categorising aid in two distinctive typologies. The first type is humanitarian emergency aid, which is usually triggered by unusual phenomena or circumstances (war, droughts, floods, earthquakes and cyclones). It is focused on special programmes with a shorter time-frame, and it tends to have a lighter social and political impact on long-term development patterns and institutions than longer term 'development policy-based aid', to use political economist's Castel-Branco's characterisation (Castel-Branco 2011).

The second type of foreign aid is development aid, which is usually given by developed countries to support socio-economic development programmes in developing countries. It is aimed at alleviating poverty in the long-term (Killick, 2005; Oya & Pons-Vignon, 2010). This type of aid is channelled to recipient countries using different modalities, eitheras general budget support (GBS) or official development assistance (ODA). GBS consists of financial assistance directed to strengthen a country's public budget and finance management (Castel-Branco, 2008), whereas ODA consists of flows to developing countries and multilateral institutions provided by official agencies (including the state and local governments or their executive agencies).

In her remarkable 2007 book *Escape from empire: The developing world's journey through heaven and hell* the late political economist Alice Amsden describes the consequences of foreign aid in the following terms:

> Foreign aid was like the hallucinogen called angel dust – it felt well, but it had many bad side effects. Most developing countries never got hooked on it and, thanks to the First American Empire, could go their own way (Amsden, 2009, p. 71).

Different authors such as Awortwi & Nuvunga (2008); De Haan, (2009); Oya & Pons-Vignon, (2010) agree that the generalised perceived bad effects of foreign aid can be presented in two main categories: firstly, the loss of policy space by national agents due to the de-politicization of the development process; and, secondly, the deconstruction of state capacity. I detail below both categories.

### *De-politicization of the development process or loss of policy space*

Jeffrey Sachs and Andrew Warner promote a blueprint of specific policy interventions to fit all, while neglecting macro-economic and market analysis (Sachs & Warner, 1995); whereas William Easterly (Easterly, 2002b) is more concerned with macroeconomic policy and a market-driven search for specific solutions for specific problems and opportunities. These interventions avoid the political economy complexities of aid dependence and development policy by assuming away such complexities and the respective institutions (Castel-Branco, 2016).

A compelling critique of the neoliberal agenda pursued by non-government organisations (NGOs) is presented by Issa Shivji in his widely cited 2007 paper *Silences in NGO discourse: The role and future of NGOs in Africa* (Shivji, 2007). For Shivji, the disregard of the complex and often conflictual nature of the development process leads to the promotion of "civil society" organisations, initiatives and "civil society participation" in the decision-making process, which may appear good, as it seems to promote "participatory" governance. However, Shivji continues, it must be looked at carefully as it represents the neoliberal project whose rationale is as follows: "Public servants are inefficient and corrupt, [so] civil society (understood as neoliberal friendly NGOs) must be involved in the governance agenda in order to participate in the decision-making, and overall, to monitor what governments intend to do and what they really do."

The critique of the neoliberal orientation of NGOs is not to undermine the good intentions of the development industry, but rather to analyse the objective effects regardless of intentions. As Shivji (2007) assertively puts it:

> I do not doubt the noble motivations and good intentions of NGO leaders and activists. Nevertheless, we do not judge the outcome of a process by the intentions of its authors. We aim to analyse the objective effects of actions, regardless of their intentions (p.5).

In fact, the development industry (understood as the machinery composed by the Bretton Woods institutions, state development agencies, and related NGOs) is what

Easterly calls “a cartel of good intentions” (Easterly, 2002a). Their activities are usually accomplished using the methodologies and instruments given by the donors – and therefore built upon the theoretical and policy frameworks of the Washington Consensus and the post-Washington Consensus (Fine & Van Waeyenberge, 2013; Milonakis & Fine, 2009a; 2009b). Easterly (2002a) constructively puts it in the following terms:

> It is a lot easier for aid agencies to produce observable frameworks rather than actually implement risky programs like “empowering the poor” (risky because local elites would resist, as they do even in industrial countries). The aid agencies thus do not have to face hard choices between a number of competing claims on their scarce implementation resources, potentially alienating single-issue lobbies that might influence aid revenues (p. 9).

In other words, besides the mainstream civil society and neoliberal-orientated NGOs that make their living by helping the Bretton Woods’ institutions (the World Bank and the IMF) to implement their dogma, there are growing groups of non-civil society forces. These are usually grassroots movements, mostly with a little or no bureaucratic systems or resources (such as strategic or annual plans, budgets, log frames,vehicles or offices).

**Deconstruction of state capacity**

The huge quantity of aid projects and donor demands lead to a fragmentation of state institutions as many of them face the challenge and need to run donor-driven projects, not only to contribute to “poverty reduction” but also to ensure that more money from aid will continue flowing. A significant number of public servants (usually the most qualified and those who can speak the donors’ languages) are appointed to donor-driven projects or go to work for NGOs or donor agencies at the expense of their public work – which usually results in confusion and lack of prioritization (Oya & Pons-Vignon, 2010).

All the above must be summarised as a massive downsizing process in the developing countries’ public sector, promoted by the donor-driven structural adjustment

programmes (SAPs). This has led to the reduction of real salaries in the public sector, a clear manifestation of the ideology according to which the public sector is less efficient than the private, so it deserves lower wages (Amin, 1974; Mkandawire, 1992).

## 2.5. The extractive industry: 'Dutch Disease' and 'Resource Curse' Models

Generally the concept of the extractive industry refers to the process of obtaining natural resources (water, timber, minerals, oil and natural gas), and transforming them into processed goods for use, either as final products or as inputs in various other products. However, the extractive industry is also referred to in the development literature by political scientists, business administrators and, in the colloquial language of the media, as the mining, oil and gas industries only, or as other scholars call it: the 'exhaustible materials' or 'non-renewable energy sources' (Hirschman, 1997; Hotelling, 1931; Sachs & Warner, 1995). Accordingly, in this study, the term 'extractive industry' will refer solely to minerals, oil and gas extraction and exportation, dwelling therefore on the second category of conceptualisation.

The neoclassical school of thought interprets the effects of economic reliance on minerals as having perverse results, which is termed as the 'Dutch disease' and the 'resource curse'. Dutch disease is the name given to certain negative spill-over effects of a natural resource export boom, or some other transfer effects, such as foreign aid, which produces a surge in extra wealth for a country (Sachs & Warner, 1995).

The term was first used by *The Economist* magazine in 1977, analyzing a crisis that occurred in the Netherlands after the discovery of vast natural gas deposits in the North Sea in 1959. The newfound wealth and massive exports of oil caused the value of the Dutch guilder to rise sharply, making Dutch exports of all non-oil products less competitive on the world market. Unemployment rose from 1.1 per cent to 5.1 per cent, and capital investment in the country dropped (The Economist, 1977).

As observed by Evelyn Dietsche in her doctoral thesis: "Good governance of the extractive resources sector: A critical analysis" (Dietsche, 2014b), much of the work on extractive natural resources and economic performance has been prompted by the

seminal work of Jeffrey Sachs and Andrew Warner (Sachs & Warner, 1995). This argument has raised the following question: Why, on average, against economists' predictions, have some countries that are less dependent on the resource sectors achieved better economic outcomes than those more dependent on these sectors?

## 2.6. The Dutch Disease and Resource Curse Models

Dutch disease is the condition whereby a resource boom leads to an appreciation of the real exchange rate, which in turn damages manufacturing and other tradable sectors (Auty, 2001;Ross, 2013; Rosser, 2006).

Institutions and state development during resource booms are locked into development trajectories. What results from such processes are negative development outcomes such as poor economic performance, growth collapses, a high degree of corruption, ineffective governance, and greater political instability (Collier & Hoeffler, 2004; Olanya, 2012; Ross, 2003).

The expressions 'Dutch disease' and 'resource curse', therefore, became common ways to refer to almost any problematic situation caused by (or at least thought to have been caused by) mineral resource abundance or exploitation. However, their appropriate meaning entails some rigorous reasoning; as Rosser (2006) assertively puts it:

> More formally, the Dutch disease describes the combined influence of two effects that commonly follow resource booms. The first is the appreciation of a state's real exchange rate caused by sharp rise in exports; the second is the tendency of a booming resource sector to draw capital and labour away from a country's manufacturing and agricultural sectors, raising their production costs (p. 306).

The political explanations of the Dutch disease can be further divided into three dimensions:

i ***cognitive explanations*****,** which argue that resource booms produce a type of short-sightedness among policy makers;

ii ***societal explanations*****,** which say that resource exports tend to empower sectors, classes, or interest groups that favour growth-impeding policies; and

iii ***state-centred explanations*****,** which argue that resource booms tend to weaken state institutions but are necessary to foster long-term economic development (Brunnschweiler, 2008; Brunnschweiler & Bulte, 2008; Rosser, 2006).

## 2.7. The intellectual collapse of the Dutch disease and resource curse models

### 2.7.1. Questioning the Dutch Disease model

The designation Dutch disease originated from the phenomenon that occurred in the 1960s, following the Netherlands discovery of natural gas in the North Sea. The Dutch found that their manufacturing sector suddenly started performing more poorly than anticipated. There was a de-industrialisation in output and employment following the resource boom. Put differently, Dutch disease is the condition whereby a resource boom leads to appreciation of the real exchange rate, which damages manufacturing and other trade sectors (Heal, 2007; Hujo, 2012a, 2012b, 2012c; Sachs & Warner, 1995;). As Poteete (2009) puts it, the Dutch disease is considered as the product of rentier politics that undermine long-term economic performance in resource-dependent economies resulting in a resource curse.

***The resource curse revisited***

Resource curse is also known as “the paradox of plenty”. This refers to the contradiction between natural resources (typically, a mineral, oil or gas abundance) in a certain economy (a country) and that economy’s correspondingly poor economic performance. More precisely, the lack of acceptable development outcomes resulting from the extractive activities is explained as a result of their very dependence on extracting natural resources (Hujo, 2012a, 2012b; Poteete, 2009; Sachs & Warner, 1995).

Consequently, having influenced the mainstream economics in academia and the policy-makers in global institutions such as the World Bank and the (IMF), the Dutch disease and resource curse models have failed – at least on intellectual grounds.

The efforts to explain poor economic performance as a consequence of reliance on mineral exports (Sachs & Warner, 1995) or civil wars as a result of mineral abundance (Collier & Hoeffler, 2004) or bad political regimes and countries not delivering on social development (Rosser, 2006), have been thoroughly challenged in academia up to the point of collapse. However, this is not to say that both narratives have been abandoned. For development agencies, both models remain dominant frames of explanation for what happens to resource-based economies. In fact, despite their intellectual collapse they remain dominant for the simple reason that they are militantly defended by the dominant mainstream school of economic development.

Nevertheless, the proponents of the Dutch disease and resource curse models continue to be debunked by some researchers (Castel-Branco, 2017b; Dietsche, 2014; Saad-Filho & Weeks, 2013) who stress that these two analytical frameworks fail to argue convincingly that their explanations are reflected by the econometric proxies they used. They have also failed to present valid and consistent solutions for the diagnosed problems.

Castel-Branco (2017c) has noted that the studies on causality sought to demonstrate that resource abundance is not only correlated with, but is the cause of poor growth, poor export diversification, and so on. He contends that even if this correlation could be demonstrated, there are some challenges to the definition of resource abundance, which makes it difficult to decide what correlates to what, as there is no proof of causality. Instead, poor growth could be the cause of reliance on natural resources (rather than the other way around, as predicted by the curse hypothesis), or it could be the effect of other problems such as a Washington consensus style of a structural adjustment programme.

According to Dietsche (2014), the initial research was framed in a very simplistic manner, juxtaposing a hypothetical economic-rational explanation against an equally hypothetical socio-political explanation, which found that ‘greed’, rather than

'grievance', leads rational individuals to fight over resources. To test these propositions, Collier and Hoeffler (2004) and Dietsche, (2014) assigned proxies to these two dichotomously framed hypotheses and subjected them to a statistical analysis. Both authors found 'greed' to be of greater statistical significance.

While the popular publication *Greed and grievance in civil war* (Collier & Hoeffler, 2004) was discredited by the usual Marxist economist critics of the neoclassical approach, more unexpectedly perhaps, one of the initial attacks came from a Pretoria-based political science professor Laurie Nathan (2003) in a laudable publication entitled: "The frightful inadequacy of most of the statistics: A critique of Collier and Hoeffler on causes of Civil War." Here he metaphorically accuses these authors of "having mixed apples with oranges" by inferring causality with inappropriate proxies: "Collier and Hoeffler view ethnic and religious hatreds as grievance variables. Yet their proxies measure heterogeneity and do not capture hatred or the kind of ethnic and religious discrimination and propaganda that might generate hatred" (Nathan, 2003, pp. 7-9).

Another comprehensive critique is the influential work by two political economists from the School of Oriental and African Studies (SOAS), Alfredo Saad-Filho and John Weeks in "Curses, diseases and other resource confusions" (Saad-Filho & Weeks, 2013). These authors looked at the data available between 1980 and 2010 from a sample of 29 countries to analyse the curse. Twelve of these countries have been included in the United Nations Conference on Trade and Development (UNCTAD) as major petroleum and natural gas exporters (the share of hydrocarbons in merchandise exports is equals or exceeds 50 per cent, and share of world exports is equal to or higher than one per cent). To these, they add another 17 countries whose share of petroleum or natural gas in merchandise exports exceeds that defined by UNCTAD, or that were large global producers during the period.

The oil and gas share of total exports of these countries varies from 54 per cent (Cameroon) to 100 per cent (Brunei). The sample excludes developed countries (as not cursed), large producers that are not exporters (export channel not in operation), and countries with recent discoveries of oil, gas or other minerals riches (Saad-Filho & Weeks, 2013 as cited in Castel-Branco, 2017b).

Saad-Filho & Weeks (2013) note that the critique of both models does not dismiss the evidence that many so-called resource-rich countries have not fared well with respect to economic, social and political performance over long periods of their histories. However, it does change the question of inquiry from “Why natural resource wealth has fostered different political pathologies?” to “What political and social factors enable some [so called] resource abundant countries to utilise their resources for development [however defined] and prevent others from doing the same?” (Saad-Filho & Weeks, 2013 as cited in Castel-Branco, 2017b).

Acknowledging both the existence and the dominance of the Dutch disease and resource curse models, therefore, this study does not adopt them as conceptual and theoretical frameworks. Instead, it adopts the classical political economy analytical framework to understand the trajectory and prospects of primitive capital accumulation (Fine, 1989), or accumulation by dispossession (Harvey, 2003b); being under sub-imperialist conditions (Bond, 2019, 2018) of coal extraction led by Brazilian and Indian companies (namely, Vale and ICVL). The next section provides more details on the perspective of the political economy in use in this study.

## 2.8. Political Economy Analysis (PEA) in perspective

Political economy refers to the study of the interrelation between politics (power) and economics (business) grounded in the historical and social conditions of the sector or economy under study in terms of production, capital accumulation and distribution (Amin, 1974; Chang & Evans, 2005; Fine & Saad-Filho, 2004).

The growing literature on political economy analysis seeking to cover each of the economic schools of thought (classical, Marxist, neoclassical and structuralists) appears to have its own definition of political economy. In summary, there are only two contradictory schools of thought, as far as the meaning of political economy is concerned. This lies in the contradiction between heterodox and orthodox economics. The former refers to political economy as a complex, interdisciplinary, socially and historically grounded analysis of development (Amin, 1974; Fine & Saad-Filho, 2004), whereas the latter focuses on microeconomic elements to derive general conclusions, for example, the influence of cultural habits on economic growth as described by the

political economist, Alice Amsden, in relation to the influence of Confucian culture in Chinese growth patterns (Amsden, 2009).

When comparing the now developed countries with developing countries, another example used by neoclassical political economists is the economy that builds from micro to macro proportions. This is discussed by Cambridge-based political economist, Ha-Joon Chang, with regard to geography, history or culture (Chang, 2002, 2003).

Neoclassical political economy propels the role of geographic settlement in the gross domestic product (GDP), using (and most of the time, abusing) econometrics to establish such causal relationships (Collier & Hoeffler, 2004; Nathan, 2005).

Other neoclassical authors work with some classical fundamentals under neoclassical frameworks by adding the prefix “new” before the desired field of thought, for example, Justin Lin’s “New Structural Economics” (Lin, 2012) or what political economists Dimitris Milonakis and Ben Fine call the “remaking of economic history” (Milonakis & Fine, 2005).

## 2.9. Estimating Mozambique’s degree of dependency

There are several synthetic (or aggregate) indices for measuring the state and level of development of a society, such as, for example, the Human Development Index, the Multidimensional Poverty Index, the Gini Inequality Index (generally income), the Global Competitiveness Index (GCI), among others. These indices result from a combination of indicators or variables, which are considered to have greater determinism and which best characterize a given social and economic dimension that is intended to be evaluated and compared, whether at different moments in the same reality, or between different realities (generally countries), regions, and continents, among others.

There is no established index to measure or estimate the degree of dependency of an economy. In Mozambique, economist and professor João Mosca has set an index to measure the degree of dependency, the IDEx (Mosca, 2023); (Mosca, 2024).

In the IDEx, each sub -index results from the combination of variables (which can be called sub-indices), which are assigned weights (generally measured according to a given scoring scale) according to their degree of influence (calculated, estimated or assumed) in the variable to be measured or evaluated (the index). Parameters are defined for each variable, considering qualitative or quantified situations or realities. The sum of the sub-index scores results in a score that is intended to be analyzed.

The scoring scales (better or worse) for each sub-index and variable vary: for example, in the corruption perception index, the closer to zero the better (less corruption); in the inequality index (GINI index), the closer to zero the smaller the inequalities; and in the Human Development Index (HDI), the closer to zero the worse. In the case of the proposed IDEx, the closer to zero the better (non-dependent economy) and the worst approaches 100 (very dependent economy).

“The center-periphery theory states that the structure of underdeveloped economies determines a specific pattern of international insertion as a periphery of world capitalism via the international division of labour.

In this context, the underdeveloped economic structure produces goods and services with little dynamized external demand; with regard to the domestic market, it is an importer of goods and services with a rapidly expanding domestic demand. In addition the underdeveloped economy is an assimilator of consumption patterns and technologies suitable for the developed centre, but these are often poorly suited (or completely inappropriate) for the availability of resources and the level of income at the periphery.

This analysis resulted in the idea that the social and economic structure of the Latin American periphery determines a particular mode of industrialization, of introduction and dissemination of technical progress and growth, as well as a peculiar mode of absorption of the labour force and income distribution. In other words, in their most determining characteristics, the processes of economic growth and development, in all their key variables would be different from what occurs in central countries.

The conditions underlying dependence in any country are as follows:

(1) exporting companies are mostly owned by foreigners;

(2) exports are dominated by one or a few commodities;

(3) exports dominate the economy, and imports are larger in relation to GDP; and

(4) mineral and petroleum products are produced under conditions of vertical integration.

The differences between developed economic structures and underdeveloped economic structures are found in the fact that the latter have a structure that is not very diversified and is technologically heterogeneous, contrasting with the situation observed in the former. The central countries have a more diversified productive apparatus, homogeneous productivity throughout the entire production chain, in addition to having improved technological creation and diffusion mechanisms and social transmission of their fruits that are non-existent or barely functional to promote development in the periphery.

Hans Singer and Raul Prebisch (Velasco, 2022), when analyzing the terms of trade between underdeveloped countries in relation to developed countries, found that there was a deterioration over time, where underdeveloped countries purchased fewer and fewer manufactured products from developed countries in exchange for a certain amount of material exports.

The well-known Singer-Prebisch thesis or hypothesis states that there is a secular trend of deterioration in the terms of trade in favour of industrialized goods. Traditionally, four factors are considered responsible for this phenomenon:

(1) existence of market power in the industrial sector contrasting with competitive markets in the commodities sector;

(2) pressure resulting from the difference in income elasticities, demand for manufactured and primary products;

(3) unequal distribution of human capital and knowledge; and

(4) asymmetries in the labour market between the centre and the periphery.

The pattern of exchanges in the early days of market development or commercial exchange can also partly justify a country's levels of dependence.

An economy is dependent when it is related to other countries, regions or the world, in a situation of subordination or disadvantage, not only in political and economic decision-making, but also in relation to resources (human, financial and technological) for the implementation of a development plan, programme, and orstrategy prepared with different levels of sovereignty.

Structuralists emphasize the development of technological innovation as a means of reconfiguring the economic structure, such as the role of the entrepreneur (and innovation) developed by several authors, such as Joseph Schumpeter. Schumpeter is the economist who stated: “the entrepreneur is the one who destroys the existing economic order by the introduction of new products and services, by the creation of new forms of organization or by the exploitation of new material resources”, which he called creative destruction. Schumpeter considered innovation as the engine of growth(Schumpeter, 2021). Schumpeter conceived that innovation and change occur through a spiral of mutual attraction (clusters), where a successful entrepreneur attracts another entrepreneur and, thus, the effects are multiplied.

There are several theories for the interpretation of underdevelopment and development, with dependence and its reproduction mechanisms being an important component of this debate. Most of these approaches have the following transversal theoretical supports:

- Productive structures, efficiency related to technologies, and the international division of labour, based on labour productivity and implemented by unequal external economic relations, by asymmetric capital flows, by the structure and nature of external trade and exchange relations with a tendency towards unfavorable prices for primary goods produced in less developed economies, with long-term trends of worsening trade balance deficits and external debt.
- Capital flows, on the one hand, to less developed countries, especially foreign investment, donations and loans and, on the other hand, the export of profits, the repayment of loans, the transfer of capital gains, considering imported and exported goods. This reality can increase external debt and, in extreme cases, non-compliance with international financial commitments and poor risk classification by rating agencies, which influences the image, especially for foreign investors.

- External cooperation and donations, especially those intended for direct support to the state budget, depend on government programmes, mainly public investment in productive and service infrastructures, the modernization and qualification of the administrative apparatus and, in some cases, the worsening public debt and the high and growing budget deficit.
- Vulnerability measures whether the economy, faced with external shocks and therefore not managed by national authorities, has the capacity to maintain growth rates and macroeconomic stability, employment, poverty levels and political and social stability based on internal resources.

Very important aspects of dependence, or that generate dependence, are scarcity of innovation, technology and knowledge, the weak business fabric, the entrepreneurial spirit in the Weberian sense and industrial culture, the ineffectiveness and lack of transparency of institutions, including market structures, erratic and inconsistent public policies, and the presence of conflict of different types. These are factors that aggravate (or mitigate) dependence. On the other hand, some developing economies integrate political and military geo-strategies.

In the case of Mozambique, the weight of the primary sectors in the formation of gross domestic product (GDP) is evident, configuring a funneled and poorly diversified economic structure, weak industrial development and a limited market in terms of size and depth, with a very small segment of consumption of differentiated goods, generally imported and distributed through international value chains.

Low agricultural productivity and the competitiveness of the economy are based on low innovation and technology in the productive fabric, stifled by extroverted and extractive external capital. The low general productivity of the economy and the competitiveness derived from the lack of modernization of the business sector imply the practice of low wages and little job creation, which feeds back into poverty and food insecurity.

The characteristics mentioned above are reflected in a strong and growing sectoral concentration of the economy and foreign trade. It is evident in the persistent and growing deficit in the balance of payments, in internal and external debts, and in the

dependence on budget revenues and external resources. These factors limit the exercise of state functions, the respective level of sovereignty over public policy decisions, and the deterioration of the terms of trade in foreign trade and the low coverage of the trade balance (Mosca, 2023).

***The IDEx approach and functionalities***

The IDEx's chosen variables are those that represent and reflect, in essence, the economic, financial and commercial relations of an economy with the outside world (namely trade and external financing), the influence of external resources (donations and loans) on the public budget, and with tax revenues, food security and resilience against climate shocks. All of these are interrelated and there are others that can be considered influenced by them, or that influence them (with cause and effect relationships). For example, foreign direct investment (FDI) is related to capital flows and exports, and the latter with the rate of coverage and openness of the economy, with the terms of trade. Foreign trade is related to state revenues and capital flows, among other things.

The economic vulnerability of the economy is associated with food dependence and this, in turn, is related to the concentration of foreign trade due to variations in the prices of international markets for the main imported goods (such as food products and agricultural commodities , oil and gas, coal and aluminum), with external debt and with total public debt.

The last two can affect FDI and capital flows, with possible consequences on national sovereignty through dependence on external resources for development. This dependence on external resources affects economic growth resulting from the development of markets and the weak national productive fabric, job creation, tax revenues, among other dimensions of the economy. In short, there are many variables that indicate external dependence, whose greater or lesser importance (degree of determinism) changes depending on realities.

External dependence, when high (for example, weight of financial responsibilities abroad and in particular debt, low savings, fragile institutions, armed conflicts) can imply major losses of sovereignty, such as, for example, decisions of economic and monetary policy, sanctions of different types, military intervention, among other things.

Institutions are fundamental for analyzing the degree of competitiveness of the economy and the external vulnerability represented by some of the dimensions presented above, and which can be translated into the state fragility index.

There are variables that are “internal” dimensions of the economy and that can mitigate or worsen external dependence, such as internal savings, credit to the economy and by the productive sector and for consumption, productive and market structures, the effectiveness, efficiency and transparency of institutions, the qualification of human resources, the level of services to companies and citizens, among others.

The institutional aspects that, in principle, most interfere with the competitiveness of an economy stand out summarized in some indicators of the business environment, especially:

- the conditions for internal and external investment (taxation, capital repatriation, flexible labour law and market, speedy justice, etc.);
- the effectiveness, transparency and competence of public administration;
- the existence of markets not distorted by exogenous interventions and competition structures;
- investor confidence in the economy (macroeconomic stability, monetary policy, external debt, compliance with financial commitments, etc.), summarized in the index used by rating agencies;
- stability and investor confidence in the country's politics (political regimes, conflicts of different natures), social and labour environment, and democracy.

Inter-sectoral relations exist for the creation of accumulation and internal benefit and provision of services within the framework of the cluster concept (measured by the Mozambique Competitiveness Index). This dimension can also be assessed by the structure of the business fabric (size of companies), economic sectors with greater weight in the business structure, and GDP, the proportion between the formal and informal economy and Mozambique's position in the international innovation ranking.

Within the scope of IDEx, individuality is attributed to food dependence, not only due to import values, but also due to the weight of its volumes in the internal supply of essential goods (such as rice, cooking oil, fish and wheat) in the diet of the majority of the urban population. Vegetables (tomatoes and onions) and some fruits also represent high percentages in the supply, especially in population clusters. Food dependence, in addition to being permanent, exists with great frequency and importance (due to the volume of imports and the number of people affected by food insecurity), due to prolonged armed conflicts, resettlement and the effects of extreme weather events.

Environmental phenomena are increasingly important and generate high and diverse vulnerabilities (such as displacement of people and means of survival, loss of production, destruction of infrastructure, and social conflicts in the movement of people). From a long-term perspective, these phenomena are increasingly violent and of greater temporal frequency. Mozambique is a country with high exposure to climate shocks.

Private (macro) and public (general state budget) finances, are a way of estimating the degree of dependence on the national investment capacity (private and public), through internal resources, comparing with national savings, the percentage of national direct investment (NDI) on total investment in the country, the budget balance and the flow of capital extracted from the balance of payments.

A balance of payments that expresses the nature and scope of commercial and economic relations translates or synthesizes various foundations of the theories presented, among others.

***Justification of sub-index variables***

As explained in the previous section, the variables chosen are those that, in general, reveal greater relations with the outside world and that can most influence the behaviour of economies. The sub-indices have, in turn, variables with multiple correlations between them. The weight (degree of influence or correlation) between the variables that make up the sub-indices differs depending on the reality to be studied.

As mentioned above, the sub-indices and selected variables are as follows:

- **Finance:** *(1) FDI/Total Investment; (2) capital inflow/external revenue; (3) debt/GDP stock; and, (4) classification in rating agencies*.
  These sub-indices, and respective variables, are those normally used by neoclassical and neo-Keynesian economic theory, to assess the capacity of economies to have certain levels of investment and respective sources of financing (internal and external), and how the debts created (FDI, donations and cooperation) hinder or facilitate economic growth. The classification of rating agencies mainly conveys a qualitative level of the level of default on debts and other financial commitments. A bad classification discourages investment, both internal and external.

- **Trade balance**, highlighting: (1) coverage rate (exports/imports); (2) opening of the agricultural and food trade balance (weight of the external sector in the formation of GDP – (imports + agricultural exports) / agricultural and economic GDP, calculated by the expression (exports + imports) / GDP; concentration of the five main imports and exports over respective exports and imports and evolution of the terms of trade. The terms of trade are defined as the relationship between the prices of the country's exports (PX) and those of its imports (PM). An improvement in the terms of trade – that is, an increase in the PX/PM ratio – and all else equal (economic variables), increases real income.
  These sub-indices reveal the extent to which external trade relations are important and weigh on a given economy (coverage and openness rates), how they reflect the internal economic structure (concentration of imports and exports and nature of goods exchanged), the its more or less dependent and underdeveloped nature and the extent to which the evolution of international prices benefits the economy, which is reflected in terms of trade.

- **General State Budget,** with the following indicators: (1) external revenue (which includes loans and donations) / total public expenditure; (2) public debt service / GDP; (3) public deficit / total state revenue; and, (4) state fragility (international ranking). These sub-indices are important as they can intervene in the autonomy and independence of centres of political, economic and national sovereignty decision-making, in addition to revealing the state's capacity to contract new loans and the respective charges and conditions of the loans, due to the debt interest, etc. Permanent deficits and high debts reduce the ability to offer services to citizens, the

ability to invest in and maintain public infrastructure, guarantee the security of citizens and defend the territory. These and other sub-indices can be summarized in the concept of state fragility, which summarizes the state's ability to fulfill the rights and duties of the state towards citizens and political and military development and sovereignty.

- **Sub-index of vulnerability to external crises and environmental shocks** is measured as mentioned, by the Shipping Vulnerability Index. Furthermore, the resilience or resistance capacity of the economy can also be considered with: (1) the variation in economic growth in the three years after a climate shock; (2) Mozambique's position in international rankings (variation in economic growth - GDP, during periods of crisis). Mozambique is classified as one of the most vulnerable countries in the world, which adds a very weak resilience and relief capacity to disaster situations resulting from shocks.

  This sub-index is important as we are witnessing an increasing intensity and frequency of climate shocks, which can cause economic instability, loss of infrastructure, displacement of people, food crisis and social instability among those affected and the populations receiving the impacts. In these cases, the state has revealed a high organizational and operational incapacity, lack of resources, scarcity of technical means, invariably resorting to cooperation and external and humanitarian aid. Essentially, the measures are aimed at the post-shock and not at preventive actions to create greater resilience, such as, for example, construction and maintenance of defense dikes and drainage of rivers, low-lying areas and irrigation systems, construction civil protection against winds and floods, urban sanitation, tree plantations around agricultural fields and in coastal areas, among others.

- **Food dependence:** (1) total food imports / total food needs; (2) levels of food insecurity; and, (3) emergencies (response capacity – food, accommodation, transport, health, etc.). Food insecurity and hunger are one of the first effects of poverty that has self-reproducing mechanisms. That is especially related to employment and wage levels, agricultural productivity and, in particular, essential food products and levels of commercialization and post-harvest losses, educational levels and demographic growth, family structure (especially the age structure of families), migrations that cause pressure on natural resources (land, forests, water), and conflicts between traditional residents and immigrants. Food dependence is also related to changes in diets, whether due to the effect of urbanization or the increase or decrease in family income and associated social inequalities. Nutritional education and conservation of assets are

important at family level. The deficit in food supply is covered in part by imports, with a growing deficit in the food trade balance affecting mainly foods consumed in urban centers: rice, all wheat, a large part of cooking oil, potatoes and some horticultural products.

- In addition to the fragility of institutions being reflected in the capacity of the state to exercise its political, economic, social and sovereign functions, this also has consequences in the weakness of law enforcement, the slowness and partisanship of institutions. This includes the judiciary, tax collection, the fight against corruption, customs control, controlling capital flight and money laundering, and in different forms of trafficking (human beings, human organs, drugs, minerals, wood, etc.). Centralization and concentration of powers, partisanship and corruption in institutions are aspects that influence the ineffectiveness and inefficiency of state administration. On the other hand, there are strong weaknesses in the corporate organizations of companies, workers, agricultural producers, social groups, the local population ("communities") and civil society.

**Table 6: External Dependency Index - Scroing table for each sub-index and variable**

| Sub-index | Points | Variables | Points |
|---|---|---|---|
| Finance | 32.5 | FDI / Total investment (1) | 10.0 |
| | | (Net capital flow-FDI) / Total net capital flow (2) | 5.0 |
| | | Total external debt *stock / GDP* | 10 |
| | | *Rating* agency classification (3) | 7.5 |
| | | | |
| Trade balance | 25 | Total trade balance coverage rate (4) | 7.5 |
| | | Total trade balance opening rate (5) | 5.0 |
| | | Top five imported goods / Total imports | 2.5 |
| | | Top five exported goods / Total exports | 2.5 |
| | | Terms of trade for the country's foreign trade (6) | 7.5 |
| | | | |
| State and General State Budget | 17.5 | External revenues (7) / Total public expenditure | 5.0 |
| | | Public debt service / Total public revenue | 2.5 |
| | | Public deficit / GDP | 2.5 |
| | | State Fragility (8) | 7.5 |
| | | | |
| Economic and environmental vulnerability | 12.5 | Variation in economic growth (GDP) (9) | 5.0 |
| | | Position of Mozambique in the international ranking in the EVI (10) | 7.5 |
| | | | |
| Food safety | 12.5 | Total imports of food products / Total food requirements (11) | 7.5 |
| | | Percentage of the population in food insecurity | 5.0 |
| | | | |
| **Total IDEx** | **100** | | **100** |

***NOTES:***

(1) Total investment = Foreign investment (FDI + Portfolio investment + others) + Bank loan for investment.

(2) Total capital inflow = Foreign Investment + Remittances (Expatriates/Emigrants + Profits + Income).

(3) Ratings are assessments issued by risk rating agencies on credit quality. “The agencies assess the ability of an issuer (banks, finance companies, companies, etc.) to honor its financial obligations in full and within the specified period”. The rating agencies are Fitch, Moody's and Standard & Poor’s.
(4) Coverage rate = Export / Import.
(5) Opening rate = (Export + Import) / GDP.
(6) Terms of trade for the country's external trade is calculated as the percentage ratio between the export unit value indices and the import unit value indices, measured in relation to the base year 2015 (World Bank database).
(7) External revenue refers to support for the state budget through external sources (donations and credit)
(8) “A State is considered fragile when it cannot meet the expectations of its populations or manage changes in expectations and capacity through the political process. The fragility arises, therefore, from the substantial imbalance in the relations between State and society. It has many underlying causes, both chronic and acute, and can produce several consequences, the most worrying of which are vulnerability to internal conflicts, inability to deal with humanitarian disasters and the high risk of state collapse.”
The fragility of states is measured using the Fragile States Index (FSI).
The typology is based on the first logic of security and therefore shows the relevance of the monopoly of violence in comparison to the other two while acting as the precondition for a functioning state. Its four types of sovereignty are: (1) consolidated and consolidating states, (2) weak states, (3) failing states and (4) collapsed states / failed states.
(9) The economy's resilience to external and internal shocks, measured by growth behaviour up to three years after a climatic event. (Authors' definition.)
(10) Environmental Vulnerability Index (EVI): “Environmental vulnerability is understood as the susceptibility of a system to environmental degradation, considering: the exposure of the system to environmental pressures typical of agro-industrial activities, assessed by indicators that show the anthropogenic pressure exerted on the system”.
(11) Food needs were calculated based on products from the national basic food basket (national food diet) defined by SETSAN (daily diet per inhabitant x 365 days x population). The indicator represents the proportion of total food imports over calculated food needs.

### The IDEx Parameters

The points assigned to each sub-index indicate, according to economic literature, the “ideal”. The closer the value is to the “ideal”, the lower the score, which therefore contributes less to the IDEx sum (the closer to 100, the worse) – see tables above and below.

The table on scales and scoring is interpreted as follows: IDEx is broken down into sub-indices and the variables are integrated into each sub-index. Each sub-index is assigned a score. The sum of the scores from all sub-indices adds up to the total of the IDEx (100 points), and the total of the variable scores for each sub-index totals the score assigned to it. For each variable, scales are established that allow checking the

score of each variable, equally, in a way considered “ideal” and according to the supposed determinism of the variables in IDEx.

As previously mentioned, the maximum score for each sub-index corresponds to what the literature indicates as a “desirable”, “balanced” or “ideal” situation. The authors, indicating the perception of a (“balanced”) situation, assigned the reference score for each sub-index. As with most other indices, the scoring of sub-indices can be qualitative or quantitative (or both).

In the case of IDEx, the authors considered that the closer to 100 points, the more economically dependent the country is on the outside.

**Table 7: IDEx Scales and Scoring**

| Sub-index | Points | Points per variable | Variables | Scale | Punctuation |
|---|---|---|---|---|---|
| Finance | 32.5 | 10.0 | FDI / Total investment | 0% to 25% | 0.0 |
| | | | | 25% to 75% | 5.0 |
| | | | | 75% to 100% | 10.0 |
| | | 5.0 | (Net capital flow - FDI) / Total net capital flow | Up to 50% | 2.5 |
| | | | | More than 50% | 5.0 |
| | | 10.0 | Total external debt *stock / GDP* (ideal is less than 30%) | Up to 30% | 0.0 |
| | | | | From 30% to 60% | 5.0 |
| | | | | More than 60% | 10.0 |
| | | 7.5 | Rating agency classification [1] | From A- to 1+ | 0.0 |
| | | | | FROM A-1 and A-3 | 2.5 |
| | | | | Between B and C | 5.0 |
| | | | | Greater than or equal to D | 7.5 |
| Trade balance | 25.0 | 7.5 | Total trade balance coverage rate | Up to 50% | 7.5 |
| | | | | From 50% to 100% | 5.0 |
| | | | | More than 100% | 0.0 |
| | | 5.0 | Total trade balance opening rate | Up to 50% | 0.0 |
| | | | | From 50% to 100% | 2.5 |
| | | | | More than 100% | 5.0 |
| | | 2.5 | Top five imported goods [2] / Total imports | Up to 50% | 0.0 |
| | | | | From 50% to 100% | 2.5 |
| | | 2.5 | Top five exported goods [3] / Total exports | Up to 50% | 0.0 |
| | | | | From 50% to 100% | 2.5 |
| | | 7.5 | Terms of exchange for the country's foreign trade | Greater than 1.0 | 0.0 |
| | | | | From 0.7 to 1.0 | 5.0 |
| | | | | Less than 0.7 | 7.5 |
| | 17.5 | 5.0 | External revenue / Total public expenditure | Up to 20% | 0.0 |
| | | | | From 20% to 40% | 2.5 |

| | | | | | |
|---|---|---|---|---|---|
| State and General State Budget | | | | More than 40% | 5.0 |
| | | 2.5 | Public debt service / Total public revenue (ideal 14%) (4) | Up to 14% | 0.0 |
| | | | | More than 14% | 2.5 |
| | | 2.5 | Public deficit/GDP (5) | Less than 3% | 0 |
| | | | | More than 3% | 2.5 |
| | | 7.5 | State Fragility (6) | Up to 30 | 0.0 |
| | | | | 30 – 60 | 2.5 |
| | | | | 60 – 90 | 5.0 |
| | | | | Over 90 | 7.5 |
| Economic and environmental vulnerability | 12.5 | 5.0 | Variation in economic growth (GDP) (7) | More than 3% | 0.0 |
| | | | | From 0% to 3% | 2.5 |
| | | | | Negative | 5.0 |
| | | 7.5 | Position of Mozambique in the international ranking in the EVI (8) | Up to 215 | 0.0 |
| | | | | From 215 to 315 | 2.5 |
| | | | | From 315 to 365 | 5.0 |
| | | | | More than 365 | 7.5 |
| Food Safety | 12.5 | 7.5 | Total imports of food products / Total food requirements | Less than 50% | 0.0 |
| | | | | From 50% to 80% | 5.0 |
| | | | | More than 80% | 7.5 |
| | | 5.0 | Percentage of the population in food insecurity | Less than 10% | 0.0 |
| | | | | From 10% to 60% | 2.5 |
| | | | | More than 60% | 5.0 |

Source: Adapted from (Mosca, 2024)

## IDEx grades

(1) Among the existing rating agencies, the Fitch ratings agency was chosen to calculate IDEx, as it has available the results of the ratings for the series under analysis.

(2) Five main imported products: machinery (capital goods), fuels, construction material except cement, raw aluminum and automobiles.

(3) Five main exported products: aluminum, coal, heavy sands, natural gas and tobacco.

The products and values refer to 2021, but there are no changes to consider over the last few years.

(4) According to the debt analysis report, for external debt liquidity indicators, the maximum limit for considering debt service sustainable in relation to total revenue is 14% (considered a new limit from 2018 onwards).

(5) According to the OECD, the budget deficit-to-GDP ratio can only exceed a reference value of 3% of GDP in exceptional circumstances.

(6) Based on the scale of the State Fragility Index, the following scale was created for IDEx : Up to 30 points – Consolidated State; From 30 – 60 points – Stable State; From 60 – 90 points – State in danger; and, More than 90 points - Failed state.

(7) From a medium- to long-term perspective, it is considered stable when growth is continuously around 3%. An economy is in a state of “retraction” / “deceleration” / “slowdown” when growth in one period is lower than in the previous period. An economic crisis exists when the downturn lasts for a period of more than 6 months. GDP growth is negative when it is less than 0%.

(8) The Environmental Vulnerability Index is calculated based on 50 indicators, being subsequently evaluated on a scale of 1 to 7. To calculate the IDEx, it was adjusted/adapted to a scale of 4, namely: Up to 215 = Resilient; From 215 – 315 = at risk; 315 – 365 = vulnerable; and, More than 365 = extremely vulnerable.

Cells marked in blue in table 7 above represent the maximum score for each variable.

**Table 8: IDEx classification according to the points assigned to the index**

| Category | Points |
|---|---|
| Non-dependent economy | 0-30 |
| Moderately dependent economy | 30-50 |
| Dependent economy | 50-70 |
| Very dependent economy | Over 70 |

Source: (Mosca, 2024)

A score of 0 to 30 points is considered as non-dependent, 30 to 50 points as moderately dependent, 50 to 70 points as dependent, and more than 70 points as very dependent. However, it is important to note that non-dependent economies can establish economic relations of interdependence or with the freedom to choose other external or internal alternatives.

The analysis of the degree of dependence must be considered along with realities in the context of prolonged crises motivated by political, military and social conflicts, pandemics, intense and frequent climate shocks, as is the case of Mozambique.

These aspects are more serious when the starting condition for the verification of crises is great dependence on the economy and fragility of institutions and limited resources generated internally by the economy.

### IDEx for Mozambique, 2015-2021

Based on the calculation method presented above, the degree of dependence for the Mozambican economy is estimated for the period from 2015 to 2021. The choice of years was based on the availability of data for the variables I am using in the IDEx.

**Table 9: IDEx Mozambique, 2015 – 2021**

| Sub-index | Variables | IDEx 2021 | IDEx 2020 | IDEx 2019 | IDEx 2018 | IDEx 2017 | IDEx 2016 | IDEx 2015 |
|---|---|---|---|---|---|---|---|---|
| Finance | FDI / Total investment | 10.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | 5.0 |
| | (Net capital flow - FDI) / Total net capital flow | 2.5 | 2.5 | 2.5 | 5.0 | 2.5 | 2.5 | 2.5 |
| | Total external debt *stock / GDP* | 5.0 | 5.0 | 10.0 | 10.0 | 10.0 | 10.0 | 5.0 |
| | *Rating* agency classification | 5.0 | 5.0 | 5.0 | 7.5 | 7.5 | 7.5 | 5.0 |
| **Sub-total (Finance)** | | **22.5** | **17.5** | **22.5** | **27.5** | **25.0** | **30.0** | **17.5** |
| Trade balance | Total commercial coverage rate | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 7.5 |
| | Total commercial opening rate | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| | Top five imported goods / Total imports | 0.0 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| | Top five exported goods / Total exports | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Terms of exchange for the country's foreign trade | 0.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 |
| **Sub-total (Trade Balance)** | | **10.0** | **12.5** | **10.0** | **10.0** | **10.0** | **10.0** | **15.0** |
| State and General State Budget | External revenue / Total public expenditure | 0.0 | 2.5 | 0.0 | 0.0 | 2.5 | 2.5 | 2.5 |
| | Public debt service / Total public revenue | 0.0 | 0.0 | 0.0 | 2.5 | 2.5 | 2.5 | 0.0 |
| | Public deficit / GDP | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| | State fragility | 7.5 | 7.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| **Sub-total (State and State Budget)** | | **10.0** | **12.5** | **7.5** | **10.0** | **12.5** | **12.5** | **10.0** |
| Economic and environmental vulnerability | Change in economic growth (GDP) | 2.5 | 5.0 | 2.5 | 2.5 | 0.0 | 0.0 | 2.5 |
| | Mozambique's position in the international ranking in the EVI | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| **Sub-total (Economic and environmental vulnerability)** | | **5.0** | **7.5** | **5.0** | **5.0** | **2.5** | **2.5** | **5.0** |
| Food Safety | Total imports of food products / Total food requirements | 5.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Percentage of the population in food insecurity | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| **Sub-total (Food security)** | | **7.5** | **7.5** | **5.0** | **5.0** | **2.5** | **2.5** | **2.5** |
| **TOTAL** | | **55.0** | **57.5** | **47.5** | **55.0** | **52.5** | **57.5** | **50.0** |

Source: adapted from (Mosca, 2024)

In the above Table 9 we see the following:

- IDEx has varied slightly, remaining in the dependent economy category .
- The years in which the index increased coincided with the effects of the discovery of hidden debts (reduction in financing for the economy, the General State Budget and foreign investment). Another factor is the 2020-2022 Covid-19 pandemic causing a reduction in foreign trade and economic activity at national level and general rise in prices, resulting in high external vulnerability and low response capacity based on internal resources. The effects of the NATO/Ukraine – Russia war are evident after 2021.

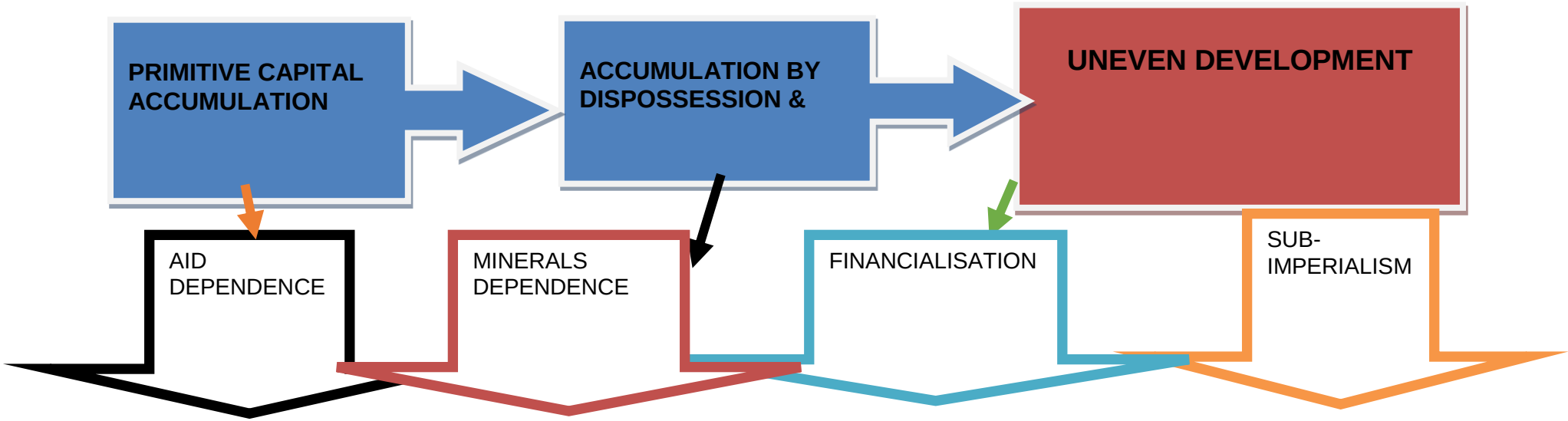
The IDEx for Mozambique shows that the country is a dependent one. Contributing most to this classification are external economic relations (direct investment and other capital inflows, trade balance and direct financing of the state budget for specific projects).

## 2.11. Conceptual Framework

Using Charles Kivunja's guidance presented in his 2018 article "Distinguishing between Theory, Theoretical Framework, and Conceptual Framework: A Systematic Review of Lessons from the Field" (Kivunja, 2018), in this section, I proceed to the presentation of my conceptual framework. As Kivunya puts it: "a conceptual framework is the total, logical orientation and associations of anything and everything that forms the underlying thinking, structures, plans and practices and implementation of your entire research project."

I utilise the below graphic representation to summarise the discussion and show Mozambique's uneven development trajectory from aid dependence to mineral dependence – under primitive capital accumulation and accumulation by dispossession to financialisation and sub-imperialism. As a result, the country faces a continuous formation of a national capitalist class without capital and oligarchs without production; endless displacement of peasants and loss of their arable land in favour of coal mining projects; community and workers' resistance and protests; porosity of the economy and creation of an economic bubble; and weakening of the state institutions.

**Figure 4: The conceptual framework of the political economy of the coal industry in Mozambique**




Construction of national capitalist class without capital and oligarchs without production.
Displacement of peasants and loss of their arable land in favour of coal mining projects.
Community and workers' resistance and protests.
Porosity of the economy and creation of economic bubble.
Weakening of the state institutions.

**Source:** Own construction based on various authors.

## 2.12. Conclusion

In the first ten sections of this chapter, I have critically surveyed the main theoretical features around the political economy of extractive industries. Those have included abundance and scarcity in natural resource economics, primitive capital accumulation, accumulation by dispossession, dependency theory, Dutch disease and resource curse, the political economy analysis and uneven development.

As I deploy a classic political economy theoretical framework in this thesis, the range of references in terms of dates of publications might seem old. That is simply because classic political economy is grounded in the historical trajectory of the economic thought.

The theoretical discussion I have developed in this chapter serves as a foundational ground to engage scientifically in the specificity of my study's topic: the political economy of the coal industry in Mozambique.

# CHAPTER 3 – MOZAMBIQUE'S UNEVEN DEVELOPMENT AND COMPARISON WITH NEIGHBOURING COUNTRIES

## 3.0. Introduction

This chapter contains two parts. The first is about Mozambique's internal factors of uneven development. The second presents a comparison between Mozambique and similar situations in two neighbouring countries – Malawi and South Africa.

The internal factors I present in the first part of this chapter range from history to politics to governance. Those are factors that influence or are influenced by the coal industry in particular, and the extractive sector in general. The combination of these factors leads to what I am calling throughout this thesis "Mozambique's uneven development". The first factor, governance, is measured by three components: (i) multiparty democracy, (ii) corruption, and (iii) freedom of expression. The second factor is macro-economic performance measured by (i) the composition of the growth in domestic product, (ii) trade balance – imports and exports, and (iii) public finance management. The third factor is a result of the initial two factors – the dynamics of the social sectors (education, health and nutrition).

Uneven development is a concept coined within the Marxist economic geography field. According to (Smith, 2010), the concept refers to the process by which the social relations of capitalist societies are translated into spatial forms. It is a systematic rather than an arbitrary process, the hallmark of the geography of capitalism. Uneven development results from the resolution of competing tendencies toward the differentiation of development levels and conditions, rooted in the division of labour, and the equalization of conditions and levels of development impelled by the circulation of capital.

In the case of mining sites, uneven development is a result of the competing interests between mining projects and peasants over land. The miners want to dig the same spaces to extract minerals (e.g., coal in the case of Tete Province) that the peasants want to farm and produce food for their subsistence. The resulting competition is shaped by the unbalanced power relations where, on the one hand, the mining companies control the entire process, including the government authorities at different levels, the lawmakers, the media and parts of the civil society organisations (CSOs).

On the other hand, local communities (mainly peasants) are powerless, with almost no resources to face the powerful mining companies in the contestation over land. At the end, the peasants loose out while the mining companies win not only the battle but also the bigger process of accumulation by dispossession. The mining companies accumulate land and minerals by dispossessing the land from the peasants. In this sense, uneven development is a process intimately linked to the process of accumulation by dispossession. This is precisely what has happened in Tete's coal mines, which are places of social and economic contradictions.

These social and economic contradictions are resolved geographically as different places crystallize as discrete territorial entities, localities, cities, regions, nation states, the global economic system itself — resulting in the production of a nested hierarchy of geographical scales. The Tete villages of Moatize, Cateme, Mwaladzi and *"25 de Setembro"* have gone through that process of geographical scale, putting them in different categories. Historically, there is therefore a tendency for development to move around, at different scales, in a seesaw pattern whereby development of an area is often followed by its underdevelopment, which in turn establishes the conditions for redevelopment.

## 3.1. Assessing Mozambique's uneven development

As I have noted in the introduction of this thesis, Mozambique's governance has been changing since its inauguration as an independent state in 1975. Immediately after the independence, the former liberation movement Frelimo adopted the single-party regime, with a Marxist-Leninist orientation. The country joined the Bretton Woods Institutions (the World Bank and the IMF) in 1987 during the cold war. That was the time when there was a proxy war in Mozambique. The West through the apartheid regime in South Africa financed a rebel movement in the country to fight against the newly established government of Frelimo (Hanlon, Forthcoming). As a result, the country shifted from socialism to capitalism. With the new economic set-up came the good (forex inflows increased), the bad (the state started losing control of the economy and society), and the ugly (the increase of foreign direct investment did not contribute

to job creation or poverty reduction). It was just the beginning of uneven development in Mozambique. As remarked by (MacKinnon & Cumbers, 2019):

> Uneven development is an inherent feature of the capitalist economy, reflecting the tendency for growth and investment to become concentrated in particular locations. These areas may be favoured by a particular set of advantages such as their geographical position, resource base, availability of capital or the skills and capabilities of the workforce. Once growth begins to accelerate in a particular area, it tends to 'suck in' investment, labour and resources from surrounding regions. Capital (investment) is attracted by the opportunities for profit whilst workers are drawn by abundant job opportunities and high wages. Surrounding regions are often left behind, relegated to a subordinate role supplying resources and labour to the growth area (p. 10)

The war that started in 1977 ended in 1992 with a peace agreement signed in Rome on 4 October between President Joaquim Chissano of Mozambique and the late President of Renamo, Afonso Dhlakama. In 1994, the country held its first multiparty general elections. The elections, the end of the war and the approval of a new constitution in 1990 were signs of remarkable changes.

Although the Rome Accord put end to the bloody civil war, it did not resolve the essential issue of a society at war: the need for national reconciliation. The peace negotiations only served the purpose of silencing the weapons but did not heal the open wounds in millions of Mozambicans.

A month before the first multiparty elections, journalist Joseph Hanlon, editor of the influential *Mozambique Peace Process Bulletin*[11] (Hanlon, 1994) listed three elements that represented a clear violation of the Peace Accord, in the following terms:

> Mozambique will go into elections without a new unified army, as was specified under the peace accord. This means that no one can enforce the outcome of the election, even if it is declared free and fair. The UN operation in Mozambique (ONUMOZ) has the largest and best trained army in the country, but it will not use it to force the losers to accept the election result. Also in violation of the accord, both sides appear to have retained military forces, although on a much smaller scale than Angola, and to have major arms caches. Renamo appears to be keeping groups of demobilised soldiers together in zones it controls, including 500 men in Inhaminga. In early September it also revealed that it had violated the peace accord by failing to list more than 1000 soldiers – 5 per cent of its army – and Frelimo rightly feared that it may have more hidden. With arms, soldiers and communication in place, Renamo could reconstruct a

[11] The Bulletin still exists with a slightly different name: it is currently called "Mozambique Political Process Bulletin", available online at https://www5.open.ac.uk/technology/mozambique/mozambique-political-process-bulletin

> small army quickly. The third violation of the peace accord is that, as we report elsewhere in this issue, there are still two administrations in Mozambique. Renamo has retained effective control of its zones and continues to restrict access to government and Frelimo officials and even civic education teams (p. 1).

The issues raised by Hanlon were only resolved 30 years after the Rome Accord,. Renamo's former combatants were not fully demobilized until 2023, prior to the October municipal elections, in a process still to be assessed.

On the eve of the multiparty democracy in 1991, in response to the country's accession to the International Monetary Fund, a reform programme was introduced – a harsh IMF adjustment programme reduced civil service wages and by 1993 even nurses and teachers had fallen below the poverty line. Everyone needed extra money, so civil servants stole time (to tend gardens or do second jobs) or resources (using state cars as taxis). Teachers, nurses and others in contact with the public expected informal fees. Within just a few years, petty corruption became institutionalized (Hanlon & Mosse, 2010a).

### 3.1.1. Multiparty democracy: 1994-2023

#### *From 1994 to 1999 – the era of privatizations*

The 1994 elections were massively attended by the Mozambicans. According to United Nations accounts, "nearly 6.4 million people have registered for the election. This is 81 per cent of the eligible population of 7.9 million as estimated by the National Election Commission and 84 per cent of the 7.5 million eligible estimated by the United Nations."

After the 1994 general elections, Frelimo candidate Joaquim Chissano was declared winner with 53.3 per cent of votes and the Renamo candidate lost with 33.3 per cent. This was the only general election that did not result in a post-electoral violent conflict.

The parliament was balanced enough: the ruling party Frelimo had 129 seats out of the available 250; Renamo had 112 and the third bench Democratic Union had nine seats. This distribution of seats meant that no political party had a majority of two-thirds, necessary to do significant changes to the constitution. Thus, from 1994 to 1999, every Mozambican felt represented in parliament. The ruling party was humble

to negotiate the approval of laws and resolutions, and the opposition put enough pressure on the executive by calling the prime minister and other cabinet members to parliament.

Notably, over one quarter of the members of parliament (MPs) were women (65 MPs out of the 250).

The 1994-1999 period is the period of massive privatization of state companies that had already started in the late 1980s after the country's adherence to the Bretton Woods institutions. The privatizations were considered successful and an example to be followed by other countries, as documented by Anne Pitcher in her book "Transforming Mozambique – The Politics of Privatization 1975-2000" (Pitcher, 2002). Such success would put the country in the list of favourite donor recipients of foreign aid in the successive years.

The privatizations were part of the policy recommendations given by the International Monetary Fund (IMF), the World Bank and other donors under the Washington Consensus. Not surprisingly, with the privatizations a few Mozambican started to become very rich while the majority starved. As Joseph Hanlon and Marcelo Mosse recount in their 2010 article "Mozambique's Elite – Finding its Way in a Globalized World and Returning to Old Development Models":

> There was widespread privatization – small firms went to members of the Frelimo elite and larger firms went to foreign companies – and rapidly growing corruption. Meanwhile, although loosening the IMF cap led to economic growth in 1996-1998, the economy declined again in 1999-2001 and poverty increased, raising questions about Washington Consensus economic policies (p. 3).

The foundations of an uneven development were created. The levels of unequal development between the rural and urban areas increased. The gap between the capital Maputo and the rest of the provinces widened as I demonstrate in the next sections. As posited by Joseph Hanlon and Marcelo Mosse, "the formal transition to multi-party democracy in 1994 was not accompanied by conflict of interest regulations or asset reporting and other transparency requirements. Thus, the elite came to understand that 'democracy' and 'capitalism' meant that they were allowed to use their privileged positions to accumulate wealth unobserved" (Hanlon & Mosse, 2010a).

### *From 1999 to 2004 – the arrival of the first mega-projects*

While in 1994, 6.4 million people registered to vote in that year's general elections, five years later, in 1999, 7.1 million voters registered, which was equivalent to 85 per cent of eligible voters. The momentum for multiparty democracy was still very high and vivid.

Unlike the 1994 elections, the second general elections in 1999 were very controversial. President Chissano ran for the last time, his second term in the multiparty democracy regime. Chissano won with 52.3 per cent, clearly a much smaller margin than 1994's 53.3 per cent, while Frelimo increased its parliamentary majority. Unlike the 1994 elections where national and international observers praised the fairness of the elections and declared then free, in 1999 no observer was convinced of the Frelimo and Chissano victory. The Carter Center, led by former United States President Jimmy Carter issued a report refraining from issuing a final judgement about the results of the elections (The Carter Center, 2000). That was the beginning of a tense period in the country.

The political tension easily spread to the economic and development field. At the time, BHP Billiton was already negotiating with the government of Mozambique the implantation of the first mega-project in the country, the US$ 2.3 billion Mozal project, an aluminum smelter that was expected to transform the Mozambican economy. Twenty years after the Mozal installation in Maputo province, the expectations of economic boosting simply blurred (C. N. Castel-Branco & Greco, 2022). This shows how the high expectations raised with the coal industry in Tete were not new. Neither is the frustration that resulted from the failure to generate development: jobs, business opportunities and poverty alleviation.

### *From 2004 to 2014 – the Guebuza era*

In 2004, President Chissano stepped down as Frelimo President and Head of State. President Armando Guebuza, a former political commissar, replaced President Chissano. The last years of President Chissano were marked by widespread corruption and assassinations of those who wanted to investigate fraud. In the late 1990s, the two biggest commercial banks in Mozambique were robbed: *Banco Comercial de Moçambique (BCM) and Banco Austral*. Investigative journalist Carlos Cardoso was gunned down in 2000 for exposing the looting of BCM. In 2001,

economist António Siba Siba Macuácua was murdered for investigating the looting of *Banco Austral*.

President Guebuza took power in this contest with discourses on the fight against corruption, poverty alleviation and the need for Mozambicans not be scared of being rich. More mega-projects were arriving in Mozambique. Tete's coal boom started around 2007. People believed that these were new times, with new leadership. However, there were World Bank alerts about the adoption of a "growth model that has been associated with a rise in inequality" and poverty, and "people in the bottom 40% of the income distribution have been largely left behind.... Mozambique's impressive growth rates have disproportionately benefitted those at the top of the income distribution in urban areas." Rural roads remained poor while "infrastructure investment, notably road transport, has been skewed towards urban areas and export corridors" (Mahdi & Fiseha, 2022).

***2015-2025: the Nyusi era***

In January 2015, President Filipe Jacinto Nyusi took over from President Guebuza as head of state. A year later President Nyusi also became President of Frelimo, thus accumulating all the power. His predecessors were also simultaneously presidents of the Frelimo party and heads of state.

In theory, the Nyusi era will end in January 2025 when he hands over the power to his successor, who is currently not known. The Nyusi era is known as the era of 100 per cent. In internal elections in the party, officers are elected with 100 per cent of votes. In the 2019 provincial elections, Frelimo won with 100 per cent, controlling all 11 provinces of the country. In the 2023 municipal elections, despite huge popular support gained by Renamo, the main opposition party, Frelimo rigged the election and took 60 out of the existing 65 municipalities.

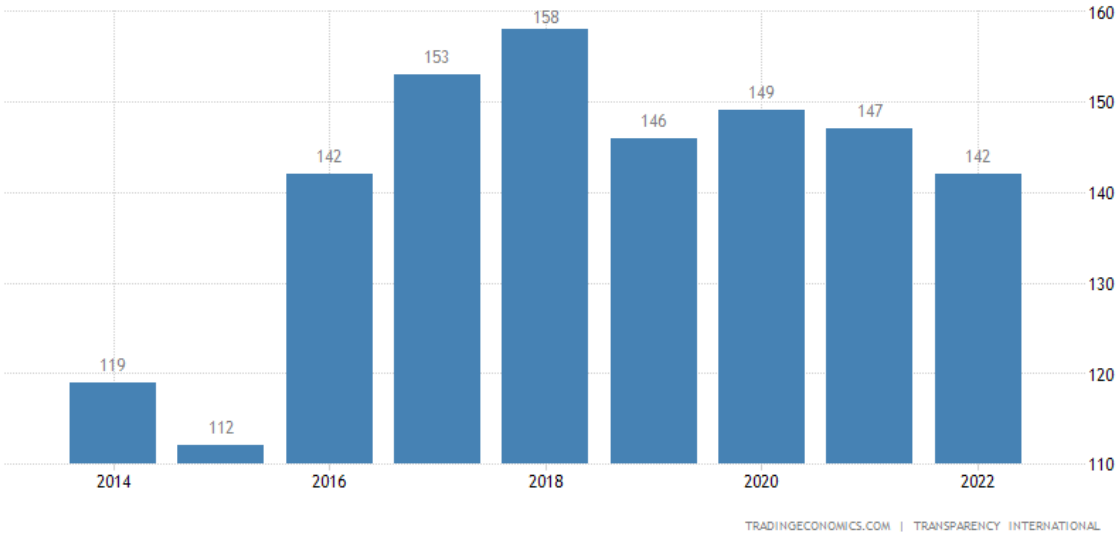
These political dynamics of greed for power are important to explain the reason why at the economic level the elites fail to share the benefits gained from the extractive industries. A party that is not able to respect the will of the voters and rigs the elections towards the control of all municipalities cannot be expected to implement inclusive policies that will benefit every citizen regardless of political affiliation.

### 3.1.2. Corruption in Mozambique

Corruption is a widespread phenomenon in Mozambique, since the introduction of market-oriented economic policies in the early 1990s. Prior to that, during the Samora Machel era, people who were seen as corrupt or dissolute were publicly labelled as '*xiconhacas*', a compound word from the nickname *Xico* which referred to the old Portuguese secret police (PIDE) and *nhoca*, which means snake (Hanlon & Mosse, 2010a)

As the figure below shows, Mozambique is among the most corrupt countries in the world. This reality cannot be dissociated from the fact that the foreign direct investment poured into mining projects does not generate the desirable developmental outcomes.

**Figure 5: Mozambique's trend in the corruption Index 2014-2022**




Source: Transparency International 2023

#### The hidden debt scandal

After having been seen as a pragmatic president, pro-business and against corruption, President Guebuza is currently viewed as the most corrupt leader Mozambique has had. The revelation in mid-2016 of US$2 billion in secretly contracted debts called into question the entire discussion of public financial management in Mozambique, making the country lose international credibility. The loan process violated all financial management systems. It was unconstitutional because it did not have the approval of the Assembly of the Republic. Nevertheless, the government granted guarantees

signed by the then Minister of Finance, Manuel Chang, and then by the National Director of the Treasury, Isaltina Lucas, then Deputy Minister of Finance (Hanlon, Forthcoming).

Under pressure from the international community and Mozambican civil society organizations, a parliamentary commission of inquiry was set up to investigate the debt process. This commission revealed results that were already known to public opinion: that the process had been unconstitutional and illegal, and that the loans to supposedly private companies were largely for military and security equipment to set up a coastal and maritime protection system for the Mozambique Channel

Money borrowed from Swiss bank Credit Suisse and Russian VTB was used to finance three companies created by state entities but considered private. The companies are controlled by the State Information and Security Services (SISE). ProIndicus was the first company to be created, in January 2013. It has the following shareholders: 76 per cent Monte Binga (a Ministry of Defense company) and 33 per cent belonging to SISE itself. US$622 million was allocated to ProIndicus, with US$504 million coming from Credit Suisse and US$118 million from VTB.

The second company receiving the loan money is Ematum (Empresa Moçambicana de Atum), incorporated in August 2013. SISE and Emopesca own it. The amount allocated to it was US$850 million contracted from those two banks plus BNP Paribas. The third company is Mozambique Asset Management (MAM) created in May 2014, also 98 per cent owned by SISE, and the remaining 2 per cent belongs to Ematum (1 per cent) and ProIndicus (1 per cent). MAM was financed at US$535 million.

***How was the hidden debt scandal resolved?***

The International Monetary Fund (IMF) and other Mozambican cooperation partners (notably Sweden, the United Kingdom, the Netherlands, Canada, Denmark and Ireland) insisted that the Mozambican government accept a forensic audit of the debts. The government gave in. There was an international competition that selected the auditing company Kroll, which currently works in collaboration with the Attorney General's Office (PGR). The report was released in 2017. In 2021, the Maputo High Court started the trial of those accused of having planned and executing the fraudulent scheme of the hidden debt.

After several months of the trial shown live on television and radio, on 7 December 2022, Judge Efigénio Baptista of the Maputo City Court finalized the reading of the verdict of the hidden debt judgement. The verdict was not the end of the process as the condemned people appealed. Eleven of the 19 defendants in the US$2 billion hidden debts case were convicted and sentenced to between 10 and 12 years in prison. Five defendants were sentenced to the maximum possible sentence of 12 years in prison.[12]

***The political-economic implications of the sentences***

Most of the group convicted have already served three years waiting for trial, which will be subtracted from their sentence. Some could be out in two to three years if their sentences are cut in half for good behaviour. However, most were convicted of money laundering and must serve at least 75% of their sentence, which means at least five more years in prison, so only in 2027 they will be out of prison.

The hidden debt scandal has always been seen as a political matter used by the Frelimo faction led by President Nyusi and Minister Celso Correia against the other faction led by President Guebuza. The Kroll report identified much more people implicated in the scandal, e. g., Maria Isaltina Lucas who first acted as Head of Treasury, signed the letters of request of guarantees, then went on to work for Ematum, one of the three companies set up with the monies from the scandal.

Another prominent figure implicated in the scandal is Ernesto Gove who was Governor of the Reserve Bank, various managers of Ematum, Mozambique Asset Management (MAM) and Proindicus. Some of these were called to the trial but neither detained nor accused. The interpretation is that those aligned to President Nyusi and collaborated with the investigators were left out, and those who did not collaborate (aligned to

[12] They are: (i) Ndambi Guebuza, son of former Mozambican President Armando Guebuza; (ii) Gregório Leão José, former director general of intelligence service (SISE); (iii) António Carlos do Rosario, former director of economic intelligence at SISE; (iv) Bruno Evans Tandane Langa, friend of Ndambi Guebuza.; and (v) Teófilo Nhangumele, project consultant. the five defendants sentenced to 11 years in prison were: (i) Renato Matusse, former political advisor to President Armando Guebuza;(ii) Ângela Buque Leao, wife of Gregório Leão; (iii) Fabião Mabunda, Gregório Leão family contractor; (iv) Maria Inês Moiane Dove, former secretary to President Guebuza; (v) Sérgio Namburete, friend of Ines Moiane. Lastly, Cipriano Mutota, former director of projects and studies of SISE, was sentenced to 10 years. According to Judge Baptista, Mutota's sentence was reduced by one year for confession and surrender of assets bought with the proceeds of crime.

President Guebuza) were detained, accused and now sentenced to 10, 11 or 12 years in prison. For this reason, there is a widespread perception among the Mozambican public opinion that the trial was a political expedient. Six main factors reinforce that perception.

*The first factor* is that the Mozambican state only accepted the existence of the hidden debt after the international media (*New York Times* and *Financial Times*) and then IMF Director Christine Lagarde spoke about it and various bilateral donors informed the government about their decision to suspend budget support and any financial assistance to government institutions.

*the second factor* is that the Mozambican state only started investigations after donors cut the budget support and Sweden offered to pay for an independent investigation – this was done by Kroll and received heavy resistance from SISE managers Gregório Leão and António Carlos do Rosário. One of the main people responsible for the scandal was former Minister of Finance Manuel Chang, identified in the Kroll report but never accused or even investigated. It was only after the US government ordered Chang's arrest at the South African Oliver Tambo International Airport that Mozambique acknowledged his implication in the matter.

*The third factor* is that Frelimo organized a parliamentary inquiry to investigate the hidden debt scandal. The inquiry was used by President Guebuza and his allies from SISE (Gregório Leão and António Carlos do Rosário) to say that they saw nothing wrong with the hidden debt and that they would do it again if they were to do so. They considered the Kroll investigation as a spy project aimed to destroy Mozambique's prospects in the oil and gas business.

*The fourth factor* is that weekly newspaper *Canal de Moçambique* published the transcription of a conversation held between Minister Celso Correia and the former Personal Assistant to President Guebuza, Maria Inês Moiane – now sentenced to 11 years in prison. In the conversation, the Nyusi faction proposed an agreement between the two opposing factions to organize a disguised trial "just for the electorate and the donors to see." The agreement would consist in leaving out of prison all relevant staff who served President Guebuza, including his son Ndambi Guebuza – now sentenced

to 12 years in prison. Minister Celso wanted the Guebuza faction to collaborate with them in pretending that the hidden debt scandal went to trial and had a fair sentence.

*the fifth factor* is that the 19 individuals were arrested ahead of the 2019 general elections. This was seen as a move by President Nyusi to gain sympathy from the electorate and the donor community. As the verdict has now shown, only 11 of the 19 individuals had real involvement in the scandal.

*The sixth factor* is that after the arrest of those 19 individuals, the Penal Code was reviewed to change, among other provisions, the following: the period for preventive prison (to wait for trial) was made unlimited, contrary to the previous 48 hours. Thus, the 19 accused individuals had to remain in jail while they waited for trial. The change was seen as directly targeting those 19 defendants. However, in the same revision of the Penal Code, the sentence for individuals accused of economic crimes (corruption, embezzlement, bribes, money laundering, etc.) was limited to a maximum of 12 years instead of the previous 24 years. Not surprisingly, Judge Efigénio Baptista, on 7 December, complained that the sentences were too lenient: 12 years and not 24 as it would have been if the Penal Code was not revised two years ago.

Currently, in 2024, President Nyusi is now seen as the first Frelimo leader who prosecuted and detained his predecessor's son, head of intelligence and other staff. For this reason, among local independent media, President Nyusi and his government are seen as using double standards in the fight against corruption. Inside Mozambique, they let the trial to take place, but outside Mozambique they fight against Manuel Chang's extradition to the US where he is wanted to stand for trial accused of money laundering and fraud in the very same case of illegal loans. The Mozambique President and Cabinet might fear that that Manuel Chang in a US court will expose the entire scheme that led Frelimo to receive $10 million for its 2019 campaign. Moreover, according to the Kroll report, the then Presidential Candidate Filipe Nyusi received $1 million, around US$100 million was spent on bribes for the now sentenced defendants, and the remainder disappeared between Abu Dhabi, the presidency and the ministry of defense in the 2009-2014 term.

***How does the hidden debt scandal link to Tete's coal industry?***

According to the accused and condemned people in the trial, Mozambique's government believed that with the money coming from the coalmines in Tete, and the gas in Cabo Delgado, it would be possible and easy to repay the loans to those international banks. The problem is that the scandal was uncovered before the arrival of the money and the settling of the debt.

In January 2024, the bridge that connects Tete city (the capital of Tete province) to the coal town of Moatize over Revubue[13] River collapsed due to rains. The government announced that it was necessary in three weeks to rebuild the bridge at a cost of US$ 7 million, which was still to be fundraised. In the same week, Mozambicans learnt that the government paid hidden-debt creditors about US$ 142 million in settlement of a US$ 522 million loan that UBS Group AG's Credit Suisse arranged related to the hidden debt scandal. Media reports cited an IMF report realized in January 2024 (Hill, 2024). The payment comprised about US$ 96 million in local-currency bonds and US$ 46 million in cash. The government was still going to fundraise US$7 million at the same time as they paid US$142 million to creditors.

### 3.1.3. Freedom of speech as a governance condiment

The 1990 Constitution of Mozambique, approved ahead of the end of the 16-year civil war[14] paved the way for the creation of privately owned media. That was when journalists who previously worked for government-owned newspapers and magazines started cooperatives to establish independent papers. Weekly newspaper *SAVANA* was established in 1994 under the same wave. At the same time, Mozambicans could create civic associations.

The existing civil society organisations (CSOs) that work with mining affected communities in Tete and elsewhere in Mozambique came from this background. The relevance of this section is not the background per se, but rather the latest

[13] This name has different spellings: Revuboe, Revobue, Revubue which is in the local language Nhungwe and Chewa.
[14] The 1977-1992 Mozambican war between Frelimo and Renamo has different designations according to the speaker's positionality. Frelimo people call it "destabilization war"; Renamo people call "war for democracy". To be neutral in academic discourse we call it "civil war."

developments influenced by the boom of the extractive industry as I demonstrate below.

Since 1991 to date, the Law 8/91, of 18 July governs the creation and management of CSOs in Mozambique. The law is officially called "Law of Freedom of Association" because it was approved in the context of transition from the single-party regime (1975-1990) to the multiparty regime (1990 to 2024).

***From post-war reconstruction to HIV-AIDS to monitor governance***

As time passed, the country opened up to the world, international NGOs and development agencies started operating in Mozambique. First, they came to assist in the post-war reconstruction projects, and then they moved to development projects – financing education and health, water and sanitation. With the HIV-AIDS crisis, civil society organisations became a key government partner in running campaigns for prevention of the disease.

From the year 2000, as the country started dealing with massive foreign direct investment channeled to the minerals-energy sector,[15] civil society organisations became the third pillar in development dialogue (with government as the first pillar and development partners as the second). At this time, CSOs started to be seen as watchdogs of governance. With the emergence of the extractive industry around 2005, some CSOs specialized in monitoring governance and distanced themselves from those CSOs engaged in monitoring the delivery of service in education, health, water and sanitation.

When the hidden debt scandal emerged, there was already a powerful CSO coalition working on monitoring the state budget and conducting Public Expenditure Tracking Surveys (PETS) in various sectors – that is the Budget Monitoring Forum, known by its Portuguese name *Fórum de Monitoria do Orçamento* or FMO. This group pushed

[15] I am adapting the term coined by Ben Fine and Zavareh Rustomjee about South Africa's "minerals-energy complex" in their seminal book "The political economy of South Africa: from minerals-energy complex to industrialisation" (Fine & Rustomjee, 1996).

for the trial of those suspected of being involved in the hidden debt to take place. The same group is fighting in South African courts against the extradition of former minister Manuel Chang to Mozambique; they want him to be extradited to the US where they believe that he will face real justice.

***Freedom versus terrorism***

The above background must be combined with the emergence of terrorism in the northern province of Cabo Delgado from 2017. In fact, during the last three decades, thousands of associations (traditional CSOs) have been formed. More than ten foundations have been created, receiving external funds from different sources.

The country has tens of private media companies who receive funds from all over the world. As a result, what is currently called “civil society organisations” in Mozambique is a mixture of foundations, associations, think tanks and research institutes. Each of these organisations have a different structure and set-up, with different funding demands, so they cannot be treated in the same way. The new law mixes up those different organisations on the same page, which is neither correct nor fair.

***The new law and the fear of CSOs***

What the proposed new law wants to pursue is financial transparency and accountability from CSOs. The problem is that the proposed law seeks to replace the 1991 law of Freedom of Association by imposing new rules on aspects such as the disclosure of sources of funding; the accountability of CSOs to the government; and the possibility of the government closing down any CSO that fails to comply with the mentioned transparency and accountability. Article 33 of the proposed law requires national NGOs to submit, every year, proof of their good and regular functioning, including accounting of their funds and activities.

***Why is this important to the discussion on Tete’s coal industry?***

The contestation of people affected by the mining operations of the multinationals in Tete could not have been formally taken to court without freedom of expression and

freedom of association. The proposed new law might represent a throwback in the governance arena as the civic space to contest the wrongdoings of the multinationals and even of the state could be limited.

### 3.1.4. A look into Mozambique's economic performance

In this subsection, I look into two important components of economic performance. One is the gross domestic product (GDP) growth, including projections presented by the government. The second is the growth of the population. The two help us to understand the status of economic performance.

Reducing regional disparities in Mozambique has been presented in official documents and statements as one of the government's priorities. However, the magnitude of the effort to be made and, consequently, the policies to be designed, seems to go unnoticed by the majority of people responsible for it.

In this thesis, I critically analyze the 2024-2043 National Strategy of Development, known as ENDE – *Estratégia Nacional de Desenvolvimento.* This is the only holistic – at least in theory – long-term development strategy the government of Mozambique possesses currently. The other development documents are by sectors or only for five years.

The reason for choosing the ENDE as point of entry into the analysis is because that is the long-term government document. The five-year government plan (Plano Quinquenal do Governo 2020-2024) will no longer be in use in one year from the time of writing this thesis.

ENDE's motto is "Leave no one behind" (MEF, 2022) – in the sense of inclusiveness. The government expects that everyone in Mozambique, through the implementation of ENDE, will have access to the same opportunities for economic, social and environmental development. This motto and its description, which are ultimately the spirit of the strategy, are my objects of analysis.

Based on the estimates of GDP per capita by provinces for 2021, I have made projections for Mozambique's growth until 2035. The same growth rates proposed in ENDE 2023-2043 were simply considered for each five-year period, for all provinces.

Table 10 below shows what GDP per capita would be in 2043, which also demonstrates that regional disparities do not change compared to 2023.

**Table 10: Simulations of provincial GDPs, using ENDE 2023-2043 growth rates**

| Provinces | 2021 | 2023 | 2043 | % GDP Province Maputo City |
|---|---|---|---|---|
| Maputo City | | | | |
| GDP per capita (Meticais) | 119 628 | 134 158 | | |
| GDP per capita (US$) | 1 827 | 2101 | 4 692 | 100 |
| Niassa GDP per capita (Meticais) | 23 688 | 24 997 | | |
| GDP per capita (US$) | 362 | 391 | 874 | 18.6 |
| Cabo Delgado GDP per capita (Meticais) | 30 362 | 31 933 | | |
| GDP per capita (US$) | 464 | 500 | 1 117 | 23.8 |
| Nampula GDP per capita (Meticais) | 21 699 | 22 691 | | |
| GDP per capita (US$) | 331 | 355 | 794 | 16.9 |
| Zambezia GDP per capita (Meticais) | 15 229 | 16 335 | | |
| GDP per capita (US$) | 233 | 256 | 571 | 12.2 |
| Tete GDP per capita (Meticais) | 34 979 | 38 857 | | |
| GDP per capita (US$) | 534 | 609 | 1 359 | 29.0 |
| Manica GDP per capita (Meticais) | 40 557 | 43 142 | | |
| GDP per capita (US$) | 620 | 676 | 1 509 | 32.2 |
| Sofala GDP per capita (Meticais) | 42534 | 46 067 | | |
| GDP per capita (US$) | 650 | 721 | 1 611 | 34.3 |
| Inhambane GDP per capita (Meticais) | 49 237 | 53 439 | | |
| GDP per capita (US$) | 752 | 837 | 1 869 | 39.8 |
| Gaza GDP per capita (Meticais) | 39 841 | 43 847 | | |
| PIB per capita (US$) | 609 | 687 | 1 533 | 32.7 |
| Maputo GDP per capita (Meticais) | 59 441 | 66 229 | | |
| GDP per capita (US$) | 908 | 1037 | 2 316 | 49.4 |
| Mocambique GDP per capita (Meticais) | 34 329 | 37 174 | | |
| GDP per capita (US$) | 524 | 582 | 1 300 | 27.7 |

Source: own projections based on ENDE

A second exercise I have done consisted of the following assumption. Let us suppose that in 2043 the GDP per capita of all provinces would be equal to that of Maputo City. If in the latter the GDP per capita grew at 5 per cent per year, what should be the per capita growth of each province to achieve such an objective of reducing regional disparities? Table 11 shows this simulation. In summary, the Province of Zambézia – the second most inhabited province following Nampula – should grow at almost 23.5 per cent per capita per year to reach the same GDP per capita as Maputo City growing at 5 per cent per year. The table below shows for the remaining provinces the annual growth necessary to achieve the objective of completely reducing regional disparities

**Table 11: Growth rates of GDP per capita with reduction of regional inequalities**

| Provinces | 2021 | 2023 | 2043 | Necessary growth rate (%) |
|---|---|---|---|---|
| Maputo City<br>GDP per capita (Meticais) | 119 628 | 134 158 | | |
| GDP per capita (US$) | 1 827 | 2 101 | 3 962 | 5.00 |
| Niassa<br>GDP per capita (Meticais) | 23 688 | 24 997 | | |
| GDP per capita (US$) | 362 | 391 | 3 962 | 19.49 |
| Cabo Delgado<br>GDP per capita (Meticais) | 30 362 | 31 933 | | |
| GDP per capita (US$) | 464 | 500 | 3 962 | 17.26 |
| Nampula<br>GDP per capita (Meticais) | 21 699 | 22 691 | | |
| GDP per capita (US$) | 331 | 355 | 3 962 | 20.38 |
| Zambezia<br>GDP per capita (Meticais) | 15 229 | 16 335 | | |
| GDP per capita (US$) | 233 | 256 | 3 962 | 23.46 |
| Tete<br>GDP per capita (Meticais) | 34 979 | 38 857 | | |
| GDP per capita (US$) | 534 | 609 | 3 962 | 15.50 |
| Manica<br>GDP per capita (Meticais) | 40 557 | 43 142 | | |
| GDP per capita (US$) | 620 | 676 | 3 962 | 14.58 |
| Sofala<br>GDP per capita (Meticais) | 42 534 | 46 067 | | |
| GDP per capita (US$) | 650 | 721 | 3 962 | 14.00 |
| Inhambane<br>GDP per capita (Meticais) | 49 237 | 53 439 | | |
| GDP per capita (US$) | 752 | 837 | 3 962 | 12.70 |
| Gaza<br>GDP per capita (Meticais) | 39 841 | 43 847 | | |
| GDP per capita (US$) | 609 | 687 | 3 962 | 14.43 |

| | | | | |
|---|---|---|---|---|
| Maputo<br>GDP per capita (Meticais) | 59 441 | 66 229 | | |
| GDP per capita (US$) | 908 | 1037 | 3962 | 10.86 |
| Mocambique<br>GDP per capita (Meticais) | 34 329 | 37 174 | | |
| GDP per capita (US$) | 524 | 582 | 3692 | 15.27 |

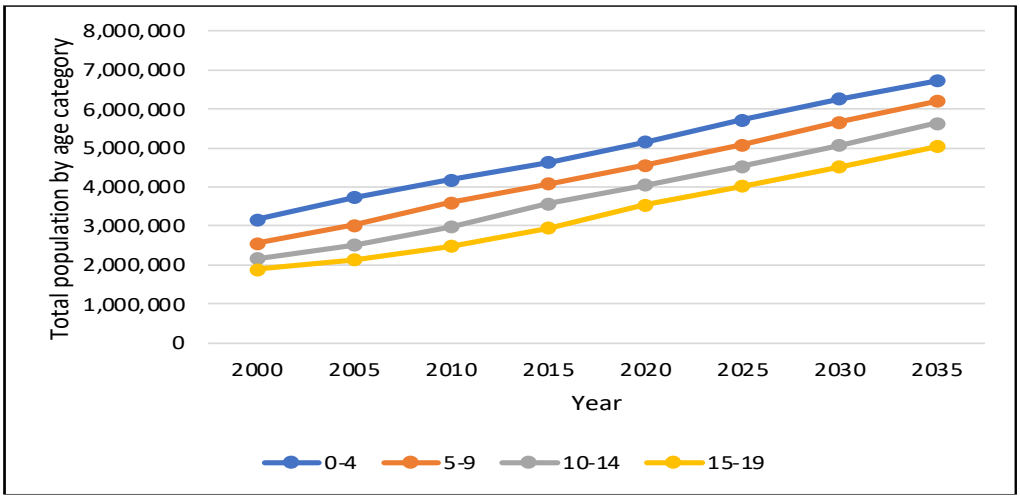
Source: own projections based on ENDE

The two tables 10 and 11 show that the current government development strategy will not generate different outcomes from the current ones. If the ENDE is to be implemented in the way it is, in 2043 Mozambique will still be facing the same inequalities (uneven development) as in 2023.

### 3.1.5. Population rapid growth

The population of Mozambique is growing very quickly. The population is heavily weighted towards younger cohorts, as 30 per cent of the total 2020 population was under the age of 10. The shape of the population pyramid indicates a substantial pressure on the education system in coming years, with more spaces and teachers required to accommodate a growing number of children. Furthermore, current United Nations projections show that the 0-4-year-old cohort will increase through the 2080s before finally beginning to decline. This projected growth is demonstrated in the below figure, which shows a steady growth trend for younger age cohorts across the entire 2000-2035 period. For example, the 5-9 year old cohort increased from 2.5 million in 2000 to 4.5 million in 2020 and is projected to reach 6.2 million in 2035.

**Figure 6: Mozambique population by age group, 2000-2035**




Source: National Institute of Statistics - INE (2023)

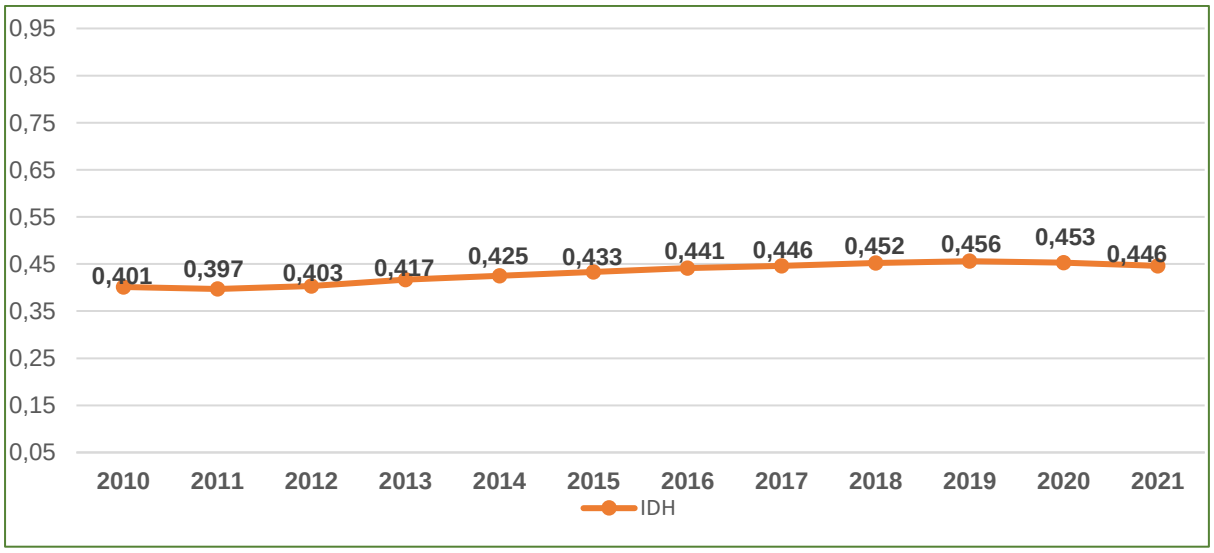
After the analysis of the population growth and the mainstream indicator of GDP, this subsection looks at the human development component – the Human Development Index (HDI) and the education sector.

### 3.1.6. Human Development Index

Mozambique's Human Development Index has been persistently around 0.4 for more than ten years. From 0.401 in 2010 to 0.446 in 2021, the Index shows how the well-being of the Mozambicans is not changing significantly. This is explainable by the unevenness I have described and demonstrated throughout this chapter.

Although the country has one of the highest social spending rates in sub-Saharan Africa (SSA), human capital formation remains weak. Compared to its peers, the country also has one of the lowest levels of learning, which is a critical obstacle to faster and more inclusive growth. Many Mozambicans – especially those in rural areas and in the central and northern regions – lack access to the quality education that is essential for productive adult lives.

**Figure 7: Mozambique's Human Development Index – 2010-2021**



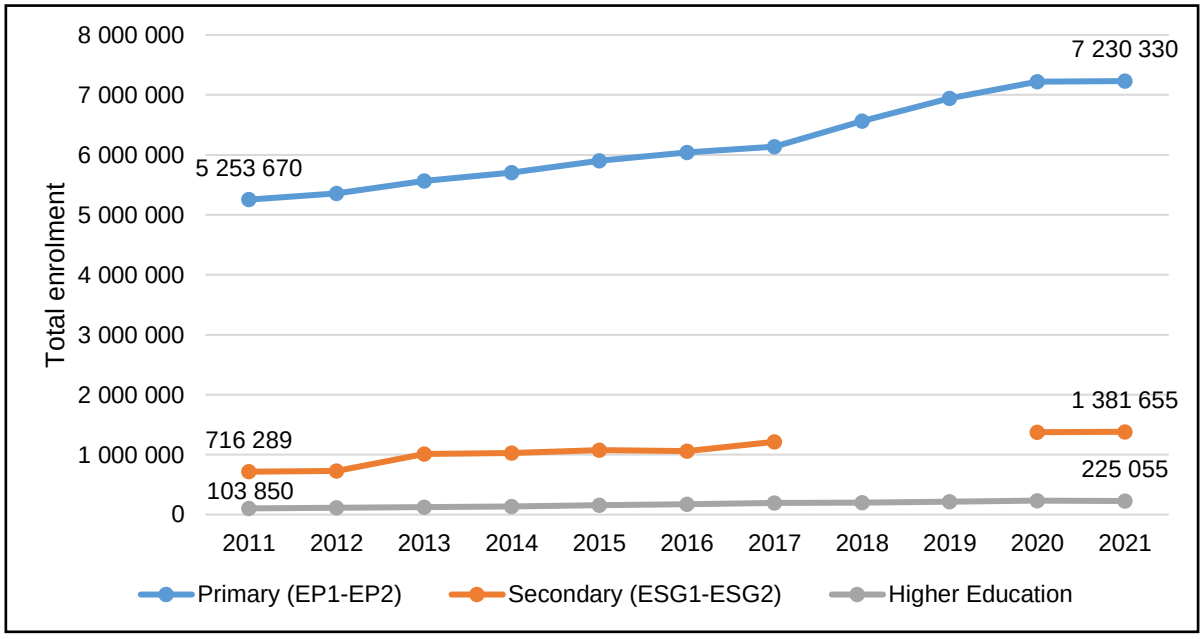

Source: Own construction based on MEF Data

### 3.1.7. Education

After 20 years of extraction and export of minerals, the illiteracy rate remains high, although it has reduced among people aged 15 or over, dropping from 39.9% in 2019/20 to 38.3% in 2022. It is important to note the prevalent illiteracy among women (49.2%) compared to men (25.9%). Likewise, inequalities between illiteracy levels are evident between rural areas (52.3%) and urban areas (19.7%) (World Bank, 2023).

Mozambique's rapidly growing population poses both challenges and opportunities for long-term development. Mozambique's uneven development is also visible through the performance of the education sector as shown in the below figure.

**Figure 8: Pupils enrolment in Mozambique 2011-2021**




Source: (World Bank, 2023)

Enrolment growth in recent years has been uneven across regions and provinces. The northern region provinces (Niassa, Cabo Delgado, Nampula) account for about 32 percent of the total EP1 enrolment in 2021, compared with 51 percent for the central region (Zambézia, Tete, Manica and Sofala) and 17 percent for the southern region (Inhambane, Gaza, Maputo province and Maputo City). The breakdown of primary enrolment by region closely mirrors the overall population breakdown for 6-12-year-olds, and given the higher population growth rate in the northern region this imbalance

vis-à-vis the south will likely increase. In higher levels of education, the current (2023) figures are very different: southern provinces make up 38 percent of ESG1 (primary) + ESG2 (secondary) in 2023, while only accounting for about 16 per cent of the population.

These data are no surprise. As argued by Michael Cross, in a capitalist society, education becomes an agency of social control or a mechanism of reproduction of labour, reproduction theorists have frequently tended to reduce colonial education, including missionary education, into little more than a mere appendix of state apparatuses and schools into simple instruments of [neo] colonialism (Cross, 1987). In the case of Mozambique, it is not about colonial education, but about an underfunded, understaffed and intentionally disorganized education sector.

## 3.2. Comparison between Mozambique's coal industry and the neighbouring countries

The two international examples I present in this section are Malawi and South Africa. Tete's coalmines are very close to Malawi. Malawians used to be deployed in Tete by the former brick-makers who were affected by the Vale and Rio Tinto projects. Malawi is a country where socio-economic reality is very close to Mozambique in general, and to Tete in particular.

The second case is South Africa with its Witbank coal mines. A regional economic power and leading economy in the Southern African region, South Africa has many features similar to Mozambique in the minerals and energy component. South Africa is also the "big brother" from which the neighbouring countries desire to learn in terms of minerals exploration (Ben Fine & Rustomjee, 1996); (C. N. Castel-Branco, 2002).

### 3.2.1. The Malawian case – the Salima Solar Project

Between 2016 and 2018, the Malawian Ministry of Lands facilitated an involuntary resettlement process where the community's land was acquired for a private company, a Canada-based renewable energy company known as JCM Power, to build a solar power plant. In 2019, CHRR and IAP started supporting the affected communities who reported that the involuntary resettlement process was non-transparent and implemented without their meaningful involvement. To add to this, the

community has faced intimidation, manipulation, and coercion so they could be silenced from speaking up (Jika, 2023).

The Salima Solar Project came to the public attention in September 2018, when local media reported that the Electricity Supply Corporation of Malawi (ESCOM), the state-owned power utility company, had signed memoranda of understanding (MoUs) with two private companies. The MoUs were part of the implementation of a project led by the government.

According to the project's description, the Salima Solar Project involves the construction and operation of a 60 Mega-watt (MW) solar photovoltaic plant in Salima District, Malawi. The project includes the construction of transformers, associated cabling, access roads, a maintenance area, storage, temporary hostels, and offices. The project was reported to require 225 hectares of land, which resulted in the acquisition of land and relocation of people living near the project site. JCM Power Corporation is responsible for developing, constructing, and operating the project. he project is financed by the Dutch Entrepreneurial Development Bank (FMO) and the Multilateral Investment Guarantee Agency (MIGA).

The project has received separate financing from FMO: US$12.51 million in March 2019 and US$4.4O million in August 2020. MIGA also provided a guarantee of US$58.58 million approved in May 2019. T

***What went wrong in the Salima solar project?***

The affected community commissioned a modest study to learn about the implications of the project. The study reached at nine conclusions:

1. the community had not been provided with adequate information about the project;
2. the community had not been adequately consulted;
3. the community had been resettled from their land using a flawed resettlement process;
4. the community had not received information about either FMO or MIGA's grievance redress mechanisms;

5 the company's project-level grievance redress mechanism was flawed and ineffective in addressing their complaints;
6 the involuntary resettlement process was non-transparent and highly flawed;
7 the affected communities had lost their livelihoods due to the involuntary resettlement;
8 there were unhealthy and unsafe working conditions at the project site; and
9 there were allegations of gender-based violence (GBV) and sexual exploitation, abuse, and harassment (SEAH).

***The Salima community lost their livelihoods***

When the affected communities were first approached in 2016 by the Ministry of Lands and informed that their land would be taken from them for a private company to construct a solar power plant, some of them refused to part with their land. The affected persons have reported that their chiefs and the Ministry of Lands officials used intimidation and manipulation tactics to coerce them into complying with the involuntary resettlement process. As a result, the affected communities of Salima lost their livelihoods.

Non-governmental organisation IAP, which is a human and environmental rights organisation that works with communities, civil society and social movements to change how current development is done, conducted a survey among the affected community. In the survey, 26 per cent of the people reported that their lives had been made worse since the project came to their community, while an additional 5 per cent reported that they believed the quality of their lives would further worsen. The involuntary resettlement restricted the community's access to their land for growing crops and grazing livestock. Additionally, some community members who had been previously employed by fellow villagers to do contract work on their farms have since lost their jobs..

In early 2020, the affected communities made their second attempt to be heard and have their concerns addressed. The community-led research report was shared with JCM Power in the hopes of opening up a channel for discussions that would see the community concerns addressed. In their response, however, JCM Power in simple terms viewed the affected communities' concerns and complaints as lies (Jika, 2023). The affected communities then made their third attempt to be heard. They shared the research findings with FMO and MIGA. Unfortunately, this did not open a channel for discussions either as the financiers would refer to JCM Power to validate the concerns and complaints, which would invalidate the claims. After much resilience and pressure through other advocacy spaces and by providing more evidence of the concerns and complaints made, FMO and MIGA finally agreed to sit down and listen to the concerns of the affected communities.

***Victories achieved by the community***

Discussions with the project company, JCM Power, and the financiers FMO and MIGA over the project and the involuntary resettlement process have been challenging, but with CHRR and IAP's support, the community has achieved key victories in several areas. These include the improvement of communication and engagement between the affected community and the project company, improvement in the implementation of the company-led Livelihood Restoration Program (LRP), and improvement in the company's project-level Grievance Redress Mechanism (GRM) and its handling of complaints. From here, the community continues to fight to secure its remaining collective demands (Jika, 2023).

**The Facilitated Dialogue Process with the Company**

From January 2021, the implementors of the Salima Project have represented the affected communities in discussions with FMO and MIGA to come up with a strategy that would address the community complaints. It was agreed that an independent facilitator would host a discussion between the affected communities and JCM Power, a process known as "facilitated dialogue". The one objective was for all parties to discuss and address the community complaints and grievances – that at this point had expanded beyond what was recorded in the initial community-led research report to

include more reports of labour and employment abuses, unfair dismissal of workers, and reprisals against affected communities.

The affected communities received support through the facilitated dialogue by:

- providing timely feedback and updates on the discussions so they could be informed of the progress of the discussions;
- providing information on upcoming meetings and discussions to ensure their readiness; training them on how to engage with the project company and how to prepare themselves for the discussions;
- monitoring all the facilitated dialogue discussions to ensure that they would happen fairly and the community voices would not be silenced throughout the process; and,
- continuing to discuss with FMO and MIGA to improve on any shortfalls that would be identified throughout the process.

The facilitated dialogue process officially commenced in August 2021 with the first independent facilitator's visit to the community, and continued until July 2022 (the final visit). There were officially two sets of facilitated dialogue discussions, which both ran for four consecutive days in March and in June 2022. Preceding them was a series of meetings between the independent facilitator and different community groups, which acquainted the independent facilitator with the different groups.

***Concerns with the Independent Facilitated Dialogue***

As civil society organizations, our experience with the independent facilitated dialogue process was incredibly frustrating. The affected communities were also discontented with the process. Summarized below are some of the issues we experienced.

***i Planning of the Facilitated Dialogue with the Company***

The selection process for the independent facilitator was agreed to be done based on a list of criteria, which included that there would be options for candidates to choose

from. However, FMO and MIGA presented one candidate who met only one of the criteria: their previous experience in a similar role.

### *ii. Planning of the Facilitator's First and Second Visits*

When the independent facilitator started performing their role, they were not independent between the two parties but rather would plan meeting agendas, organize the meetings, and schedule visits with JCM Power. Communication had not even been given to CHRR and IAP that meetings had been planned until two days before the first meeting. After writing to FMO and MIGA expressing our concerns with how the first visit was planned, there were minimal improvements in the second visit. JCM Power and the independent facilitator again scheduled the second visit and meetings without consulting IAP and CHRR. The only minor improvement was that JCM Power communicated with CHRR through a phone call sharing the planned dates for the visit and asked CHRR if they wanted to be part of the meetings.

### *iii. Convening of the Discussions between JCM Power and the Project Affected Persons*

Up to this point, despite numerous recommendations for the independent facilitator to separately consult the affected communities about the dialogue process, the independent facilitator continued to convene the meetings without their consultation. The consultations would have answered any questions the affected communities had regarding the process and managed their expectations.

### *iv. Follow-through and Report-back*

After the second visit, which we believe was the only meaningful series of discussions held, the independent facilitator compiled their report. In it, they concluded that their work had been finished without getting the affected communities' reactions to the report. After CHRR took the report to the affected communities, their feedback was that the independent facilitator's work had just started. They highlighted some issues that needed follow-up discussions, and some areas of topics that had not been touched on yet, including GBV and SEAH complaints.

At the request of the affected communities, the independent facilitator made a third visit to follow up on the issues. The independent facilitator also privately heard from three girls (two of whom were underage) who were victims of GBV.

Just when the affected communities thought this had opened up another channel to discuss these issues, the independent facilitator reviewed their report and still concluded their work was done without following up on the GBV issues. The independent facilitator sent the same report back to the community, but only through JCM Power, which did the translation of the report and the actual community report-back.

***Outcomes of the Independent Facilitated Dialogue with the Company***

While the shortcomings of the facilitated dialogue were many, it did manage to facilitate some improvements in the implementation of the Livelihood Restoration Program (LRP), which was still underway by JCM Power. JCM Power had contracted a local institution to implement the LRP. The affected communities were dissatisfied with the contractor's implementation of the LRP, primarily because they were not involved in the decision-making or consulted in the implementation of the activities. This led to the LRP's failure to yield positive results for the communities. In response to our concerns, JCM Power terminated their contract with the institution, drafted a new program, and started to implement it by themselves taking into account the shortcomings of the previous contractor. The affected communities have been viewing the LRP as their final hope to have their livelihoods restored.

The facilitated dialogue process also brought to light the shortcomings of the company's project-level grievance redress mechanism. With the recommendations from the community-led research report, JCM Power has been making improvements. JCM Power facilitated a process where the affected communities voted for a new grievance redress committee, which then would be trained to better perform their duties. However, many of the other recommendations for improving the grievance redress mechanism have yet to be implemented.

***Ongoing advocacy work***

Since they started their advocacy journey in 2019, many of the human rights violations that the affected communities have been raising have not been adequately addressed, thus requiring further advocacy work. These include unfair employment opportunities, unfair dismissal of workers, unsafe and unhealthy working conditions, and reprisals against community members speaking up against the project. The complainants have fought and exhausted a lot of their energy. One of the complaints that the affected communities want to see addressed is the unfair involuntary resettlement process. Since the facilitated dialogue process failed to address this, CHRR and IAP are engaging JCM Power and other stakeholders to address the land acquisition complaints. This process commenced in August 2023 and is being handled through JCM Power's project-level grievance mechanism.

As the community-led research findings highlighted, one of the complaints with the involuntary resettlement process is that it was implemented without adequate information. Communities receiving accessible and early access to information is key to implementing projects that deliver on their own development priorities and do not cause harm. A key factor to addressing the myriad of complaints from the involuntary resettlement process is therefore for communities to understand the process that was used by the Ministry of Lands between 2016 and 2019 to acquire their land for the Salima Solar Project. CHRR and IAP are therefore pressuring the Ministry of Lands to hold information-sharing sessions with the affected communities.

As in the case of Tete communities affected by the coal mines, the Salima community faces various problems that are typical to this kind of project: lack of information, unrealistic promises that are never fulfilled, violation of human rights and abuse of power by the government agencies.

### 3.2.2. The South African case – coal mining in Witbank, Mpumalanga

The South African region of Witbank has the biggest concentration of coal mines. Iconic jazz singer Hugh Masekela, who was originally from Witbank, immortalized the

coal train through his memorable song “Stimela[16]”, released for the first time in 1974. From the song, we can understand the complexities, injustices and rudeness of the mining industry.

The relevance of Witbank as an international example in the analysis of the political economy of the coal industry resides in the fact that the area receives mineworkers from thhroughout southern and central Africa, just like the gold and mineral mines of Johannesburg. As the song “Stimela: goes (Masekela, 1974):

> *There is a train that comes from Namibia and Malawi*
> *There is a train that comes from Zambia and Zimbabwe*
> *There is a train that comes from Angola and Mozambique*
> *From Lesotho, from Botswana, from Swaziland*
> *From all the hinterlands of Southern and Central Africa*
> *This train carries young and old, African men*
> *Who are conscripted to come and work on contract*
> *In the gold and mineral mines of Johannesburg*
> And its surrounding metropolis, sixteen hours or more a day
> For almost no pay (…)”

Masekela’s song raises issues about the nature of dispossession in the mining industry. “Young and old African men” are taken by the coal train with the promise of a job, but then end up “working 16 hours or more for almost no pay.” The coal train is no longer there, but all the features of the extractive industry to deplete the mines in Mozambique, South Africa or Malawi are still there.

This is not a peculiarity of the South African mines, but rather a common feature of any industrial mining.

**The effects of coal mining in Witbank**

A study conducted by two South African authors, John Laisani and Ademola Jegede (Laisani & Jegede, 2019) mapped out the socio-environmental consequences of coal extraction in Witbank and registered the following:

[16] Train in local languages Isi-Suthu and Isi-Zulu. Words similar to *Stimela* are used in other Bantu languages to say “Train.”

### *i Pollution of water*

The water in Witbank is reportedly polluted. (Laisani & Jegede, 2019) note that, poor residents who cannot buy purified water but depend on water from the taps and streams and other water bodies are at risk of water related diseases such as diarrhoea which has been recorded as being among the top ten diseases in the affected communities. This is influenced by poor water quality. In order to manage the water crisis and related health problem in the study area and the surrounding communities, Klipspruit mine with the help of EMalahleni local municipality has decided to implement proper maintenance measures which resulted in the water purification plant becoming fully operational in the area. The mine campaign on the effects of drinking water from the streams, rivers and pond was used as an intervention measure.

### *ii Noise pollution*

Noise pollution is one of the predominant pollutions in Klipspruit and other communities that are close to the mine. Noise and vibration on the identified communities includes the mobile equipment, air blasts, and vibration from blasting and other machinery – draglines and electric shovels (Laisani & Jegede, 2019)

### *iii Air pollution*

The authors John Laisani and Ademola Jegede (Laisani & Jegede, 2019) note that "another form of pollution that was identified at Klipspruit Mine and the five surrounding communities was air pollution. The respondents complained about the dust particles in the air due to blasting, clearing of the vegetation and the process of loading and hauling by heavy trucks and loading tools. The other concerns from the respondents were unpleasant smells from the blasting chemicals and the black smoke on the affected communities. The residents also complained that it is affecting their eye visibility and keep on causing cardiovascular diseases in the residents from time to time."

### *iv Land degradation*

.According to the participants interviewed in the cited study (Laisani & Jegede, 2019), at the five surrounding communities, land degradation was identified as one of the major environmental effects. The process of removing top soil, trees and vegetation deprives the land of its nutrients and results to infertility of land for agricultural purposes.

The study on the socio-environmental effects of coalmining in Witbank concludes as follows:

> The consensus in this study was that the concerns of communities and community-support organisations are not being taken seriously, and that government and industry are failing to implement existing legislation and alleviate the environmental pollution, degradation and human suffering in the Mpumalanga coal-mining areas. The lack of adequate response on the part of both the government and industry, and the continuing issues of environmental pollution and adverse community effects, have resulted in on-going (and possibly escalating) conflict situations in the form of community activism, protests and litigation (p. 1591).

## 3.3. Conclusion

This chapter serves to demonstrate the relevance of the analysis about coal mining and its problems. Such problems are not unique to Mozambique. They exist in any extractive-based society.

The challenges faced by the communities in Tete, Mozambique are similar to the ones faced by the Salima community in Malawi and the Witbank community in South Africa. From inadequacy of the legal regime to mining companies that are more powerful than the state and the people to lack of political power within the affected communities to challenge the mining companies and governments who appear to be more important than the people are.

The negative effects present in Tete's coal mining are similar to the ones identified in Witbank area: water, air and soil pollution; lack of information among community members; unrealistic promises about jobs; and unmet promises of livelihoods improvement.

# CHAPTER 4 - DISPLAYING AND EXPLAINING THE METHODOLOGY AND METHODS

## 4.0. Introduction

This chapter starts with a theoretical positioning in terms of epistemology and ontology as the basis of the entire methodological approach used throughout the research. The chapter presents the methodology and methods I have utilised in researching "The political economy of the coal industry in Mozambique" with its two research questions:

i How do socio-economic factors of the Tete province coal industry contribute to Mozambique's uneven development?

ii And similarly, how do environmental factors of the Tete province coal industry contribute to Mozambique's uneven development?

## 4.1. Epistemology and Ontology

As documented by Haribabu Ejnavarzala in a 2019 journal article "Epistemology–Ontology Relations in Social Research: A Review" (Ejnavarzala, 2019), epistemology deals with questions such as what is knowledge, what counts as knowledge, how knowledge claims are justified and the nature of explanations, subject–object relations and fact–value relations. In other words, epistemology deals with theories of knowledge. Ontology is concerned with the existential conditions related to material, social, cultural and political contexts. Hence, the relation between epistemology and ontology assumes importance with regard to what methodological approach the research is based upon.

I conducted this research using two intertwined methods as a means of ensuring the responses to the above sub-questions. The first is the classical political economy analysis. This approach assisted me in responding to the question on the socio-economic factors shaping Mozambique's uneven development. Political economy analysis is understood here to be an interdisciplinary socially and historically orientated approach (political science, economics and history) as well as the development of a specific economy like Mozambique's by looking at its regional and

international contexts (Caporaso & Levine, 1992); (Leftwich, 2011b); Milonakis & Fine, 2009; Mkandawire, 1992, 2011; Moran & Pitcher, 2004).

Political economy analysis is essential in this type of research as it allows us to sketch a map of winners and losers in the extractive industry as argued by Power et al. (2016). This is because engaging with political economy enables the researcher to attain three inter-related aims:

i a better understanding of the discourses, institutions and interests that shape energy transitions;
ii an enhancement of an understanding of who sets the terms of energy transition and whose interests are served as a result; and
iii an appreciation of how relations of power relate to each other.

In the case of Tete's coal industry, the deployment of a political economy analysis has helped in establishing the foundational ground for the understanding of the relationship between coal extraction, job creation and local business opportunities.

The research follows the political economy analysis (PEA) in its classical terms (Bond, 2019; Castel-Branco, 2014; Hanlon, 2017; Harvey, 2003; Luxemburg, 2015; Macuane et al., 2017; Ross, 2013: Rosser, 2006) in the sense that it looks at interdisciplinary and inter-related factors and conditions to construct a holistic development narrative (Chang & Evans, 2005; Fine &Milonakis, 2009; Körtl, 2015; Mkandawire, 2011; Varia, 2013) on Mozambique's coal sector. The approach consists of a combination of methods in all stages of the research: from conceptualisation, moving through data collection to data analysis and data presentation (Badenhorst, 2007; Castel-Branco, 2017a; Merriam, 2002).

The second approach is a political ecology analysis, which leads to unpacking the political dimensions of environmental issues in a more balanced and integrated manner as posited by Zimmerer & Bassett (2003) and developed by Patrick Bond (Bond, 2018b). This approach is fundamentally motivated by the contributions of coal mines to climate change at both the excavation sites and the sites of burning. For this reason, the political ecology approach seeks to understand the relationship between economically driven environmental processes and their corresponding social processes (Bond, 2018a).

## 4.2. Research method: qualitative research

Although the research makes use of substantial quantitative data, the main method used was qualitative. I chose a qualitative method for three reasons, following Sharan Merriam's guidance (Merriam, 2002b), in the following terms. The first reason is to understand the in-depth processes of a phenomenon, in this case of the political economy of the coal industry in Mozambique. The second reason is to understand what could account for why the formulated policies are often not the ones implemented; in this case, understanding how and why the Mozambican coal industry contributes to the country's uneven development. The third reason is the uncovering of the underlying structures, factors and motivations that assist in describing the matter of the study.

The secondary data collected in the first step of the research was checked against Mozambican reality by confronting the theory with empirical experiences through triangulation. The information triangulation consisted of interviews.

I collected primary data through in-depth and semi-structured interviews, which had a limited focus on a number of core aspects – social, economic and environmental issues around coal extraction in Tete province by both Vale and ICVL companies at the time of research, but currently Vulcan and ICVL. The giant Brazilian mining company Vale announced its withdrawal from Mozambique on January 20, 2021 and it was handed over to the Indian company Vulcan. At the time of the field research for this thesis, the Moatize mines still belonged to Vale.

After Vale's departure from Mozambique in January 2022, I continued following up the developments of the Moatize's coal extraction by Vulcan, which resulted in the journal article "From Vale to Vulcan: 'new wine in old bottles?' An analysis of Vale's exit from Mozambique". I published this article in the London-based peer reviewed journal *Extractive Industries and Society* (EXIS) in July 2023 (Selemane, 2023).

The interviewees were selected from five main stakeholders' representatives as follows. First, national and local government representatives – policy makers and policy implementers; second, staff members namely the coal industry managers of the two mining companies ICVL and Vale; third, representatives of small and medium

enterprises providing goods and services to the mining companies; and fourth, civil society organisations working on negotiations between the extractive companies and affected communities, including those CSOs who engage in regional and international networks and advocacy platforms. Fifthly, I interviewed members of the communities affected by the two mining mega-projects.

**Table 12: Number of interviewees in the fieldwork**

| STAKEHOLDER | | NUMBER OF INTERVIEWEES |
|---|---|---|
| **GOVERNMENT REPRESENTATIVES** | National Government | • 3 – Ministry of Mineral Resources and Energy (MIREME)<br>• 2 – Ministry of Land and Environment (MTA)<br>• 2 – National Revenue Authority |
| | TETE Provincial Government | • 2 – Tete Provincial Directorate of Mines and Energy<br>• 1 – Tete Provincial Directorate of Environment<br>• 1- Tete Provincial Revenue Authority |
| | Moatize District Government | • 2 district government representatives |
| **MINING REPRESENTATIVES COMPANIES** | Rio Tinto/ICVL mining company | • 2 interviewees – 1 Corporate Affairs Manager and 1 Legal Affairs Manager |
| | VALE/Vulcan mining company | • 3 interviewees – 2 Corporate Affairs Manager and 1 Public Relations Manager |
| **COMPANIES PROVIDING GOODS AND SERVICES TO THE MINING COMPANIES** | \Association of Small and Medium Enterprises | • 4 interviews with managers of companies providing goods: foodstuff; equipment; cleaning services and transportation of mineworkers |
| **CIVIL SOCIETY ORGANISATIONS' REPRESENTATIVES** | Maputo-based CSOs | • 5 interviewees (3 think-tanks and 2 advocacy) |
| | Tete-based CSOs | • 4 interviewees (2 community-based organisations and 2 paralegals) |
| **COMMUNITY MEMBERS IN MOATIZE, "25 de SETEMBRO"; CATEME AND MWALADZI** | People affected by VALE/Vulcan and Rio Tinto/ICVL mining projects | • 6 in Moatize<br>• 9 in Cateme<br>• 5 in "25 de Setembro"<br>• 7 in Mwaladzi |
| ***TOTAL*** | | ***58 interviewees*** |

**Source:** Author's construction based on fieldwork

## 4.3. Case study design

Using the framework provided by Robert Yin in the articles “Case Study – research, design and methods” and “Designing Case Studies”(Yin, 2003; Yin, 2014), this research adopts the single case study approach, although each case study contains sub-cases as established by (Mills et al., 2010). The single case study is the Mozambican coal industry in Tete province and the sub-cases are the two biggest coal mines – in Moatize (ex-Vale, currently Vulcan) and in Benga (ex-Rio Tinto, currently ICVL).

British Professor Jennifer Rowley states in her journal article, ‘Using case studies for research’ (Rowley, 2002, p. 11), that “case studies are useful in providing answers to ‘how?’ and ‘why?’ questions, and in this role it can be used for exploratory, descriptive or explanatory research”.

A second option of pursuing a case study approach is based upon the justifications of Hodkinson & Hodkinson (2001) who identify three major motives to opt for a case study: (i) case studies facilitate the understanding of complex relationships; (ii) case studies are grounded in “lived reality”; and (iii) case studies foster the exploration of the unexpected and unusual. Since the relationship between coal exploration and the peoples’ well-being is complex, all these reasons match the research topic to be investigated. Such extraction activity takes place in the Moatize and Benga communities where thousands of Mozambicans live and witness the daily hazards of being in a mining site as an experienced reality.

According to Yin (2014), the case study design is a research approach investigating a contemporary phenomenon, such as the extraction of coal in Tete province, within some real-life context when answering such explanatory ‘how’ and ‘why’ questions where the author has limited control over events.

## 4.4. Target population and sampling

This research targeted persons directly and indirectly involved in the coal industry in Mozambique as either policy-makers (government representatives) or business actors and policy implementers (extractive companies representatives), monitoring and advocacy institutions (civil society and community-based organisations) as well as

people affected by the resettlements promoted by the coal companies in Moatize, Cateme, "*25 de Setembro*" and Mwaladzi.

As defined by Oppong (2013, p. 17), sampling is a process of selecting subjects to take part in a research investigation on the ground that they provide information considered relevant to the research problem. The selection of potential informants and interviewees is conducted using four different techniques (Etikan, Musa, & Alkassim, 2016; Teddlie & Yu, 2007) as I describe in the following paragraphs.

In preparing interviews, I started by using purposive sampling. That entailed a selection of my interlocutors based on who I deemed most likely to provide the most useful information, especially in the selection of specific interviewees from government bodies, mining companies, members of civil society organisations, staff members of small and medium enterprises providing goods and services to the mining companies.

The reason to use purposive sampling is because, it responds more substantially to a typical research problem founded on research questions concerned with socio-economic and environmental factors' contribution to an uneven development, which have much to do with knowledge, feelings and perceptions. While reliant on this type of sampling, I was equally cognisant about the warning given by Tongco (2007) of the dangers posed by purposive sampling as researchers usually make a judgment on the informant's reliability and competency on which to posit their data quality. This is a relevant concern especially regarding key informants on whom much of the data quality rests. Such a challenge was overcome by triangulation of information from different interviewees so that no interviewee was considered more reliable than another to avoid the risk of information bias. Additionally, the research sought to explore an array of interviewee categories, not only for the sake of triangulation, as previously mentioned, but also to ensure that different category perceptions and sensibilities could complement each other, assuring quality results.

## 4.5. Data collection and data analysis

### 4.5.1. Data collection

Following Sharan Merriam's guidance (Merriam, 2002b), during the fieldwork I sought for answers to the three essential questions:

i What – to establish the descriptive issues around Tete's coal extraction.
ii How – to respond to the explanatory issues about the dynamics of coal extraction in Tete and its relationship with the wider living conditions.
iii Why – which also aimed to provide clarity on the explanatory issues.
iv To answer those questions, I collected two types of data: secondary and primary data.

I used codes for each of the interviewees to ensure anonymity of the answers when writing up. The codification followed conventional alpha-numeric practice. Having four initial groups of interviewees: government, companies, civil society and local communities, I attributed a capital letter from A to E to each of the groups. The second layer of codification was the level of each interviewee. A government representative from central level received the code A – for government and number 1 for central government; 2 for provincial and 3 for district. At the end, the interviewee received another letter, now small, from "a" to "z" for the order of interview. For example, an officer from central government who was fifth to be interviewed received the code A1e.

Representatives from companies received code B for mining company, 1 for Vale/Vulcan and 2 for Rio Tinto/ICVL and letters a to z for the order of interview. For example, a representative of ICVL who was third to be interviewed within the group of companies' representatives, received the code B2c.

I attributed capital letter C to the representatives of companies providing goods and services to the mining companies, whereas letter D identified civil society organisations. Those based in the capital city Maputo received number 1 (e.g., C1) and those based at provincial level received number 2 (e.g., C2). The order of interview followed the same rule: from a to z.

Capital letter E served to codify members of local communities in Moatize, "*25 de Setembro*", Cateme and Mwaladzi. The final codification for this stakeholder ended up being as follows:

**Table 13: Codification and categorization of interviewees**

| Stakeholder | Capital Letter | Number | Small letter | Example |
|---|---|---|---|---|
| Members of local community | E | 1 – Moatize<br>2 - "25 de Setembro"<br>3 - Cateme<br>4 - Mwaladzi | *a* for the first interviewee, b for second and so on | Second interviewee from Cateme: E3b |

Source: own construction

I categorized the answers according to the thematic area covered in each interview: resettlement, corporate social responsibility, business opportunities and so on. Both codification and categorization of the interviews allowed me to manage the answers obtained in the interviews in anonymous manner.

***Secondary data collection***

Secondary data was collected in the form of document analysis from governmental policies and reports which were very helpful to further understand the socio-economic and environmental public policies directed to subject of study in this thesis. Reports from non-government organizations (NGOs), banks and international institutions were also a relevant source of information. According to Bowen (2009), document analysis is an invaluable social research method consisting of triangulation of methodologies in the study of the same phenomenon.

Given the study's topic – the Political Economy of the Coal Industry in Mozambique – the research dwelled on the leading body of literature on political economy analysis from natural resource economics (Kneese, 1988), moving on to primitive capital accumulation (Marx et al., 1955), accumulation by dispossession (Harvey, 2003), Dutch disease and resource curse (Sachs & Warner, 1995b), to uneven development (Bond, 1998b).

The process of document analysis followed the eight steps prescribed by O'Leary, (2014, 2017) as follows:

i *Creating a list of texts to explore* (e.g., population, samples, respondents, participants) – I started creating the list of texts during the Social Theory course in 2018. Part of it was very useful to the development of both short and long PhD proposals that I defended at the School in 2018 and 2019, respectively.

ii *Considering how texts will be accessed with attention to linguistic or cultural barriers.* Conducting research in a Portuguese-speaking country like Mozambique while registered at an English-speaking institution like Wits seemed to be a tremendous challenge and barrier. However, I overcame that barrier thanks to my previous experience in conducting similar research, although for Masters and Honours degrees, in 2012 and 2014, respectively.

iii *Acknowledging and addressing biases.* Any research project is subject to potential bias. This was not different. I managed to minimize the bias through research techniques established by the Wits Ethics Committee, the lessons learnt during the Social Theory course, and the deployment of research methods learnt in previous academic degrees.

iv Developing appropriate skills for research – I explain this below.

v Considering strategies for ensuring credibility – I also explain this below.

vi *Knowing the data to search for* – previous familiarity with the extractive industry in Mozambique, research conducted during my masters and honours degrees provided me enough knowledge about the data to search for in this doctoral study.

vii *Considering ethical issues* (e. g., confidentiality and anonymity) – I considered the ethical component by following the rules established by the Wits Ethics Committee.

viii *Having a backup plan* – I developed various backups for the material I collected during the research such as external disks, personal cloud and storage locked with password as recommended by the Wits Ethics Committee.

Three requisites from the eight listed above deserve some clarification. These are language barrier, bias, and skills for research.

I am fluent in Portuguese, Mozambique's official language as well as Chichewa, the local language spoken in the Tete province's communities where I conducted the research.

I addressed the potential bias following the instructions provided by Bowen (2009) by always taking into account the subjectivity of who authored the documents being analysed. It was essentially a matter of paying attention to which stakeholder (e.g. extractive company, government department or an advocacy non-governmental organisation, NGO) authored what document, and arguments put forward with intentions and interests.

Skills for research were also not a drawback as I am an experienced researcher with publications in peer reviewed journals, with the following references: Selemane (2023); Selemane (2022); (Selemane, 2019); Selemane, (2017); Selemane (2016); Mosca & Selemane (2012a; and (Selemane, 2009b).

***Primary data collection***

Primary data was collected using in-depth interviews, which are aimed at exploring views, experiences and opinions from a select group of individuals based on their positions in one or another stakeholder group (Adams & Cox, 2008; Boyce & Neale, 2006; Legard, et al., 2003). The in-depth interviews were guided by semi-structured questionnaires differentiated from one stakeholder to another, depending on the sector that each stakeholder represents (government, companies, civil society organisations and local community). Wits Ethics Committee approved the questionnaires prior to utilisation.

The interviews were recorded then transcribed. The transcripts were stored in a personal computer protected with a password and also backed up in various personal password-protected clouds.

### 4.5.2. Data analysis: qualitative content analysis and thematic analysis

The data collected throughout this research was analyzed using two main methods: the first was qualitative content analysis and second thematic analysis. As documented by Vaismoradi & Turunen (2013), the purpose of content analysis is to describe the characteristics of the document's content by examining who says what,

to whom, and with what effect. On the other hand, thematic analysis often is seen as a poorly branded method in that it does not appear to exist as a named method of analysis in the same way that content analysis does. Thematic analysis, as an independent qualitative descriptive approach, is mainly described as a method for identifying, analyzing and reporting patterns (themes) within data. For example, legal issues, environmental aspects, or local business opportunities.

The transcripts from the interviews were read and re-read to identify categories. I grouped the categories in a thematic map which allowed me to have a visual presentation of themes, codes, and their relationships, involving a detailed account and description of each theme, its criteria, exemplars and counter examples, as prescribed by Vaismoradi &Turunen (2013).

Following the instructions provided in “Practical research: Planning and design” (Leedy & Ormond, 2005), after having put together the description of each theme, I organized the categories into meaningful groups. This was followed by an interpretation that helped in establishing major themes, patterns and meaning. Some of the themes and categories with similar elements were generalized. The generalization allowed me to construct a unified narrative resulting from both documentary analysis and interviews analysis.

## 4.6. Background to the study site and case study

The case study is the exploitation of the coal industry in Mozambique’s Tete Province by Brazil’s Vale and India’s ICVL companies. Consequently, it will be an embedded case study as it involves two units (companies) of analysis (Yin, 2003b).

### 4.6.1. Vale’s Moatize coal mining

The first unit of analysis, the Vale project, is the oldest and the biggest. Vale Mozambique, a Brazilian Vale subsidiary, arrived in Mozambique in 2004, having won a 23 780 hectares concession under a 30-year (renewable) contract to dig coal in a project worth US$1.3 billion. The company is reported to have paid US$123 million for the coal mining rights, but the money has never been registered with state agents. If this is correct, Vale’s presence in Mozambique – far from benefiting citizens – is undermining revenue transparency and accountability (Kabemba & Nhancale, 2012).

The exploition started in 2007 with production and exports of 11 million tons per annum. According to Selemane (2012), in the process of setting up, the company displaced 1 313 families (equivalent to over 5 000 people) from arable land in Moatize, near Tete to Cateme village, 40km away. The displaced community was divided into two groups based on their socio-professional status: 717 families were classified as "peasants" and the remaining 596 as "urban" as they included teachers, nurses, builders, carpenters and other professions in their families.

In 2014, the company expanded its project by opening a new mine named "Moatize Mine II", aimed at doubling the coal production to 22 million tons per annum. However, the plans did not go as hoped due to water, soil and air pollution that subsequently motivated several communities to resist the mine's development. This impeded the company's progress as the mine was closed for 19 days. However, on 23 October 2018, Vale Mozambique decided to reopen Mine II without the community's consent and there were threats by community members to continue protests that would include sabotage of the mines' facilities and machinery. These protests then followed as warned (Maolela, 2018).

Castel-Branco & Cavadias (2009) expose the excessive and redundant fiscal benefits the government of Mozambique gave to the mining companies. In the case of Vale, the fiscal incentives consist of: (i) Corporate Tax reduction from 32 per cent to 15 per cent during the first ten years of exploration; (ii) freedom to repatriate 100 per cent of the profits and dividends; (iii) custom duties and VAT exemption.

### 4.6.2. ICVL's Benga coal mining

The Indian-based company ICVL is the third beneficiary of the Benga coal mine concessions. The mine's concession was firstly granted to Australian Riversdale Mining in 2010 with projections to produce 20 million tons of coal per annum in a concession of 127 900 hectares (the initial phase explored only 4 560 hectares). A year later the concession was taken over by the then mining giant Rio Tinto at $4 billion. Mozambican authorities never taxed the deal. As (C. N. Castel-Branco, 2014b) put it, the transaction between Riversdale and Rio Tinto was not taxed because the government was not prepared for this, having no institutions in place to check, monitor and control. In 2014, the Indian-based company took over the concession for US$50

million, the concession having been previously purchased by Rio Tinto for US$4 billion just three years earlier.

According to Selemane (2012), the installation of Benga's coal mines resulted in the displacement of 600 families by Rio Tinto from Benga to Mwaladzi village some 44 km away from Tete town.

## 4.7. Ethical considerations

This research has been conducted respecting all ethical regulations as established by the University of the Witwatersrand. The Ethics Protocol for this research was awarded on 23 March 2021 under Number H20/09/51 with "Minimal Risk."

All respondents interviewed for this research made a free and informed decision to participate. Their freedom of choice and detailed information about the research were provided prior to any sort of responding the questions.

Each respondent has been treated with confidentiality, anonymity and privacy according to ethical protocols. I have protected all respondents by ensuring that no name or any other personal detail can link the response to the person who responded. No answer has been presented in one form or another attached to who provided it. The categories and themes derived from the information collected in interviews do not allow the identification of the respondents.

All interviewees provided their consent to participate in the research. The institutions that provided information also signed letters of consent, which I have included in this thesis as annexes.

## 4.8. Researcher's positionality

My first engagement with the extractive industry took place in 2006 when I started working as researcher and project coordinator at the Mozambican NGO Centre for Public Integrity (CIP), in Maputo, Mozambique. For five years, I coordinated a project on natural resource governance. Apart from CIP, I was also responsible for coordinating a platform of civil society organisations affiliated to the African and global "Publish What You Pay" coalition.

During that period, I published various research reports on the subject. I attended numerous conferences and workshops on extractive industries both at national and international level. When the government of Mozambique decided to join the voluntary group of countries who implement the Extractive Industries and Transparency Initiative (EITI) – a multi-stakeholder group consisting of government, industry and civil society organisations and think-tanks – I was elected as one of the CSO representatives in the EITI Coordination Committee, where I served for three years (2009-2011).

When I coordinated the natural resources project at CIP, I was also studying for my honours degree in Finance & Management at the Higher Institute of Transports and Communications (ISUTC) in Maputo. At the end of the honours course, I chose to research more about the extractive industry, given the fact that this was the thematic area I was more familiar with. Therefore, I wrote my honours degree paper on "The corporate social responsibility of Sasol mega-project" in 2009, which was approved with distinction.

In 2012, I moved to Johannesburg to pursue a second honours degree in Development Theory and Policy at the University of the Witwatersrand, within the then School of Economics and Business Sciences (SEBS). At the end of the course I successfully wrote an honours paper which I called "The political economy of the extractive industry in Mozambique – socio-economic dynamics and alliances of power." This was followed by a Master's degree that I completed in 2014 at the same school, same faculty under the supervision of Professor Paul Jourdan.

For the Master's Degree, my interest shifted to the coal industry, hence I entitled my Masters' paper "Coal-based linkages and development in Mozambique: a political economy perspective."

When, in 2018, I decided to apply for the doctoral programme at the School of Governance, it was clear to me that my nearest and most familiar area of study was the extractive industry, particularly the coal industry, under the lens of the political economy.

In the course of this research, I managed to publish two journal articles in peer-reviewed journals: one in the *Journal of Australian Political Economy* – JAPE – "Mozambique's coal implosion amidst global catastrophe" (Selemane, 2022) and

another in the London-based *Extractive Industries and Society* (EXIS) called “From Vale to Vulcan: ’new wine in old bottles?’ An analysis of Vale’s exit from Mozambique” (Selemane, 2023).

## 4.9. Validity of the research

As established by Marczyk et al. (2005), validity refers to the conceptual and scientific soundness of a research study or investigation, and the primary purpose of all forms of research is to produce valid conclusions.

The validity of the conclusions has been established using the triangulation of data collection and data analysis prescribed by Creswell & Miller (2000). The triangulation has been possible through the collection of the most widespread data available from different stakeholders: government, extractive companies (Vale and ICVL), non-government organisations (NGOs), grassroots movements and research institutes , including development agencies, regional and global civil society platforms working on transparency and accountability in the extractive sector (for example, the Publish What You Pay – PWYP coalition).

Every piece of information used to construct this thesis has been confronted with other sources from counterparts. Data from the mining companies has been confronted by that from government or independent research institutions to ensure triangulation and validity.

## 4.10 Relationship between questions, theory, methods and outcomes

In the below table, I summarise the relationship between the research questions, the theoretical framework I have deployed to address those questions, the methods I used to collect data in the process of answering each of the questions and the respective outcomes.

**Table 14: Questions, sub-questions, theory, methods and outcomes of the research**

| Main research question | Sub-questions | Working questions | Theory | Methods | Outcomes |
|---|---|---|---|---|---|
| What are the socio-economic and political factors and conditions of the industry coal that shape Mozambique's uneven development trajectory? | How do socio-economic factors of the Tete province coal industry contribute to Mozambique's uneven development? | Where does Mozambique's coal industry come from? | Classical political economy; economic history | Literature review; documentary analysis | Chapters 1 and 2 |
| | | How can we interpret the weight of coal in the broad mining spectrum? | Marxist capital accumulation and David Harvey's accumulation by dispossession | Literature review; documentary analysis | Chapters 2, 3 and 4 |
| | | What social, political and economic factors have shaped Mozambican economy from 1975 to 2023? | Marxist capital accumulation and David Harvey's accumulation by dispossession | Literature review; documentary analysis; in-depth interviews | Chapters 5, 6 and 9 |
| | | How has the Mozambican economy benefited from coal extraction: through taxes? Corporate Social Responsibility? Linkages? Social contributions? | Resource abundance; Dutch disease; resource curse; accumulation by dispossession; uneven development | Literature review; documentary analysis; in-depth interviews; observation | Chapter 5, 6, 7 and 9 |
| | How do socio-environmental factors of the Tete province coal industry contribute to Mozambique's uneven development? | What effects has the coal extraction in Tete created in the local environment: soil, water and air? | Political ecology; energy transition; uneven development | Literature review; documentary analysis; in-depth interviews; observation | Chapter 8 and 9 |

Source: own construction

## 4.11. Conclusion

This chapter has presented the methodological approach that I used in researching the Political Economy of the Coal Industry in Mozambique. The chapter has demonstrated the philosophical ground where the thesis is positioned in terms of epistemology and ontology. I have also presented the method I used throughout the research and my reasons for doing so.

The chapter also includes a presentation of the methods I used to collect and analyse data, including the description of the site study, ethical considerations, my positionality, and my motivation for choosing this research topic.

I have also presented the study sites of Moatize and Benga, including a description and an analysis of the case study. The chapter closes with a note on the validity of the research.

# PART III

# PRESENTATION AND ANALYSIS OF FINDINGS AND CONCLUSIONS

# CHAPTER 5 – PROBLEMATIZING RESETTLEMENT AS A PROCESS OF CAPITAL ACCUMULATION

## 5.0 Introduction

This chapter presents and analyzes the implantation process of the two coalmines in Tete province. One by the former investor Vale Mozambique, currently run by the Indian mining company Vulcan, and another by the then British mining company Rio Tinto, currently managed by another Indian company International Coal Ventures Limited (ICVL).

The chapter starts by presenting the description of the two mining sites, the places from and to where the affected local communities were resettled by the two companies, including such resettlement process and implications.

I analyze the entire resettlement process and its implications through the lens of the Marxist primitive capital accumulation (Marx et al., 1955), David Harvey's 'accumulation by dispossession' (Harvey, 1989; Harvey, 2003), and uneven development (Peck et al., 2022, Leyshon, 2021; Bond, 2006).

The first element to analyze in the process of implanting a coalmine project is the creation of the space either through resettlement of people and other facilities or simply by cleaning the area. I dedicate the next section to analyze the creation of space in Tete.

## 5.1 Creation of space for the coal mines to operate in Tete

The implantation of any mining project in a site where people are already living implies the resettlement of those people regardless of their agreement. Often the resettlements are involuntary. As posited by Nikkie Wiegink, large-scale mining projects often require the displacement of people from their land and houses, a process that is referred to as "involuntary resettlement". It is involuntary because decisions over land use lie with the government, as in Mozambique all land is owned by the state (Wiegink, 2020).

Vale's concession occupies 23 780 acres under a 35-year contract (renewable) to dig coal in a project worth US$1.3 billion. That area needed to be "cleansed" by removing the people who lived there and had developed their own economic activities. As a result, two resettlements were implemented by Vale in Cateme and in *25 de Setembro.*[17] Vale Mozambique relocated 760 families from Moatize to Cateme and Rio Tinto (currently ICVL) relocated 470 families from Benga to Mwaladzi.[18] From November 1, 2009 to April 28, 2010, Vale resettled 760 families (out of 1 313 registered) who lived in coal production areas in the municipality of Vila de Moatize, the area concessioned to Vale. The company intended to separate the people based on their social status, not allowing that jobless people could live alongside those having a paid job.

Two hundred and eighty eight (288) families considered semi-urban went to the *25 de Setembro* neighborhood. In the end, a group refused to fit into the categorization made by the Vale census. As a result, 308 families refused to be resettled and chose to receive "assisted compensation". This was a sort of monthly stipend paid to each family for a period of 24 months. Those who received "assisted compensation" were not resettled at all, in the sense that they left the old homes and went to find new homes outside Cateme and *25 de Setembro* – the two resettlement destinations of the communities affected by the Vale Mozambique project.

The process of separating the "rural people" from those "urban people" was interpreted as a strategy of "dividing to rule." Vale Mozambique aimed to weaken the negotiation power of the communities affected by its mining project. Therefore, the company chose to split the community members in categories so that they would only negotiate with the company separately, with no common concerns and demands.

Former concessioner Riversdale Mozambique, a subsidiary of the Anglo-Australian company Riversdale Mining which was overtaken by Rio Tinto in 2011, developed the Benga mineral coal mega-project, located in the Moatize district of Tete. The company

[17] "*25 de Setembro*", in English 25th of September is the date dedicated to the Mozambican Army as it is considered to be the date when the liberation war started by FRELIMO in 1964 against the Portuguese colonial regime. The date is currently used to name villages, schools, avenues and other public institutions in Mozambique.

[18] Sometimes spelled Mualadzi, I use the spelling Mwaladzi as it is more accurate in the local languages ci-Nyungwe and ci-Nyanja spoken in Tete province.

obtained the mining concession for an area of 4 560 acres, in April 2009, with duration of 25 years (renewable) and a possibility of expanding the concession area to 127 900 acres.

Rio Tinto resettled 470 families taking them from Benga, a Moatize village, to Mwaladzi, a place located 50 kilometers from Benga, whereas Vale Mozambique relocated people from Moatize to Cateme, which is 44 kilometers from their original homes.

In 2018, when the Benga mining project was already under the management of the Indian company International Coal Ventures Limited (ICVL), in the process of expanding its mining area, a second resettlement was done from Benga to Mboza. According to the company's representatives "that was an urban-resettlement, because all the people affected by it had jobs and businesses either at Moatize town or Tete town".[19] In essence, the 2018 resettlement conducted by ICVL followed the same logic as the 2010-2011 resettlement conducted by Vale Mozambique, which "divided to rule." The below table summarizes the main elements of the two resettlements conducted in Tete by Vale/Vulcan and Rio Tinto/ICVL.

**Table 15: Summary of resettlements in Moatize district**

<table>
<tr><th rowspan="2">Name of the company/Project</th><th rowspan="2">Concession in hectares</th><th rowspan="2">Number of resettled families</th><th colspan="2">Resettled people</th></tr>
<tr><th>Place of origin</th><th>Place of destination</th></tr>
<tr><td>Vale Mozambique, currently Vulcan</td><td>23 780</td><td>1 313</td><td>Moatize (Chipanga, Bagamoyo, Mithete and Malabwe)</td><td>Cateme and 25 de Setembro</td></tr>
<tr><td rowspan="2">Rio Tinto, currently ICVL</td><td rowspan="2">127 900 in total, but initially 4 560</td><td>470 by Rio Tinto in 2011</td><td rowspan="2">Benga (Capanga Nzinda, Capanga Gulo, Capanga Luani, Mpala and Nhanganjo)</td><td>Mwaladzi</td></tr>
<tr><td>272 by ICVL in 2018</td><td>Mboza</td></tr>
</table>

Source: Author's construction

## 5.2 Resettlement as an opportunity for local "development"?

From a theoretical-conceptual point of view, the coupling of "development" with the extractive industry can be situated in a larger shift in international development thinking and practice that increasingly privileges trade over aid, and in the "ethical turn" of big

[19]Interview with ICVL Manager

businesses, in which corporations are transformed into agents and architects of "development" (Wiegink, 2018). Such a view, mainly aligned with the neoliberal school of thought (Fine, 2000); Chang, 2010) and less with the heterodox school of thought (Harvey, 1989; Castel-Branco & Greco, 2022) lacks both theoretical and empirical evidence. In developing countries like Mozambique, for more than 30 years people have been expecting, with frustration, the corporations to substitute with success the traditional development agencies in the provision of better livelihood and social services such as education, health, water and sanitation.

With the aim of paving the way for the coalmines to operate, the mining companies forced the relocation of 2 072 families in Moatize district, including the Benga Village to new areas in Cateme, *25 de Setembro,* Mwaladzi and Mboza. As noted above, 308 families affected by the Vale Mozambique project simply refused to be sent where the company and government decided they should go. That was the first sign of resettlement failure. While the companies presented it as an "opportunity for development" with promises of new and better houses, water and sanitation, electricity and all necessary public services (health, education and so on), there were people who did not believe in the promise and decided to refuse it.

As noted by Nikkie Wiegink in her studies about the resettlements in Tete, initially, the *reassentados* (resettled people) perceived the resettlement process as a "development" opportunity, which was the way in which the government of Mozambique and the coal companies presented the process (Wiegink, 2018).

However, what happened in reality was a pure process of expansion of the mining companies' capital accumulation. Both the Brazilian giant Vale and the Anglo-American Rio Tinto gained vast areas of land to dig coal – this was a process of primitive capital accumulation as defined by the Marxist theorist De Angelis (2000).

Those mining companies simply dispossessed the local communities of their land and living conditions and accumulated it to themselves. As David Harvey would term it: accumulation by dispossession (Harvey, 2003a). The promised "development" ended up being a matrix of frustrations and asource of conflict between the resettled communities, the mining companies, and the district government of Moatize.

The promised development did not happen because of two types of reason. The first type of reason is theoretical-conceptual and the second is empirical. The theoretical-conceptual reasons are the ones referred to above: the resettlement of people living in areas affected by mining projects is a mere process of establishing the ground for the mining project to be implanted – it is an expansion of the accumulation of capital through accumulation by dispossession (Harvey, 2005). The process of accumulation by dispossession is never conducive to the improvement of the living conditions of the dispossessed.

The empirical reasons as I discuss in the next sub-sections, have been documented in previous studies and confirmed in this thesis, when I was carrying out fieldwork in Tete.

### 5.2.1 Lack of dialogue between companies, communities and state representatives

The resettlement of people affected by the coal mines in Tete was conducted with very little and insignificant dialogue. Community members had very limited space to ask questions, pose queries and raise their concerns to the companies' representatives and the state. In the extractive-led economies, such lack of dialogue in a resettlement process is understood as "a failure." However, that is simply part of the development model. Capital is never in the position of establishing proactive, successful and long-term dialogue with communities.

A multi-stakeholder team, consisting of government representatives, companies' representatives and communities' representatives managed the resettlement process. At the time of Vale and Rio Tinto resettlements (between 2009 and 2011) Mozambique had no legal framework to regulate the resettlements. There was only the Land law with its provisions about community consultation for the implementation of mega projects. According to the Land Law (Law 19/97 of 1 October), community consultation is one of the main forms of community participation in natural resources management as well as in the decision-making process, and the preservation of community rights.

Ministerial diploma 158/2011 establishes that community consultation is carried out in two phases. The two phases of the consultation might consist of two or more meetings. The first being intended to provide information to the local community about the request to acquire the right of use and the use of the land and identification of the boundaries

of the plot, and the second aimed at obtaining the local community's opinion on the availability of an area to carry out the project or exploration plan.

As discussed in Chapter 4 of this thesis, prior to obtaining a mining license, as per the Mozambican law, the investor needs to acquire a land right formalized by a document called DUAT – *Direito de Uso e Aproveitamento de Terra* - Right to Use and Benefit from Land. Vale and Rio Tinto obtained the mining licenses by firstly applying for the respective DUATs. All the negotiation and consultation with the communities should have taken place in the process of acquiring DUAT and not in the process of paving the way to implant the mining projects.

The Land Law explains that community consultation is carried out with the local community that occupies a portion of land needed by an investor to develop a project. This means that all community members (men, women, youth, and elders) must be consulted.

The same Ministerial diploma 158/2011 establishes that the consultation minutes are signed by the members of the community (given the high levels of illiteracy, there are various rural communities in Mozambique where nobody can read and right) and the Locality Consultative Councils. After issuance of the opinion (*Parecer*) by the District Administrator, it must be delivered to the local community. The delivery of the consultation minutes to the local community is a way that the state created so that the local community could prove the commitments made during the community consultation process, and thus demand fulfillment from the investor.

In the case of Moatize, regardless of the evidence of Vale not complying with the promises it made, the government did nothing to resolve the matter. Again, this is part of the extractive-led development model. It is not a failure, but rather an essential characteristic of the process of accumulation by dispossession.

The Decree 31 (Decree of Resettlements) only came in August 2012 after a long discussion between the companies, government and civil society organizations (CSOs). That multi-stakeholder group resulted from a quasi-informal arrangement to deal with a situation that was out of the ordinary legal and institutional framework of that time.

In fact, lack of dialogue was not motivated by the non-existence of a law to regulate the resettlements, but rather by the conviction that the companies had about the significance of the process. As remarked by a traditional leader interviewed for this thesis remarked:

> Vale acted as if they were doing as a favor. They would come for a meeting and keep talking for more than two hours, showing us videos of what our future houses would look like. Then they would leave less than 30 minutes for us to ask questions. The meetings always had more than 50 people. There was always a provincial government representative but said nothing. The process continued until we were evicted from our land. Today, I would like to see again those people from Vale to confront them with their behavior. However, they are no longer around[20].

In the interview cited above, a traditional leader recounts how the meetings meant to "consult the communities" towards the resettlement were organized and held. The so-called consultation process was a total fraud.

Another interviewee, who was a brick-maker and employed 25 workers, tells his story about how he lost his business:

> I was a brick-maker. There was a small factory making bricks made from abobe, here in the Bagamoyo neighborhood. Because in Tete people build their houses with these bricks. That is why I wasn't the only one: there were many of us. One day people from Vale arrived to tell us that we had to leave the place where we manufactured the bricks, because it was part of his license. That there they would dump rubble from their excavations. Therefore, we ask how we are going to stay. They didn't say clear things. From one day to the next, they came with heavy machinery, fill our work area with rubble, that's it! My ovens are buried, right there! In the dry months I used to employ 25 Malawians, beating bricks, while others, Mozambicans, worked in the kilns. Other people's ovens too they were buried! And we asked: "but...what's that like?!"
>
> As no one wanted to talk to us, we decided to hold a demonstration: we got tree trunks and blocked the road and the railway line where the trucks and trains transporting coal and other materials from Vale pass! We were close to a thousand people! Then everyone showed up to talk to us: first, the police arrived, but Vale and representatives of the district government also came. That was when we reached an agreement: Vale agreed to pay us, each, 60 thousand meticais (US$ 1,000.00) for the interruption of our work, while a complete study was carried out to determine the value of our compensation. That was in 2010. We prepared all the documents and evidence. Vale

[20] Interview with a traditional leader in Cateme

> representatives were here collecting all the documents and evidence of our activities, to calculate the compensation. But, since 2010 until now [2022] we have received no compensation![21]

The conflicts between Vale and the former brick-makers was one of the most difficult for a number of reasons. Firstly, because Vale wanted to calculate the compensation based on the area of land each brick-maker occupied, but the potential beneficiaries refused on the basis that the compensation should be calculated based on the amount of income they had. Secondly, because brick-makers were micro and small enterprises that deployed other people, hence the closure of the activity meant a loss not only to the owner but also to those who relied on that business to sustain their families.

### 5.2.2 Unrealistic and unmet promises by Vale and Rio Tinto

Another factor of failure of the resettlements is the unrealistic and unmet promises. Both Vale and Rio Tinto promised good houses, new business opportunities and a vast list of better living conditions merely as a way of obtaining "social license to mine", which is understood to be a strategy followed by mining companies to gain compliance from communities affected by the mining projects to pursue such projects (Cooke & Kothari, 2001); (Dietsche, 2014c) (Marais et al., 2021).

In fact, some of the promises were simply unrealistic, for example, the promise of a job for at least one member of each family affected by the project. That was simply impossible to comply with as the companies showed no interest in doing so (Selemane, 2010; Wiegink, 2022).

As documented by various studies conducted in the resettlement area (Selemane, 2010; Mosca & Selemane, 2011; Varia, 2013) the process was made of various unmet promises. The houses that Vale and Rio Tinto built were of bad quality. A common promise to convince the residents of the future mining site to leave was a better house, built with cement, including a water closet. The houses Vale built were, in fact, of cement but never included a water closet.

[21] Interview with a former brick-maker in Moatize

At the beginning, Vale promised to distribute food to each family affected by their project. The food was never distributed. For this reason, Human Rights Watch published the widely cited report “What is a house without food?” authored by senior researcher Nisha Varia in 2013. More than ten years after that resettlement, an interviewee for this thesis told me the following:

> Government officers and the companies’ representatives always repeated the fact that we had a unique opportunity to live in better houses, with water closet and electricity. They even threatened everyone who questioned the fact that most of those promises just looked too good to be true. As you know, some people refused to be relocated. Government tried to persuade them with no success. Initially, Vale refused to pay them any money because they did not want other people to follow that example. In my view, people who refused to go to the resettlement villages took a good decision, because until today (2022) we are still suffering here. I would love to see again here those Brazilians who worked for Vale, those who made all of those promises. I wanted to ask them about their own lies[22].

In general, the unmet promises were as follows: first, promise of a job for at least one member of each family; second, a better house; third, food distribution; fourth, money payment.

The unfulfilled promises led to protests by the affected communities, a sort of “community resistance” as political economist Patrick Bond and workers’ organizer Judith Marshall would call it (Marshall, 2017; Bond, 2022). The first notorious protest took place in 2009 when a wildcat strike took place in Moatize, where 1200 construction workers protested against working conditions and low wages. In the same year, another protest took place and forced the stoppage of the implantation of the mining machinery. Mozambican workers protested against the huge discrepancy between their salary and the salaries paid to the expat workers.

An illustrative case of unmet promises is at Bagamoio village in Moatize. There most of the houses are built from raw blocks of artisanal manufacture. The houses do not follow a strict alignment because the space was not parceled out. The streets are not straight. The ground is uneven so there is no sewage system. The sewage waters flow and

[22] Interview with a former village chief in Moatize

follow the natural trajectory, according to the slope of the land. We climbed to the top of the hill to have a good view of what is happening around the neighborhood.

A metal fence, as long as the eye can see, delimits the residential area from the space where coal is extracted by the company Vale. On the other side of the fence one can see and hear the roar of an excavator. The dust caused by the movement of the excavator completes the scene. Around 1000 people live in the area waiting to be relocated to somewhere else, a place where they will live without hearing the noise of dynamite or feeling the smell of the smoke.

Canadian workers' organizer, academic and activist Judith Marshall who spent many years assisting the coal mineworkers in Tete, documented all the protests that happened. The information was then published as part of an article in the renowned academic journal *Review of African Political Economy* (RoAPE) in 2017: "Mozambican Workers and Communities in Resistance" (Marshall, 2017). Although the title refers to Mozambican workers, the registry is not limited to the protests organized by the workers. It also includes those protests organized by the local community in contestation of various aspects of their living conditions.

During the research for this thesis, I updated the registry and the result is presented in the table below, showing the frequency of protests that took place in Moatize for a wide range of reasons.

**Table 16: List of protests undertaken in Moatize coal mines**

| Year | Type of action | Protagonists | Targets | Issues raised |
|---|---|---|---|---|
| *2009* | Wildcat strike | 1200 construction workers | Odebrecht/Vale | Salaries, working conditions, severance |
| | Work stoppage | Construction workers | Odebrecht/Vale | Working hours, ex-pat salaries and benefits |
| 2011 | Official letter of protest | Community displaced by Vale from Moatize to Cateme | Vale and the Government of Mozambique | Access to arable land, houses, water, livelihoods |
| | Railroad blockade | 700 resettled families in Cateme | Vale and the Government of Mozambique | Broken promises and silence from Vale and government |
| | Strike notice | Kenmare bargaining committee | Kenmare | Wages, health care, difference between nationals and expats salaries or any sort of conditions. |
| | Wildcat strike | Kentz construction workers | Kentz | Severance, Labour law implementation |

| Year | Type of action | Protagonists | Targets | Issues raised |
|---|---|---|---|---|
| 2012 | Work stoppage, attacks on ex-pats | Jindal workers and affected community | Jindal and the Government of Mozambique | Lack of environmental study, insults to national workers by managers; no resettlement plan |
| | Mine blockade | 800 block makers | Vale and the Government of Mozambique | Loss of livelihoods |
| | Railway blockade | Cateme brick makers | Vale | Compensation for loss of small business |
| | Demonstration at Vale offices | Brick makers | Vale | Response to new compensation proposal |
| | Demonstration at Cateme resettlement | Households/families | Vale and Government of Tete | Unfair resettlement process |
| 2013 | Mine blockade | Community resettled at *25 de Setembro* village | Vale | Compensation for lost livelihoods |
| 2014 | Blockade threats | Brick makers | Vale | Loss of livelihoods and land grabs |
| | Coal mine blockade | Resettled community and brick makers | Vale | Land grabs, dispossession |
| | Community demonstration | Resettled community at Cateme | Vale and Government of Tete | Decay of cultural and historical values due to Vale's operations |
| 2015 | Work stoppage | ICVL mine workers | Jindal (ICVL) and the Government of Mozambique | 'Slave labour' conditions, racism |
| | Mine blockade | 500 families of four affected villages | Jindal (ICVL) and the Government of Mozambique | False promises of land, resettlement, jobs and better living conditions |
| | Demonstration | Kancope Community | Government of Tete, Vale and Rio Tinto | Require promised hospitals, schools and road construction |
| | N'tchenga community | Demonstration | Government of Tete, Vale | Resettlement as required by law: nice houses, hospital, schools, nice road, fertile land and food basket |
| 2016 | Demonstration | Kancope Community | Government of Tete, Vale and Rio Tinto | Employment and unfair compensation |
| | Work stoppage | 1400 mineworkers | Vale | Better salaries and bonuses |
| | Demonstration | Residents of *Bairro 25 de Setembro* | Vale and Government | Complaints on house fissures |
| 2017 | Work stoppage | More than 1000 mine workers | Vale | Better salaries and bonuses |
| 2018 | Mine blockade | Residents of Nhanchere village | Vale | Pollution of air, water and soil |
| | Mine blockade | Around 300 residents of Cassoca village | ICVL | Resettlement conditions |
| | Demonstration | Nhanchere community | Vale | Complaint on proximity, causing environmental and sound pollution and fissures on houses |

| Year | Type of action | Protagonists | Targets | Issues raised |
|---|---|---|---|---|
| 2019 | Roads and mine blockade | Around 500 residents of *25 de Setembro* village | Vale | Unfair compensation and jobs |
| | Massive demonstration | Communities around Moatize | Vale and Government of Tete | Inadequate food and machamba provision; complaint on road construction |
| | Community demonstration | Communities around Moatize | Vale | Complaint on transfer of cemeteries; compensation due to economic losses |
| 2020 | Roads blockade | Around 300 residents | Vale | Resettlement conditions |
| 2021 | Mine blockade | Around 500 residents | Vale | Better living conditions, unfair compensation |
| | Demonstrations | Dzindza, Cassoca, Luane and Gulo communities | ICVL and Vale | Communities have not been resettled and most of them live within the mining sites |
| 2022 | Work stoppage and mine blockade | Around 1000 mineworkers | Vulcan | Non-continuation of contracts signed with Vale and better salaries |

Source: updated from Marshall (2017)

Interestingly, the departure of Vale from Moatize and the arrival of Vulcan to take over the coal mines did not stop the protests. It means that the reasons of dissatisfaction among the affected people have not been resolved. As the table shows, in 2022 there was a protest targeting the new company Vulcan to contest against the non-continuation of the contracts previously signed with Vale.

### 5.2.3. Lack of improvement of people's living conditions

A third factor that contributed to the failure of the resettlements in Moatize is conveyed by the general sentiment that people's living conditions did not improve. Firstly, the houses built for the resettled people were all of bad quality, as said in subsection 5.2.2 above.

In the case of Vale, the company presented a good model of house ("*casa modelo"* in Portuguese) to the government and communities. Vale built one house and the affected community members were taken on a tour from Moatize to Cateme to appreciate it. The community members were told that their future house would be similar to the one they were shown. However, at the time of building the rest of the houses, Vale built houses of low quality, with no foundations, no interior divisions, with windows and doors made of wood of very low quality (Selemane, 2010; Varia, 2013).

Secondly, contrary to the promise of building houses with a water closet, Vale built houses with toilets outside each house. This fact was a motive of a strong contestation even from the government authorities. The main government-aligned weekly newspaper *Domingo* published a harsh editorial on 12 August 2012 entitled "*eternamente latrinas?*" questioning the fact that Vale was submitting the people affected by its project to "an eternal toilet life", a Portuguese phrase meaning that one is refusing the improvement of the other's living conditions (Domingo, 2012).

Lastly, in 2016 I carried out a study at the same mining sites, whose results I published in a working paper (peer-reviewed) at the Maputo-based think-tank "*Observatório do Meio Rural*[23]"(Selemane 2016). This was as a follow-up to previous research conducted in the resettlement areas, I visited Tete and spent two weeks in Cateme and Mwaladzi observing the daily life and talking to people about their living conditions. In that study, I found out that the problems that existed through the 2009-2011 resettlement still existed in 2016. Some problems like the provision of potable water and access to arable land were even worse than five years before.

In 2022, during the fieldwork for this thesis, I visited again the resettlement areas. Schoolchildren at ages of five to eight years old still walk three kilometers to go to school and another three kilometers to return.

### 5.2.4. Abandonment of the resettlement villages

In 2022, after Covid-19, during the fieldwork for this thesis I went to Tete again and visited the same sites. The situation I found in 2022 was worse than the one I found in 2016. The multi-stakeholder working group that existed to deal with the queries posed by the resettled people no longer existed. The government officers have changed more than three times in the last five years. The ones who are working in Tete, Moatize and the areas of resettlement (Cateme, Mwaladzi) have no institutional memory of what was done before their arrival.

[23]*Observatório do Meio Rural* (OMR) is a multi-disciplinary think-tank started in 2010 by Mozambicans from various areas of knowledge (economics, sociology, agronomy and others); it is dedicated to research of themes around agriculture, rural development, natural resources and social cohesion. I am member of OMR since 2015 and I have served in its board between 2016 and 2020.

I also found out that those 45 families from the Mwaladzi resettlement left for other places where they could find more fertile land for their food production. Similarly, 62 families from Cateme also left the resettlement village. However, those departures did not result in a decrease of the people living in the area as some families have grown. Some young people who were teenagers at the time of the resettlement in 2009-2011 have grown up, and they are currently married and have their own children.[24]

Before my fieldwork, another researcher (Nikkie Wiegink) found evidence of abandonment of the resettlement villages. As published in 2018, some people from Mwaladzi had found no other option than to leave. They sold whatever they could take off from the houses such as doors, wooden beams, and tin roofs, and returned to Capanga or went elsewhere. In 2017, it was estimated that between 96 and 181 families had already left the resettlement area. Thus, as living conditions seemed to worsen in Mwaladzi, the resettlement itself seemed increasingly of a temporal nature (Wiegink, 2018).

The abandonment of the resettlement village was not only a failure of the resettlement itself, to use the extractivist terminology, but also a contradiction of expectations. Families reported that the water supply was insufficient to meet community needs and that there were frequent interruptions in supply due to pump defects and electrical network problems. The infertility of the soil and the reduced size of the lots, combined with intermittent access to water, have prevented displaced populations from producing food and raising animals for sale and for their own consumption, making them dependent on food aid. To use Gediminas Lesutis formulation, those people left the place due to “precarious living conditions” (Lesutis, 2018).

According to Nikkie Wiegink, those who were dispossessed and resettled by the mine expected some kind of long-term relationships of dependency (to be “in the hands of the company”), whereas companies’ resettlement practices seemed to be of a short-term nature, also depending on the market fluctuation shaped by changing ownership of the mines (Wiegink, 2018).

[24] Notes from 2022 interviews with residents of the resettlement areas of Cateme and Mwaladzi

## 5.3. Civil society organisations fight against unfair resettlements

In 2019, SEKELEKANI and KUWUKA-JDA collaborated with other CSOs in organising the first civil society congress of the communities affected by mining projects. The congress happened in Tete city. One hundred and twenty (120) people attended the congress coming from the districts of Moatize and Marara (Tete); Palma and Montepuez (Cabo Delgado); Moma, Larde and Angoche (Nampula); Temane and Jangamo (Inhambane) and Massingir and Chibuto (Gaza).

The main objective of the conference was to provide an opportunity for resettled or affected communities to speak out about their experiences of life in their contact with this economic sector, in a context of sharing experiences and information with each other and with the public.
It was a moment for constructive dialogue between the different communities who reside in Tete. The dialogue was not only among them, but also between them and the government representatives who attended.
All participants contributed to the discussions around the best ways of making the most of the extractive industry. In particular, the conference was a great contribution to the discussions around corporate social responsibility policy for the extractive industries and mineral resources.

Another topic was the use of 2.75 per cent of revenue. The participants sought for the alignment of the Economic Development Plan for the District (PESOD) and the social responsibility plans of companies, for an integrated local development which culminate in the beginning of a joint integrated planning process.

The congress represented a big shift in the discussion, and was a forum for lobbying and advocacy in favour of communities affected by mining projects. Previously, all of the discussions happened between Maputo-based CSOs, activists and academics. Sometimes the discussions took place only among the affected people from the same district or the same project. For the first time in the history of resettlements in Mozambique, affected communities from different districts and provinces gathered to

share their experience and discuss the best ways of engaging with multinational extractive companies and state entities.

## 5.4. Government responses to the resettlements failures

The government of Mozambique did not leave the resettlement failures unanswered. As documented in a 2020 study, resettlement simply impoverished already vulnerable communities and government responded to their contestations with armed repression (Wiegink, 2020).

Apart from various failed attempts to “fix” the problems raised in the resettlement villages of Mwaladzi and Cateme through intimidation and detention of protesters, prosecution of social activists and journalists, the government put forward three responses in three different fronts. One response was on the legal front in 2012. A second response was on the public policy front in 2014. A third response was on the public relations front in 2016. Unfortunately, none of the two answers has helped the resettlement process to leave its ontological reason of being – the resettlements continue to be instruments of accumulation by dispossession conducive to uneven development as I demonstrate in the next sub-sections.

I dedicate the next sub-sections to present and debunk the so-called failures of the resettlement model. In fact, the failures are not of the resettlement model, but rather of an economic model that relies on extractivism as the only way of development in a mineral-rich country.

### 5.4.1. The approval of the resettlement decree in 2012

The first response that the government of Mozambique adopted to cope with the failure of the resettlement model was on the legal front, namely the approval of a Decree to regulate the resettlements. Notably, after three years (2009-2012) of intense debate between civil society organizations (CSOs), media, communities affected by the resettlements, the mining companies and government entities, in 2012 the government approved Decree 31/2012 of 8 August – Regulation on the Resettlement Process Resulting from Economic Activities (referred to in this section as “the Decree”).

The problems faced by the resettled people in Cateme and Mwaladzi accelerated a national debate about the need to regulate the resettlements. As I have noted in the previous sub-section, those resettlements were conducted using the Land law (Law No. 19/97; Article 10), particularly the procedure for DUAT acquisition.

In its justification, the government argues that its approval results from the questioning of the existing resettlement model – the model that was adopted using the Land Law as noted above – which was very problematic as it was not solving the people's concerns and demands. In fact, no stakeholder was happy with the resettlement model implemented so far. The companies faced tens of protests, the government had to mediate the grievance between the affected communities and the companies, and CSOs had to assist the affected communities with organization of their demands in formal letters and petitions to the parliament.[25]

In the Decree, the government questions the fact that there is a "growing demand for natural resources in the country, which has been dictating the need for relocation of people and business facilities without complying with socio-economic and cultural aspects (*Conselho de Ministros*, 2012).

Thus, the Decree was meant to convey the idea that with it "socio-economic and cultural aspects" would be observed in the resettlement process. This claim is denied both on a theoretical level (the guideline of the Decree itself) and on empirical grounds.

On a theoretical level, the Regulation on the Resettlement Process Resulting from Economic Activities was initially thought to bring about solutions to what was considered an important gap in the resettlement processes – the inappropriate treatment of socio-economic aspects. However, the Decree ended up being an instrument targeting poor communities, mostly illiterate, living in precarious houses in rural mining sites. There was no thought or provision for a resettlement happening in an urban area, where middle and upper classes live in relatively fancy houses. For instance, article 16 of the Decree establishes that "the houses in a resettlement village must be up to 3-bedrooms occupying an area of not more 70m$^2$".

[25] Interview with an academic in Tete

In the end, the Decree perpetuated the mistreatment of the socio-economic aspects through that article 16. It gave no possibility of a resettled family to acquire a house bigger than 3-bedroom, regardless of the previous house each family lived in.

On empirical grounds, it was to be expected that the resettlements conducted after the approval of the Decree would have integrated the "missing elements" from previous resettlements. This did not happen. In 2018, six years after the Decree entered into force, ICVL conducted a resettlement of 272 families who were relocated from Benga to Mboza.[26]

The 2018 Mboza resettlement was done using the same philosophy as the previous ones done in 2009-2011. A summary of how the new resettlement was conducted is provided in the following citation:

> The Resettlement Action Plan, considered the urban-type resettlement model for families dependent on jobs in the city of Tete or Moatize or other non-agricultural activities were categorized for urban-type resettlement, which is carried out close to the city of Tete or village of Moatize in order to protect their means of subsistence, depending on the proximity of these urban areas. In 2018, in a session of the government of Tete Province, it approved the beginning of the implementation of urban resettlement in Mboza, Moatize district, Tete Province. The resettlement village approved by the government comprises the construction of 272 houses, 1 health center, 1 primary school, 1 police station, 4 churches, roads, electricity system, water system, market, football field, women's office and social action[27].

The first part of the above citation indicates that the Tete provincial government approved the resettlement plan. Prior to such approval, important milestones should have been reached. During the fieldwork and in interviews, I found no evidence of meetings between ICVL and the 272 affected families. A source from ICVL referred to meetings that took place when the project belonged to Rio Tinto, although no copies of the minutes were made available. I only heard oral accounts plus the official plan approved by the government.[28]

[26] Notes from interviews with ICVL managers and community members affected by the resettlement
[27] Notes from interview with ICVL managers and the company's website
[28] Interview with ICVL manager

The second important element in the above citation is the designation of "urban resettlement." As I have discussed in the case of Vale, when mining companies refer to "urban" they mean non-peasant people. They mean only that the affected people (teachers, nurses, drivers and others) must be relocated to an area relatively near a main city so that they continue to pursue their livelihoods and careers.

### 5.4.2. The approval of the Corporate Social Responsibility policy in 2014

A second response adopted by the government of Mozambique to cope with the malfunctioning of the resettlements was the approval of a policy to guide the mining companies' corporate social responsibility (CSR), in 2014.

The CSR policy came as a response to critiques about the limited contributions by the mining companies in the communities where they operate. In the case of Moatize, communities affected by the resettlements complained about the abandonment by the companies after the relocation was completed. Companies like Vale and Rio Tinto complained about lack of visibility of their "efforts to contribute to local development" which jeopardized their "good image" in the local communities. Local government representative in Moatize also complained about the mismatch between what the companies offered to the local communities and the priorities defined in the plans of the local government.

As a result, a CSR policy was approved. In terms of the CSR policy, the government chose to adopt the concept of corporate social responsibility from the ISO 26000 Standard, which aims to assist organizations in contributing to "sustainable development." According to its website, "ISO 26000 serves as an international standard designed to assist organizations in effectively evaluating and addressing their social responsibilities. It helps them identify and prioritize what is relevant and significant to their mission, vision, operations, and processes. Additionally, it encourages them to consider the impact of their actions on customers, employees, communities, stakeholders, and the environment".[29]

ISO 26000 establishes the core elements of CSR as follows:

[29] https://greenly.earth/en-us/blog/company-guide/what-role-does-the-standard-iso-26000-play-in-csr

- contribution to sustainable development, including the health and well-being of society;
- consideration of the interested parties' expectations;
- compliance with legislation and be consistent with international standards of conduct;
- integration with the entire organization and society.

The CSR Policy was approved with the following objectives:

> a) to promote the establishment of mechanisms that ensure the existence of social responsibility programs business in the mineral resources extractive sector, so that it contributes effectively to poverty reduction and sustainable development in Mozambique;
> b) to frame and coordinate responsibility programs corporate social in objectives and programs' development especially plans of local development.

The expectation of all stakeholders (government, affected communities, and mining companies) was that the CSR policy approval would help in "normalizing" and reducing the levels of contestation of the resettlements. However, as I have demonstrated, the protests continued even after 2014, and they continue in 2022.

### 5.4.3. The government-led national conference on resettlements held in 2016 in Tete

In parallel with the approval of the resettlements regulation in 2012 and the CSR policy in 2014, the government of Mozambique and the mining companies continued to face criticism about the failures of the resettlements. On 22 November[30] 2016 in Tete province, the government and mining companies organized a national conference on resettlements aimed to gather experiences from previous resettlement processes and provide lessons to forthcoming resettlements in Cabo Delgado.

Between 2014 and 2016, when Mozambique public opinion was debating the negative outcomes from the Tete resettlements, the US oil company Anadarko Petroleum Corp

[30] By coincidence, the conference organizers chose a symbolical date in Mozambique's public opinion - 22 November is the date of assassination of the investigative journalist Carlos Cardoso, who was gunned down in 2000, in Maputo, when he was investigating massive financial fraud involving Frelimo (Mozambique ruling party) elites.

was planning to relocate 743 families in the northern province of Cabo Delgado, near the border with Tanzania. This resettlement was part of the implantation of a gas project in the Rovuma Basin. Anadarko was eager to demonstrate its willingness to avoid all the errors committed by the coal companies (Vale and Rio Tinto) in Tete province.

The conference was organized by the national division of Territorial Planning and Resettlement (*Ordenamento Territorial e Reassentamento*) a branch of the former Ministry of Land, Environment and Rural Development (*Ministério de Terra, Ambiente e Desenvolvimento Rural* – MITADER)[31] and supported by funding from Anadarko and others. It was attended by approximately two hundred people (Wiegink, 2020). The participants included civil society organizations, media, and government officers from the provinces of Inhambane (where Sasol gas projects are located, and resettlement took place in 2004); Nampula (where Kenmare extracts heavy sands – ilmenite, rutile and zircon – and resettlement took place in 2007) and the hosting province of Tete (the epicenter of the problematic resettlements of Cateme and Mwaladzi). Thus, the conference brought together formerly resettled people from Tete and soon-to-be resettled people from Cabo Delgado and Gaza provinces. All mining stakeholders were invited and did attend.

While the conference was the government's demonstration to the public about its concern and receptiveness to the critiques raised about the resettlement process, for Anadarko (the main funder of the conference) it represented a "learning process" that was inclusive (because all stakeholders were invited) and, above all, it served to legitimize Anadarko's future resettlement in Cabo Delgado. President Filipe Nyusi of Mozambique, inaugurated the resettlement on 5 August 2019, two years after the insurgency attacks started in the very same area of Cabo Delgado gas. Two years later, the French oil company Total took over the Anadarko project. Total subsequently declared "*force majeure*" which led to its interruption from 26 April 2021 until the time of writing this thesis in 2023.

From a theoretical point of view, none of the actions by either the government or Anadarko is neutral. The government's action of organizing such a big conference to

[31] The designation of that ministry was changed after the 2019 general elections. It was split into two: the Ministry of Land and Environment (*Ministério da Terra e do Ambiente)* and the Ministry of Agriculture and Food Security (*Ministério da Agricultura e Segurança Alimentar – MASA),* which oversees issues related to rural development.

discuss a controversial subject was meant to signal its own commitment to transparency in relation to project-induced displacement and dispossession. The inclusion of all stakeholders – including those who opposed the mining projects – can be seen as a pure attitude of inclusive governance. However, some authors look at such attitudes with caution. For instance, (Cooke & Kothari, 2001) warn of the risk of "inclusionary control", which refers to the fact that the very act of inclusion, of being drawn in as a participant, can symbolize an exercise of power and control over an individual.

In effect, inviting contradictory voices to a conference might seem an attitude of tolerance and inclusion until we analyze the extent to which those voices are heard, taken into account, and influence the final decisions made in such meetings. In the case of resettlements, it was simply pointless to invite all stakeholders and put together 200 people with different views in a conference, when the ultimate objective was to legitimize a future resettlement in Cabo Delgado. The resettlement, which was conducted following the same regulation as the previous ones, ended up repeating the same errors committed by the previous extractive companies that implemented resettlement processes: unrealistic promises, unmet expectations of jobs for everyone, and disrespect of local cultural dynamics related to relocation of graves, to name but a few.

A key issue that was left out in both the previous discussions around resettlement and the 22 November 2016 conference is whether mining is unavoidable or not? Can people choose to stay over a portion of land that is rich in minerals and develop other economic activities or not? Is there a room for an informed discussion about different options for people living in mineral-rich areas, or is their only alternative to accept extractivism?

To address these questions, I look into a dichotomy between consultation and negotiation when it comes to the implementation of mining projects.

## 5.5. Local participation in mining projects: between consultation and negotiation

The philosophical basis for the resettlement of people affected by a mining project is that a mining reserve needs to be exploited. Moreover, the socio-economic and environmental effects can be "managed", meaning that the mining project owners can control them (be those governments or private companies). This basis leaves no room for a discussion about the possibility of not extracting a mineral reserve for whatever strategic reasons. The reasons could be, among others, the following:

i the socio-economic costs of digging the mine will be higher than other advantages;
ii the environmental damage caused by the mining activity will be harder than the compensation to be gained from the mining income;
iii in the very same area, other economic activities such as farming, tourism or fishing can be much more beneficial to the people's livelihoods than mining.

The resettlement regulation, the efforts to convene conferences on resettlements, as parallel measures taken to pair with the regulatory ones, are all endeavors conducive to the inevitability of mining – an enforcement of an extractivist agenda. In other words, it is the infallibility of the 'accumulation by dispossession' development model.

In reality, resettlements are supposed to be carried out through a "public consultation" (art. 23 of the Decree on resettlements). Many CSOs criticize the contours of these consultations for several reasons. Firstly, the failure to make complete information available in a timely manner; secondly, insufficient time for the necessary discussions among community members, companies, government, as well as other stakeholders and the use of tricks to deceive mostly illiterate communities; and lastly, the lack of financial and material autonomy of the state representatives who must monitor the resettlement process.

All these critiques assume that a resettlement process, regardless of its conceptual-philosophical basis, can be peoples-friendly and function against its very nature – primitive capital accumulation and accumulation by dispossession. Such a view is not only theoretically incorrect but also empirically untrue, as I have demonstrated throughout this chapter.

Beyond questioning the contours of public consultation, it is necessary to question the model behind public consultation or behind resettlement. Why do people need to be relocated?

The terminology used in the Mozambican Regulation on Resettlements speaks of people affected by a mining project as having the right to “give an opinion” but not to “decide” (see paragraph (f) of art. 10 of Decree 31/2012 of 8 August).

Obviously, there is a big difference between giving an opinion and making a decision, between consulting and negotiating. The only way to break the cycle of impoverishment of resettled communities is to adopt the format of negotiation rather than consultation. People affected by the mining projects must have the possibility of saying “No” to mining.

## 5.6. Conclusion

In this chapter, I have presented and analyzed the contour of the implementation of Tete’s coal mines. Starting with the characterization of each of the coal mines, I have presented the process of paving the way for those mines to be operated. I have questioned the philosophical basis of extractivism, namely the fact that digging mines is presented as the only development option for mineral-rich areas like Tete province.

The existing critiques of the extractive agenda are limited in various stances, as I demonstrate below:

i ***The non-inclusion of socio-economic aspects in the resettlement process:*** the Decree 31/2012 of 8 August (Regulation on the Resettlement Process Resulting from Economic Activities) justifies its existence with the need to question the resettlement model. The government questions the fact that there is a growing demand for natural resources in the country, which has been dictating the need for more physical spaces for the implantation of mining projects. Such implantation implies the resettlement of the people living in the areas where the mineral reserves are located. As such, the Decree seeks to convey the idea that with it “socio-economic and cultural aspects” will be complied with, contrary to what was happening before its

existence. Throughout this chapter, I have demonstrated that the approval of the Decree did not resolve the problems identified in the resettlement areas.

ii ***The lack of information and effective communication with resettled people*** has been identified as one of the most serious deficiencies of the current resettlement model. From a legalist perspective, this gap can be criticized as a "violation of art. 14 of the Resettlements Regulation". In general, the lack of information and communication verified by government authorities for the resettled people is criticized. But, in fact, the government does not have information independent of companies. The information in the possession of the government of Mozambique on mineral reserves, values, and so on, is provided by the companies interested in exploring those minerals (Boas & Associates, 2011). Mining and oil concession contracts are signed between the companies and the central government. Until 2023, most of those contracts were secret. Some were released as a result of the 2014 mining law, but the most important contracts (e.g.,Vale's and Rio Tinto's contracts) were signed before 2014 and therefore remain secret. Not even local governments (provinces and districts) are aware of their content. In other words, lack of information does not only occur at the level of the resettled people, but also at the level of government authorities below the central level.

The above critiques are meaningless if read out of the context of accumulation by dispossession, which is the main feature of the mining projects.

As a way of convincing people to give up their land and allow the mining companies to dig freely, large-scale mining and other resource extraction projects evoke the promises of rapid wealth and "development", but also bring about concerns about environmental degradation and exploitation of land and people. Particularly in the context of African resource-rich areas (including Mozambique), the role of multinational extractive industries has been described as igniting processes of "enclavisation" (Wiegink, 2018). I dedicate the next chapter (Chapter 6) to the environmental aspects of coal mines in Tete.

# CHAPTER 6 – RECLAIMING TETE'S DEVELOPMENT THROUGH COAL-BASED LINKAGES

## 6.0. Introduction

This chapter gauges the conclusions reached by authors of a vast literature on economic resources about the potential of the coal industry to foster wider socio-economic development through linkages (Leeuw & Mtegha, 2018). There is a generalized though contested understanding that the coal industry can be a key factor of change in the development path of local and national economies. Such understanding is based on the assumption that being a capital-intensive industry, the coal industry can only generate wider benefits in the economy through the creation of linkages with other economic activities, namely non-extractive ones (Jourdan et al., 2012); (Monjane, 2019).

Building on these assumptions, in this chapter I survey the development of linkages in Tete's coal industry. I do so by combining the theoretical foundations of the linkages framework with the results that I found on the ground for each type of linkage during fieldwork.

## 6.1. The linkages framework

Initially studied by economist Albert Hirschman (A. Hirschman, 1977), one of the pioneers in studies of industrial development arising from commodities, the linkages framework has evolved over time. Various authors coincide in the definition of a linkages framework as consisting of inter-firm transactions that go beyond arm's length, once-off transactions and involve long-term collaborations between the parties (Jourdan et al., 2012); (Buur, 2014).

In an article entitled "Diversifying mineral economies: conceptualizing the debate on building linkages", Evelyn Dietsche (Dietsche, 2014a) places the debate on the

relationship between mining and development into perspective by distinguishing between three stages in the last 30+ years, as follows:

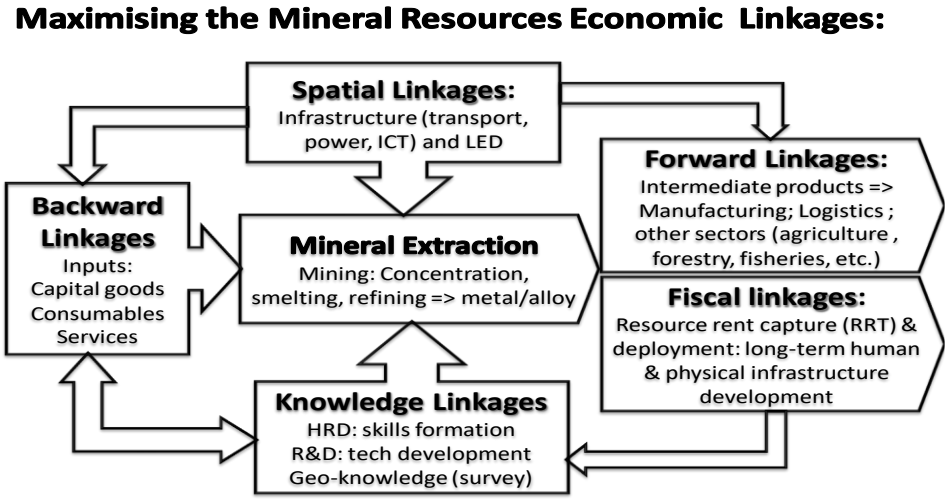
i Over the 1980s and 1990s, the focus in policy circles was on establishing enabling environments for investment to generate tax revenue and foreign currency.

ii In the 2000s, the emphasis was placed particularly on avoiding the "resource curse". As I have analyzed in this thesis, the "resource curse" theory was developed by studies that saw a negative correlation between resources and development.

iii More recently, greater emphasis has been placed on building linkages between the natural resource sector and other economic sectors to promote economic diversification and industrialisation.

The diagram below presents the types of linkages a mining project can establish.

**Figure 9: Establishing the seminal resource linkage**




*Source*: Jourdan (2012; 2013)

As per the above diagram, the literature on extractive industries conceives five types of linkages. These are five different but intertwined avenues through which an economy can be developed using coal extraction. At the centre of a mining project (such as the Tete coal mining projects) is the extraction of minerals. Prior to the implementation of the digging process, there is the first type of linkage, known as 'backward linkages".

Those linkages feed into the mining process by providing inputs in the form of capital goods (such as the equipment necessary for the digging, washing or storing of coal). In addition, inputs in terms of services are necessary to make possible the mining activity (such as food for the workers, transportation to and from the mine, housing, and cleaning services provided to the mining facilities).

Above the extraction of minerals in the diagram, we find 'spatial linkages', which represent the services needed for the transportation of coal, namely the infrastructure like roads or railways. Spatial linkages also include local economic development (LED) plans translated into local businesses providing goods and services to the mining companies.

Below the extraction of minerals, we have 'knowledge linkages'. Spatial and knowledge linkages take place in the course of the mining project. Forward and fiscal linkages are located at a later stage of the mining activity. They can only be established once the mining operations are being implemented.

The key point here is that the linkages framework conceives the activities with potential to benefit the broad economy as only the ones that go beyond the mining activity. In other words, only railroads that serve the broad economy can be considered a spatial linkage, and only training of general human resources (not just to serve the mining itself) can be considered a knowledge linkage, otherwise the result will be an enclave – the mining project only developing services for itself – and not a linkages-oriented economy.

## 6.2. Analysing the linkages established in Tete's coal projects

Establishing linkages within the economy is the most dynamic and effective way in which foreign direct investment (FDI), and mega-projects in particular, can contribute to the growth and transformation of the economy as a whole. As stated earlier, these contributions can take several forms: e.g., fiscal; generation of foreign currency; increase in available savings; input-output in the form of sub-contracts, partnerships, etc.; encouraging the emergence of new activities and industries; creation of new

technological capabilities; introduction of standards; training of the workforce; and dissemination of best production management and organization practices.

### 6.2.1. Backward linkages: a lost opportunity for Mozambican enterprises?

With the few exceptions of South Africa, Canada, Australia and India, resource-dependent countries have weak industrial bases to provide goods and services to the mining companies. The provision of such goods and services ends up being done through imports in most cases, until the mining project reaches its end. Mozambique is among those countries with weak capacity to provide goods and services to the mining companies. The reality found in Tete's coal mining is consistent with the aforementioned situation.

The two biggest mining companies in Tete, Vale/Vulcan and Rio Tinto/ICVL require goods and services of two categories. One category is of complex products and services such as heavy machinery to dig the coal, or car-trains to carry the coal from the mine site to the port. This complex category is usually fulfilled by multinationals with high specialization. Another category is less complex; it includes goods like uniforms and personal equipment for the miners, or services like transportation for the miners at least twice per day; meals for the miners. Initially Vale required 9 000 meals per day, then the number went down to 5 000. In the case of Rio Tinto/ICVL, during the implantation phase the company required 6 000 meals per day, then 3 200 meals. South African-based catering companies have provided all these. No Mozambican company was able to take advantage of this business opportunity.[32]

The mining companies always allege the lack of capacity of Mozambican providers as the reason to work with foreign companies. Without denying such allegations, my interviewees added corruption as another impediment. Two interviewees told me that coal companies deploy corrupt people in their procurement departments. Such people only register providers when they know beforehand that some bribe will be paid.

[32] Interviews and observation in Tete

On the other hand, there is the corrupt practice of registering the names of companies that do not exist in reality. The company only exists on paper. The owner is a powerful and influential politician who possesses a license, but does not operate in reality. When the mining company orders goods or services, that non-existent company goes to South Africa, purchases the goods and sells them to the mining company at a very high price. The price is high enough to compensate for the bribery of the procurement people.[33] This process is known as “indirect import” and is described in detail below.

***Indirect import of goods to the mining companies***

As far as the acquisition of inputs by suppliers is concerned, in general there is a high dependence on imports where local value addition is generally negligible (the extreme cases are the supply of personal protection equipment and imported agricultural inputs). In addition, in two interviews Rio Tinto/ICVL mentioned the fact that it has implemented a model for promoting backward linkages with national companies based on “indirect import”, in which the mining company facilitates contacts with companies that produce inputs and the national companies carry out the process of importing and delivering the product. This type of linkage makes it possible to increase the number of national suppliers and retain profits nationally, but it generates limited benefit locally in terms of either the jobs created or the development of internal production capacities.

The national companies analyzed in this thesis are all suppliers of goods and services of a non-complex nature, with around 80 per cent being considered complementary or supportive. Only two Mozambican companies (Tayana Moçambique and *Gondwana Empreendimentos)* operate in areas considered nuclear to the coal extraction activity. One of the companies has established a connection in the area of providing coal prospecting services, designing, and supervising civil construction works. This company has been in business for over 30 years and is present in all the country's provinces, with the Mozambican state as its biggest client. Unlike the others, this company is not a small and medium enterprise (SME).

[33] Interviews with providers of goods and services in Tete

In the table below, I present the list of enterprises that provide goods and services to the mining companies in Tete Province.

**Table 17: Goods and services providers to the coal industry in Tete**

| | Company | Country of origin | Business sector |
|---|---|---|---|
| 1 | Carpintaria Mama & Filhos | Mozambique | Carpentry |
| 2 | Sir Motors Lda | Mozambique | Transport and Logistics |
| 3 | Água Terra | Mozambique | Drilling Services |
| 4 | Aceagrários | Mozambique | Agricultural products |
| 5 | Atlas Copco | Sweden | Industrial (mining) Tooling and Equipment |
| 6 | Aurecon | Australia/South Africa | Engineering, Management, Design and Planning |
| 7 | Bell Equipment | South Africa | Parts and Machinery Provider |
| 8 | BMG (Bearing Man Group) | South Africa | Parts Provider (engineering components) |
| 9 | DRA Mineral Projects | South Africa | Mining Plants Design |
| 10 | Dynapac | German | Mining Equipment (parts and services) |
| 11 | Eqstra | South Africa | Mining Services and Equipment |
| 12 | Gondwana Empreendimentos e Consultorias Lda | Mozambique | Mining Consulting |
| 13 | John Deere | United States of America | Industrial machinery |
| 14 | Komatsu | Japan | Mining and Compact Construction Equipment |
| 15 | Minopex | South Africa | Operation and Maintenance of Mineral Processing Facilities |
| 16 | SRK Consulting | Canada | Mining Consulting |
| 17 | Stefanutti Stocks Mining Services | South Africa | Mining Engineering Services |
| 18 | Tayanna Moçambique | Mozambique | Excavation and Coal Extraction Works |
| 19 | WHBO | South Africa | Construction and Civil Engineering |

***Source:*** Own construction based on interviews

### *Constraints of establishing backward linkages in Tete's coalmines*

There are three constraints in establishing backward linkages. The first is that small and medium enterprises (SMEs) lack access to relevant information on business opportunities with coal mining companies. The second is uncertainty in the business cycle. The third is delays in payments.

Vale and Rio Tinto's contracting policy requires potential suppliers to first register on their internal databases, which allows them (among other things) to assess the level of fulfilment of the companies' requirements. In the case of Rio Tinto/ICVL, tenders of up to US$100 000 are limited to previous and potential suppliers already registered in the company's database, with the former having a comparative advantage. Tenders are only published in the national press when the contract exceeds US$100 000.

The main criteria for evaluating suppliers include the following aspects:

i health and safety at work policy (documented procedures for minimising accidents at work) and financial capacity (the supplier's ability to finance the supply without requiring advance payments);
ii technical capacity (the ability to supply goods and services under the stipulated conditions and within the agreed timeframe); and
iii compliance with the legal requirements of their activity (registration of activity, up-to-date permit or licence, among others).

Some suppliers argue that the availability of relevant information on business opportunities for SMEs is of no interest to national political elites, as they see the lack of transparency as a means of achieving personal benefits. The second constraint identified refers to the instability of the backward linkages that have materialised due to uncertainty about the continuity of the linkage. Due to the temporary or casual nature of some of the services provided (such as small building works, glass replacement, fumigation and all the social services mentioned above), the linkages established are sporadic, short-lived and have no clear prospects for renewal. However, some suppliers in permanent areas also face short-term contracts, without access to advance information about their extension or renewal, and there are cases of abrupt interruption of contracts.

The possibility of interrupting a connection with a mega-project like Vale or Rio Tinto is cause for alarm for supplier companies for several reasons. Firstly, foreign direct investment (FDI) mega-projects are the dominant dynamic, offering the main business opportunities in the national economy, which is reflected in relative financial strength of the companies. Secondly, some production linkages transform the structure of companies, orienting them towards the market for large projects due to the need to comply with increased demands in terms of quality, health and safety at work, among other things, which can only be recovered by guaranteeing the continuity of the link. Finally, these connections bring with them other types of benefits, such as improved working conditions and partnerships, which are discontinued with the end of the connection.

The final constraint relates to late payment for services rendered. Several suppliers mention situations of prolonged payment delays of up to six months. This is a serious problem for suppliers because, as an SME, these delays negatively affect the company's cash flow. In a context of difficulties in obtaining bank loans at bearable interest rates, delayed payments create constraints on paying salaries to the company’s workers and making reinvestments.

### 6.2.2. Spatial linkages: making Tete an enclave

Spatial linkages comprise sidestream infrastructure – collateral use of mineral infrastructure and local economic development (LED). Resource infrastructure generally relies on state assets (servitudes) or rights (licenses) and consequently constitutes a potential lever for encouraging the resource and the infrastructure concessionaires to optimize the local mineral and infrastructure linkages.

The high-rent resources infrastructure (mainly minerals) could be used to open up other lower rent resource potential (such as agriculture, forestry and tourism), as per the spatial development initiatives (SDI) methodology, in order to access zones of economic potential with lower returns that cannot afford their own requisite infrastructure.

All resource concessions must include third party access at non-discriminatory user-tariffs to all the resources infrastructure (transport, power, water and telecommunications), in order to catalyze the higher development impact resource infrastructure 'hitch-hikers' (such as agriculture), which in general have a much higher socio-economic propulsive impact (Jourdan, 2013).

Because of their geographical location, Tete coal has two main gateways to reach the ports and from there be exported to international markets. One is the Nacala Corridor, where a railway runs from the mining village of Moatize, via the neighbouring country Malawi, to the Nacala port. A second gateway is the Beira Corridor, with its Sena railway (*Linha de Sena*) from Moatize to the port of Beira.

#### 6.2.2.1 The Nacala Integrated Logistics Corridor

The Nacala Corridor, part of the bigger Integrated Logistics Corridor, is one of the most important axes in the configuration of the Mozambican economy and its connection with the neighbouring countries of Malawi and Zambia. Its geostrategic importance derives from the deep-water port, the railway line linking the port to those two countries and, more recently, the railway line designed to transport the coal mined in Moatize.

The vastness and wealth of economic interests means that the Nacala Corridor receives large amounts of foreign direct investment (FDI), particularly in the areas of agribusiness, logistics and governance through civil society organisations. Countries such as the Netherlands and Norway stand out in the Nacala Corridor with funding for CSOs working in the area of land tenure and management. Brazil and Japan have been the main investors in logistics, through Vale. However, as stated in this thesis, Vale left Mozambique in January 2022. Furthermore, multi-lateral entities such as the World Bank and the United Kingdom have interests along the Corridor through agribusiness projects with the private sector and land tenure security for local communities.

While on the one hand the FDI present in the Nacala Corridor is part of the extractivist agenda that links the Moatize coal mines to the Nacala port, on the other hand, there

is the creation of business ventures in the agro-industrial sector, in addition to the logistics business.

The Nacala Integrated Logistics Corridor (CLIN) in northern Mozambique is a development consisting of a 912 km railway line that runs from the coal mine in Moatize, in the central province of Tete, and ends at the Nacala-a-Velha port terminal.
The Nacala railway was re-inaugurated on 12 May 2017. The rail-line is a 200km section of railway that crosses the neighbouring Republic of Malawi, a small country stuck in the "armpit of Mozambique", between the central provinces of Tete and Zambézia and the northern Mozambican province of Niassa.

The fact that the infrastructure passes through neighbouring Malawi, combined with the history of political and diplomatic tension that has surrounded the relationship between the two countries since Mozambique's pre-independence period, means that the viability of CLIN to transport coal from Moatize to Nacala will always depend on good relations between the two countries. This is a geopolitical challenge that will accompany the Moatize-Nacala railway throughout its useful life, as long as it continues to pass through Malawi.

With the rehabilitation and extension of the Moatize-Nacala railway, the project operators, especially Vale S.A., have argued that it will help Malawi reduce the costs of its goods by using rail instead of road. However, Malawi's preference has always been to use the port of Beira rather than Nacala, which is five times further away and therefore represents a much more expensive option for its exports and imports.

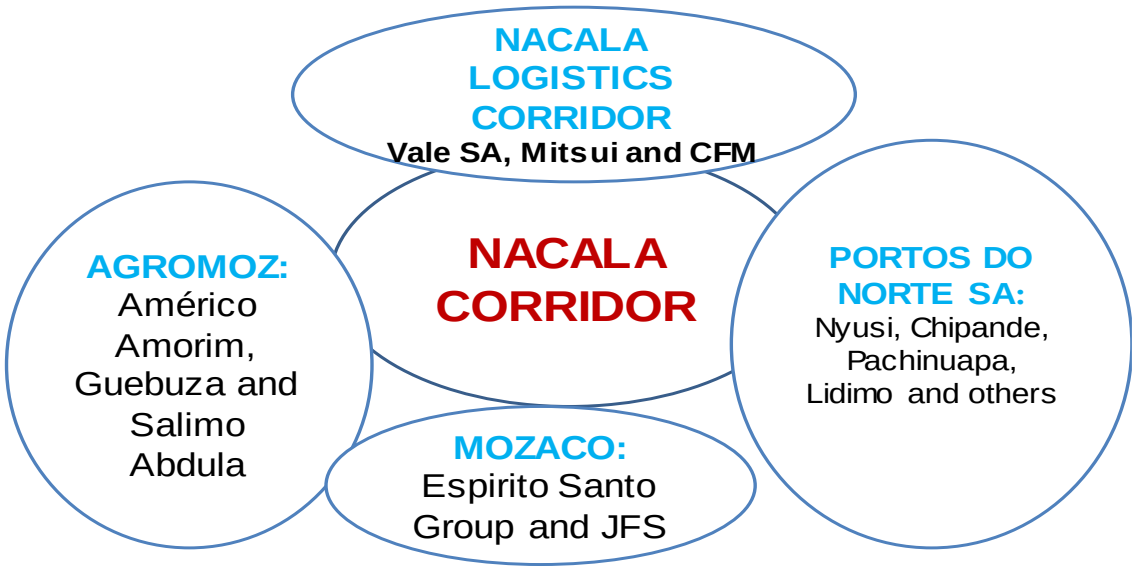
Started in 2012, with a total investment of around US$4.5 billion, the consortium was initially made up of Vale S.A. and the Mozambican public company *Portos e Caminhos de Ferro* (CFM), with a third shareholder since March 2017 (the Japanese conglomerate MITSUI). This is a project financed by Vale with the aim of making the investment profitable through the growth of mining production and the use of the infrastructure by other mineral operators in the region. According to data obtained in interviews with businesspeople in Nampula and Nacala, the cost of logistics is considered to be very high, a situation that Vale justified with the investment in

rehabilitating the railway line, port systems and compensation to affected communities along the line.

MITSUI's entry into the Nacala Corridor, via Vale, was part of a wider strategy by the Japanese government to penetrate and establish itself in the southern African region through Mozambique. MITSUI is also present in the gas sector in the northern province of Cabo Delgado. In addition to its shareholding in Vale, Japan (through its international cooperation agency, JICA) had a partnership with the Mozambican government, which includes a project at the Nacala general cargo port.

The configuration of the Nacala Logistics, which includes the Nacala Corridor, shows the intricate business interests around the coal industry, beyond the visible mining activities of VALE/Vulcan and Rio Tinto/ICVL. The diagram below shows the complex relationships and interests in the Nacala Corridor.

**Figure 10: Business interests in the Nacala Corridor**




**Source:** Own construction based on various sources

***Portos do Norte SA: Nyusi, Chipande, Pachinuapa, Lidimo and others***

*Portos do Norte* is a public limited company run by Mozambican businessman Fernando Couto, who is associated with two strong allies of President Filipe Nyusi, Alberto Chipande and Raimundo Pachinuapa (through the Cabo Delgado Consortium), both from the Makonde ethnic group to which President Filipe Nyusi belongs.

Other important Frelimo figures include Abdul Magid Osman (a former Minister of Planning and Finance), and José Mateus Kathupa (a former Minister of Culture and currently a member of parliament for the Frelimo bench, where he also serves as spokesperson for the Standing Committee). Several local interests centred in Nampula are also reported, including Major General Frazão Chale (former commander of the Higher Institute of Defence Studies, ISEDEF), who is close to Chipande) and General Lagos Lidimo (former director of the State Information and Security Services, SISE), with whom he is a partner in the company *Olima Investimentos*. The President of Mozambique himself, Filipe Nyusi, is cited as having indirect interests in the Nacala Corridor, through the company SOMOESTIVA.[34]

***AgroMoz: Américo Amorim, Armando Guebuza and Salimo Abdula***

Established in 2012, AgroMoz is an agro-industrial company that holds a DUAT for an area of 9 000 hectares in Lioma, Gurué. It is made up of Américo Amorim (sometimes considered the richest person in Portugal, who has since passed away), the former President of Mozambique, Armando Guebuza, and his partner Salimo Abdula (UNAC-GRAIN, 2015). AgroMoz is in fact part of AGS Moçambique, S.A., a Mozambican company owned by two Portuguese subsidiaries of the Amorim Group (Solfim SGPS and Sotomar – *Empreendimentos Industriais e Imobiliários*, S.A.) and *ESF Participações*, a subsidiary of *ESF Investimentos*, controlled by Intelec and SF Holdings, both chaired by Guebuza's main business partner, Salimo Abdula.

[34] Interviews in Tete and Maputo

***Mozaco Company***

Mozambique Agriculture Corporation (Mozaco) is a company created in 2013 through a partnership between the Espírito Santo Group's investment company (Rioforte) and the Mozambican group João Ferreira dos Santos (JFS), and is one of the companies that make up the G8's New Alliance for Food Security. Rioforte is based in Luxembourg and was created in 2009 as a vehicle for the non-financial assets of the Espírito Santo Group (BES).

Along with the *Portos do Norte* Company, all the investments made in the Nacala Corridor serve to consolidate the extroverted pattern of the Mozambican economy; these ventures serve more the outside interests than the inside ones. In other words, the spatial linkages created by the Tete coal mines through the Nacala port are not beneficial to the Mozambican economy as a whole, but rather to a tiny group of local elites.

This pattern ends up appearing as a national development strategy, although it is not set out in any official document. As Joseph Hanlon and Teresa Smart put it: "Instead of a development strategy, Mozambique has a series of beliefs and assumptions. The one at the centre of them all is that if Mozambique creates human capital (health and education) and infrastructure (roads and electricity), foreign investors will fly in and a dynamic domestic business class will emerge. Linked to this is an assumption that implies shifting the burden and responsibility of government onto the poorest. Instead of state marketing organisations and national grain warehouses, peasants must now store their harvest and bear the risks of the market and the weather. Many more people are likely to be living off self-employment and the 'informal sector', rather than jobs in the formal sector" (Hanlon, Forthcoming).

This pattern of development is supported by the alliance between the state and big national and foreign capital. As Marx said, the state functions like a committee where the bourgeoisie does its business. Mozambique is a good example of what happens in a system of clientelist, neo-patrimonial and sometimes rentier governance.

#### 6.2.2.2 Beira Development Corridor

The Beira Development Corridor (BDC) is made up of the Port of Beira, the railway lines from Beira to Moatize (Sena Line) and from Beira to Machipanda, as well as the roads from Beira to Zobué via Tete, and from Beira to Machipanda.

The Beira Development Corridor is a geographical region defined by the two axes constituted by National Road No. 6 (Beira-Machipanda), the Beira-Dondo-Machipanda Railway (main axis), which connects the port of Beira to Zimbabwe, as well as the axis constituted by the Sena Line on the Beira-Dondo-Moatize route. Currently, goods transported overland to and from the Port of Beira contribute around 95 per cent of freight traffic to the Beira Development Corridor. Zimbabwe, Zambia, Botswana, Malawi and Democratic Republic of Congo (DRC) are the traditional users of the Port of Beira.

***Main players in the Beira Development Corridor***

Data provided by the Port of Beira indicates that the ten service providers together employ 4 115 workers, with RGB and Xigolo individually responsible for 34 and 27 per cent of the total workforce respectively.

During the concession period for the port of Beira and driven by the major investments implemented by Cornelder Mozambique logistics, depot and dispatch companies also sprang up. Overall, these companies have 56 multi-purpose warehouses with a storage capacity of around 600 000 metric tonnes. The warehouses cover an area of around 262 000 square metres and employ around 2 000 permanent workers and 1 500 seasonal workers.

***Carlos Mesquita: the King of the Beira Corridor***

Businessperson Carlos Mesquita, the current Minister of Public Works and former minister of other portfolios from 2015 to 2019 (e. g, Industry and Trade) is the most influential of all Mozambican businessmen with interests in the Beira Development Corridor (CDB).

Long before being invited into President Filipe Nyusi's government in January 2015, Carlos Mesquita, a figure with a well-known profile and experience in the railway-port sector, was director of the Port of Beira. Filipe Nyusi is also a railwayman, having been

managing director of *Caminhos de Ferro de Moçambique* before being appointed Minister of Defence in the Armando Guebuza administration on 27 March 2008.

Carlos Mesquita takes over the management of *Cornelder de Moçambique SARL*, a partnership between the Dutch company Cornelder B.V. and *Caminhos-de-Ferro de Moçambique* (CFM), which was awarded the concession to manage the rail-port infrastructure and operate the container and general cargo terminals at the Port of Beira in October 1998.

According to a survey carried out by the Centre for Public Integrity, Valentina Guebuza (who died on 14 December 2016) was a partner in Beira Grain Terminal, SA, along with CFM, *Nectar Moçambique*, Sonipal, Seaboard, Rainbow International, FZCO CFI holding and Merec Industries. With a capital of 2 600 thousand meticais, Beira Grain Terminal (founded in 2007) has as its corporate object the operation of a grain terminal in the port of Beira.

With various economic interests in the Beira Development Corridor region, Carlos Mesquita started out in the private sector in 1996, in a company called Danimo (S.S. Danish-Mozambique Service System Limitada) with his brothers Adelino and Joaquim Manuel Fortes Mesquita.

In 1997, Carlos Mesquita set up *Sociedade de Consultoria, Serviços e Representação, Limitada* (CONSER) in Beira, with his brothers, Joaquim and Paulo Jorge, and Risto Martti Kontturi (a Finnish citizen). Later, in 2002, the company was extended to another citizen identified by the name of Seppo Antero Yliraisanen and to José Kataoo de Nascimento Amaral.

In March 1998, Carlos Mesquita, in partnership with his brothers Joaquim, Adelino, Paulo Jorge, Leonel and Finnish citizen Risto Martti Kontturi set up *Transportes Carlos Mesquita Limitada*, known as TCM. This cargo, passenger and tourist transport company also operates in the Beira Development Corridor in the area of transport. At the end of 2018, the company had a fleet of more than 200 lorries.

The Mesquita Group also provides services in the port of Beira through Sermoz, a company registered in 2018 in Beira, with a capital of 6 250 thousand meticais. In Sermoz, the Mesquita Group participates with Mespar Limitada.

Another national land transport giant operates on the Beira Corridor, linking the Port of Beira and Zimbabwe: Lalgy, which is more influential on the Maputo Corridor than on the Beira Corridor. Among other routes, Lalgy transports chromium iron from neighbouring South Africa to the port of Maputo.

***Vandúzi Company***

Alongside other companies, one of the companies that is dynamising and reconfiguring the economic dynamic in the region is the Vandúzi company, an agro-industrial unit based in Manica province. It produces and exports baby corn, chillies, broccoli, soya beans and green beans. A man known as Nuno Miguel Pereira currently owns Vanduzi. It produces and exports 35 tonnes of vegetables a week to the UK and South Africa, including to the mining sites of Tete.

Founded in 2004, *Companhia de Vandúzi* exploits an area of 1 353 hectares, out of a potential 2 450. It is one of the few companies in Mozambique that operates all year round. It uses its own financing, a departure from the logic of agricultural financing in a country dominated by external and state support.

***Fruti Manica***

Set up in 2010 in Chimoio, Fruti Manica operates in the production, processing, industrialisation and marketing of agricultural products.

**Table 18: List of business interests in the Beira Development Corridor**

| Companies with operational interests in Beira Corridor | Owners, shareholders and description of activities |
|---|---|
| 1- **Cornelder de Moçambique** | Manager of the Port of Beira, the heart of the Beira Corridor. Cornelder Corporation Mozambique B.V. (a company incorporated in the Netherlands) with a 67% stake and CFM with 33% |
| **2-Beira Grain Terminal** | Company owned by Valentina Guebuza, daughter of President Armando Guebuza who governed Mozambique from 2004 to 2014. Valentina passed away on December 14, 2016 during a marital fight with her husband. She was partner with Cornelder de Moçambique (15%), CFM (15%), Nectar Moçambique (12.5%), and Seaboard Moz, Limited (55%)<br>It operates at the cereal terminal in the Port of Beira. It was founded in 2007. |
| **3- TCM-Transportes Carlos Mesquita** | Company of the Mesquita Group. It operates on the Porto da Beira-Zimbabwe section. The shareholders are: Carlos Alberto Fortes Mesquita (Minister of Transport and Communications), together with Joaquim Manuel Fortes Mesquita<br>Paulo Jorge Fortes, Adelino de Jesus Fortes Mesquita (Railway worker and former administrator of Cornelder Mozambique who died in an accident)<br>Celso Alexandre Fortes Mesquita<br>Célia Maria do Rosário Fortes Mesquita<br>José Kataoo de Nascimento Amaral and Leonel de Jesus Fortes Mesquita |
| **4-Danmo** | Stevedoring company, owned by Grupo Mesquita (50%), the family company of the current Minister of Transport and Communications, Carlos Mesquita. The remaining 50% is held by Mespar, which is also a family company owned by Carlos Alberto Fortes Mesquita (Minister of Transport and Communications), together with Natércia Maria Ismael Ornelas Fortes Mesquita<br>Joaquim Manuel Fortes Mesquita<br>Paulo Jorge Fortes<br>Celso Alexandre Fortes Mesquita<br>Célia Maria do Rosário Fortes Mesquita<br>José Katao de Nascimento Amaral. |

| Companies with operational interests in Beira Corridor | Owners, shareholders and description of activities |
|---|---|
| **5-Beira Logistic Terminals** | Currently it is participated by Lift Haullers and Lift Logistics holdco. Some years ago it was owned by Asset Management Internacional LLC and Ingenious Quality Investments LLC |
| **6- Índico Logistic** | Danmo Services Sytems Limitada, Grupo Carlos Mesquita e Mespar, Limitada. |
| **7-Bridge Shipping, Lda** | Participated by C Steinweg Bridge (PTY), Limited and Júpiter Container Property (PTY) |
| **8-Bussness Logistic & Services, Lda** | Participada pela Lift Haullers e Lift Logistics holdco |
| **9- Mozambique Logistic Park, Limitada** | Partners: Grupo Mesquita and Mespar.<br>It operates road, rail and multimodal cargo terminals of a national and international nature in transit, the operation of dry ports, commonly known as dry-ports, the operation of customs transit warehouses, the supply, on a rental basis, of equipment for the transport and cargo handling industry. |
| **10-CWT Moçambique** | Company involved in Intermodal Cargo Terminal operations and Logistics Services, in Mozambique. He also carries out activities as a dispatch and transit agent;<br>Cargo and ship agent;<br>Import, export and general trade;<br>Customs Warehouse and others;<br>Road freight transport. It is owned by CWT Europe B.V and Sermoz - Owned by Grupo Mesquita with 60%) |
| **11- DSV** | DSV Air and Sea Holding |
| **12- ETC-Adubos** | Maheshkumar Raojibhai Patel, ETC Group, ETG Inputs Holfco, Limited, Agro Industries, Limitada |
| **13- Global Marine Services, Lda** | Participated by Bercêncio Lourenço Vilanculo Júnior, Jefferson de Cândida Bercêncio Lourenço Vilanculo, Emerson Lourenço Vilanculo, Bercêncio Lourenço Vilanculo<br>The company is involved in all activities related to the provision of services in the area of transportation of liquid or gaseous cargo, dry, sea, air or land. Complete logistics services, ship agency, freight agency, auxiliary stevedoring services, freight charter, freight forwarding agent, supervised expertise, customs clearance, storage, distribution and other services that may be required by customers from time to time, as well as stevedoring services. |
| **14-Independente Beira Logistc Terminais** | Company whose activity is the development and management of terminal, logistics and services activities;<br>Transport and Logistics and Storage and conservation. It is participated by Beira Logistics Terminal, Limitada and JJ Transportes, Limitada. |

| Companies with operational interests in Beira Corridor | Owners, shareholders and description of activities |
|---|---|
| **15 - Mediterranean Shipping Company** | Agency company for ships, air, sea, rail and road cargo, freight procurement, cargo chartering; transit activity and storage, dispatch and cargo checking; provision of auxiliary stevedoring services; international maritime transport, national cabotage and local traffic; management and operation of areas for handling, storage and repair of containers in international or national transit. Participated by Mediterranean Shipping Company (PTY), Limited;<br>Medite Marine Services (PTY), Limited |
| **16- NewSpeed international, Lda** | Transport and logistics company, civil construction, public works, private works, industry, tourism, general trade with import and export, mining activities and their processing, provision of services, real estate, sales of vehicles and their accessories. Two Chinese citizens, namely Hui Sun (80%) and Xiangle Mo (20%), own it. It has a capital of 500 thousand meticais. |
| **17- Olam Moçambique** | It has been operating in Mozambique since 1999. Olam Internacional, based in Singapore, controls it. It is one of the largest agribusiness companies in the world, with a presence in 70 countries. Promotes the production and distribution of agricultural products in Mozambique. Along the Corridor (Beira) there is a cooking oil refinery. It also has a cotton ginning unit in Beira. |
| **18- Sermoz** | Grupo Mesquita (60%) and Mespar, Limitada (40%). It operates in the area of consultancy, service provision, equipment rental and general trade. |
| **19- Substantia International Trading** | Agency and marketing of goods and services owned by Samir Thakran and Nelesh Aswin Goradia |
| **20-Transcom Sharaf** | Its main objective is the storage and logistics of goods. Guy Harvey and Kapil Celly are arrested. Brae Breeze Hoding Limitada is the institutional partner. |
| **21- Chele** | Participated by the Chele family (António, Vitória and Francisco) |
| **22- Mesquita Group** | Mesquita Family Holding |
| **23- Lalgy Transports** | Lalgy family company. (Najibuniça Cassamo Ismael Lalgy)<br>Luís Junaide Ismael Lalgy<br>Elio Ibrahimo Ismael Lalgy<br>Rui Iasser Ismael Lalgy<br>Anselmo Aly Lalgy<br>Zaina Ismael Lalgy<br>Sheila Aly Lalgy) |

| Companies with operational interests in Beira Corridor | Owners, shareholders and description of activities |
|---|---|
| | With a capital of around 11 billion meticais, it is involved in mixed transport, comprising the transport of cargo, passengers and tourism via national and foreign routes. The Lalgy family is also involved in various sectors of activity, such as construction, investment in football, food products and has supported the Frelimo party in electoral campaigns. |
| **24- Vanduzi Company** | Nuno Miguel Perreira Cabeçadas (Portuguese nationality) and Mozfoods, SA |
| **25- FrutiManica** | Agriza Messinza-50% (Malcom Guy Wiggins-Zimbabwean) and Golden Fruit, Limited 50% (David Florester Smithe-Zimbabwean) |
| **26- Agribusiness Company** | Small farmers control 45% and the remaining 55% are owned by AgeDevCo, a non-profit organization registered in the UK |
| **27- Mozambique Honey Company** | Africa Agricultural Development Company Mozambique, Limitada;<br>(Andrew Charles Kingman-British and<br>Miracle Orhl Fabião Nuvunga-Mozambican)<br>Foundation or Association of Beekeepers of Manica;<br>V and M Grain, Limited. It is a company based in Manica, whose objective is to carry out the activities of purchasing, processing, packaging and selling honey, wax, and other forestry products and also the general provision of ancillary, complementary or similar services to agriculture, specifically beekeeping: |
| **28- Portucel** | Involved in agricultural and forestry activities for the production of cellulose, paper and energy pulps and their derivatives and the like. Portucel Moçambique is controlled by the Portuguese The Navigator Company (formerly the Portucel Soporcel group) and is the company that operates the largest eucalyptus planted area in Mozambique. |
| **30- RGB** | Participated by the citizen Francisco Sabia Massuanganhe and by RGB Services and Investments Mozambique, Limited. |

Source: Own construction based on various editions of the Government Gazette (*Boletins da República*)

A look at international experience on how spatial linkages are established teaches us that, in theory, Mozambique has adopted correct models, with potential to transform the country's economic dynamics. However, there is much more effort needed in order to ensure that infrastructure borne at the cost of a mining project can be beneficial to the wider economic spectrum. The table below presents some examples of how other countries have managed their spatial linkages.

**Table 19: International experience on spatial linkages**

| Country | Spatial development (Rail/road, Ports, Power & ICT, Water, LED) |
|---|---|
| Finland | The transport, power, water & Information and Communications Technology (ICT) infrastructure is excellent and was established by the state over the last 50y, with minerals providing important extensions to the grid.<br>Generally run by state-owned enterprises (SOEs), though there have been some privatizations. Most infrastructure is open access. Local economic development (LED) & Corporate social responsibility (CSR) are strong mainly due to the "welfare" state of the country. |
| Sweden | The transport, power, water & ICT infrastructure is excellent and was established by the state over the last century. From 1939-1948 most of the private railway companies were nationalized. Today, several private operators have access to the national railway. Infrastructure is generally run by SOEs, though there have been some privatizations.<br>LED & corporate social responsibility (CSR) are strong mainly due to the "welfare" state of the country. |
| Norway | The state Norwegian National Rail Administration (Norwegian: *Jernbaneverket*)<br>Several private operators have agreements to access the national railway. The transport, power, water & ICT infrastructure is responsible for the Norwegian railway network. |
| Chile | Poor infrastructure development in some mining areas because of desert and low population but in other areas significant development in terms of housing, ports, and electricity. Severe electricity constraint, rising tariffs affecting the mining industry. |
| Venezuela | Each mining company is required to pay a percentage of its revenue towards education, health and other social issues relating to the community. Good power generation (HEP) |

| Country | Spatial development (Rail/road, Ports, Power & ICT, Water, LED) |
|---|---|
| Brazil | The transport, power, water & ICT infrastructure is patchy but minerals are opening up several isolated areas (thanks to Asian boom prices) and are providing important extensions to thegrid. Generally run by SOEs, though there have been some privatizations.<br>Most infrastructure is open access, but some ore corridors are closed.<br>LED & CSR were poor, but are now reported to have improved with the Workers Party and President Lula in power again. |
| Australia | Development of infrastructure often left to the private sector including rail & electricity. For example, Rio Tinto and BHP Billiton have created their own rail, power and water supplies. Regional Infrastructure Fund planned out of revenues derived from the RRT, especially for indigenous communities. 60% of mines are co-located with indigenous communities. Substantial involvement by private companies in terms of employment, training, and community development – companies often take responsible for producing 'public goods' such as education. |
| Botswana | The transport, power, water & ICT infrastructure is good (population concentrated alongeastern border of Kalahari desert). Rail established by minerals (Zimbabwe-BSAC).<br>Transport (road & rail) & Energy state (SOEs). Landlocked – no ports. Access via SA & Namibia. Energy shortages due to SA power crisis. Desert – major water constraint formining. LED & CSR are moderate. |
| Zambia | Some infrastructure development in Copperbelt. Rail connections to coast established byminerals (Benguela line, Tazara line & Victoria Falls line). Major electricity development for<br>mining industry. Nevertheless, most support comes from the government. |
| China | Infrastructure support comes essentially from the government although there are public private partnerships (PPP) models. Rich mineral resources are believed to contribute to the significant inter-provincial forward linkages and intra-provincial backward linkages of raw material sectors observed in some central and western provinces like Shanxi, Henan and Sichuan. |
| Malaysia | Malaysia has excellent infrastructure across the entire country. It has five major development corridors traversing the country. Government involvement has been key to the entire development of the infrastructure network. |

Adapted and updated from (Jourdan, 2012)

The examples presented in the table above show that spatial linkages are directly linked to the country's stage of development. More advanced economies like Finland, Sweden, Norway, Malaysia and Australia possess good infrastructure network beyond the mining complex. On the other hand, developing economies like Zambia and Botswana are still in the process of establishing proper spatial linkages and efficient infrastructure networks. Emerging giant economies like Brazil and China present a mixed picture of good infrastructure networks in the most developed cities and still poor infrastructure in the rural areas.

In sum, the analysis here tells us that there is no "one size fits all" model when it comes to the development of spatial linkages. The most important factor is for each country to find its own appropriate way of development, based on its socio-political conditions. This is where Mozambican economy is failing. The focus on the two corridors I have discussed earlier – Nacala and Beira corridors, the two gateways of Tete's coal mines – is not consistent with the need for a broader development of roads and railways in the country, beyond the mineral complex. Those two corridors serve more to consolidate the enclave nature of Tete's coal mines than to generate wider developmental gains for the national economy.

### 6.2.3. Knowledge linkages

Knowledge linkages comprise human resources development (HRD), research and development, in other words, skills, and technology development (A. Hirschman, 1977); (Jourdan et al., 2012).

Multinational companies operating in developing countries struggle to find high-qualified local labour to serve them, simply because the local economy does not produce and provide such expertise, neither for mining industry nor for the rest of the economy. Under these circumstances, the mining companies find themselves in a position of importing labour from the developed world and only hiring cheap and unqualified local labour for the elementary jobs – cleaning, security guards or cooking.

Given the heavy criticism the mining companies receive, they develop training centres, which in theory are aimed to uplift local people's expertise and allow them to access better jobs in the mining industry. This is what both Rio Tinto/ICVL and Vale/Vulcan did in Tete.

***Two training centres offering the same courses***

Rio Tinto opened a training centre in Tete in 2012. The centre still exists and was inherited by Rio Tinto's successor ICVL. In ten years of operations, from 2012 to 2022, the centre is reported to have trained around 10 000 people – mostly in short term courses of four to six weeks in areas like mechanics, electricity, and plumbing. According to ICVL,[35] the majority of beneficiaries have been locksmiths, masons and carpenters. The trainees are expected to get jobs not only in the mining sector but also in the local market.

Two years after Rio Tinto opened its training centre in 2014, Vale also opened its own training centre with a slightly different designation: Vale's Professional Centre. The two centres offer the same courses as mentioned above. Both recruit primarily young people from Moatize, Benga and Tete, although people from other provinces who reside in Tete can also attend the courses.

Vale's statistics passed on to Vulcan indicate that the centre trained around 8 000 people from 2014 to 2021[36]. In 2023, Vulcan expects to train around 1 000 people in Moatize for the broad labour market, not only for the mining companies. According to my interviewee, Vale's strategy consisted more in sending trainees to Brazil. However, the ones that were sent to Brazil were only those meant to work for the mining company. Others were offered the training courses available at the centre in Moatize. From 2014 to 2021, 72 Mozambicans were sent to Brazil. At the time of writing this thesis, Vulcan in Tete (the successor of Vale) had less than 40 Mozambicans working in the mine.

In addition to training Mozambicans in Moatize, both Rio Tinto/ICVL and Vale/Vulcan implement partnership programmes with Mozambican universities. The partnerships consist in universities setting up degrees in areas that are of more

[35] Interview with ICVL in Tete
[36] Interview with Vulcan in Tete

interest to the mining companies. Those areas include geology, geological mapping, electrical engineering and industrial mechanics.

Not surprisingly, none of the partnerships –between universities and mining companies see environmental related courses as being of any relevance to the extractive industry-led economy that Mozambique has become. As a result, there is no incentive for environmental courses, because it is assumed that environment-related courses would be a cooking point of future critics of the coalmining practices. Table 20 below illustrates the names of teaching institutions and the courses they started in response to the mining companies' skilled labour demand.

**Table 20: Teaching institutions and the new courses started to respond to mining companies' skilled labour demand**

| TEACHING INSTITUTION | COURSE NAME | PLACE AND YEAR OF START | NUMBER OF GRADUATES UNTIL 2023 |
|---|---|---|---|
| Tete Higher Polytechnic Institute *(Instituto Superior Politecnico de Tete)* | Geology; engineering - Mining engineering | Tete, 2013 | 93 |
| Catholic University of Mozambique (UCM) | Mineralogy with specialisation in i) mineral processing engineering ii) geology engineering iii)mining engineering | Tete, 2013 | 125 |
| Eduardo Mondlane University (UEM) | Geological mapping and research -Applied geology | Maputo, 2014 | 35 |
| Higher Institute of Technology and Management (*Instituto Superior de Tecnologias e Gestão, ISTEG)* | Mining geology | Maputo, 2013 | 47 |
| Higher Institute of Science and Technology of Mozambique (*Instituto Superior de Ciências e Tecnologia de Moçambique, ISCTEM*) | Oil and gas management - Oil and gas law | Maputo, 2013 | 23 |
| **TOTAL** | | | **323** |

***Source:*** Own construction based on interviews and universities' websites

The numbers I have found on how many people have been trained by the two coalmining companies need to be read with caution. The two training centres of ICVL and Vulcan mention thousands (18 000 in total) and the five universities report having graduated 323 students in courses related to the extractive industry. These numbers can give an impression that human resource development is effectively one of the main achievements of the mining companies. Such an impression is misleading from the moment one starts to interrogate the numbers. Firstly, how many people was it possible to train in the two training centres, instead of the 18 000 in the decade? This is a question none of the companies wanted to respond to.

Rio Tinto and Vale did not want to respond because they were still to do the statistic. A year later, Vulcan and ICVL did not want to respond because they were still gathering the data from their predecessors.[37]

The point here is that training 18 000 youngsters in about ten years, mostly with short-courses of four-six weeks provides no real capacity of employability. Neither the mining companies nor the other the businesses are willing to employ leaners who have had one-month training as an electrician. That is simply unrealistic.

On the other hand, looking at the universities' graduates, we find that the 323 have resulted from about ten years. In fact, most courses take three to five years, which is not a problem. The problem here is that mining projects do not wait for people being trained in order to operate. As I have stated it earlier, mining companies import labour from anywhere.

Furthermore, given the mining cycle, once a coalmine is started (as was the case in 2011 with Vale and in 2012 with Rio Tinto) the progress of its implementation results in the need for more qualified labour. The initial stages of a mine consist of basic works such as the cleaning of the site and the resettlement of the people, which includes building houses, negotiating with the affected people and so on. These

[37] Interviews in Tete in 2021 and 2022

activities usually require more labour than the digging activity itself. Once the digging starts, there is always more machinery than people.[38]

For the above reasons, the knowledge linkage created by the two mining companies is counterproductive and not beneficial to the local economy. The government should have taken the lead in developing knowledge linkages looking at the broad economic needs of the country. No mining companies exist to occupy themselves with training of people. If the hosting economy does not offer the required labour, any mining company will go around and recruit from wherever there is qualified personnel.

### 6.2.4. Forward linkages

Forward linkages are those consisting of downstream value addition (mineral beneficiation). Enforcing mineral beneficiation or moving up the value chain of commodities exploitation can deliver benefits for income, but it requires competitive processing industries and access to marketing and distribution networks (UNECA & African Union, 2011; UNECA, 2013).

Initial studies of viability of the Tete's coal mines (Callaghan, 2011) (Coughlin et al., 2013) mentioned the possibility of part of the coal being processed locally in Tete. Some of the coal would be used for energy generation in two distinct sites: one was Benga, using the coal from Rio Tinto/ICVL mines, and another in Moatize, using the coal from Vale/Vulcan.

In 2013, a third company (Ncondezi Energy) announced a plan to build a 300 MW coal-fired power plant, according to media reports. However, until 2023, none of the projects on coal-fired power centre has been developed, leading to the conclusion that, in fact, Tete's coal mines have been developed with the sole objective of exporting all of the coking coal. The lack of usage of Tete's coal locally underlines

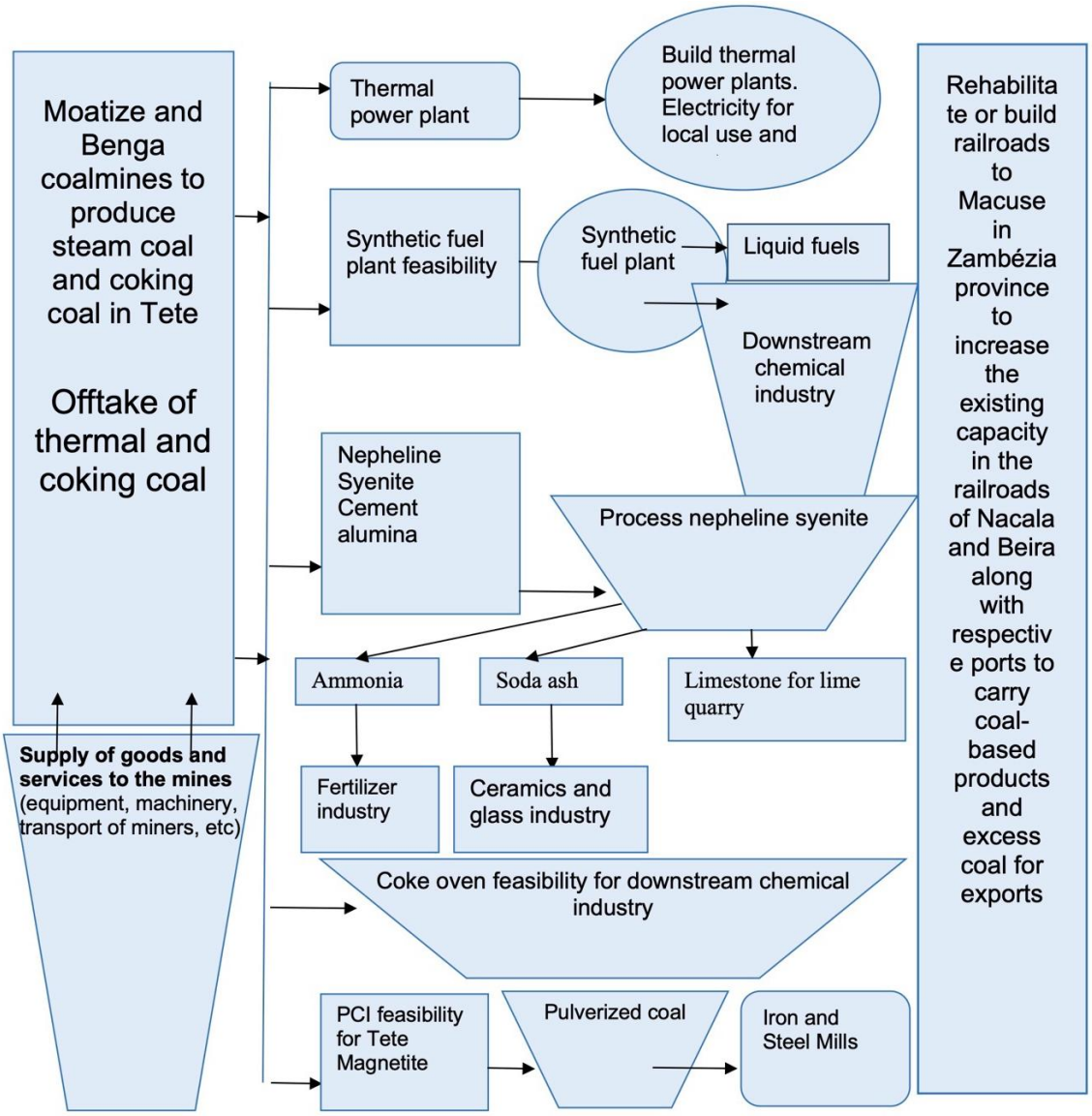
[38] From observation in Tete coalmines

the characteristic of Tete as an enclave, showing development of the extractive projects without establishing any links with the local economy.

As previously documented (Monjane, 2019) and confirmed in interviews for this thesis, ICVL issued a tender for a company to build and operate a 200MW coal-fired power plant at its mine in Tete. However, the future of this bid is uncertain, as *Electricidade de Moçambique (EDM)* – Mozambique's parastatal electricity company –cannot guarantee that it will be able to purchase the power output. In the same vein, two othercoal-mining companies, Jindal and Ncondezi, are planning to build coal-fired power plants attheir mines.

In summary, coal has been extracted from Tete mines for more than ten years and none of it is being utilised locally, neither for power generation nor for other uses such as fertilizer, diesel or lime production. This situation is happening despite the existence of viability studies demonstrating the huge potential coal has to play in transforming a local economy. The below diagram summarises such studies.

**Figure 11: Tete's coal potential linkages**




*Source:* Adapted from (Callaghan, C., 2011)

The above diagram shows the immense possibilities of creating linkages from the Tete coal. Ranging from coal-fired power plants to the production of cement and alumina, coal can also be used in iron and steel mills, as well as in the production of fertilizer. These immense possibilities have not materialized ten years after the extraction of coal started in Tete.

### 6.2.5. Fiscal linkages

Fiscal linkages are established through the tax system. The state defines a regulatory framework to collect different taxes from the mining companies. The efficiency of the tax apparatus is crucial for the successful implementation of the fiscal linkages. In fact, achieving fiscal linkage is likely to be difficult unless the ability to tax is combined with the ability to invest productively. In a situation where earned revenues from the enclave are siphoned off for the purposes of irrigating other parts of the economy, the possibility of either faulty investment or a great deal of leakage is most likely (Olanya, 2012).

The state capacity to develop an effective fiscal apparatus capable of capturing rents and reinvesting them into the broad national economic sphere is what constitutes the basis for fiscal linkages. Such linkages are considered as the most important ones.

According to Law No 14/2002 of 26 June (Mining Law), in the case of Mozambique, in the mining sector, the companies are required to pay the following taxes:

i Corporate Tax – known as IRPC in Mozambique – *Imposto de Rendimento de Pessoas Colectivas*, 32 per cent.
ii VAT – Value added tax: 17 per cent until 2022, then reduced to 16 per cent.
iii Import duties for capital goods – class K: 35 per cent.
iv Production tax (royalty): 3 per cent, this is paid on a monthly basis.
v Resource Income Tax – this is a tax levied on the net cash flow under a mining bond, as soon as that flow gives rise to an internal rate of return, before the IRPC, equal to or higher than 18 per cent. This tax is due when there are

accumulated net cash gains at the end of the fiscal year and the applicable rate is 20 per cent.

The issue with mining corporations is not about how much percentage is defined in the fiscal law as tax, but rather how much each company has managed to bargain from government and get lower percentages thanks to tax benefits.

That is the case of Vale, which got unnecessary fiscal benefits as I detail in the section below.

***Mozambican government gave unnecessary fiscal incentives to Vale and Rio Tinto***

The government of Mozambique granted Vale an imense list of unnecessary fiscal benefits as presented below:

1 exemption from customs duties, VAT, excise tax on imports of construction materials, machinery and equipment, work vehicles, accessories, parts and spare parts used for the implementation and start of operation of the project for a period of ten years counted;
2 exemption for a period of 25 years, of customs duties on the import of goods classified in class “K” of the customs tariff;
3 authorization for temporary importation of equipment, work vehicles, utensils, tools and machinery by providing a guarantee as established by customs legislation;
4 deduction of confirmed fiscal losses from taxable profits until the first 15 years counted from the date of the beginning of production;
5 reduction in 25 per cent of the IRPC rate for a period of five years counted from the first fiscal year that the company has taxable profit;
6 for ten years from the beginning of the implementation of the project, consider as costs for the purposes of determining the IRPC tax base, the amount corresponding to 150 per cent of the amounts spent on the construction and rehabilitation of roads, railways, telecommunications, water supply, electricity, schools, hospitals and other works when considered to be of public domain and utility;
7 exemption from withholding income from the IRPC, for income relating to large services, i.e. those worth more than one million US dollars or not available on

the Mozambican market and the specialty or quality required in the project subject to the IRPC for a maximum period of five years from the effective date of the contract;

8 exemption from withholding tax of interest on investment loans contracted during the same period;

9 reduction of 50 per cent, during the first three years of the project from the effective date of the contract, of the SISA rate on the acquisition of real estate exclusively for the implementation and exploitation of the project activity;

10 a 25 per cent reduction in the IRPC rate due on the distribution of dividends to shareholders of the project implementing company from the annual profits generated by the project for five years from the first year of the referred distribution;

11 exemption from the payment of VAT on the provision of services for the shipment of project products destined for export (including, but not limited to, the extraction, cleaning and improvement of coal and electricity) for a period of 30 years from the signing of the contract; the provision of services for extraction;

12 when calculating the production tax set at 3 per cent, deduction in the value of the mining product sold, of transport and insurance expenses incurred before the sale, and borne by the implementing company; any and all by-products resulting from the mining production that are marketable shall be excluded from the production tax basis;

13 the benefits set forth in numbers 1, 2 and 3 shall be extended to contractors, subcontractors and operators of the implementing company for the first five years from the effective date, if the imports are intended exclusively for the enterprise, and they will also apply to the three phases of the thermal power plant implementation, as provided for in the respective project.

The government gave the 13 benefits presented above to Vale in 2007, when the contract between the two parties was signed. In 2021, when Vale was already planning to exit the country, it negotiated a new package of fiscal benefits.

Insurance and transportation costs before the sale to Vulcan have an average weight of 54 per cent in relation to the amount that should have been paid if this benefit was not granted. According to the data published in the Extractive Industry Transparency Initiative (EITI) Mozambique Report, Vale Mozambique paid in Tax

on Production 5.7 billion meticais between 2011 and 2019. However, these figures are far below what would have been paid without the tax benefits in this category. In 2011, for example, the amount of production tax paid by Vale was 3.9 million meticais and could have amounted to 69 million. In 2019 Vale paid only 42.6 per cent (783.2 million meticais) of what it could have paid (1.8 billion meticais). Therefore, in the period ranging from 2011 to 2019 the country lost about 4.6 billion meticais of tax on production due to the tax benefits related to the deduction of insurance and transportation costs in the taxable base of the calculation of this tax (i2A Consultoria e Serviços, 2022).

***Multinational companies with no audited accounts, no financial statements***

A compilation of EITI Reports for ten consecutive years (2011-2022) shows that both Vale and Rio Tinto reported not having audited reports and financial statements. Such an allegation sounds strange as those companies are multinationals, listed on stock exchanges where they must comply with a bulk of requirements, including the financial reports and audited accounts.

My interpretation is that the two companies decided to tell the different EITI auditors in those ten consecutive years that they do not have such reports just as a way of hiding information to avoid public scrutiny.

***Rio Tinto's bad business***

In December 2023, the Mozambican Tax Authority – (MTA, or *Autoridade Tributária de Moçambique*) announced that they were prosecuting Rio Tinto mining company for tax evasion. The news came as no surprise to the circles who follow the fiscal regimes of the extractive industries. Some weeks before, police inteligence had detained some officers from the Tete revenue authority for embezzlement and misconduct in managing tax money from the mining company ICVL, successor of Rio Tinto in Benga's coal mines.

The announcement by the MTA was about a decision to suspend the refund of VAT to ICVL, the Indian mining company operating the former Rio Tinto coalmines. MTA alleged fraud committed by Rio Tinto at the time it purchased the coalmine from

Riversdale. Rio Tinto paid US$3.7 billion for the coal mine, then in 2014 sold it for mere US$ 50 million to the Indian ICVL. At the time, Mozambican public opinion was sceptical about the reasonability of the deal. Almost ten years later, the government now agrees that the multinationals committed fiscal fraud. The MTA intends to recover more than US$ 239 million in unpaid taxes on the sale of the coal mine in Tete.

The refund of VAT credits to the multinational Rio Tinto was suspended as a pressure measure to pay taxes on capital gains resulting from the sale of coal assets in the country. This measure is from the MTA, which reverted the debt in favour of the Mozambican state. The decision was cemented by the fact that in November 2023, the United States Securities and Exchange Commission filed a complaint against the multinational with the New York Federal Court, accusing Rio Tinto of fraud.

The state had VAT refund credits owed to the company in the amount of 1.6 billion meticais, and the refund was suspended and converted in favor of the state.

Legal experts cited by media reports (Hill, 2024), have said that the authority is unlikely to succeed, partly because the law at the time did not allow tax to be charged on transactions of that nature between foreign-registered companies, and partly because the then government was negligent in intervening in the deals. The beneficiary from the transactions was Riversdale, which sold the business to Rio Tinto for far more than it turned out to be worth, but the authority does not currently seem to be going after Riversdale.

In 2012, the Mozambican parliament approved a new law for capital gains tax. The law establishes that any concessioner that sells its rights or licenses to another has to pay 32 per cent of the gains obtained from the sale.

The capital gains tax has emerged also in response to various critics from 2011 when Rio Tinto bought Riversdale's coal assets in Benga and Mozambique's state got nothing in taxes. The deal would have netted Mozambique US$450 million if capital gains taxes had been paid. Economist Carlos Castel-Branco estimated that

this lost money was equivalent to an entire year's budget support aid, or equivalent to building 100 secondary schools (Selemane, 2013).

## 6.3. Conclusion

This chapter has presented and discussed the possible benefits that the Mozambican economy could have gained from the coal industry through the creation of linkages. I have presented the theoretical and historical grounds for the linkages framework, and demonstrated how each of the five types of linkages could have been established in the Mozambican coal industry.

The establishment of linkages is not automatic. The mere presence of one or more mega-projects does not transform a business opportunity into a connection. For linkages to come to fruition, opportunities must be combined with the interest, desire and capacity of economic agents who can enter into these connections.
These economic agents and opportunities also have to be framed by public policies favorable to reducing risk and uncertainty (for example, investment coordination). The policies must be such that encourage technological development (for example, introduction of standards and incentives related to training and acquisition of new technology). They must encourage the use of the firm's surplus for investment (for example, giving a different tax treatment to reinvested profits in relation to distributed dividends). Additionally, the policies must encourage productive investment rather than financial speculation; and that encourage firms to achieve certain performance indicators (such as exports and effective import substitution).
As has become evident in this chapter, the greater the difference between the mega-project and the existing economic base and technological capabilities, the smaller the capacity that the economy has to absorb the mega-project and develop linkages with it.

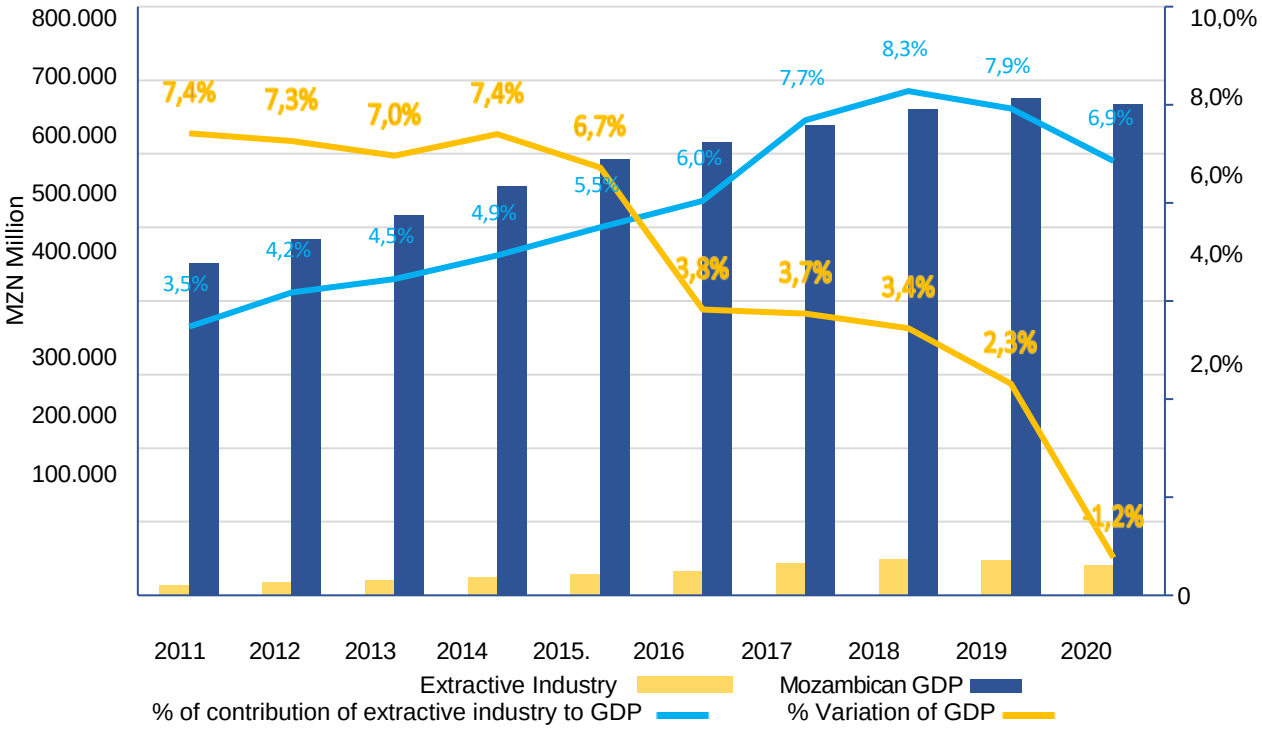
# CHAPTER 7: INQUIRING INTO THE CONTRIBUTIONS OF THE COAL INDUSTRY TO THE NATIONAL ECONOMY

## 7.0. Introduction

This chapter presents and discusses the financial and non-financial contributions of Tete's coal industry to the Mozambican economy. Due to the limited availability of data, the analysis covers only the years from 2011 to 2020, whereas the entire thesis studies the coal industry from 1975 to 2023.

The analysis starts with the contribution of the extractive industries revenues to the country's gross domestic product (GDP) in the period 2011-2020.

**Figure 12: Mozambique GDP with contribution of the extractive industry**




*Source: INE and 10th EITI Report*

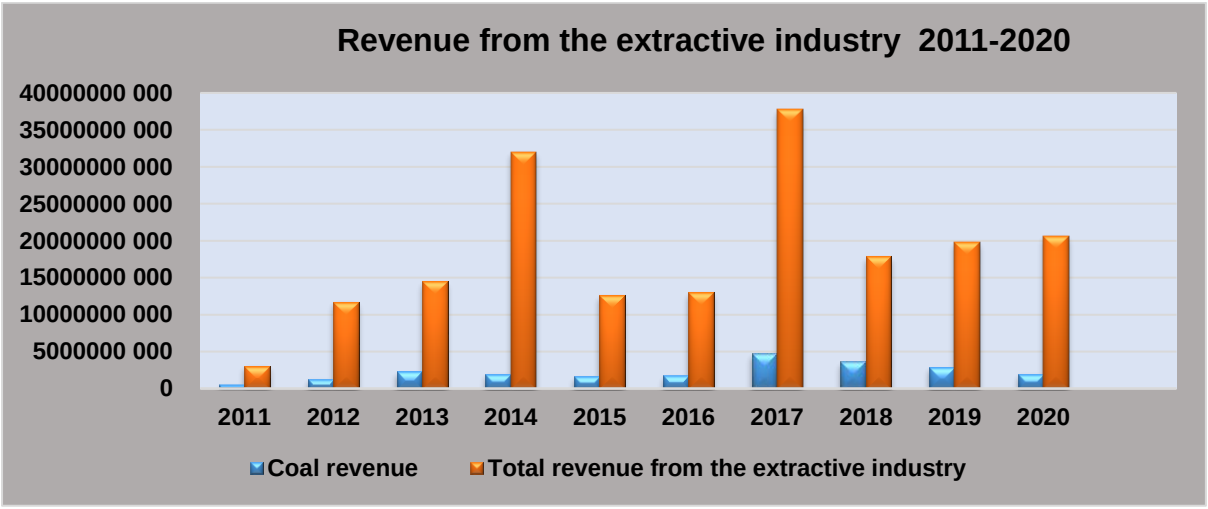
Data compiled in the graph presented above shows high growth of the contribution of the extractive industry to GDP, from 2011 to 2018, and then an inflexion and decrease

from 2019 to 2020 (the blue line). Mozambican GDP (the yellow line) decreased from between 7.4 per cent in 2011 and 6.7 per cent in 2015.

## 7.1. Financial contributions of Tete's coal mines to Mozambican economy

In this section, I present and analyze the amount of revenues from the extractive industry with disaggregation of the coal revenue.

**Figure 13: Coal versus extractive industry revenue from 2011 to 2020**




Source: own construction based on EITI reports

*From the above graph, from 2011 to 2020, the coal sector had its lowest contribution in 2011 with 523 108 000 meticais, equivalent to around US$8 million. The highest contribution was in 2017 where the sector generated revenue of 4 720 527 000 meticais, that is equivalent to US$72 623 489 as presented in the two graphs below.*

**Figure 14: Coal revenue in 2011**

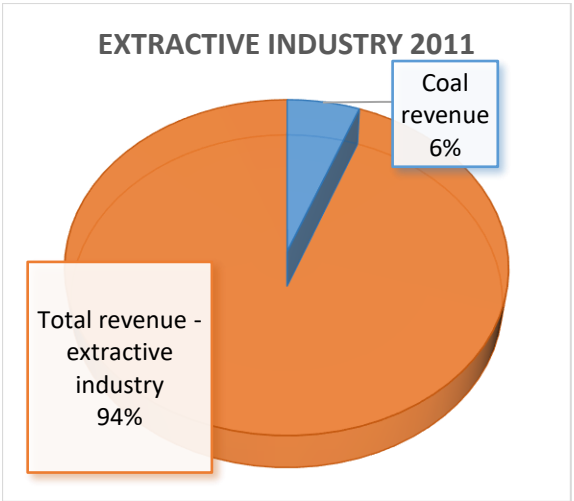
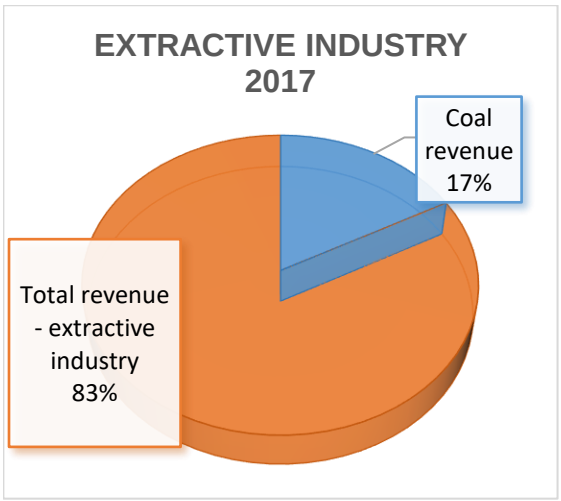



**Figure 15: Coal revenue in 2017**




Source: Own construction based on EITI Reports

According to Circular No. 1/MPD-MF/2013, part of the revenues (2.75 per cent) collected from the extractive industries must be returned to the local communities

where the extraction takes place. In Tete, the communities with the right to receive part of the revenues are Cateme, "*25 de Setembro*", Chipanga II and Benga.

The Mining Law and the Petroleum Law define that a percentage of 2.75 per cent of the revenues generated from oil and mining activities must be channeled to the development of communities in the areas where the respective projects are located. This contribution must be reflected in the State Budget in year N+1 where an amount is determined which varies according to the objectives of each year.

According to the abovementioned government orientation document *Circular No. 1/MPD-MF/2013*, there is a list of priorities to be funded by the revenues from the extractive industry. Such priorities must always be assessed by the local authorities, which include local government and representatives of the local community. The priority areas of intervention to be financed by the revenues in each mining community are the following sectors:

- Health (clinics, and health centres; medical equipment);
- Education (classrooms and respective furniture);
- Agriculture (seeds, irrigation, or other inputs);
- Forestry (conservation of community forests).

During the fieldwork, in parallel with the interviews and documentary analysis, I visited the villages to see through observation what projects were implemented using the money received from the coal companies. I present the results of that observation in the sections below.

### *Incorrect interventions in the health sector*

The revenues from coal received in Tete were invested in building an auxiliary house – locally known as "*Casa Mãe Espera*" to the local maternity in "*25 de Setembro.*" The infrastructure was built in 2014. However, the house was never used by the local community of "*25 de Setembro*" because "*Casa Mãe Espera*" is a concept of an auxiliary house built in the rural areas, where maternity facilities are distant from the people. As a way of cutting short both distance and waiting time of the women seeking martenity services, Mozambican health authorities build those auxiliary houses for the

pregnant women to stay in while they wait for the day of delivery. Usually, pregnant women stay there two to three days. The problem in "*25 de Setembro*" is that the community is urban, so the distance between the maternity facility and the people's houses is not big (at most four kilometers). For this reason, the good intention of building such infrastructure proved to be inappropriate.

Without pregnant women to make use of the facility, other patients use it. During the visit, I found admitted patients sleeping in the house.

Another intervention in the health sector was done at CFM health center (*Centro de saúde dos Caminhos de Ferro de Moçambique*), which was rehabilitated in 2013 with construction of a fence and wall and painting of the building. However, the health centre had no electricity at the time of visit in June-July 2022.

### *Provision of water and classrooms*

Chipanga II is the area where the company Vale Moçambique resettled the communities that occupied potential mining areas in Moatize. In this community, within the scope of the 2.75 per cent, the several infrastructural developments took place.

In 2019, three water fountains were built for the Chipanga community. Initially, it was agreed with the community to build water pumps, but at the time of execution the company built water sources through taps with water piped by the government's water provision company FIPAG (*Fundo de Investimento e Património do Abastecimento de Água*), which often makes it difficult for the community to have the precious liquid when there are problems with water cuts by FIPAG.

Also in 2019, three classrooms and an administrative block were built. During the visit, I found that there were cracks in some walls, and lack of electrical installation in all classrooms and the administrative block.

In the Benga community, I visited a block of classrooms and two double latrines built in 2020, a water supply system built in 2019, and sheets that were used to construct the roof cover of the local administrative post in 2018.

The block consisting of three classrooms has not yet been officially handed over to the community, but it has cracks and fissures on the walls. Doors and some windows are damaged. The community complains about the condition of the block and regrets the fact that it was built by a contractor unknown to the community who may have chosen to use low quality material.[39]

In the water supply system, the existing pump provides healthy water but makes it difficult for the population to consume, which leads them to consume water from a mining company instead. In other cases, it resorts to the Zambezi River, which increases the number of deaths due to crocodile attacks in that community.

As for the 175 zinc sheets, the research team was informed that they were used to cover the Benga Sede administrative post. However, due to the size of the

[39] Notes from interviews

administrative post, it appears that less than 20 per cent were used to build the roof and I found no information about the remainder.

In the community of Cateme, the intention to pave less than 30 km of road started in 2017 and was still not completed at the time of writing this thesis in 2023.

The dam, built in 2016, does not fulfill its purpose, which is to keep the water in the indicated location. At the time of the visit, the place was completely dry.

According to the General State Accounts (*Conta Geral do Estado*, CGE), the community that would benefit in the Marara district is that of the Marara administrative post.

In general, I found that the funds disbursed did not benefit the resettled communities of Marara and the justification was that the amount received is not sufficient to meet the requests of this community. For example, the resettled community requested the opening of a water pump and the local government found it appropriate to use the amount for nearby communities and not just the resettled community. The communities that benefited in the Marara district were Chirodzi and Nhatsango.

In the town of Chirodzi, I visited a water supply facility built in 2020, and a block of two classrooms and double latrines built in 2019. The water supply source is contributing to the water supply that was a problem for several years given that the region has a hot and dry climate. In hot weather, all rivers and streams run out of water for human and animal consumption. This fountain, according to an interviewee, is not enough for the entire community. There continued to be water problems in 2023 just like 10 and 15 years ago when the coal companies started to settle themselves.

In addition to the projects described above, in the 2.75 per cent management documents I identified 58 projects with a total cost of 18 million meticais, equivalent to around 13 per cent of the total amount allocated to the province between 2013 and 2020. The table below presents those projects.

**Table 21: Summary of projects financed with the 2.75 per cent**

| Year | Projects implemented | Cost of the project in US$[40] | Contractor | Beneficiary Community | Recorded impact of the project |
|---|---|---|---|---|---|
| 2013 | Rehabilitation of the Heroes Mozambicans Secondary School-City of Moatize | 16 000 | *Pura Construções e Serviços* | Moatize | The ratio of teachers and students decreased and the school began to receive several students from other districts in Tete province. |
| | Construction of the auxiliary house (Casa Mãe Espera) at Carbomoc Health Center | 23 000 | *Ajuda e Filho Construções* | Moatize | No Changes for the communities, because the health center only receives mothers who live around the City of Moatize, currently the mother house is used to attend tuberculosis consultations. |
| | Rehabilitation of the CFM Health Center - City of Moatize | 14 000 | CT Construções | Cidade de Moatize | The Health Center began to serve users 24 hours day and expanded more services to improve the quality of life of the communities. |
| | Construction of water sources-Necungas and Benga | 24 300 | EICOCIN | Necunguas<br>Benga | |
| | Rehabilitation of EPC Cateme | 15 000 | Super Construções | Cateme | |
| | Income Generation Projects-City of Moatize | 50 000 | | Moatize | |

[40] The original amounts were given in Mozambican Meticais. I converted all amounts from Mozambican Meticais to USD using the Central Bank's exchange rate of each period.

| Year | Projects implemented | Cost of the project in US$ | Contractor | Beneficiary Community | Recorded impact of the project |
|---|---|---|---|---|---|
| 2014 | Rehabilitation of CFM Health Center - City of Moatize | 14 000 | CT Construções | Moatize | The Health Center began to serve users 24 hours a day, and expanded more services, to improve the quality of life of the community members |
| | Construction of auxiliary house (Casa Mãe Espera) mother house awaits - Kambulatsitsi Locality | 12 585 | *Ajuda e Filho Construções* | Kambulatsitsi | |
| | Construction of fountains-Nhambalualu Village | 13 000 | Marju-Construções | Nhambalualu | |
| | Rehabilitation of the “Heroís Moçambicano Secondary” School-City of Moatize | 14 000 | *Pura Construções e Serviços* | Cidade de Moatize | The ratio of teachers and students decreased and the school began to receive several students from other districts in Tete province. |
| | Furniture for Cateme Secondary School | 20 000 | | Cateme | Conditions have been created to improve the teaching and learning process for students |
| | Rehabilitation of the 25 de Setembro-City of Moatize Road | 18 000 | *Achawa Construções* | Moatize | Improvement of minimum transit conditions between neighborhoods in the City of Moatize. The community now benefits from another access road. |

| Year | Projects implemented | Cost of the project in US$ | Contractor | Beneficiary Community | Recorded impact of the project |
|---|---|---|---|---|---|
| 2015 | Construction of Classrooms at Samora Machel Secondary School | 15 500 | *Pura Construções e Serviços* | Moatize | The ratio of teachers and students decreased and the school began to receive several students from other districts in Tete province. |
| | Construction of auxiliary house (Casa Mãe Espera) at Carbomoc Health Centre | 55 000 | *Ajuda e Filho Construções* | Moatize | No changes for the communities, because the health center only receives mothers who live around the City of Moatize. Currently, the waiting house is used to attend tuberculosis consultations. |
| | Road rehabilitation - City of Moatize | 13 000 | *ALM Construções* | Moatize | Improvement of minimum transit conditions between neighborhoods in the City of Moatize. The community now benefits from another access road. |
| | Rehabilitation of the CFM Health Center - City of Moatize | 52 000 | CT Construções | Moatize | The Health Center began to serve users 24 hours a day and expanded more service to improve the quality of life of the communities. |
| | Equipment Mother house awaits-Carbomoc Health Center-City of Moatize | 25 000 | Choa Investimentos | Moatize | No changes for the communities because the furniture purchased was allocated to nurses at the Carbomoc Health Center. |
| | Double school desks | 20 000 | | | Created the minimum conditions for the teaching and learning process |

| Year | Projects implemented | Cost of the project in US$ | Contractor | Beneficiary Community | Recorded impact of the project |
|---|---|---|---|---|---|
| 2016 | 250 Double school desks - 50 EP1 from Cancope, 80 EPC from Mitsanha, 25 EPC from Catsanha and 60 EPC from Djenge and 4 Secretaries and respective chairs | 62 000 | Choa Investimentos | Cancope | |
| | | | | Mitsanha | |
| | | | | Catsanha | |
| | | | | Djege | |
| | 1 water supply hole in the town of Benga | 30 000 | Marju-Construções | Benga | |
| | 1 Small water supply system in the Nhanchere-Cidade de Moatize neighborhood | 45 000 | JB Construções | Cidade de Moatize | Communities in the Nhanchere neighborhood no longer have to travel long kilometers to access water. Children no longer miss classes and women have more time to pursue other family-supporting activities. |
| | Construction of 1 Dam in the town of Cateme | 1 261 787,20 | *Marju-Construções* | Cateme | Communities continue to have problems watering their animals and having water to water their small home gardens because the dam does not retain water. |

| Year | Projects implemented | Cost of the project in US$ | Contractor | Beneficiary Community | Recorded impact of the project |
|---|---|---|---|---|---|
| 2017 | 250 double school desks and 10 desks and respective chairs - 50 EP from Khondo, 50 EPC from Waenera, 75 EPC from Situavua, 50 EPC from Kaphirizanje and 25 EP1 from Thóndue | 35 000 | KKK Investimentos | Khondo | |
| | | | | Waenera | |
| | | | | Situavua | |
| | | | | Kaphirizanje | |
| | | | | Thóndue | |
| | 4 water supply holes for the towns of Benga and Cangala | 20 000 | Marju-Construções | Benga | With the boreholes built, the Benga Health Center and the Complete Primary School now have piped water; communities no longer go to the Zambezi River to fetch water for domestic use, putting their lives at great risk due to crocodiles. |
| | | | | Cangala | Increased sources of drinking water supply in the community |
| 2018 | Construction of 3 classrooms, administrative block and 2 latrines-Resettlement of 25 de Setembro | 27 000 | TOP-Construções | *"25 de Setembro"* | Conditions were created to improve the teaching and learning process for around 250 students, in addition to reducing costs for the communities, because students should go to the city of Moatize to attend grade 10, secondary school. |
| | Localized Improvement of the 10 Km Main Road in the Town of Cateme | 15 000 | Khembo-Construções | Cateme | |
| | 175 IBR 050 mm Zinc Sheets for Povoado de Benga | 32 000 | Casa Gito | Benga | Improved service conditions for communities at the administrative post headquarters. |

| Year | Projects implemented | Cost of the project in US$ | Contractor | Beneficiary Community | Recorded impact of the project |
|---|---|---|---|---|---|
| 2019 | Paving of the Cruz EN7 road (Casa Bota- CFM Station; Cruz EN7) Extension up to 1 km-City of Moatize | 14 000 | ALM Construções | Moatize | Improvement of minimum transit conditions between neighborhoods in the City of Moatize. The community now benefits from another access road. |
| | Paving the Main Street in the Town of Cateme for an extension of up to 1 km | 21 000 | Marju-Construções | Cateme | Improvement of minimum traffic conditions in the Cateme community. The community now benefits from another access road, thus allowing the transport of people and goods to markets in the City of Moatize. |
| | Construction of 1 small water supply system in the village of Benga | 15 000 | Nfigo Construções | Benga | Availability of potable water |
| | Construction of 3 Fountains at the Neighborhood Headquarters 25th of September (Resettlement)-City of Moatize | 17 000 | Electro Zambeze Construções | Moatize | Availability of potable water |
| | Construction of 1 fence wall for the Bairro 25 de Setembro School (Resettlement) - City of Moatize | 22 000 | Nfigo Construções | Moatize | Security conditions created within the school premises |
| | Assembly of 1 Energy Transformation Station in the 25 de Setembro Neighborhood (Resettlement)-City of Moatize | 45 000 | Electro Executiva Moatize SU, Lda | Moatize | Part of the community already has electricity, although not representative (how many or less or what % does not have it). The community now has 2 PTs and an expansion of the electricity network of 3 km |
| | Construction of 3 Classrooms, Administrative Block and 2 Latrines in the 25 de Setembro Neighborhood (Resettlement)-City of Moatize | 9 000 | TOP-Construções | Moatize | Conditions have been created to improve the teaching and learning process, reducing the distances traveled by children to EPC Mutarara-Moatize |

| Year | Projects implemented | Cost of the project in US$ | Contractor | Beneficiary Community | Recorded impact of the project |
|---|---|---|---|---|---|
| 2020 | Construction of paved pavement on the unclassified road on the EN7-Cateme section | 8 750 | Marju-Construções | Cateme | Improvement of minimum traffic conditions in the Cateme community. The community now benefits from another access road, thus allowing the transport of people and goods to markets in the City of Moatize. |
| | Construction of paved pavement on the 695 meter section-Retunda/CFM/BCI-Bairro Bagamoio/25 de Setembro-City of Moatize | 21 500 | Construções África | Bagamoio<br>"25 de Setembro"<br>Cidade de Moatize | Improvement of minimum traffic conditions in the Cateme community. The community now benefits from another access road, thus allowing the transport of people and goods to markets in the City of Moatize. |
| | Construction of paved pavement on a 1000 meter section - Chipanga Cemetery/Health Center in the Chipanga neighborhood | 9 250 | ALM Construções | Chipanga | Improvement of minimum traffic conditions in the Cateme community. The community now benefits from another access road, thus allowing the transport of people and goods to markets in the City of Moatize, in addition to ensuring a good transfer of users to the Carbomoc Health Center. |
| | Construction of 3 classrooms and 2 double latrines in the town of Benga | 4 500 | TOP-Construções | Benga | Conditions have been created to improve the teaching and learning process, reducing the distances traveled by children to ESH Moçambicano de Moatize |

Source: Own construction based on fieldwork and interview

## 7.2. Compensation for loss of previous source of income

Apart from the financial contributions of the coal industry to the national economy, another benefit resulting from the existence of coal mines is expected to be in the form of compensation paid to the persons affected by the resettlement.

In this sub-section, I discuss the compensations both Vale and Rio Tinto paid to the persons affected by the resettlement as a way of recovering their lost sources of income.

During the fieldwork, in one afternoon I interviewed António – not his real name – who had received 119 thousand meticais (around US$2 000) in compensation for loss of crops. He highlighted the fact that the amount was very little. Even so, he and his family already had plans: they tried to improve the chicken project by expanding the aviary in order to increase the scale of production. Nevertheless, apparently, none of this brought him great happiness because what he really wanted to do was to go back to making pottery.

Under current conditions and without support from the company, he told me that it seems impossible: *"*Making bricks is an art. If the company allowed it, which would be great happiness." He informs me that in comparative terms, the sale of chickens provides lower profitability compared to the brick business. In addition, he confesses to not having yet assimilated the change his life has undergone and how much it costs him to have gone from potter to chicken seller. He interprets this change of activity as a loss of social status, which for him is inconceivable if one considers the magnitude of mining companies. Therefore, he feels that resettlement took away the possibility of leaving a legacy for his children, of making the story of his life through pottery, as had happened with his parents and grandparents.

From his activism in public protests, he shares his understanding of the response capacity of companies and the government. He reveals that Vale is a much-closed company with a lot of bureaucracy, contrasting with its counterpart, Rio Tinto. He establishes a parallel between the company and the Mozambican government and

highlights the behaviour of the district administrator: “I don't want to speak ill of the leadership but I want to congratulate this administrator. I do not know how she was born. She is a machine woman, a person who can think… but really thinks. I have never seen an administrator who could perhaps match her.”

He adds that the money he will receive that afternoon is due to the selfless effort she has made to solve people's problems. He regrets the fact that she was not present at the beginning of the resettlement process. He believes that if she had already been an administrator when the houses were being built, the local government would not have accepted the company distributing improved porches or tents to families directly affected by the extractive industry. She reaffirms that those houses could collapse at any time, which would not be at all an inconvenience for the company, as the urban resettlement site was part of Vale's mining concession. That is why, with part of the salary she received as an Odebrecht employee, she built an annex as a security measure. In fact, we observed that in all Vale resettlements, families used part of the compensation money to build small outbuildings, all part of the strategy of dispersing the risk of the houses allocated by the company collapsing one day.

***Compensations paid in Cateme***

In the rural resettlement of Cateme, I spoke to Romão – not his real name – 39 years old, with two wives and father of seven children. Before resettlement he was a brick maker and now produces chickens, his only means of survival. He is already on the third batch and argues that due to the mortality rate of the chicks, he does not obtain a financial return from poultry farming. When asked about the more general benefits of mining, his answer is blunt and refers to a process of fragmentation of his identity as a Mozambican:

> “The activity of coal extraction improves the lives of some people, those in Maputo. Those who came from the country's capital are, in fact, improving their lives. But not us here. Those people who came from Maputo to work here, we do not have jobs. They say we have no qualifications. We are being harmed. It seems that we are not also Mozambicans.”

For Romão, these social development packages only distract him from the essential: the farm. This is how returning to one's origins seems to appear as the only way to

overcome the profound sense of marginalization that permeates the settlement. However, even if their destiny was to restart their life in agriculture, the rocky lands allocated to them as compensation are unsuitable for cultivation. In line with my interviewees from "*Bairro 25 de Setembro*", Romão reproduces the idea that only popular protests can change the current scenario in communities. In his opinion, public authorities and companies only pay attention to their complaints when they are presented in the form of popular demonstrations. He feels there is a great lack of consideration for host communities and increasing confusion between the role of the company and the government, as illustrated by his own words:

> "The district administrator helps but the leaders here, as we are resettled, when we talk to them it seems like we are trash. If Maputo considered us as people, I think Vale would not do this. Vale is not the government, it is a company, and it is a project. The government can stretch its hand and tell us how to work, but sometimes, what we are seeing is that when there is a demonstration, they send the police. Is Vale a government or project? We want to know this well to be clear about this situation. If Vale is the State, then we will respect it as a government and obey[41]."

The asymmetry of power between local and central authorities seems to constitute, in the minds of resettled people, one of the main blocking factors in resolving the problems that affect them. In fact, for our informant, the leaders of his community transmit the population's concerns to the administrator, but the latter is unable to do much more because she does not have the same power as the leaders in Maputo, many of whom are also shareholders in these companies. Reports about the state range from the recognition of its material and institutional weakness to the appreciation of small initiatives by some authorities whose commitment is visible in resolving the most important issues for the populations.

Like António, Romão also seeks to highlight the action of the district administrator of the entire bureaucratic apparatus, and does not establish a causal relationship between her commitment and her duties as head of government in the district. The

[41] Interviews were given in Portuguese, then translated into English by the author

relatively successful work he does is interpreted as being the result of his good character, faculties that the government as a whole does not possess, leaving him with intense distrust. This duality is evident in the following sentence: “in this process the entire government is on Vale's side, with all of these problems we would have already had a meeting with the government. But neither the government nor Vale.” It is interesting to note that Romão is one of the people who had the privilege of participating in a meeting with the administrator when the potters intended to claim compensation for their farms (*machambas*).

Romão tells me, nostalgically, about the time when he had a contract to supply bricks to a local technical school. As he did not have the capacity and scale to respond to the quantities demanded, he began to include other potters. He supplied 24 thousand bricks to the local school. He was a licensed operator. With the arrival of Vale, in addition to having lost everything, he feels unfairlytreated in relation to the compensation amounts.

Before being resettled, he had two houses, one on the farm – where he stayed during the harvest season – and the main one in Chipanga, where he lived with his family. Today he has only one, the resettlement one, very small and with infiltration problems. Considering his condition as a polygamist, he states that he must have three houses to accommodate his three wives and their children. For him, the processes that preceded the preparation of the displacements were politicized and since people did not know what awaited them, they accepted unconditionally. The deterioration of their social status and condition makes them see mining activity, carried out in its current form, as a return to colonization and its extractive modus operandi, adding that the government has abandoned them.

An account by one of my interviewees in Tete tells the following narrative:

> “In my opinion, Vale only came to harm us. This is an exploration. Nevertheless, it is a slightly different exploration than that of colonialism. Colonialism came by force. Vale was authorized. They are taking our riches and we will be poor. The Vale train is loading coal 24 hours a day. The advantage is for Vale itself and not for us. They only came to take what we have because we can't take it alone and sell it. If it was something made like bricks, it would be better to tell Vale to go away and we would take it out ourselves and sell it. Now, in the case of coal we do not have machines...they

> do. Moreover, in all of this, the government is with Vale. It is difficult for them to talk to Vale and force things to be done for the population because it's difficult to leave someone who eats with you at the table aside. That is why we are separated, without the support of either the government or Vale. We are alone and abandoned. Vale doesn't want us, the government doesn't want us[42]."

In this process, the government is seen as a hindrance, and the ideal situation for them would be direct interaction between the white people of Vale and the community. There is a widespread feeling that the government is damaging the relationship between the community and companies. In Ricardo's view, people should be free to demonstrate and not have to be beaten up and detained by the police whenever they do so. He considers that the stoppage of Vale's activities would generate much more visible effects on its social development packages and the improvement of the lives of the people affected by it. These, in turn, would only experience improvements if the houses had been built to each person's taste and, above all, if they fulfilled the promise of employment. "Vale and the community should be friends."

"Do we always have to resort to demonstrations to be heard? Everything we achieved after resettlement was through demonstrations." Despite this observation, he recognizes that the extractive industry constitutes a peace dividend and that there were people who took up arms to make it possible. Therefore, relations between the community, the company and government should not be permeated by the tension that characterizes them, but rather by a climate of harmony and mutual consultation.

Among the social activities carried out by the main extractive companies in Tete, the following can be highlighted: livestock promotion, horticulture, cash crops and poultry farming, the latter being the most significant, as it can guarantee an income of up to 7 400 meticais (around US$130), twice the national minimum wage of that time (2022).

However, families directly affected by Vale Mozambique and Rio Tinto disputed the methodologies used and the limited scope of these packages when considering the total universe of approximately 2044 families (1365 from Vale and 679 from Rio Tinto). For example, Vale expected that chicken farming would reach up to 150 families. The beneficiaries of this specific package showed some uncertainty regarding the

[42] Interviews were given in Portuguese, then translated into English by the author

sustainability of this activity, especially after the company withdrew its logistical support.

The company Vale Mozambique was the pioneer in Tete and everything indicates that other companies like Rio Tinto did reproduce many of its development models for the social area. The interviews carried out allowed me to determine the existence of socio-demographic and gender factors that weigh heavily on people's decision to sign up. For example, some female heads of families aged over 35 reported not having signed up for the poultry farming programme because they did not trust their ability to manage a project of that nature and did not believe in its long-term sustainability:

“I haven’t joined any Vale project because I don’t think I can do it… because finding material to build an aviary is difficult… where do you get that material?”

Although the vast majority of my interviewees showed interest in social development programmes offered by companies although they constitute the replacement of the means of subsistence, the discouragement among the elderly was notable. They often evoked their weak predisposition to learn new ways of working and sustaining themselves. In Mwaladzi, where livelihood replacement programmes seem to be focused on agriculture and livestock promotion, families demand veterinary care, similar to what happens in Cateme. Here, many feel that projects such as poultry farming conflict with activities historically established in the family and question who will take care of their farms if they are dedicated to chicken production.

***Compensations paid in “Bairro 25 de Setembro”***

In the “25 de Setembro” neighbourhood I spoke to Alípio – not his real name – 41 years old, previously an informal micro-entrepreneur, now a beneficiary of the poultry farming project and dependent on the income from his bricklaying activity. Father of seven children, because of the resettlement he lost his income and ended up abandoned by one of his two wives because he could no longer support her. Despite recognizing the potential of extractive industries' social packages to generate benefits to a limited extent, Alípio told me angrily that nothing that has been done to date to

compensate him for losses resulting from displacement returns him to his relatively comfortable previous situation.

> "I was a businessman and had a lot of workers. I had 12 workers in my pottery. As a businessperson, I no longer did this work of building houses because I had money. I gave my friends odd jobs because I had money. My children studied well, ate well, dressed well because I had money. My previous house was well plastered, although it was not painted. It was a house with three bedrooms, a living room and a balcony outside, with power and everything. Here I am suffering. They give us chickens and this is the only development we are seeing now. However, they are deceiving us. That's to shut us up."

A common sentiment expressed by the interviewees is unhappiness. The above quoted interviews show to what extent people affected by the Tete's coalmines have been unhappy and frustrated.

## 7.3. Corporate social responsibility - Vale/Vulcan and Rio Tinto/ICVL

The neoclassical school of thought conceives corporate social responsibility (CSR) as one of the ways through which the private sector can contribute to local development. CSR is even considered an inevitable response to the negative effects of globalization (Su et al., 2024); (Dietsche, 2014a). The discussion about the benefits arising from the extractive industry is linked to the contestation that this sector receives around the world.

The contestation of extractive mega-projects in Mozambique led the government of Mozambique (GoM) to draw up the Corporate Social Responsibility Policy approved by Resolution No. 21/2014, of 16 May. The Policy in question aims to ensure the involvement, participation and coordination of all parties interested in investments and ventures in the mining extractive industry, from prospecting, research, and development and production activities. It was also expected that the Policy would guide the monitoring and evaluation mechanisms of CSR activities, as well as the complaints, appeal and dispute resolution mechanisms.

In practice, CSR projects implemented in Tete by both Vale/Vulcan and Rio Tinto/ICVL have consisted of offering school blocks and building classrooms (education sector); health centers (heath sector), opening water holes, a hospital and IT materials.

The projects were developed more in the interests of those who finance them, to benefit the image and marketing purposes of the multinationals and less in the interests of those who should benefit from the interventions.

The areas of intervention of CSR programmes reflect a response to the contestation by local community against the negative social impacts (in resettlements); negative economic impacts (loss of revenue resulting from either resettlement or loss of arable land to produce food); and negative environmental impacts (soil, air and water pollution). Overall, CSR programmes fail to respond to the need for job creation in the communities where the companies operate.

Conceived and implemented in the way they are, CSR programmes have three problems. First is pressure on the state budget, the need to maintain social infrastructures coming from CSR in the form of public works, when these are built outside of the government's plan, such as, for example, the construction of schools, roads, hospitals, etc, which increases the pressure on the state's current budget. For example, schools need teachers, school equipment (desks, boards, chalk, among others), and water, energy and communication services that must come from the state budget in addition to what was already planned.

Second is loss of the state's reputation among local communities. In Mozambique, communities around mining mega-projects lack several public services that are traditionally provided by the state. Under these conditions, the existence of companies that provide such services within the scope of CSR can discredit the image of the role of the state as a fundamental provider of basic services to communities. Thus, companies tend to increase their power vis-à-vis the communities that benefit from this investment, at the same time that communities lose the autonomy to claim possible impositions or negative impacts generated by the mega-project.

Third is dependence of local communities on mega-projects. When developing CSR activities, there is a risk of developing within the community, intentionally or unintentionally, a dependency on the mega-project, which could have serious consequences, particularly after the closure of the mine.

More than a technical discussion, the discussion around CSR is a political-ideological discussion: who has the role of providing education and health services, building schools and hospitals? – the state or the mining companies such as Vulcan and ICVL?

## 7.4. Conclusion

This section has tackled the contribution of Tete's coal industry to national and local economies, in the communities where the two companies are located and operate. The contributions to the national economy have been very modest due to various factors. The nature of the extractive industry is capital-intensive – it employs very few workers when compared to the huge amounts of investment. The fiscal regime was crafted to benefit the coal companies with tax benefits – it is interesting that Vale decided to leave Mozambique exactly in the year when its fiscal benefits were expiring.

While the financial contributions are modest or insignificant, the non-financial contributions seen under the 2.75 per cent rule and CSR programmes are particularly problematic. Firstly, these interventions are reactive and not pro-active. The companies respond to the existing demands for intervention in education, health or potable water. Secondly, the projects implemented are not integrated in a wider development plan. They are mere once-off and show-off interventions.

For these reasons, the overall benefits of Tete's coal industry to the economy are insignificant.

# CHAPTER 8 – ASSESSING THE ENVIRONMENTAL EFFECTS OF TETE'S COALMINES

## 8.0. Introduction

In this chapter, I examine my second research sub-question "how do environmental factors of the Tete province coal industry contribute to Mozambique's uneven development?" I do so by assessing what is known in the economic literature as "mining legacies", which is the accumulation of externalities – impacts on people and society where the mining activities take place (Harvey, 1987 Bond, 2018b Roche et al., 2021).

One of these legacies is the environmental impact of the mining activity. Mining legacies are current and long-lived outcomes, ranging from pollution to community fragmentation with intergenerational effects. Mining legacies have origins, causes and impacts in both the physical process of mining and the industry's complex role in society, where it has been integral to colonial expansion, imperialism and global capitalism (Roche et al., 2021).

The issue of the environment is as alarming as the resettlement of people. I found that there is a strong incompatibility between the exploitation of natural resources and the environment, as mitigating and compensatory measures are not being taken, either by the government or by companies.

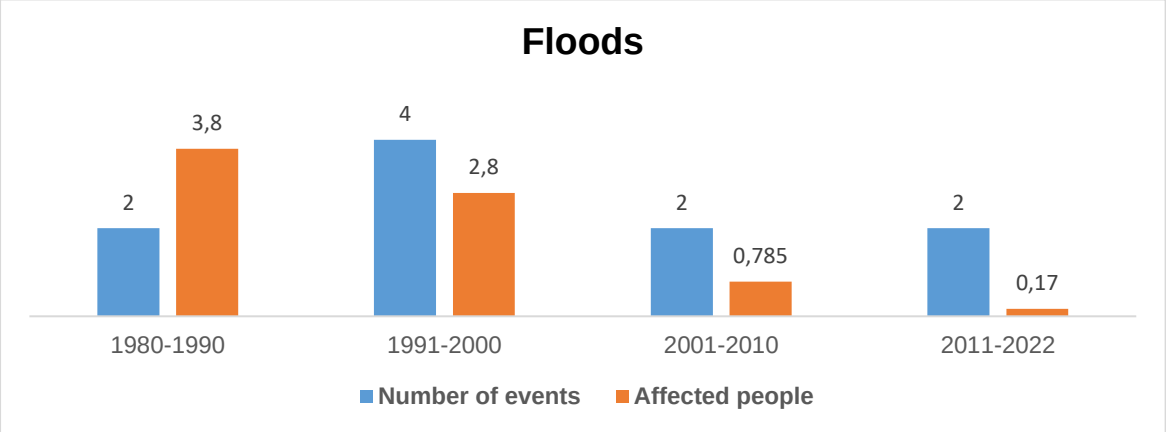
The effects of detonation to extract coal shake the earth and cause cracks in homes. The ore is transported in an open truck, which means that with each ton of coal that is extracted, environmental risks increase, which could compromise the quality of health of present and future generations. It is therefore stated that the exploitation of resources should not be carried out in an unrestrained, Machiavellian way, with only profit as the goal, without the necessary observance of environmental rights, at the risk of leaving a legacy of holes and diseases.

## 8.1. Environmental dynamics in Mozambique

Prior to the inauguration of Tete's coal mines, Mozambique has been suffering from severe climate events, mainly floods, droughts and cyclones.

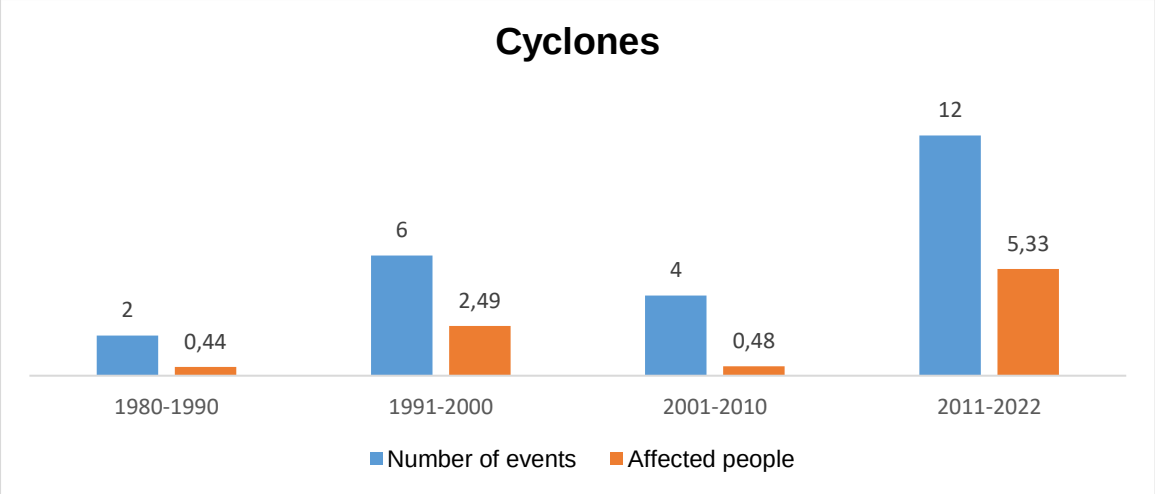
The three graphs below present the trajectory of extraordinary climate events that have affected Mozambique from 1980 until 2022.

**Figure 16: Occurrence of floods and number of affected people: 1980-2022**



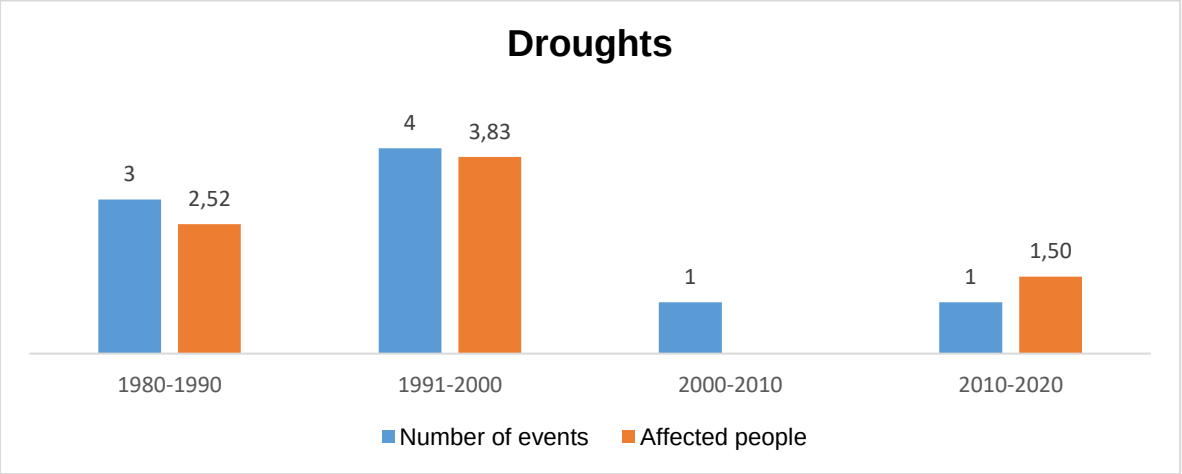

Source: own construction based on Ministry of Land and Environment (2023)

**Figure 17: Occurrence of cyclones and number of affected people: 1980-2022**




Source: own construction based on Ministry of Land and Environment (2023)

**Figure 18: Occurrence of droughts and number of affected people: 1980-2022**




Source: own construction based on Ministry of Land and Environment (2023)

The above three graphs 16, 17 and 18 show how Mozambique is a country vulnerable to severe climate events due to its location along the Indian Ocean.

In 2016, the drought generated by the El Niño phenomenon occurred, which affected a large part of Southern Africa and reached 43 districts in Mozambique (UNICEF Mozambique, 2019).

## 8.2. Assessing the environmental effects of coal mining in Tete

### 8.2.1. Description of the morphology of soils and coal in Moatize

The district of Moatize is located in a region formed by basic rocks such as gabbros, anorthosites, norites, leuco gabbros and others, highlighting the groupings of grayish-brown and shallow reddish-brown soils on limestone rocks and those derived from basaltic rocks–. These can be reddish, reddish-brown or black, of variable depth and characterized by good nutrient and water retention capabilities. Alluvial soils also occur in small proportions, particularly on the terraces of the Révubuè and Zambezi rivers (Ministry of Land and Environment, 2023).

The minerals most found in coal are clay, pyrite, quartz and calcite, associated with the elements oxygen, aluminum, silicon, iron, sulfur and calcium, in decreasing order

of abundance. The Moatize coal layers are composed of grayish-white arkosic sandstone, fine clayey or micaceous sandstone with plant fossils and intercalations of black mudstone with coal layers.

The quality of coal from the Moatize coal basin is high, of the bituminous type, with volatile content varying from high to low. They are rich in vitrinite, poor in liptinite, with variable sulfur content and a high level of ash.

Tete coal mining is done in open pits. Many families still live near the mines and are affected by the dust raised by coal excavation machines. Coal is washed into the Zambezi and Revúbue rivers, polluting their waters, and the local population depends on the waters of these two rivers for their survival. After processing the coal, it is transported in trucks, without coverings, further contributing to polluting the air that people breathe, until it ends up on the train. This entire process (excavation, washing, transport) is carried out among people without a minimum of protection. For this reason, the contamination of Tete's air, soil and water by coal mines is very high.

The main pollutants emitted by mining and burning coal are particulate matter (PM); methane ($CH_4$); sulfur dioxide ($SO_2$); oxides nitrogen (NOX); carbon monoxide (CO) and carbon dioxide ($CO_2$). All are harmful, to a greater or lesser extent, to the environment, polluting the atmosphere and, consequently, undermining human health, mainly affecting the respiratory system. As the concentration of gases in the atmosphere increases, it influences global warming, compromising the agreements reached by the signatory nations to the Paris Agreement. Mozambique is a signatory of the Paris Agreement, which is the legally binding international treaty on climate change, adopted in 2015 and entering into force in November 2016.

The mining activities in Tete result in a variety of environmental effects. Those environmental effects also create social and economic effects. For instance, pollution of water in the rivers results in the death of fish, which reduces the available of food among the local villagers and wildlife. This shows that environmental effects cause bigger problems than the obvious ones.

**Figure 19: Summary of environmental effects of coalmines in Tete**

| Action by the mining company | Environmental effects | Socio-economic effects |
|---|---|---|
| Excavation of the mine to remove coal from underground | Deforestation and loss of biodiversity<br><br>Loss of fertile land<br><br>Soil erosion | Scarcity of arable land and destruction of biodiversity around the village |
| Blasting boulders using dynamite and explosives | Heavy noise<br><br>Shrapnel escaping puts the lives of residents near the mines at risk | High risk of hearing diseases<br><br>Displacement of people seeking better residential areas |
| Coal washing in the Zambezi and Revúbue rivers, the same rivers that local communities use in their daily lives | Contamination of water, rivers and swamps<br><br>Fish and wild animal mortality | Scarcity of water for daily use by the local residents<br><br>Scarcity of food for people and animals |
| Transporting coal in open trucks without protection, from the mining site to the railway station | Damage to the roads, increasing erosion and polluting the homes with coal dust | High risk of respiratory diseases |

Source: own construction based on observation and interviews

### 8.2.2. The local communities are exposed to the coal pollution in Tete

The majority of families residing in the area surrounding the mining companies in the Moatize district have legal licenses to build their homes. Those who do not have a license occupied the land in good faith, as prescribed in article 12 of Law No. 19 (Law, 1997).

The territory occupied by the companies includes areas where local communities lived. The projects directly covered around 2388 households, living in ten communities: Capanga Nzinda, Capanga Gulo, Capanga Luani, Mpala, Nhanganjo, Chipanga, Bagamoyo, Chithata, Malabwe and Mithethe, the first five being affected by the Vale Mozambique.

The levels of water and air pollution in Moatize put thousands of people at risk, many of whom end up in hospitals with respiratory problems, acute coughs and tuberculosis. However, for the mining company, all that matters is profit. In 2021, the pollution situation in Moatize worsened.

According to laboratory analysis carried out on the water (Liberty neighborhood) at the request of the organization *Justiça Ambiental* (JA!), in 2021 alone the results of water and air pollution were three times above the national and international limits established by law. For example, Cadmium (Cd) levels of 0.009 mg/l were recorded in the VALE concession area, while the levels considered permissible by Mozambique and the World Health Organization (WHO) are 0.003 mg/l. Cadmium is a heavy metal that causes damage to the nervous system and can cause disturbances in fetal development, even at low concentrations.

According to hospital sources, the largest number of people treated at Moatize Hospital are diagnosed with tuberculosis (TB).

Unfortunately, and unlike in other places like Brazil or South Africa, community resistance is not supported by the existing legislation, which does not grant local people decision-making power. The legislation prioritizes tax collection and other economic gains that resource exploration can offer the country. The exclusion of the population from areas of mega-projects reiterates socio-spatial inequalities enhancing poverty and exclusion, making dialogue difficult between the local population and the representatives of mega-projects.

The environmental impacts generated by mining companies on the population's routine are more pronounced on windy days, making it practically impossible to remain outside the houses. Children cannot play in the yard. Even inside the houses is coal dust expelled from mines and quarries. Furthermore, houses, plants and animals are covered in coal dust, impacting the productivity of cultivars and disrupting local cultural dynamics. It is unfeasible to put flour and clothes out to dry. The impact on deforestation of vegetation cover is exacerbated, since the extraction of mineral coal in Moatize takes place in the open pits.

Mozambican legislation provides protection for the population in the face of air pollution, according to paragraph 2 of article 16 of Decree no. 26 (Decree, 2004), where it establishes “the mining owner and the operator will take precautions to limit

emissions of dust for atmosphere, use water or adopt other suitable methods to contain dust." Additionally, article 7 of Decree no. 18 (Decree, 2004) establishes that "the fundamental parameters that must characterize air quality so that it maintains in self-purification capacity and does not have a significant negative impact on public health and ecological balance."

In the areas affected by coal mining, I found that large tracts of land were abandoned without the necessary care such as the replacement of vegetation, thus causing soil erosion. It is for this reason that, in several countries, legislation was created obliging mining companies to recover areas degraded. If the requirements are met, it is possible to recover the soil and continue with reforestation or even make it suitable for agriculture. In this way, the landscape, once affected by mining, is also restored.

***People's right to health***

The quality of life of the population is also foreseen in paragraph 1 of article 117 of the Constitution of the Republic of Mozambique (Constitution, 2004), which establishes that "the State promotes initiatives to ensure ecological balance and conservation and preservation of the environment aiming to improve the quality citizens' lives". It is up to the Ministry of Land and Environment (MTA – *Ministério da Terra e do Ambiente)*, through the General Inspectorate, to activate legal mechanisms to, in coordination with the competent entities, embargo, order the destruction of works or cancel activities that degrade the quality of the environment, in accordance with paragraph h) of Ministerial Diploma no. 259.

In addition to the problem of pollution of water, mining also puts water availability at risk, as it uses enormous amounts of water to remove impurities contained in coal. The open-pit mining method contributes mainly to the contamination of water with chemical products produced, direct intervention in the destruction of aquifers, production of enormous volumes of waste and emission of carbon dioxide into the atmosphere. It also leads to the diversion of rivers that previously served communities, invasion and destruction of forests, and the destruction of natural public water supply sources.

## 8.3. Environmental and minerals inspections

Knowing that mining activities will always produce negative externalities, the government and parliament have defined rules to be followed. The rules are in regulations that need to be enforced by the companies. One of the mandatory tasks to be undertaken is inspection that is conducted by the General Inspectors of Mining (*Inspecção Geral de Recursos Minerais e Energia*) and the General Inspection of Environment (*Inspecção Geral do Ambiente)*.

In 2004, the government of Mozambique approved Decree No. 26/2004 that establishes environmental norms for the mining activities. Two years later, another decree – Decree No. 11 (Decree, 2006) – was approved, establishing that:

> a) environmental inspection of environmental licensing of any activity, to verify its compliance with the environmental protection standards;
>
> b) supervision of actions of environmental audit and monitoring, in order to confirm whether the recommendations for a possible environmental audit were accepted or to evaluate the state of the environment itself where those actions have not been carried out;
>
> c) monitoring compliance with mitigation measures proposed within the scope of the impact assessment process environmental, with a view to reducing or suppressing the negative effects of any activity on the environment

Previous studies have criticized the understaffing and underperforming of the inspections. For instance, (Dias, 2018) and (Serra & Cunha, 2018) lament the fragility those inspectorates live in. they highlight difficulties in creating an effective inspection service, of which the following aspects stand out:

> a) lack of three categories of resources: human, to carry out inspections, and the lack of training of a substantial part of the existing staff; logistical to carry out such inspection; and financial, taking into account the difficulties that the country is currently experiencing, which leads to dependence on support from international organizations;
>
> b) latent corruption at different levels of power, bearing in mind that the offenders are often politically and financially powerful people;
>
> c) the low salaries earned by supervisory agents, in addition to the lack of various benefits, which in no way supports the strict fulfillment of their respective duties.

The three aspects mentioned in lines a, b and c above are not deficiencies of the inspection model. They are part of the model. Inspections are *ex-post* activities,

meaning that they only take place after the mining activity has taken place, and are reactive and not proactive.

***The law on access to information***

Mining companies are expected to undertake monitoring activities, produce reports and share them with the stakeholders. The problem in Tete is that the companies never share that information. As a result, civil society organization *Justiça Ambiental* (JA!) sued Vale in 2019 for refusing to share the results of the environmental monitoring exercise. The court papers filed by JA! Were based on the Law of Access to Information - Law No. 34/2014 of 31st December.

As a former Marxist-Leninist country, with a single party and no freedom of expression, Mozambique only approved a law on access to information in 2014. The approval took nine years after the submission of the proposal.

The Mozambican chapter of the Media Institute of Southern Africa (MISA) submitted the initial draft to parliament in 2005. The law regulates the exercise of the right to information for the democratic participation of citizens in public life. It determines the obligation to provide information held by state bodies and institutions and their respective representations abroad, local authorities and private entities whose activities are of general interest or which benefit from public resources. Institutions holding information have up to 21 days to provide the information, although there are some restrictions.

***Who has the right to information?***

Under the approved law, every citizen has the right to request and be provided with information of interest and in the public domain. Legal entities also enjoy the right to information, including social organizations, associations and media bodies.

***How to access information?***

The request for information is made orally or in writing to the manager or civil servant with competences for this purpose. The applicant is not obliged to substantiate the reasons for the request. However, the law establishes the obligation to make written requests in the following cases: when it concerns official correspondence; information relating to service matters, except if the request is intended for civil or criminal

proceedings based on the same information, subject to the principles of respect for the Constitution and human dignity; information given by employees about other employees, unless authorized in writing by the employee to whom they refer; any pieces of disciplinary proceedings, investigations or investigations in the investigation phase; matters relating to investigation or police diligence.

***Impeachment***

If the request for information is rejected, an objection may be made. The administrative challenge is made within a period of five days, counting from the date of notification, or by hierarchical appeal, within a period of ninety days, counting from the date of notification of rejection; the hierarchical appeal must be decided within fifteen days. The judicial challenge is made through contentious appeal for annulment; subpoena for information, process consultation and issuance of certificates; or subpoena from an administrative body.

***Restrictions and limits***

The law determines a set of restrictions in the following cases: state secrets; justice secret; information held by the public administration received subject to confidentiality in the context of relations with other states or international organizations; professional secrecy; banking secrecy, except in cases where specific legislation allows access; personal data contained in electronic files held by public or private authorities; within the scope of special measures to protect victims, whistleblowers and witnesses; information regarding the private life and privacy of citizens; commercial or industrial secret; secrecy relating to literary, artistic or scientific property; information relating to a criminal, disciplinary or other proceeding, when its disclosure could harm the ongoing investigation and other constitutionally enshrined principles and scientific or technological research and development projects whose secrecy is essential to the security of society and the state.

***What is a "state secret"?***

Within the scope of the law, "state secret" is understood as: "data, information, materials and documents, regardless of their form, nature and means of transmission, which have been assigned a level of security classification and which require protection against unauthorized disclosure, knowledge of which by unauthorized

persons is likely to endanger or cause damage to national independence, unity, State integrity and internal and external security".

Both company representatives and government officials have used the above provisions to deny access to information on the coalmining projects, even though the approval of the law made it easier and legal for civil society organisations and ordinary citizens to demand information from the extractive companies.

The Administrative Court (*Tribunal Administrativo*), through Ruling No. 130/2020, of December 30, 2020, referring to case No. 26/2020, first ruled in favour of Bar Association , concluding that "the information sought cannot be classified as confidential" since "it has to do with mining operations, namely whether or not they are harmful to the environment" and also reiterated that "the Constitution of the Republic defines the environment as a citizen's right and determines everyone's duties to with this right." VALE appealed this decision.

The Mozambique Bar Association (*Ordem dos Advogados de Moçambique*), in turn, requested the court to subpoena the mining company VALE Mozambique to make available various information of public interest, including the Memoranda of Understanding (MoU) and other agreements signed between the government, VALE Moçambique and the affected communities. Among other details, the Bar Association also requested information regarding the total value of taxes paid by VALE to the Mozambican state, and information about the ongoing resettlement processes.

The Mozambique Bar Association requested the following the information:

1 Memorandum of Understanding signed between the Government, Vale Mozambique and the communities affected by the project in question, as set out in paragraph 2 of article 30 of Law no. 20/2014, of 18 August (Mining Law);
2 All agreements signed with communities and/or for their benefit;
3 Comprehensive and detailed information on the current stage of payment of compensation and/or compensation paid to affected communities, including potters whose workshops were destroyed as a result of the mining concession granted to Vale;
4 Report on the payment of compensation and/or compensation paid to families affected by Vale Mozambique's activity in Moatize, in the context of mineral coal exploration;
5 Information on the current stage of the resettlement process of communities affected by the project and resolution of demands presented by communities;

6 Information on the guarantees of subsistence, income generation and food security of the communities affected by Vale's investment in the exploration of the mineral coal in question;
7 Information on the total value of taxes paid by Vale Mozambique to the Mozambican State, as a result of the extraction of mineral coal carried out by Vale, in the period from 2013 to 2019;
8 Information on the conflict resolution or complaints mechanism of affected communities (Operational Grievance Mechanism), existing at Vale Mozambique;
9 Information about the social responsibility activities carried out by Vale, for the benefit of the communities affected by the project.

In its decision, the Administrative Court made the following ruling:

> Affected families have the right to directly benefit from the enterprise in question and its socio-economic and cultural impacts from the exploration of mineral coal by VALE MOÇAMBIQUE, S.A, as is clear from the provision contained in paragraph e) of article 4 of Decree no. 31/2012, of 8 August, which approves the Regulation on the Resettlement Process Resulting from Economic Activities. In addition, this depends on knowledge and participation in this Moatize mineral coal exploration project, which is only possible through the exercise of the right to information, which is being stubbornly violated by the aforementioned mining company.
>
> VALE MOÇAMBIQUE, S.A must comply with the law and provide the requested information in order to contribute to a better perception by society of its commitments within the scope of the mineral coal exploration project it is carrying out in Moatize.
>
> Thus, within the scope of its legal duties, namely “defending the Democratic Rule of Law, fundamental rights and freedoms…”; “promoting access to justice, in accordance with the Constitution and other legislation” and “…promoting respect for legality” – cf. paragraphs a), b) and d) of article 4 of the Statute of the Mozambique Bar Association, approved by Law no. 28/2009, of 29 September, the Mozambique Bar Association will continue to fight for the best defense of interests of those communities affected by mineral coal and, also, for VALE MOZAMBIQUE, S.A, to comply with the decision contained in Ruling No. 119/2020, of December 15th of the First Section of the Administrative Court.

The Administrative Court of the City of Maputo ruled in favour of the Mozambique Bar Association and ordered VALE to make the information in question available. Unsatisfied with this decision, VALE filed an appeal.

Once the case was processed and the allegations and counter-allegations presented were analyzed, the Advisory Judges of the First Section of the Administrative Court, through Ruling No. 119/2020, of December 15, 2020, referring to case No. 131/2020, at first decided to dismiss the appeal filed by the giant mining company, due to lack of legal basis to reverse the appealed decision, and agreed with the previous decision that condemned VALE for violating the right to information in the public interest.

The stance of the mining company VALE S.A. in relation to providing relevant information about its impacts is well known. Publicly, and in meetings, they always say that they are available to provide any information requested by citizens and civil society organizations, but they never do so.

In April 2021, during the General Shareholders' Meeting of VALE S.A. in Rio de Janeiro, Brazil, some company shareholders voted not to approve the management report, as it omitted important information about the venture in Mozambique. These shareholders also requested numerous documents of public interest, including documents requested by Mozambican civil society organizations regarding VALE Mozambique's activities in Moatize. Senior executives at the company promised to send the requested documents, and these promises were not fulfilled.

Despite such reluctance to inform the public about the real impacts of its activities, the company VALE strives to whiten its image and constantly claims to be a transparent, ethical and honest company.

***"Mozambican communities should have the right to say 'No to mining"***

According to one of my interviewees, Mozambican communities should be like the South Africans. They should have the right to say "No to mining." The fight for the right to say that does not intend to challenge the usual way in which mega-projects arrive in our countries, where public consultations or negotiations are normally held in the final stages of the project to agree on small details and compensations.

The right to say "No" is intended to bring about a significant change in the way affected people and civil society are brought into these debates. If the option to say "No" is on

the table, this is an indication that the people have power, and this opens up space to create real debates about the best development paths for the country and the local community.

The right to say “No to mining” began to be demanded in several popular struggles in communities directly affected by extractive projects, the negative impacts of which affect these communities. People lose their land, their means of subsistence, access to rivers and the sea, the ability to sustain themselves and survive. The environment is destroyed and the people who survive are devastated. Once all the coal is exhausted, the mining companies will leave just like Vale left, or perhaps without a substitute, leaving a trail of destruction and a huge debt for the state and the people. My interviewee summarised it in the following terms:

> For Mozambicans, perhaps the greatest reference to the right to say no is an inspiring struggle by a community in South Africa, in the Eastern Cape Province. Community association Amadiba Crisis Committee, together with a team of lawyers and a South African civil society organization, took its Ministry of Mineral Resources to court. In addition, they managed to get the high court to recognize that a titanium-mining project in that region could not proceed without the consent of the local community[43].

The Amadiba Crisis Committee mentioned by my interviewee is among the most powerful civic organisations not only in South Africa, but also in the region for being very persistent in defending their rights.

## 8.4. Conclusion

This chapter has presented and analyzed data on the environmental effects of Tete’s coal industry. The chapter has also presented the broad Mozambican environmental situation from 1980 to 2022, showing that the country is vulnerable to severe climate events.

As documented by the 2021 Global Climate Index Risk, Mozambique was the country African region most vulnerable to climate change. The Global Climate Risk Index indicates a level of exposure and vulnerability to extreme weather events, which

[43] Interview with an activist, a leader of a civil society organisation

countries should understand as warnings in order to be prepared for more frequent and/or more severe events in the future (United Nations, 2022).

For Mozambique, factors related to the localization geographical area of the country, with a long coastline, extensive lands lowlands where the deltas of 13 large regional rivers are located, makes the country vulnerable to natural disasters such as floods, cyclones, intense storms, but also droughts. Thus, coal extraction, deforestation and other invasive economic activities are no accidents, but rather part of a wider and long-term economic approach.

The chapter has also shown the effects of a weak bureaucracy like the Mozambican hosting mining giants like Vale, without the necessary preparation. Contested in court, Vale was condemned by the Administrative Court, but at the end, the company left the country without complying with the court ruling.

# CHAPTER 9 – CONCLUSION: MY CONTRIBUTION TO KNOWLEDGE

I formulated this thesis' research problem as follows:

> *The country faces a paradox of the co-existence of massive coal exploitation and exports and persistent levels of poverty and unemployment. The logical expectation would be an improvement of the living standards because of coal extraction and exports. However, coal and gas exploitation has not brought development.*

This paradox is takes various names depending on the school of thought: paradox of plenty, Dutch disease, resource curse or uneven development. I chose the last term and worked through it for being the most holistic – it implies digging for historical factors, reading political dynamics, and unpacking economic decisions to understand the paradox. It is therefore a multi-disciplinary stance – it requires knowledge about history, politics and economics. It is the most philosophical, and is hence more nuanced than the other approaches.

To unpack the above cited research problem, I defined one main (driving) research question: *What are the socio-economic and political factors and conditions of the industry coal that shape Mozambique's uneven development trajectory?*
That main question required sub-questions to be constructed. I, therefore, posed the following two intertwined sub-questions:

i How do socio-economic factors of the Tete province coal industry contribute to Mozambique's uneven development?
ii And similarly, how do environmental factors of the Tete province coal industry contribute to Mozambique's uneven development?

I have responded to those questions by constructing a narrative divided into eight successive chapters. Starting from the background in the introductory chapter, passing by the trajectory of Mozambique's extractive industry, I moved into a review of literature, before inquiring into the financial and non-financial contributions of Tete's coal mines.

I have demonstrated throughout this thesis that beyond the coal industry and apart from the extractive industry, the Mozambique's uneven development can only be understood by looking at the main internal factors: social and economic ones. I have also established the link between the political trajectory and outcomes of the elections with the economic behaviour. As I ask: can we expect that a political party or a leader that does not respect the voters' will (in other words, share political power) to share economic power, financial resources and well-being?

**My contribution to knowledge**

This thesis contribution to knowledge is that various socio-political, historical and environmental factors shape the economic outcomes of the coal industry in Mozambique. Tete's coal industry is generating uneven development in Mozambique. By doing so, it is perpetuating the already existing developmental path followed by the successive governments of Mozambique since the country's independence in 1975 and after the civil war in 1992.

Such factors cannot be understood separately. This is the reason why, using a political economy lens, this thesis has tackled historical factors linking them to the country's political and democratic dynamics. The historical and political dynamics would make no sense without the analysis of their connection with the economic decision. The strategic plan ENDE is a good illustration.

Contrary to other studies, this thesis merges history, politics and economics in a single, complex but meaningful analysis of how and why Mozambique's massive foreign direct investment channeled to the extractive sector does not produce the desirable developmental outcomes.

I have demonstrated in this thesis that in terms of economic governance (GDP projections and social sectors, Human Development Index and education) Mozambique is an uneven economy. Those are internal factors of uneven development.

While the mining companies usually present resettlements as an "opportunity for local development", in this thesis I have found that, in reality, resettlements are sources of multiple conflicts. In the case of Tete, the conflicts seem to be endless, as I have documented in chapter 5.

Mining linkages are believed to be an optimal solution to the problem of mining's capital intensive and creation of little employment. The work of economist such as Albert Hirschman provide the grounds to that sort of framework as I have detailed in chapter 6. However, in the case of Tete, such linkages have not been created. As a result, Tete's coal mines provide limited benefits to the economy.

Financial contributions of the coal industry to the national economy are also limited. The data and analysis I have presented in chapter 7 show that Mozambique is not benefiting from the coal industry as it was supposed to. The reasons for that situation are various, but the main ones are three. Firstly, the fiscal regime that is too generous to the coal companies in detriment of the national treasury. Secondly, lack of a national development strategy that is independent from the extractive industry impede the government to develop non-mineral sectors such as agriculture and food production. Lastly, deriving from the second reason, the government fails to deal with the coal industry just as one among other industries that exist in Mozambique.

Notably, a simulation of how the various provinces of Mozambique will look in 2043 has shown no change. If the current development model, the current institutional set up and the current management practices remain unchanged, we must know that today's gaps between provinces will not be resolved. The Mozambican economy will continue to be dependent, creating and exacerbating unequal opportunities among Mozambicans.

This thesis differs from others that have studied the same topic (Tete's coal) in its approach and results. While other thesis have focused only on one aspect to understand the dynamics of the coal industry, such analysis is only one among others in this thesis. For example, the 2018 doctoral thesis by Viriato Caetano Dias, defended in Portugal at the University of Évora, looked at the relationship between natural resources and democratic development in Mozambique (Dias, 2018)

Another 2018 doctoral thesis defended at the UK University of Manchester by Gedeminas Lesutis, inquired into the connection between neoliberal enclavisation and the production of precarity among the communities affected by the coalmining projects (Lesutis, 2018). In this thesis, the analysis of such a connection is only one aspect (presented thoroughly in chapter 5).

In 2019, there was another doctoral thesis, defended jointly at the Danish Roskilde University and The Institute of Resource Assessment, University of Dar es Salaam, by Celso Monjane. It investigated the political economy of the commodity-based linkages using the Tete's coal sector as a case study (Monjane, 2019). Monjane's core element of study – the linkages – is only one among several of mine. I dedicate chapter 6 of this thesis to an analysis of the linkages framework.

Different from others, this is a holistic thesis, which has looked at all relevant elements of the coal industry, from resettlement to linkages to economic contributions, including political factors and environmental effects. This is a multidisciplinary thesis.

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# Annexes

## Annex 1: Ethics Protocol

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Research Office

**HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)**
R14/49 Selemane

| | |
|---|---|
| **CLEARANCE CERTIFICATE** | **PROTOCOL NUMBER: H20/09/51** |
| **PROJECT TITLE** | The political economy of the coal industry in Mozambique |
| **INVESTIGATOR(S)** | Mr T Selemane |
| **SCHOOL/DEPARTMENT** | Governance/ |
| **DATE CONSIDERED** | 18 September 2020 |
| **DECISION OF THE COMMITTEE** | Approved<br>Risk Level: Minimal |
| **EXPIRY DATE** | 22 March 2024 |
| **DATE** 23 March 2021 | **CHAIRPERSON** J-Knight (Professor J Knight) |

cc: Supervisor : Prof E Mccandless and Dr C Mapitsa

**DECLARATION OF INVESTIGATOR(S)**

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to submit an amendment of the protocol to the Committee. **I agree to completion of a regular progress report. For Minimal and Low studies, this is due annually on 31 December. For Medium and High Risk studies, this is due twice annually on 30 June and 31 December.**

Signature 23,03,2021 Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

# Annex 2: Confirmation letter from WSG to potential interviewees

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

WITS SCHOOL OF GOVERNANCE
UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

**Research Office:**
Sithembile Xaba
Tel: 011 717 3133
Email: sithembile.xaba@wits.ac.za

Research Director:
Professor Pundy Pillay
Tel: 011 717 3808
Email: Pundy.Pillay@wits.ac.za

7 December 2020

**To whom it may concern**

I hereby confirm that Mr. Thomas Selemane (683540) is a PhD student at the University of Witwatersrand's School of Governance. The title of his research is "The political economy of the coal industry in Mozambique".

Mr. Selemane (Student no. 683540) is currently working on his research.

Should you need additional information please feel free to contact me.

Sincerely,

**Professor Pundy Pillay**
**Research Director**

# Annex 3: Consent letter from the Ministry of Mineral Resources and Energy – MIREME

REPÚBLICA DE MOÇAMBIQUE
**MINISTÉRIO DOS RECURSOS MINERAIS E ENERGIA**
**INSPECÇÃO GERAL DOS RECURSOS MINERAIS E ENERGIA**

**Exmo Srº Thomas Sulemane**

**Maputo**

Nota nº 75/GIG/IGREME/02-11/2021 Data 18/02/2021

**Assunto:** Solicitação de entrevista para tese de Doutoramento em Economia de Recursos Minerais

Em resposta ao vosso pedido através da carta datada de 16 de Fevereiro do ano em curso, na qual solicita uma entrevista para tese de Doutoramento em Economia de Recursos Minerais com o Inspector Geral dos Recursos Minerais e Energia, vimos por meio desta Informar que há disponibilidade para a relização do encontro numa data a anuciar.

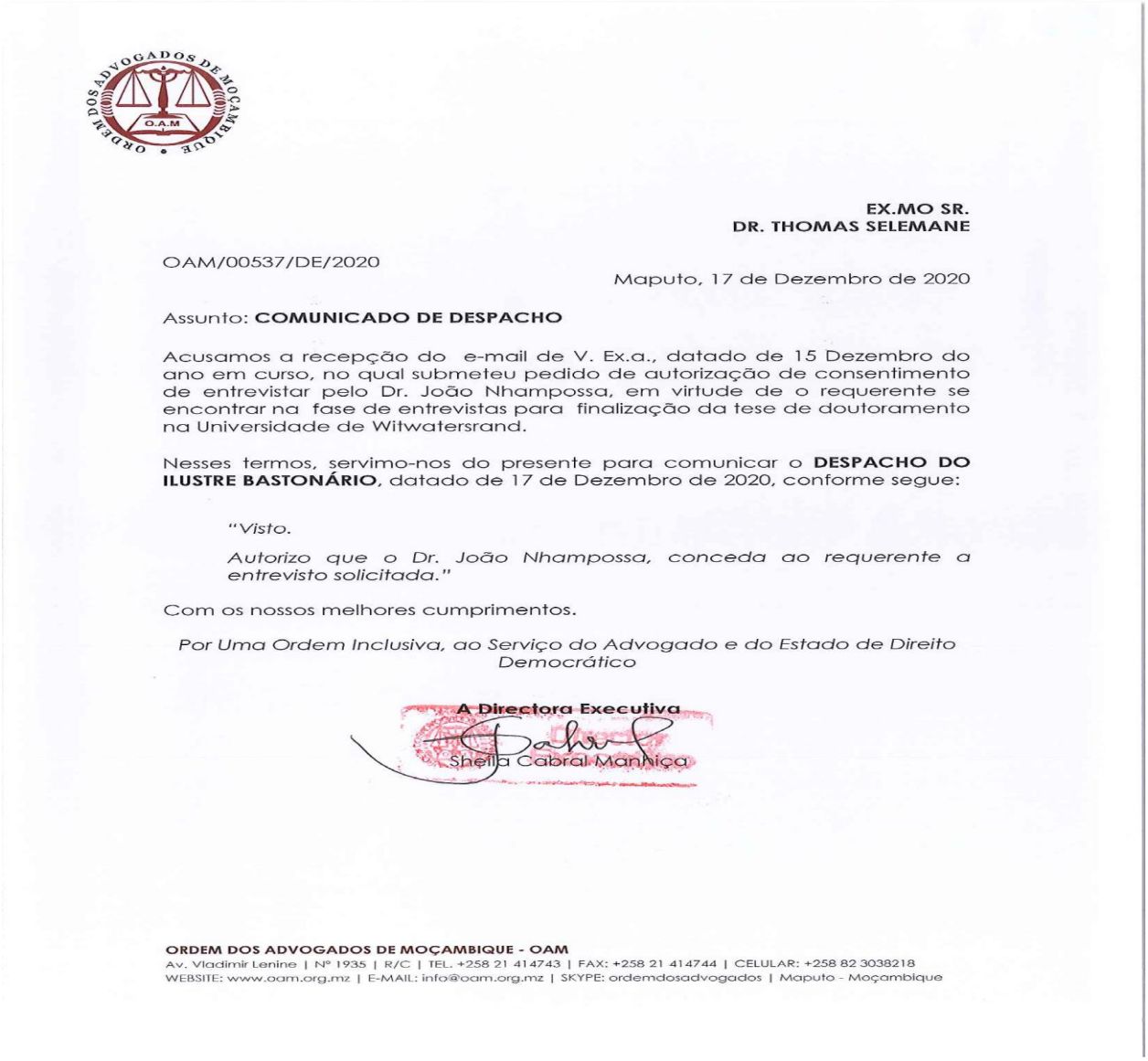
Melhores Cumprimentos,

**O Inspector-geral**
**Eng. Obete Matine**
**(Especialista)**

*ec*

*Praça 25 de Junho nº 380, 10º – 11º, CP 2904, Celular 82 333 6444 Maputo* *Normal*

# Annex 4: Consent letter from the Bar Association



**EX.MO SR.**
**DR. THOMAS SELEMANE**

OAM/00537/DE/2020

Maputo, 17 de Dezembro de 2020

Assunto: **COMUNICADO DE DESPACHO**

Acusamos a recepção do e-mail de V. Ex.a., datado de 15 Dezembro do ano em curso, no qual submeteu pedido de autorização de consentimento de entrevistar pelo Dr. João Nhampossa, em virtude de o requerente se encontrar na fase de entrevistas para finalização da tese de doutoramento na Universidade de Witwatersrand.

Nesses termos, servimo-nos do presente para comunicar o **DESPACHO DO ILUSTRE BASTONÁRIO**, datado de 17 de Dezembro de 2020, conforme segue:

*"Visto.*

*Autorizo que o Dr. João Nhampossa, conceda ao requerente a entrevisto solicitada."*

Com os nossos melhores cumprimentos.

*Por Uma Ordem Inclusiva, ao Serviço do Advogado e do Estado de Direito Democrático*

**A Directora Executiva**

Sheila Cabral Manhiça

**ORDEM DOS ADVOGADOS DE MOÇAMBIQUE - OAM**
Av. Vladimir Lenine | Nº 1935 | R/C | TEL. +258 21 414743 | FAX: +258 21 414744 | CELULAR: +258 82 3038218
WEBSITE: www.oam.org.mz | E-MAIL: info@oam.org.mz | SKYPE: ordemdosadvogados | Maputo - Moçambique

# Annex 5: Consent letter from the Catholic University of Mozambique

Universidade Católica de Moçambique
Faculdade de Gestão de Recursos Naturais e Mineralogia, em de Tete
Cidade de Tete
Moçambique

À Universidade de Witwarsrand,
Parktown, Joanesburgo
África do Sul

**ASSUNTO: Aceitação de entrevistas ao senhor Thomas Selemane**

A Universidade Católica de Moçambique, Delegação de Tete, vem por este meio informar à Universidade de Witwatersrand que recebeu um pedido de entrevista do senhor Thomas Selemane, candidato a Doutoramento nessa universidade, e anuimos o seu pedido. Assim, o senhor Selemane poderá entrevistar docentes e pesquisadores da nossa universidade, nomeadamente o padre Elton Laissone, docente e pesquisador nesta universidade, que tem trabalhado o assunto dos mega-projectos de mineração em Tete.

Atenciosamente,

UNIVERSIDADE CATÓLICA DE MOÇAMBIQUE
FACREMM
A(O) DIRECTORA (O) PEDAGOGICA(O)

# Annex 6: Consent letter from CSO based in Tete - AAAJC

Associação de Apoio e Assistência Jurídica às Comunidades – AAAJC

Cidade de Tete

Moçambique

À Universidade de Witwarsrand,

Parktown, Joanesburgo

África do Sul

**ASSUNTO: Aceitação de entrevistas ao senhor Thomas Selemane**

Nós, Associação de Apoio e Assistência Jurídica às Comunidades – AAAJC – somos uma organização cívica baseada em Tete, com trabalho focado na monitoria da indústria extractiva, nomeadamente exploração do carvão mineral, outros minérios, incluindo florestas. O nosso trabalho é feito com as comunidades afectadas por essas explorações mineiras.

Servimo-nos da presente carta para confirmar à Universidade de Witwatersrand que recebemos um pedido de entrevista do senhor Thomas Selemane, candidato a Doutoramento nessa universidade, e anuimos o seu pedido.

Atenciosamente,

Rui Caetano de Vasconcelos



# Annex 7: Consent letter from University of Cambridge

UNIVERSITY OF CAMBRIDGE
Department of Geography

**Dr Gediminas Lesutis**
Research Associate

19th February 2021

To:
Witwatersrand University
Parktown, Johannesburg
South Africa

**Re: Research Interview with Thomas Selemane**

Dear Sir / Madam,

I am writing to confirm my availability to be interviewed about my research expertise on the political economy of extractivism in Mozambique by Thomas Selemane as part of his research for a PhD thesis *The Political Economy of the Coal Industry in Mozambique.*

Yours faithfully,



Dr Gediminas Lesutis
Research Associate in Geography
University of Cambridge

# Annex 8: Consent letter from Federal University of Rio de Janeiro

MINISTÉRIO DA EDUCAÇÃO
UNIVERSIDADE FEDERAL RURAL DO RIO DE JANEIRO
INSTITUTO DE CIÊNCIAS HUMANAS E SOCIAIS - DEPARTAMENTO DE DESENVOLVIMENTO, AGRICULTURA E SOCIEDADE

À Universidade de Witwarsrand
Parktown, Joanesburgo
África do Sul

Rio de Janeiro, 17 de fevereiro de 2021.

**Carta de Aceitação de entrevista ao senhor Thomas Selemane**

Eu, Karina Yoshie Martins Kato, professora da Universidade Federal Rural do Rio de Janeiro (UFRRJ) e do Programa de Pós-Graduação de Ciências Sociais em Desenvolvimento, Agricultura e Sociedade (CPDA), confirmo o interesse em participar da entrevista com o pesquisador Thomas Selemane. Confirmo também a autorização de minha instituição para que a referida entrevista seja realizada.
Fico à disposição para agendarmos a entrevista.

Cordialmente,

Karina Kato.
Prof. Karina Yoshie Martins Kato
CPDA/UFRRJ
Mat. 2216379

Karina Kato
(CPDA – ICHS/UFRRJ)

# Annex 9: Consent letter from the Brazilian Institute of International Relations

Instituto de Relações Internacionais PUC-Rio

Rio de Janeiro, January 6th 2021

To the University of Witwatersrand

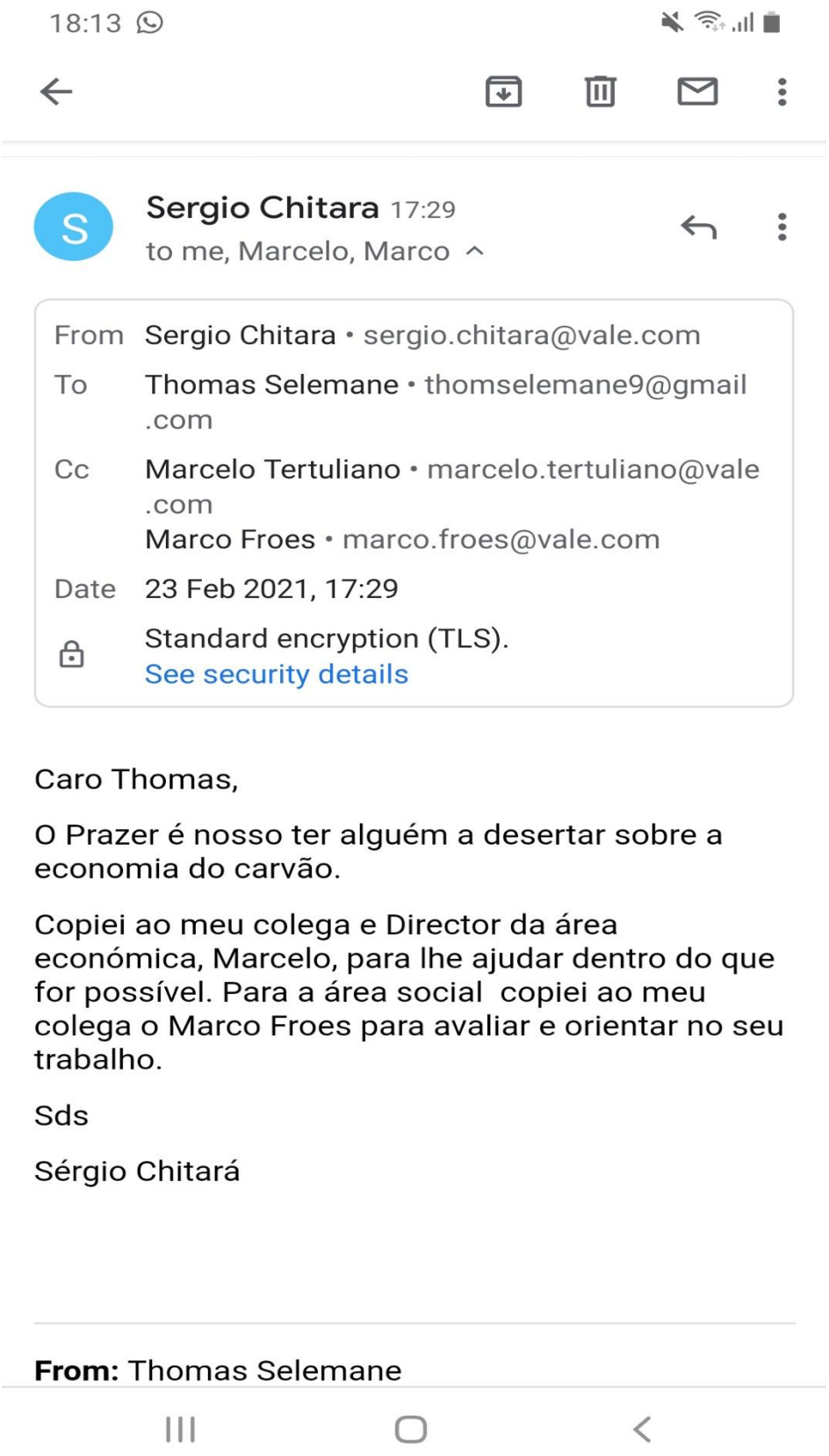
Johannesburg, South Africa

As the director of the International Relations Institute of PUC-Rio, I authorize professor Dr. Ana Saggioro Garcia to be interviewed by Thomas Selemane, PhD candidate at the University of Witwatersrand's School of Governance, for his dissertation research entitled "The Political Economy of the Coal Industry in Mozambique". The date of the interview should be set directly with Dr. Garcia.

Sincerely,

Luis Manoel Fernandes
Director of the International Relations Institute
Pontifical Catholic University of Rio de Janeiro
Brazil

## Annex 10: Consent letter from VALE



18:13

**Sergio Chitara** 17:29
to me, Marcelo, Marco

From Sergio Chitara • sergio.chitara@vale.com
To Thomas Selemane • thomselemane9@gmail.com
Cc Marcelo Tertuliano • marcelo.tertuliano@vale.com
Marco Froes • marco.froes@vale.com
Date 23 Feb 2021, 17:29
Standard encryption (TLS).
See security details

Caro Thomas,

O Prazer é nosso ter alguém a desertar sobre a economia do carvão.

Copiei ao meu colega e Director da área económica, Marcelo, para lhe ajudar dentro do que for possível. Para a área social copiei ao meu colega o Marco Froes para avaliar e orientar no seu trabalho.

Sds

Sérgio Chitará

**From:** Thomas Selemane

# Annex 11: Participant Information Sheet

**PARTICIPANT INFORMATION SHEET - STAKEHOLDERS**

Maputo, Mozambique

Greetings,

I am Tomás Mário Selemane, a PhD student at Wits School of Governance, University of the Witwatersrand, in Johannesburg, South Africa. I am conducting research on "The Political Economy of the Coal Industry in Mozambique." The research aims at understanding Mozambique's coal industry in socio-economic and environmental terms.

I have obtained the relevant permission to contact you and inquire about you willingness to participate in this research.

As a relevant stakeholder of the coal industry in Mozambique you are invited to take part in interviews which will consist of generic and open questions regarding coal endowments (quantity and quality), supply chain, exploration plans as well as medium and long-term development coal-based strategies. The interviews will take between 30 and 60 minutes. The interviews will not be recorded, the researcher will take notes.

Potential respondents are free to refuse in participating in the study. They are also free to withdraw at any time without any loss of benefits. Potential respondents' confidentiality can be guaranteed as the information they will provide will at the end be summarised in an aggregate form through categorization and codification with no identification of respondents' details.

Given the context of COVID-19 pandemic and the need for physical distancing, the interviews will be conducted by telephone call, Zoom or Skype.

Thank you for considering participating. Should you have any questions please do not hesitate to contact me at thomselemane9@gmail.com or +258 82 42 84 050

Sincerely,
***Tomás M. Selemane,***
***Wits School of Governance***
**University of the Witwatersrand**
**CC: *Supervisors:*** Prof Erin Mccandless: erin.mccandless@wits.ac.za and Dr Caitlin Mapitsa: Caitlin.Mapitsa@wits.ac.za

# Annex 12: Research Instruments

**INTERVIEW STRUCTURE - Guidance**

Each interview will follow a flexible structure intended to cover the following:

a *Introduction of the researcher*
b *Presentation of the research's rationale, objectives and a reminder of the rights the interviewee has*
c *Introduction of the interviewee*
d *The researcher poses the questions in a conversational mode, recording everything, following the sequence of questions indicated in A to E.*
e *Concluding remarks where the researcher asks the interviewer to say any additional relevant aspect that has not been asked.*

**A GOVERNMENT REPRESENTATIVES**

1 How do you explain the primacy given to the coal industry in Mozambique's development?
2 What are the main gains and challenges of coal extraction in Mozambique?
3 Does government acknowledge the competing ends between coal extraction, food production and other economic activities? If so, what is done?
4 There is a wide range of national and international criticism against coal extraction. Does government see that criticism as helpful, malicious or indifferent?
5 Is government aware of the environmental effects caused by coal extraction? What ways forward are being considered?

**B COAL MINING COMPANIES (Vale and ICVL)**

1 What factors made your company to come to Mozambique instead of going to other countries with huge reserves of coal?
2 What would you say are the major contributions of your industry to Mozambique?
3 How do you see the generalized criticism against coal extraction in Mozambique and worldwide?
4 Coal is said to be a dirty energy source. What do you say will be the future of the industry?

**C CIVIL SOCIETY ORGANISATIONS**

1 How did you get involved in working around coal mining issues?
2 What do you think have been the main challenges and victories in your advocacy work?
3 How does Government and coal mining companies perceive your work?

4 What do you think are the solutions to the environmental damages provoked by coal extraction?

## D COMMUNITIES' REPRESENTATIVES – TRADITIONAL LEADERS

1 How do you assess the presence of coal mines in your community?
2 What gains and losses do you see as resulting from coal extraction?
3 Can you mention any changes in terms of livelihood of your community pre and post coal mines presence?
4 How do you interact with government regarding your concerns arising from the presence of the coal industry?
5 How do you interact with the coal companies regarding your concerns about the damages created by them?
6 What do you think are the main strengths and weaknesses of your resistance to coal extraction?

## E ACADEMICS AND EXPERTS

1 Can the coal industry be seen as "one of" the solutions to Mozambique's underdevelopment?
2 Who do you think are the winners and losers of coal extraction?
3 How do you see the coal industry in terms of benefits and negative effects to Mozambique's economy and environment?
4 Is there any matching between the country's development strategy and the multinationals' interests?
5 What do you think are the solutions to the environmental damages provoked by coal extraction?