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2024

University of the Witwatersrand, Johannesburg

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AN ASSESSMENT OF THE ANGOLAN MINERAL TAXATION REGIME: CONSIDERATIONS FOR POSSIBLE IMPROVEMENTS ON GOVERNMENT´S REVENUE

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MSc (50/50)	MSc by Research Only	PhD
X		

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A research report submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Masters in Engineering.

DECLARATION

I have familiarised myself with the University of the Witwatersrand Student Academic Misconduct Policy (SAMP). I hereby declare that the work I am submitting for assessment is my original work. I affirm that I have not plagiarised, misrepresented, or colluded with any other person or source. I have properly acknowledged, cited, and referenced all the sources that I have used in my work. I also declare that I have used artificial intelligence (AI) tools only as a means of guidance. The ideas and arguments presented in my work are my original thoughts and interpretations. I acknowledge that any academic misconduct, such as plagiarism or collusion will result in serious consequences. These consequences may include a reduced grade, a fail mark, or disciplinary action according to the SAMP. The School of Mining Engineering has my consent to investigate any potential academic misconduct in my work. This investigation may include the use of similarity and AI detection software to check the originality of my work. I undertake to abide by the decision of any such investigation.



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ABSTRACT

Angola is host to 36 of the 51 critical minerals in the world and ranks third in mineral exports, totalling over USD 1 billion in 2020, and third in diamond production; Botswana and South Africa hold the top two slots, respectively. These untapped opportunities make the Angolan mining industry an excellent place to invest despite the mining industry contributing less than 1% to GDP and has yet to become a driver of economic diversification. In June 2022, Angola joined the EITI, bringing a welcome improvement in the transparency of the sector´s governance and reform, intended to attract new investors.

The study evaluates the effectiveness of the Angolan mineral fiscal system as a tool for maximising revenue for the benefit of its citizens and securing investment (local and foreign) to promote linkages and broad-based national growth and development. Four objectives were examined in this study: (i) Conduct a situational analysis of the current fiscal regime through a comparative analysis of headline rates in regional and international countries; (ii) Qualitative evaluation of the effectiveness and efficiency of the mineral fiscal regime; (iii) Analyse the tax revenues raised by the mining industry between 2011-2021; (iv) Make possible recommendations to improve the current mining tax regime.

The study employed a descriptive survey design with a qualitative and quantitative approach for data collection and analysis. The main findings include: (i); Angola's political economy setting resembles that of a hegemonic government characterised by an institutionalised one-party regime whereby the implications on the mineral fiscal regime are multifaceted, affecting investment, regulation, revenue sharing, and sustainability; (ii) Both mineral royalty and corporate income tax rates, are within regional and international norms and have consistently contributed a significant share of the government's direct tax revenues over the last eleven years; (iii) Prevailing fiscal regime can be improved through a combination of tax instruments such as resource rent-tax or profit-based royalty with a basic ad valorem tax system; (iv) However, Angola’s primary challenges point to a possible absence of enforcement and compliance mechanisms for both the mining code

and the sector fiscal framework, as well as the need to strengthen government agency capacity to oversee and gather fiscal contributions from the sector.

In light of these findings, it is recommended to (i) Improve the sector's mining code and fiscal legislative framework and enforce it; (ii) Conduct a study to analyse the effects of all government taxes (direct tax, indirect tax and non-tax instruments and tax incentives) on both the industry and the government´s treasury; and (iii) Conduct further studies on the proposed optimal mineral fiscal regime.

Finally, an effective, efficient, and transparent mineral fiscal system can only exist first and foremost through intentional collaboration and alignment of objectives among the sector’s stakeholders.

List of Abbreviations

AMV Africa Mining Vision

AETR Average effective tax rate

AGT General Tributary Agency

ARNM National Agency of Mineral Resouces

BEPS Base erosion and profit shifting

CGT Capital Gains Tax

CIT Corporate Income Tax

CMV Country Mining Vision

ECA Economic Commission for Africa

IGEO Geological Institute of Angola

IISCD International Institute for Sustainable Development

FI Fraser Institute

FDI Foreign Direct Investment

IGF Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development

GDP Gross Domestic Product

MRRT Mineral Resource Rent

MINREMPT Ministry of Mineral Resource, Petroleum and Gas

MINFIN Ministry of Finance

MRRT Mineral Resource Rent Tax

NDP National Development Plan

OECD Organization for Economic Cooperation and Development

PIIM Integrated Plan for Municipalities Intervention

PIP Public Investment Program

RRT Resource Rent Tax

SIGFE Integrated State Financial Management System

TEFS Technical, Economic and Financial Feasibility Study

VAT Value-Added Tax

WHT Withholding Tax

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1 INTRODUCTION

1.1 Background of the study

Angola hosts 36 of the 51 most sought-after critical minerals, such as cobalt, copper, nickel, lead, graphite, lithium, and others, making mining an attractive investment sector (VerAngola, 2023). Despite a perceived competitive mineral fiscal regime for investment, mining revenue accounts for less than 1% of gross domestic product (GDP)

Hailu et al. (2014) and Barma et al. (2012) argued that governments' bargaining power and information asymmetry affect taxation and revenue. Risk, a factor in investment decisions, requires an appreciation of the mineral resources' characteristics, such as expensive exploration and development; high geological and technical risk; price volatility and uncertainty; resource exhaustion; difficulty in acquiring information and expertise in the extractive industry; and prominent political profile (Otto & Cordes, 2002). On the other hand, the political profile of resource-dependent countries affects the fiscal design by placing a premium on flexible fiscal regimes while reducing popular pressures on the government to renegotiate and investor worries over renegotiation.

Effectiveness and efficiency are the desired characteristics of a fiscal system whereby efficiency should enable a tax system to provide the government with the required financial resources whilst effectiveness ensures that the fiscal system meets all five tax system design principles (equity, efficiency, convenience, certainty, and flexibility) while optimising their trade-offs (Otto & Cordes, 2002). Royalties, corporate income taxes, and excess profit taxes are some of the tools that comprise mineral taxes. The typical issues such as tax design, time consistency, and revenue administration capacity are known to be typical issues for developing resource-rich countries because of:

- Complex and contradictory fiscal regimes with rates above or below the international average and multiple compensating tax incentives.
- Tax legislation that allows ad hoc negotiations that disregard formal rules and create significant loopholes for regulatory capture and revenue leakage; and
- Weak governance and low fiscal regime administration capacity (Barma et al., 2012).

Many resource-rich developing countries have large contracts with extractive companies that lock in low taxes and royalties or provide broad exemptions (Hailu et al., 2014). Since questionable

accounting practices can undervalue earnings to reduce tax payments for several years, such a situation makes assessing company profits more difficult (Sigam & Garcia, 2012). Scholars agree that an efficient fiscal regime displays the following traits: (i) Create a transparent fiscal policy; (ii) Create adequate fiscal instruments to meet the objectives set and their administration, with a clear and appropriate definition of cost-recovery provisions (depreciation costs, investment and exploration expenditure uplifts, capital allowances, and loss carry-forward limits); and (iii) ring-fence cost recovery across different activities or projects by the same taxpayer relative to the economic situation in the year (Hallanda et al., 2015).

1.2 Problem Statement

The mining sector in Angola is governed by the Mining Code (updated in 2011), which governs all activities related to geological and mineral resources in the country. Mining taxation occurs through a mix of royalties and corporate income tax, combined with various tax incentives schemes negotiated as part of the Mining Investment Contract on a project-by-project basis.

Diamond mining is the main activity conducted in the Northeast region of the country and the primary source of mineral fiscal revenue; however, it has yet to demonstrate any tangible correlation to the economic and social development of the local communities around the existing mining projects (Expansion, 2020; Rahman, 2022). This is despite recent efforts by the government to grant greater autonomy to provincial and municipal bodies in the process of collecting revenues and executing expenses, including through PIIM (Integrated Plan for Municipalities Intervention) and PIP (Public Investment Program) initiatives. To date, there is no publicly disclosed information on how much income from the mining activity has been invested back in the mining provinces and communities.

Thus, understanding the cost-benefits of the prevailing mineral tax regime is important since no study has ever been conducted to quantify and qualify the possible impacts of the existing mining fiscal regime on the government's ability to maximise revenue and meet the needs of citizens and investors. As a result, there is a high risk of amplifying the negative impact of tax incentives through fiscal stability provisions in Mining Investment Contracts, potentially cutting off the government's ability to correct possible mistakes or reviews, resulting in unexpectedly significant revenue losses. For the reasons mentioned above, it is important to analyse the Angolan mineral

fiscal system between 2011 and 2021 to understand the reasons associated with or impeding its efficiency and effectiveness.

1.3 Objective of Study

The focus of the study is on the effectiveness of the Angolan mineral fiscal regime in securing government revenue and attracting investment into Angola. The objectives of the study are to:

a) To undertake a situational analysis of Angola's current mining fiscal regime.
b) To evaluate the effectiveness and efficiency of the mineral fiscal regime.
c) To understand the extent to which the interests of the government and the investors are met.
d) To analyse the revenues raised and possible costs to the Angolan government from the prevailing royalties and related taxes.
e) Make recommendations for possible improvements to the prevailing mineral fiscal regime.

1.4 Research Questions

The research aims to answer the following questions:

a) What type of mineral fiscal regime design exists in Angola, and its objectives?
b) What is the government's revenue from the mineral fiscal regime?
c) How is the effectiveness and efficiency of the mineral fiscal regime in Angola measured?
d) What is the cost to the Angolan government with the current fiscal regime and tax incentive scheme?
e) Is the effective tax rate attractive for domestic and foreign investment?
f) What is the appropriate fiscal regime for the country?

1.5 Research Motivation

Three reasons led to opting for the theme. Firstly, this assumes particular importance in the current Angolan economic situation by filling in the knowledge gap in non-existing literature or research on the subject, since such analysis has not previously been conducted. Secondly, for the possibility of contributing, to understand the reasons that lead Angola – a country considered mineral rich – not to develop in consonance. Thus, to inform direct and indirect policy debates on

the mining fiscal regime and sector policy management in general by structuring an appropriate tax system to suit all relevant stakeholders in Angola's mining industry

1.6 Scope of Study

The scope of this study is limited to the existing mineral fiscal regime and recent fiscal policy changes affecting the Angolan mineral sector. Simultaneously, lessons from Sub-Saharan countries' mining sectors and international experiences are drawn where appropriate. Aspects such as resource pricing, revenue collection, management, environmental considerations, policy, and governance issues are primarily excluded because they require a different approach.

1.7 Brief Methodology

The study used descriptive qualitative and quantitative methods to attain the set objectives. This was the most appropriate method for its characteristics pointed out as particularly suitable. The research used both primary and secondary data. The primary data collection technique was in the form of a questionnaire and guided interviews with experts and inter-ministerial and private individuals to examine the stakeholder's views on the current mining tax regime and how it contributes to achieving the interests of both the government and the investors. The secondary data was obtained from the public domain and governmental institutions' websites concerning the mineral tax revenues up to 2021. The analysis of the information was carried out according to the objective of the study by means of content analysis. The results of the analysis of the interviews are presented through figures and tables and explanations in the context of the study and the main conclusions drawn.

1.8 Limitations of the study

The study's limitations include the following:

- The research aims and objectives may have been stated too broadly.
- The sample size may not have been large enough to produce accurate results since not all initially identified participants became available.
- Participants' responses may have been influenced by and limited to their personal experiences.
- Participants may provide contradictory and biased information on politically sensitive mining taxation issues; and

- Finally, because qualitative research is interpretative, the researcher's bias may be introduced into the analysis of the findings.

The potential implications of these research limitations include reduced generalizability of the findings, potential inaccuracies due to small sample sizes, and the possibility of biased or contradictory information. To address these limitations and ensure the credibility of the study and its findings, the following steps were taken: (i) Clearly define and narrow down the research aims and objectives to ensure they are specific and achievable to help in focusing the research scope and improving the precision of the findings; (ii) Attempt to increase the sample size by recruiting additional participants; (ii) Incorporate multiple data sources such as secondary literature, apart from the interviews conducted to triangulate the findings and reduce the risk of bias; (iv) Employed qualitative data analysis techniques such as thematic analysis to systematically identify patterns and themes in the data to help minimise the researcher's bias; (v) Report the limitations of the study in the research report to allow the readers to understand the context and potential biases of the findings.

1.9 Outline of Report

The study is organised into seven (7) chapters. Chapter one covers the introduction. Chapter two examines relevant literature on the subject. The literature review extends to Chapter Three, which presents the characteristics of mineral fiscal regimes applied in other countries and are compared against Angola and Chapter Four, which reviews the Angolan mineral fiscal regime to identify the gaps. Chapter five discusses the research methodology and approach to solving the research problem. In Chapter 6, the results, including the study's findings, are presented and analysed. Finally, conclusions and recommendations are covered in Chapter Seven.

2 LITERATURE REVIEW

2.1 Introduction

This chapter is divided into four sections. Section 2.2, which provides a conceptual overview of mineral taxation and its underlying theories, is a crucial starting point. This understanding serves as the cornerstone for comprehending the various taxation strategies used in the mining industry, detailed in Section 2.3. Section 2.4 explores the application of taxation in the mining sector, while the final Section 2.5 illuminates the framework for assessing the social and economic effects of mining activities.

2.2 The Theories of Taxation

2.2.1 Defining Taxation

For any government to be effective in its obligations, it must be efficient in revenue collection, most of which is acquired from taxation. According to Neumark et al (2018), taxation refers to charges imposed by the government on persons or entities. On the other hand, Mankiw et al.(2009) viewed taxation as the government's activity to raise revenue for its expenditures. In his view on taxation, Kagan (2019) defined it as the word used for the financial responsibilities imposed on citizens by authority, mainly the government through its agencies. These three definitions seem to agree that taxation refers to any charges that the government decides to impose on its citizens to get revenue to fund its mandates and obligations

2.2.2 Theories of Taxation

Before looking at some of the theories, it is worth highlighting the purpose of a tax system and the principles of a good tax system. A tax system aims to achieve three purposes (Avi-Yonah, 2005):

(i) Raise revenue for government activities so that it can be used for public expenditure;
(ii) Redistribution to mitigate unequal distributions of wealth in society; and
(iii) Support the economy to regulate private economic activity by promoting investment, creating jobs, short-term price stabilisation, controlling cyclical fluctuations, and helping the balance of payments.

The concept of taxation evolved in the great ancient empires, such as the Magna Carta, and has remained a significant revenue collection strategy for modern governments. The 18th-century economist and philosopher Adam Smith attempted to systematise the rules that should govern a rational taxation system. In *The Wealth of Nations* (Book V, chapter 2), he set down four general canons still widely accepted as providing a reasonable basis by which to judge taxes: (1) Economy: The cost of the collection must be low relative to the yield; (2) Certainty: The timing and amount to be paid must be specific to the payer; (3) Convenience: The means and timing of payment must be convenient to the payer and (4) Equity and Neutrality: Taxes should be levied according to the ability to pay. Modern economists (Bastable, 1903) have added more canons to these to update and extend them: (5) Productivity: Tax should be productive of large revenue. According to this canon, it is desirable to have a few taxes yielding large revenue rather than having a large number of taxes yielding small revenue; (6) Efficiency: A tax must not hinder efficiency or should involve the least loss of efficiency; (7) Sustainability: a tax should be on the basis that it does not deteriorate over time unless it is intended to be contemporary or to reduce certain undesirable behaviours; (8) Simplicity: Implies that the tax should be simple to understand even to a layman and (9) Elasticity: Tax should automatically adjust to changes in the rate of inflation. Thus, a good tax should meet most of these criteria.

Various theories have been advanced to explain the concept of taxation. In modern public finance literature, there have been two main issues: who can pay (Ability to Pay) and benefit (Benefit principle). These issues are pinned to two influential theories: Ability to pay theory presented by Arthur Cecil Pigou and the benefit theory developed by Knut Wicksell in 1896 and revised by Erik Lindahl in 1919.

The Ability-to-pay approach to taxation states that the burden of taxation should be distributed by the ability to pay – based on the concept of equal sacrifice. Sacrifice refers to the loss of utility incurred when tax payments are made. Under the benefit theory, the individuals who benefit the most from public services pay the most taxes. This view describes taxation as an obligation that each citizen should value and respect since it is the only way the government can fund its obligations to the citizens. The theory has been critical in examining the efficiency of fiscal regimes.

The ability-to-pay-principle identifies three types of tax systems: proportional, regressive, and progressive taxes. Proportional taxes require all taxpayers to pay the same fraction of their income, regardless of how much money they earn. By contrast, regressive taxes require high-

income taxpayers to pay a smaller fraction of their income than low-income taxpayers. Moreover, progressive taxes require high-income taxpayers to pay a more significant fraction of their income than low-income taxpayers.

In the theory of Optimal Income Taxation by Ramsey P. Frank theorised in 1927 that a system of taxation aims at achieving the desired revenue and distributing the income in a way that guarantees more efficiency. It proposes a system that ensures minimal interference with market stakeholders, thus ensuring optimal exchanges where both parties in an economic transaction benefit (Aytaç, 2018). The developed tax policies reflect the society's choice between economic efficiency and equality. According to this theory, taxation aims to take full advantage of social welfare.

It is also important to mention the pure theory of taxation advanced by Francis Edgeworth, which focuses on how the taxpayers' fiscal burden is distributed to them. Despite the view adopted, the need to be considerate in developing tax policy is emphasised (Edgeworth, 1958). Policymakers should focus on establishing a system that guarantees equality and equity for citizens. The policies should be accepted universally, promote happiness, and intensify pleasure.

Thus, the trade-off between efficiency and equity in the tax system has not always been easy to establish because people give different weights to these two goals, which often conflict. An efficient tax system imposes small deadweight losses, such as the distortion of incentives from taxes and small administrative burdens of complying with tax laws. Many proposed changes in the tax laws increase efficiency while reducing equity or increase equity while reducing efficiency.

2.3 Taxation Applied to the Mining Sector

Laporte and Rota-Graziosi (2015) argue that taxing the mining industry requires a delicate balance between attracting foreign investors to exploit mineral resources and generating sufficient revenue for government operations that benefit citizens. This balance is challenging due to the industry's characteristics, including non-renewable resources, potential for significant rents, high sunk costs, high uncertainty, and varying resource quality. Several tax instruments are applied to the mining industry, namely direct tax, Indirect tax, and non-tax instruments.

2.3.1 Economic rent, Progressivity and Optimal Tax rate.

Baunsgaard (2001, pp.5-6) defines economic rent as “the difference between the market price for a commodity and the opportunity cost of supplying the commodity”. Similarly, Tilton and Guzmán (2016, p.117) define economic rent as a “surplus of income that can be taken from firms and individuals without causing them to change their economic behaviour”. Otto and Cordes (2002) defined it as a surplus or a financial return not required to motivate the desired investment.

Rents fall into two categories: (i) "Hotelling rent" (pure rent), where the cost of extracting some resource today is the revenue foregone by the consequent inability to extract it tomorrow; (ii) ‘Quasi-rents’ defined as rents whose existence derives from a previous outlay of sunk costs at the main phases of a project´s life (cited in Laporte & Quatrebarbes, 2015).

Economic rent is essential to tax policy because it cannot be directly taxed, preventing incentives from being created that would otherwise influence the behaviour of the project's private sector stakeholders. If the tax base is entirely composed of economic rent, ongoing operations and capital investment decisions should remain unaffected (neutral). This suggests that a project operator's decisions will be made to maximise the rent, giving the government (resource owner) a larger collection of revenues than from other types of resource taxation, like royalties and corporate income tax.

Laporte and Quatrebarbes (2015) argued that rent does not affect how much the resource is sold for; instead, it results from how much it is sold for. Since it is a neutral tax, taxing up to 100% of the differential rent, the sector should not change how resources are distributed in the economy. So, a resource tax system that aims to be efficient should seek to tax rent valued over the entire lifetime of the project, not quasi-rents (Boadway & Keen, 2010). The school of mining taxation recommend that fiscal regimes for petroleum and minerals should exhibit ‘progressivity" for "equity," "flexibility," and "stability in accordance with the principles of taxation. Progressivity is related to the increase in revenue the government gets from a project's net cash flows as the resource's value increases (Laporte & Quatrebarbes, 2015; Keen, 2012). However, these recommendations are debatable when the equity principle of personal income tax progressivity (average tax rate) is brought into the context of resource taxation. In discussing the vertical equity principle of fairness in resource taxation, Nakhle (2004) stated that companies that exploit more valuable resources have a greater capacity to pay. As a result, their tax obligations may be more significant. This means that although a progressive tax system based on taxing differential rent

may theoretically benefit society, it is still essential to consider the impact of taxation on resource allocation.

Most empirical studies use the average effective tax rate (AETR) to measure how much rent goes to the government (Daniel et al., 2010; Otto et al., 2006; Boadway & Keen, 2010; Laporte & Quatrebarbes, 2015). Wen (2018) says that there is not much of a link between the progressive nature of the AETR and the progressive nature of personal income taxes because:

(i) Most resource project investors are likely foreign investors. Consequently, the government has no reason to reduce taxes on projects that generate a small amount of rent.

(ii) Through changes in equilibrium prices or wages, a tax on corporate profits could be passed on to people who buy products made from natural resources or those who work in the domestic industry that extracts natural resources.

(iii) The only function of equity in this context is the government's right to maximise its return on behalf of the resource's citizens as the resource owner.

Also, no host government relied solely on resource rent taxes because they were added to other fees and taxes (Land, 2010). As a result, in a royalty and tax regime, a resource rent tax is frequently combined with a royalty and corporate tax. This raises questions, such as how best to achieve progressivity with the complete package of fiscal instruments and whether resource rent taxes can be employed in a way that does not adversely affect the incentive for exploration and development of projects.

What, then, is the appropriate tax rate for the mineral sector? The discussions on this issue by many of the earlier cited authors are vague and inconclusive. Otto et al. (2006, p.23) define optimal tax rate as the "point where neither the tax rate is high enough to scare off investors nor is it too low, leaving the state with only the non-tax benefits that flow from mining and mineral production.

The AETR is the government revenue ratio to the project's Net Present Value of pre-tax net cash flows (Laporte & Quatrebarbes, 2015, p. 8). It measures the tax burden shared among companies, how fair their treatment is, and how they compare to companies in other countries. The ratio of investor-paid taxes to discounted net cash flow less the initial investment establishes the proportion of government revenue to overall project benefits. The progressiveness of a tax system is measured by how sensitive government revenue is to changes in prices and costs. This

sensitivity analysis and other assessments associated with the various fiscal instruments making up a country´s fiscal system can be achieved by using the IMF's Fiscal Analysis of Resource Industries (FARI) Methodology tool. This tool is an excel-based system that combines various economic indicators and data to assess the potential risk and forecast the future performance of investments or economic conditions (IMF, 2016).

2.3.2 Type of tax instruments

The mining industry is subject to several tax instruments, namely direct tax, Indirect tax, and non-tax instruments. Direct taxes are progressive, and indirect taxes are regressive.

(i) Direct taxes: refer to all the fees, taxes, and any levy paid to the government directly by the mines (Otto, 2018). They include but are not limited to income tax, turnover tax, withholding tax on salaries and on payments for foreign services, local taxes, royalties, custom duties, rent, property tax, value-added tax, stamp duties, user fees, progressive, excess profits, and additional profits taxes and user fees among others.

Delving into royalties, when it comes to decreasing administrative efficiency in terms of reduced administrative overheads, standardised agreements, effective monitoring and reporting facilitating auditing and enforcement, the most common royalties are as follows (Otto et al. 2006 pp. 3-18):

- Unit-based royalties are based on units of volume or weight when the tax base is a physical unit (volume or weight).
- Ad valorem royalties based on the value of sales: based on the assessed value of the production.
- Hybrid royalties combine a profit or rent-based system with an ad valorem system;
- Profit-based royalties: A percentage rate is applied to a measure of accounting profit realised by the project; and
- Resource rent type royalties: when the tax base is a direct measure of economic rent.

Excess profit taxes, known as "rent taxes," are designed to capture a portion of the enormous profits mining companies earn from a boom in commodity prices. Due to their complexity, economists argue that they are best suited to countries with a strong, well-funded, and educated (knowledgeable and informed) tax authority (Otto, 2018, p. 288).

(ii) Indirect tax: refers to tax imposed on miners' use of goods and services. Such taxes include import duties, value-added tax, downstream processing, free equity, mandatory local sourcing, levies for the development of the local community, requirements on foreign exchange, and levies for the development of social infrastructure (Otto, 2018, p. 289).

(iii) Non-tax instruments: include fixed fees and bonus payments, production sharing, state equity, free carry, and local requirements to source goods and employees.

2.3.3 Revenue Distribution

Local governments in mining areas claim limited access to mining revenues, which has made this a controversial topic. Otto (2000) found that, except for a tax on commercial property value, few national governments give local governments significant taxing authority. In developing economies, taxation on the mining sector was heavily concentrated at the national level, with only a tiny portion of fiscal revenues available for distribution to subnational governments. Countries with a decentralised government, like Australia, Brazil, and Canada, are more likely to let provincial governments handle taxes.

2.3.4 Tax Incentives

Tax incentives are instruments used by both developed and developing countries to attract domestic and foreign investment (International Institute for Sustainable Development, 2018). There are nine tax incentives trends used to encourage foreign direct investment, namely: tax holiday, loss carry forward, exploration cost expensing, social cost expensing, capitalised cost deductions (such as amortisation/depreciation), loan interest deduction, depletion allowance, tax credits, tax stabilisation (Otto, 2000). Thus, tax evasion is a concern for many mineral-rich and dependent countries because undermines revenue collection and fiscal regime. Darimani and Lambrechts (2009) argued that many mining companies operating in Africa had been granted too many tax concessions and subsidies, restricting governments from their due revenue when combined with tax base erosion, profit-shifting practices, and weak institutional capacity.

Most mineral-dependent nations face challenges concerning tax stabilisation. According to Aytaç (2018), most investing companies prefer tax policies to reduce the tax rates rather than being given incentives. They also seek assurance that the taxation systems will be relatively stable and not be amended to their disadvantage. The mines that work under a stabilisation agreement are

exempted from the fiscal policy existing after it evolves. This, in turn, creates an administrative challenge on the part of the government that offers the exemption.

Thus, a fiscal policy's effectiveness depends on the government's ability to estimate accurately and project tax revenue from stabilised mines. This calls into question the efficacy of tax breaks since these should be used to incentivise businesses and boost economic growth.

2.3.5 Transfer Pricing

Transfer pricing is defined as an accounting practice representing the price charged by one division of a company to another for goods and services, and it can significantly impact how profits, taxes, and risks are allocated across jurisdictions (Organization for Economic Cooperation and Development, 2010). Lund (2010) ascertains that rent taxation worsens transfer pricing, so fixed fees are better than higher tax rates. Since one of the most challenging aspects of transfer pricing is reflecting external market conditions and the arm's length principle, which requires related parties to transact at prices comparable to those of independent parties in comparable circumstances, governments need arm 's-length prices to avoid transfer pricing (IMF, 2021).

Research by the Intergovernmental Forum and Organization for Economic Cooperation and Development (2018) on Tax base erosion and profit shifting work (BEPS) identifies the following transfer pricing issues in many resource-rich developing countries: excessive interest deductions, abusive transfer pricing, exports of undervalued minerals, generous tax incentives, international tax treaties, streaming, mineral reference prices, and inadequate ring-fencing. Kar and Spanjers (2015) calculate that between 2004 and 2013, illicit money flows cost developing and emerging countries US$7.8 trillion, of which about 83% was attributable to trade fraud. Thus, although many nations strive for a "theoretical" balance between national and investor interests, mineral revenue collection is still found to be distorted (IMF, 2021; Baunsgaard, 2001; OECD, 2010) since most tax authorities in developing lack the necessary tools to deal with transfer pricing schemes, even highly skilled tax authorities in rich countries. This imbalance makes transfer pricing unfair because countries with more resources can use it more than those without.

2.4 Political Economy of Fiscal Regime and Economic Development

2.4.1 Political Economy of Fiscal Regimes

For many resource-rich developing countries, mining plays a significant role as a source of revenue for government and employment. This revenue is achieved through taxation and varies considerably from nation to nation. Since there is no general design for a mineral fiscal regime, achieving this balance lies in how each system has its benefits and disadvantages along with economic, administrative, and revenue-enhancing dimensions.

Setting up an effective tax system for extractive industries in developing countries requires talks between the government and the private sector, which often includes large multinational corporations. Furthermore, because the institutional environment in many developing countries is more fluid and less regulated than in developed countries, project agreements can be negotiated privately, financing costs rise, investment decreases, and tax revenue decreases (Otto, 2018, pp. 276-278). Haldenwang (2011) and Barma et al. (2012) provide interesting perspectives on how the political game is frequently at odds with explaining a country´s performance on resource rent generation and distribution. The former argues that governments with a longer-term political view have a solid reason to reduce the "country risk" of investment decisions regardless of regime type, while the latter argues that resource rents are managed based on the government's ability to make credible promises (credibility of intertemporal commitment) over time and the extent to which all interested and affected parties are included in political decision-making (political inclusiveness).

Table 1 depicts the interdependence of credibility of intertemporal commitment and political inclusiveness, which give rise to four distinct political regime contexts (typology), namely patrimonial rule, hegemonic government, clientelist pluralism, and programmatic pluralism (see Appendix A). Thus, it helps assess the political economy space a resource-dependent country has embarked on at any given time.

Table 1. Natural Resource-Dependent Setting Typology

Political inclusiveness	Credibility of intertemporal commitments	
	Weaker/less enforced	**Stronger/more enforced**
Less inclusive	**Patrimonial rule** Individualized political authority, crony hierarchy, few restraints on power High discount rate, risk averse, and narrow distribution of rents • Extremely short time horizons create pressures to revise fiscal regimes, front-load revenues, disincentivize investments in institutional capacity, and reduce risk-sharing to the detriment of long-term fiscal stream. • Limited inclusiveness reduces the space for collective action and demands for good governance.	**Hegemonic government** Institutionalized one-party regime, either predatory or benevolent Low discount rate, risk taking, and narrow distribution of rents • Longer time horizons create a relatively more stable fiscal environment. It is in the best interest of the ruling elite to maximize income over time and therefore share the risk in the development of extractive industries. • Limited inclusiveness leads to a narrower distribution of rents, which are used to secure supporters and discourage opponents.
More inclusive	**Clientelist pluralism** Political competition based on extensive use of patronage High discount rate, risk averse, and broader distribution of rents • Short time horizons due to low institutionalization and electoral cycles create pressures to revise fiscal terms and front-load revenues, creating suboptimal outcomes in investment and production. • Revenues are more broadly distributed, but patronage and earmarking remain significant.	**Programmatic pluralism** Electoral competition based on programs; horizontal and vertical accountability Low discount rate, risk-taking, and broader distribution of rents • Longer time horizons create a stable fiscal environment leading to long-term investments and contracts. • Nonetheless, broader political inclusiveness creates a greater space for collective action for good governance and mitigating informational asymmetries.

Source: Extracted from Barma et al., 2012, p.55.

In summary, the scholarship of political economy recons that rent generation will be weak in non-inclusive settings where the state will find it challenging to strike advantageous extractive deals with resource developers. Rent allocation will be biased towards consumption by political-economic elites and away from saving and investment for society. So, in order for governments to negotiate better deals with mining companies at a lower risk premium, they need to increase the credibility commitments by extending time horizons, strengthening institutionalisation, and enforcing property rights.

With the above in mind, Barma et al. (2012) recommend a few fiscal instruments to guarantee minimum government performance in obtaining a fair share of revenue and foster a conducive environment for investment, based on the existing state of tax administration, the incentives to spend for capacity building, and the level of geological maturity. **Table 2** presents the suggested fiscal and nonfiscal tools for nations that rely on natural resources through stability clauses, progressive or profit-based taxes, production-based royalties, and targeted tax incentives to achieve higher revenues, efficiency and flexibility.

Table 2 "Good Fit" Fiscal Regime Instruments

	Credibility of intertemporal commitment	
Political inclusiveness	**Less credible/weaker enforcement**	**More credible/stronger enforcement**
Less inclusive/ less collectively oriented	**Patrimonial rule** Individualized political authority, crony hierarchy, few restraints on power *With certain geological prospects:* • Production-based royalties combined with windfall royalties • Use of stability clauses with built-in regular revisions *With uncertain geological prospects:* • Production-based royalties combined with windfall royalties • Use of stability clauses with built-in regular revisions	***Hegemonic government*** Institutionalized one-party regime, either predatory or benevolent *With certain geological prospects:* • Production-based royalties combined with income tax and windfall royalties or sliding-scale royalties, production sharing *With uncertain geological prospects:* • Production-based royalties combined with windfall royalties or sliding-scale royalties • Use of stability clauses with built-in regular revisions • Targeted tax incentives
More inclusive/ more collectively oriented	**Clientelist pluralism** Political competition based on extensive use of clientelism/patronage *With certain geological prospects:* • Production-based royalties combined with income tax and windfall royalties, sliding-scale royalties • Use of stability clauses with built-in regular revisions *With uncertain geological prospects:* • Production-based royalties combined with windfall royalties, production sharing, equity sharing • Use of stability clauses with built-in regular revisions	**Programmatic pluralism** Electoral competition based on programs; horizontal and vertical accountability *With certain geological prospects:* • Auctions, progressive income tax, or profit-based tax *With uncertain geological prospects:* • Auctions, progressive income tax, or profit-based tax • Use of stability clauses with built-in regular revisions • Targeted tax incentives

Source: Extracted from Barma et al., 2012, p.153

2.4.2 Economic Development

Mining and new projects have affected the national and local economy in several ways. Roe & Jeffery (2018) describe the industry and public spending routes as the two main ways through which the mining industry has social and economic effects. The industrial route tracks how all activity-related spending affects income and jobs, while the public spending route looks at what happens when tax money and other government funds from the activity are spent.

On the same thought, human development is affected in two ways: by putting money directly into social sectors like health and education facilities, and by investing in social protection programs like cash transfer schemes. Australia, Canada, Finland, Sweden, and the United States are some of the most successful economies in the world (in terms of health, education, living standards, and impact multipliers of mining activity). However, many resource-rich sub-Saharan African nations have yet to take advantage of the benefits of mining since mining revenue makes up just

2% of GDP compared to an average of 12 per cent in mineral-rich countries (IMF, 2021). Lahn and Stevens (2017) argue that the strategy for the extractive industry is to put economic transformation and diversification ahead of resource exploitation. In this regard, Chile, Indonesia, and Malaysia have successfully diversified from natural resource-based economies by taking a long-term view, making public policy decisions, and investing public money internally (Kaznacheev, 2013). Finally, infrastructure, such as the power grid, communications, roads, and transportation, is a big problem in many resource-dependent countries but spending on this area (and its capacity) is not guaranteed to help the economy grow. Roe & Round (2018) recommend solving the infrastructure challenges with more significant sums from private investors.

2.5 Conclusion

Most theories of taxation seem to revolve around the basic principles of taxation, which are agreeable. They all seem to agree that reasonable taxation should be specific in terms of amount, cost-effective in terms of collection and administration, proportional to the earnings of the individuals and their ability to pay, and convenient to the taxpayer and the government in terms of payment modes and time. Thus, defining the guiding rules and principles is essential to make the tax collection system effective and functional. However, the theories do not explain how the government can eradicate inefficiencies in tax, such as tax evasion, non-compliance, and corruption. It is also not sure how economic theory, especially optimal taxation literature, has positively impacted the design of tax systems in developing countries.

There also seems to be a consensus amongst the authors and experts that the mineral taxation systems in developed and mineral-dependent countries have progressively evolved over the past decades, reflecting not only the current state of the business cycle but also the need for mineral policymakers to achieve a balance between the national and investors. Rather than relying on ownership interest, resource-rich nations increasingly rely on taxation to generate revenue from their resource wealth. Although the structure of mining tax systems varies based on the objectives of each host government's fiscal policy, the fundamental mineral sector taxation tools have remained essentially unchanged over the past several decades. They are made up of corporate taxes and royalties.

The political economy context of a country affects the performance of resource rent generation and distribution since it is directly linked to the government's ability to credibly commit to tax policies over time and the level of political system inclusivity. These dimensions give rise to four

economic and political regimes: patrimonial rule, hegemonic government, clientelist pluralism, and programmatic pluralism. Short-term horizons are linked to underinvestment over time, quicker rates of resource extraction and front-loading of taxes (Barma et al., 2012, p.59). Nevertheless, a country´s regime context can change as a country develops economically so that fiscal regimes can be tailored for each unique political economy context based on the country´s certainty of geological prospects, administrative capacity and government credibility. Although there is no one-size-fits-all approach to defining a good-fit fiscal regime, stability clauses and progressive, profit-based taxes are some of the fiscal instruments recommended to achieve higher revenues, efficiency and flexibility.

Transfer pricing is a significant issue for governments, and it is especially difficult for developing economies that depend heavily on mining. Despite all the efforts to regulate transfer pricing, it is unclear whether international "standards" like the OECD Transfer Pricing Guidelines for Multinational Enterprises have proven effective.

Finally, the development of policy frameworks to capture mineral rent and create long-term benefits for transformation and socioeconomic development for many mineral-dependent nations today boils down to a simple decision, heavily influenced by political considerations: either help people directly improve their living standards in the short term or invest the money in larger development projects in the long term.

3 MINERAL FISCAL REGIMES APPLIED GLOBALLY

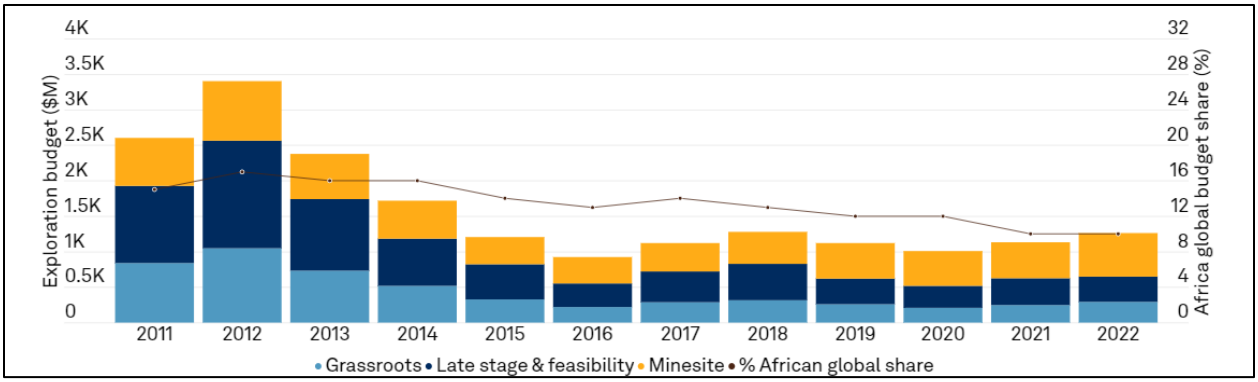
3.1 Introduction

This chapter sets the tone for how the global mineral fiscal regime works. Ten countries were selected, accounting for most of the world's production of metals and minerals, namely gold, platinum group metals, iron ore, diamonds, copper, and industrial minerals, and host to multinational mining companies. For most countries, mining is an essential part of their economies, while for others, it is a less critical part. The sample includes five African countries (the Democratic Republic of the Congo (DRC), Tanzania, Botswana, Ghana, and South Africa), two South American countries (Brazil and Chile), two OECD countries (Australia and Canada), and one Asian country (China).

3.1.1 Global Mining Overview

Minerals and metals comprise many emerging economies' exports, GDP, and government income. Despite differing opinions regarding the exact definition of an emerging economy, it can be defined as one that is rapidly developing into a developed nation, frequently as a result of comparatively strong economic development, progress in reaching middle-income levels, and an increase in trade and investment flows (Duttagupta & Pazarbasioglu, 2021). The IMF (2018) identified the following nations as emerging economies in 2018: Brazil, Chile, China, Colombia, Hungary, Indonesia, India, Malaysia, Mexico, Peru, Philippines, Poland, Russia, South Africa, Thailand, and Turkey. These countries are considered emerging because they are experiencing significant economic, political, and social development. They offer substantial opportunities for growth and investment, making them attractive to both domestic and international stakeholders.

According to RGM Consulting (2020), most mining companies will have sufficient reserves and resources to meet their needs for the next 10–20 years (RMG Consulting, 2020, p.12). On the exploration front, Canadian and Australian companies have dominated funds focused on African subsoil. The exploration budget for 2022 showed a steady growth of 10% of US$1,2 billion compared to US$1,1 billion in 2021 (**Graph 1**), with Africa also maintaining a 10% share of the global budget during that period (S&P Global, 2022).



Graph 1. Africa's Exploration Budget.

Source: S&P Global Market Intelligence (2022)

3.2 Mineral Fiscal Regime

Chapter 2 of this report emphasises the need for a well-thought-out, simple-to-use fiscal system that promotes mining and ensures that a fair share of mineral rent stays in the country that produces the minerals. It has already been highlighted that revenues achieved through taxation vary considerably from nation to nation because there is no general design for a mineral fiscal regime (Tilton & Guzmán, 2016; Otto & Cordes, 2002; Baunsgaard, 2001). Each system has economic, administrative, and revenue-generating benefits and disadvantages. **Table 3** summarises the critical components of the mineral fiscal regime for the selected ten countries by mostly using PwC Mining Summary Tool

Table 3. Selected countries' mining fiscal regime comparison.

	Australi	Brazil	Canada	Chile	China	South Africa	DRC	Ghana	Botswana	Tanzania
CIT	25% - 30%	34%	23% - 31%	27%	25%	28%	30%	35%	22	27%
Level at which applied	Federal	Federal	Federal and Provincial	Federal	Federal	Federal	Federal	Federal	Federal	Federal
Tax amortization										
Ore assets amortization	Life of mine	Life of mine	30.00%	Yes	Period of the mining license	No	Effective life	20%		20%
Land/Improvements amortization	Effective life	Life of mine	30.00%	No	Over the valid period of the mining license	10.00% - 100.00%	2% - 5%	20%		n/a
Buildings amortization	2.5% or Life of Mine	4.00%	25.00%	Yes	5.00%	10.00% - 100.00%	Useful life	20%		20%
Plant and Machinery amortization	Various 3.3% - 20%	10.00%	25.00%	Yes	10% - 20%	100%		20%		20%
Tailing liners amortization	Life of mine	Life of mine	25.00%	No	5.00%	100%	Life of mine	No		20%
Working/construction in progress amortization	No	4.0%-25.0%	No	No	No	100%	See comment	5 years		20%
Restriction on use of tax losses	Indefinitely	Indefinitely	20 years	Indefinitely	5 years	Indefinitely	Yes	No		Indefinite carry forward, utilisation of brought forward losses restricted to 70% of current year taxable profits, ring-fencing
Special allowances/contracts	Yes	Yes	Yes	Yes	Yes	yes				no
Mineral tax										
Mineral tax name	State Royalties	CFEM	Provincial Royalties	Specific Tax on Mining Activity	Various	Mineral and Petroleum Resources Royalty	Mining Royalty	Mineral Royalties	Mineral and Petroleum Resources Royalty	Mineral Royalties
Level at which applied	State	Federal	Provincial	State	Federal	Federal	State	Federal	Federal	Federal
Copper	2.5% - 7.5%	2%	1% - 17%	5% - 14%	Various	0.5% - 5/7%	3.50%	5.00%	10%: Precious stones	6.00%
Gold	2.5% - 5.0%	1.50%	1% - 17%	5% - 14%	Various	0.5% - 5%	3.50%	5.00%	5%: Precious metals	6.00%
Iron ore	2.75% - 7.5%	3.50%	1% - 17%	5% - 14%	Various	0.5% - 7%	1.00%	5.00%	3%: Other minerals	6.00%
Coal	2.75% - 15%	2%	1% - 17%	5% - 14%	Various	0.5% - 7%	0	5.00%		3.00%
Nickel	2.5% - 5%	2%	1% - 17%	Various		6%		0.5% - 5.0/7.0%		
Lithium	2.5% - 5%	2%	1% - 17%			3%		0.5% - 5.0%		
Cobalt	2.5% - 5%	2%	1% - 17%	Various	10%	6%		0.5% - 5.0/7.0%		
Tax on Export	0	0	0	0	0	0	0	0	0	0
Ore extracted	0	0	0	0	0	0	0	0	0	0
Processed ore	0	0	0	0	0	0	0	0	0	0
Refined metal	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0,00	Diamond Export Levy: All producers, dealers, beneficiators, and/or holders of permits must pay 5% of the total value less overpaid or plus underpaid.	0	0	0	0
Withholding Tax										
Dividends	0% - 30%	No	25%	35% - 44.45%	10%	20%	10%	8.00%	15%	10.00%
Interest	0% - 10%	15%-25%	25%	4% - 35%	10%	15%	20%	8.00%	15.00%	10.00%
Royalties	5% - 30%	15%-25%	25%	30%	10%	15%	20%	15.00%		15.00%
Service fees	5%	15%-25%	25%	15% - 35%	25%	Not applicable	14%	20.00%		5% - 15%
Standard VAT rate (%)	10%	5% - 30%	5%-15%	19%		15%	16%	12.5%	12%	15%-18%
Fiscal stability agreements	No	No	No	No	No	Yes - by negotiation	Yes - statutory	Yes	Yes - by negotiation	Yes
State Participation	N/A	No	Nill				Yes	Yes	No	No
Social contributions	Yes	Yes	Yes - Voluntary	Yes	No	Yes - required	Yes	Yes	Yes - required	Yes
Additional in-country information	Junior Minerals Exploration Incentive	Yes	Flow Through Shares							

Source: PwC 2012/PwC 2022

(i) Royalties

- While most Canadian mining jurisdictions use a profit-based system, most African nations use the ad valorem approach. Nonetheless, a blend of the two systems can also be seen in some mining jurisdictions in Canada and Australia.
- Australia, Brazil, the Democratic Republic of the Congo, and South Africa use a value-based royalty system with rates ranging from 0.5% to 7%. Brazil, DRC, Ghana, and Canada have the same royalty rate for all metals. Other nations, such as China and Chile, vary their royalty rates based on the type of metal produced.
- Ad-valorem (based on the value of production) was found to be the most common way to tax minerals for African countries, with rates ranging from 2% to 17%. In the Democratic Republic of the Congo, cobalt is taxed at a fixed rate of 10%, except in South Africa, which applies variable royalty rates to 'adjusted gross sales'. The variable royalty rate is determined by the profitability of the mining operations and whether the mineral is refined or unrefined.

(ii) Level of Fiscal decentralisation

- In countries like Australia, Canada, and Brazil, State or provincial governments have substantial taxing authority, usually in the form of sales taxes, income taxes, or royalties.
- In DRC, the mining royalty is paid to the tax administration. However, 50% of its amount is allocated to the Central Government, 25% to the province where the mine is located, 15% to the city or territory where the mine is located and 10% to the Mining Fund for future generation.
- Ghana has a central Government system, so taxes are levied on a national basis rather than a regional or State basis.

(iii) Other mineral taxes

- Australia implemented the Mineral Resource Rent Tax in 2012 but repealed it in 2014 for not delivering on the projected budget. In 2012, the government stated that the tax would bring in US$3 billion for the fiscal year, but by May 14, 2013, receipts of less than US$200 million were collected (RMG, 2020, p.17). The tax also proved to be complex and expensive to operate, claiming more than US$50 million to set up and an estimated running cost of US$20 million a year (PwC Australia, 2013).

- The Democratic Republic of the Congo (DRC) imposes a 50% "super profits tax" realised when commodity prices exceed 25% of the feasibility study price (RMG, 2020, p.18).
- It is difficult to substantiate the impact the introduction of the Super profits tax may have had on the level of mining investment in the Democratic Republic of the Congo (DRC) without a counterfactual. However, given that Australia's mining industry is highly regulated and faced challenges with the implementation of the Mineral Resource Rent Tax due to increased administrative complexity, it is reasonable to assume that implementing a super profit tax in the DRC would be similarly complex, if not more so.
- Concerning the VAT levy on mineral and metal exports, the ten countries either exempt or zero-rate these sales for Value Add Tax (VAT) purposes (Deloitte, 2018). However, in Tanzania, an inspection fee of 1% of all mineral exports has been imposed (Murphy, 2017).

(iv) Corporate Income Taxes (CIT)

- Canada imposes federal (applicable to everyone regardless of the location) and provincial income taxes (vary depending on the location within the country). The income tax rates in the provinces range from 10% to 16%.
- Most of the eleven countries have similar CIT rates, varying between 20% and 30%.

(v) Non-tax instruments

- State participation varies from none (Australia, Canada, Brazil, Botswana) to mixed in the other selected countries (DRC, Ghana). In the DRC and Ghana, government participation of at least 10% is a requirement towards a mining company's share capital. Tanzania's Mining Act of 2010 allows the government to have a "free carried interest," though it does not state when or how much this interest may be needed (PwC, 2012, p. 6).
- Stability agreements: Different nations have different stabilisation policies. Australia, Brazil, Canada, Chile, and China do not use stabilisation in their mining regimes, revealing that they are governments with a track record of stable political or fiscal systems. Chile's law, Decree Law 600, granted tax invariability regarding a specific mining tax rate but was repealed in 2015. DRC, South Africa, Ghana, Botswana, and Tanzania all accommodate fiscal stability agreements through negotiation with the government.

(vi) Fiscal Incentives: Tax Losses, Depreciation and Deductions and others

- Some countries, such as Chile, Canada, Australia, South Africa, and Tanzania, allow losses to be carried over indefinitely, while others, such as China and Ghana, impose a five-year maximum on carryover. In Canada, non-capital losses can be carried forward 20 taxation years or carried back three taxation years. The utilisation of non-capital loss carry-forwards after an acquisition of control may be restricted.
- Canada allows *flow-through shares*, defined as a financial tool available to Canadian companies to finance mineral resource ventures, whereas Australia promotes junior minerals exploration incentives.
- In the DRC, mining companies must negotiate the depreciation rates and the taxable base in the mining agreement (KPMG, 2019). In Ghana, subject to parliament approval, the government may enter into a stability agreement for up to 15 years with a mining company to ensure that there will not be a negative impact on the latter due to changes in the level and payment of royalties, taxes and other fiscal tools (Lexology, 2019).

(vii) Administrative Fees

Exploration and Mining permit fees:

- Australia charges AUD 164.9 (USD 112) (equivalent to approximately USD 0.13 per hectare). In addition, the fee may increase over time, as is the case in Brazil, where the fee is BRL 3.55 (0.66 USD) per hectare and will increase to BRL 5.33 (0.99 USD) per hectare after a certain period (PwC Summary tool, 2021).
- The mining permit fee is paid to obtain and keep the right to mine on a piece of land. It is generally higher than the exploration fee.
- In Australia (Queensland), the application fee is AUD 1,671 (USD 1,136) and AUD 63.7 (USD 43) per hectare; in Canada (Ontario), at CAD 400 (USD 296) per unit, and in Brazil, at BRL 1.48 (USD 0.28) per tonne of ore (RMG, 2020, p.26).
- The difference in fees can be associated with the type of mineral to be mined in a given location and the strategic relevance to the State.
- According to the PwC Mining Report (2017), mining companies must pay a licence before they may begin operations in eight of the ten countries under analysis. One option is to apply a surface tax determined by the region where exploration or extraction occurs. Beyond a surface or fixed rights and area tax, only the DRC imposes a licence fee. No licence fees are paid in Chile and China.

(viii) Environmental Fees

- Australia (Queensland) and South Africa limit emissions and impose fixed penalties for environmentally damaging activities (PwC, 2012, p.15). Mine rehabilitation fees are payable in Botswana to cover the cost of rehabilitating mines at the end of their useful lives (Deloitte, 2018).
- In other selected countries, companies must set aside funds to ensure that rehabilitation and clean-up occur in the event of an accident, even if the company must cease operations for any reason (PwC, 2012; Conrad, 2012).
- Finally, in addition to environmental-related taxes, seven jurisdictions have introduced education and corporate social responsibility (CSR) charges. In Canada and Ghana, social contributions are optional. In China, this is not applicable. Examples of the former include education, training, and other skills development levies. South Africa requires mining companies to invest in community development as part of the country's broader social agenda.

3.3 Conclusion

Based on the data collected and analyzed from the ten countries, it can be concluded that there is no single "international best practice" for the treatment across the range of fiscal instruments used by governments. Various factors, including fluctuations in commodity prices, investor interest levels, and shifting national goals, influence how governments and tax authorities tax the mining industry. As a result, taxation of the sector varies significantly between countries and changes over time, as shown in countries like Australia, Brazil, Canada, Tanzania, and China, which experienced significant changes in the mineral fiscal regime over the last ten years.

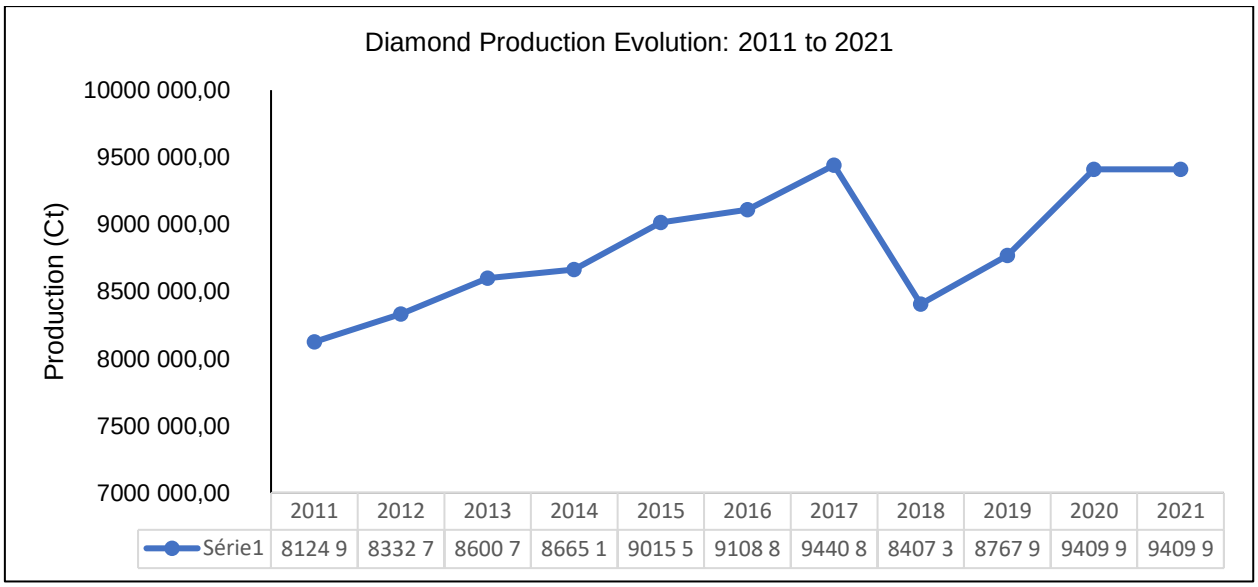
4 MINERAL FISCAL REGIME APPLICABLE IN ANGOLA

4.1 Introduction

This chapter aims to highlight key features of the Angolan fiscal regime for mining, to illustrate how investors may perceive these features and their implications for effective revenue collection and management. The following are discussed: Country Context and Mining Sector Developments; the Mining sector´s governance, Fiscal Regime Applicable to the Angola Mining Sector and the Fiscal Revenue Collection Framework.

4.1.1 Country Context and Mining Sector Developments

Angola currently ranks second in global mineral exports, totalling over $1 billion in 2020 (EITI, 2022), and third in diamond production; Botswana and South Africa hold the top two slots, respectively. **Graph 2** depicts the evolutions of diamonds produced in Angola between 2011 and 2021 totaling 97 283 987 Cts.



Graph 2. National Output for Diamond Subsector 2011-2021

Source: Ministry of Finances (2022)

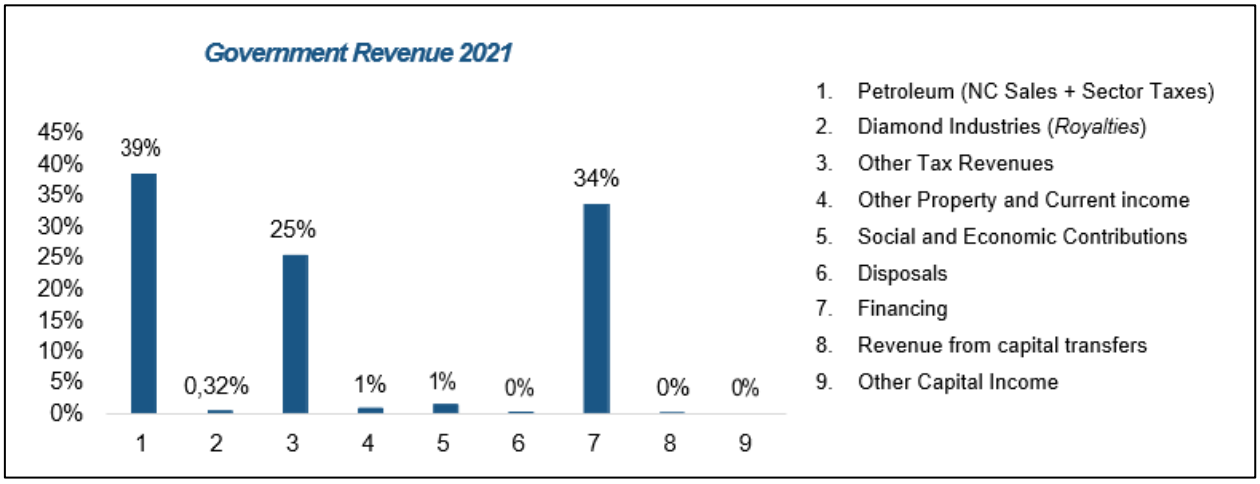
Despite the lucrative diamond sector, the mining industry contributes less than 1% to the government's revenue. According to the EITI Angola report (2023), Angola's government revenues in 2021 totalled about 15.22 trillion AKZ (US$ 24.404 billion), corresponding to an increase of 27% in AKZ or 18% in USD, compared to the same period in 2020 (see **Table 4**). In **Graph 3**, the oil and gas industry corresponded to 39% of total government revenue whilst

revenues related to the diamond sector totalled 0.32%, which continues to highlight the heavy dependence of the oil sector on Angola's accounts.

Table 4. Distribution of Government Revenues

Government Revenues	2021 (Million AKZ)	2020 (Million AKZ)
Current	**10 098 991**	**7 105 372**
Oil	5 862 496	3 751 655
Concessionaires	4 113 507	2 645 452
Companies	1 748 989	1 106 204
Diamonds	48 478	46 768
Other Tax Revenues (IVA, IRT, etc)	3 859 276	2 989 471
Other Property and Current Income	122 296	99 421
Revenue from Social and Economic Contributions	206 445	218 056
Capital	**5 121 756**	**4 849 987**
Total	**15 220 747**	**11 955 359**
Total (Million USD)	**24 404**	**20 743**

Source: Extracted from EITI Angola, 2023, p.11.



Graph 3. Distribution of Government Revenues

Source: EITI Angola, 2023, p.35.

Nevertheless, as regulatory reforms take effect, Angola is seeing an increase in mining company investment. The mining sector and the nation's reputation as a trustworthy and transparent investment jurisdiction are expected to continue to grow due to significant market players' investments in the country throughout 2022 and 2023. Anglo-American, Rio Tinto, and Pensana Rare Earth Metals are among the best examples, with significant investments in diamonds, copper, cobalt, nickel, and Rare Earth (Chamber & Partners, 2024). The industry is anticipated to significantly enhance its contribution to the growth of the national GDP because of the increased demand for strategic minerals, non-ferrous metals, and rare earths brought about by the global energy transition and the usage of strategic minerals in lithium-ion batteries.

In June 2022, Angola joined the EITI and presented its first EITI Report regarding the 2021 fiscal year. By joining the EITI, Angola aims to demonstrate not only its commitment to promoting transparent disclosure in the sector and stimulating the country's economic development through reforms associated with the extractive industry but also to enhance efforts regarding anti-corruption policy to support its strategy to prevent and combat corruption.

Mining Production

Although diamond mining has been the dominating mineral, industrial and construction minerals like marble, granite, and quartz are still exploited. The most active mining regions are Lunda Norte, Lunda Sul, Uige, Huila, Cuanza-North, and Malange. Bengo and Namibe have recently been added to the list of new investment mineral hubs (VdA, 2022).

According to the EITI Angola report 2023, the recorded diamond production was about 9 million carats, of which 8.67 million are associated with industrial production and 50 thousand carats with semi-industrial production. Compared to 2020, there was a 14% increase in diamond production due to the gradual return of normal mining operations after the COVID-19 pandemic. **Table 5** details the diamond production of seventeen mining projects, of which six projects cumulatively represent 95 % of the value of Angolan diamond, namely Catoca, Luaxe, Chitotolo, Cuango, Camutwé, Somiluana and Lunhinga. According to the data disclosed, the company with the highest representation of total production is Catoca (67%), followed by Luaxe (20%).

Table 5. Diamond Production by Company

Nº	Mining Companies	Volume (Cts)	Weight
1	Calonda	28 204	0,32%
2	Camútwe/Kaixepa	67 928	0,78%
3	Cassanguidi	9 584	0,11%
4	Catoca	5 838 369	66,94%
5	Chitotolo	244 011	2,80%
6	Cuango	254 771	2,92%
7	Furi	82 614	0,95%
8	Luachimo	25 721	0,29%
9	Luaxe	1 725 301	19,78%
10	Luembe	7 667	0,09%
11	Lulo	24 608	0,28%
12	Luminas	53 853	0,62%
13	Lunhinga	117 424	1,35%
14	Mucuanza	3 371	0,04%
15	Somiluana	115 523	1,32%
16	Tchegi	360	0,00%
17	Uari Cambange	71 425	0,82%
	Industrial Production	**8 670 733**	**99,42%**
	Semi Industrial Production	**50 750**	**0,58%**
	Total	**8 721 483**	**100,00%**

Source: Extracted from EITI Angola 2021 Report, 2023.

Finally, minerals other than diamonds are even less representative in the sector, such as gold, ornamental rocks, and construction materials. The principal gold mining operations are the Chipindo, Chicuamone, and Bucuzau mines. **Table 6** displays the production attained for other minerals between 2020 and 2021.

Table 6. Production of other Mineral Resources

Description of the Mineral	Production 2021	Production 2020	Variation
Gold (´000 of Fine Ounces)	1,037	1,887	-45%
Ornamental Rocks (´000 m^3)	86	72	19%
Construction material (´000 m^3)	3 862	3 953	-2%

Source: Extracted from EITI Angola 2021 Report, 2023.

4.2 Mining Sector Governance

The mining industry is regulated at the state level by the Angolan Mining, Law No. 31/11, of 23 September 2011 (Mining Code), and some additional statutory and regulatory Acts (Appendix B). On 26th May 2020 (Presidential Decree 143/20), the Angolan Government reorganised the regulatory environment of the geological and mining sector by providing a new Governance Model (**Figure 1**) to improve the industry's efficiency by reducing government involvement, optimising the private sector's role, fostering industry openness, and providing financial

incentives to encourage mineral exploration. According to this Governance Model, the roles and responsibilities of the sector's stakeholders are as follows :

- Holder of Executive Power: responsible for the superintendence of the sector;
- Ministry of Resource Minerals, Petroleum (MIREMPET): responsible for formulating, conducting, executing and monitoring the policy of the Executive relating to geological and mining activities, oil, gas and biofuels;
- Ministry of Finance (MINFIN): responsible for compliance with the fiscal, customs and foreign exchange framework and financial counterparts of the concession contracts;
- Geological Institute of Angola (IGEO): This institution is responsible for collecting, storing, managing, promoting, and providing geological information about Angola.
- National Agency for Mineral Resources (ANRM): created under Presidential Decree 161/20 of June 5, in addition to performing the functions of a national concessionaire, is responsible for the regulation, supervision and promotion of the Angolan mining sector;
- Sodiam, E.P: The diamond trading company of Angola, which is the single channel for the marketing of all rough diamond productions extracted from Angola,
- Endiama, E.P: The national diamond company of Angola, which recently lost the status of national concessionaire for diamonds, rare metals and rare earth elements and;
- Bolsa de Diamantes: undertakes diamond transactions in Angola under the supervision of SODIAM;
- National Kimberly Process Commission: responsible for legal certification procedures.

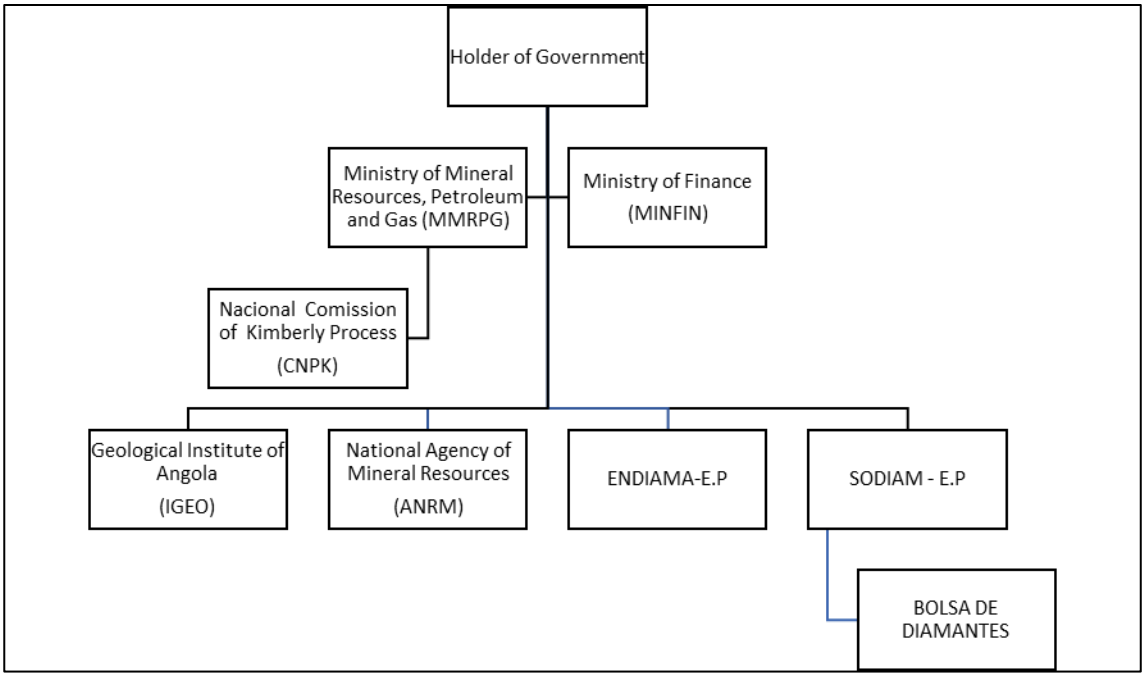


Figure 1. New Governance Model of Angola's Mining Sector

Source: Presidential Decree No.123/20 (2020).

4.2.1 Mining Policy Objectives

In Angola, all geological and mining activities are governed by the Mining Code (2011). This law is considered to be liberal and one of the most rational pieces of legislation since the repeal of the 1994 Diamond Law that preceded it. Thus, as it stands Angola does not have a comprehensive mineral policy despite its heavy dependency on the extractive industry since colonial rule. Although policy thrusts are attempted within the Code, a real drafted policy document addressing salient issues mapping the direction of the mineral development is still required. Such policies could facilitate the marketing of the country as they will stipulate the intent, long-term strategy and goals in the development of the sector.

Nevertheless, the following strategic goals for the mining industry are stated in the Mining Code (Article 8º):

1. Ensure the country's sustainable social and economic development;
2. Ensure the creation of jobs and better living conditions for the people residing in mining exploration areas;
3. Ensure tax revenues for the State's central and local administration;
4. Support and protect private companies, giving preference to Angolan companies in the concession of mining rights;
5. Whenever possible, harmonise the national mining legislation with regional and international ones, taking good practices into account;
6. Protect the environment and fight against bad environmental practices;
7. To fight illegal mining activities;
8. To establish an effective, fast and transparent regime for mining rights concession;
9. To guarantee the sustainable development of national human resources;
10. To promote the reinvestment in the country of mining exploration revenues and ensure, before mines close, that other economic activities are developed so that abandoned mining areas do not enter into economic depression.

In so far as the objectives are set, Angola´s mining policy objectives capture the general essence of the objectives for a tax system (Avi-Yonah, 2005), namely (i) raise revenue for government activities, (ii) redistribution to mitigate unequal distributions of wealth in society, and (iii) support the economy.

4.2.2 Mining Titles

Depending on the industrial, semi-industrial, or artisanal scale, the nature of the operations and the kind of minerals to be discovered, the state grants mining rights to state-owned, mixed-

ownership, or private businesses through a mineral investment contract and/or licence, following a public tender procedure or voluntary application. Industrial-scale mineral rights are awarded only after a mineral investment contract with specific operational, financial, and economic terms and conditions (from exploration to mining and marketing) has been negotiated and agreed upon by the investor and the National Agency for Mineral Resources (ARNM). Semi-industrial and artisanal projects are rewarded by a simplified application process.

The Angolan law does not restrict the participation of Angolan nationals in mineral concessions; thus, both foreign and local mining companies may engage in exploration and mining activities. However, Semi-industrial and artisanal mining of diamonds and construction minerals rights are granted only to Angolan citizens or legal entities with majority shareholding capital held by Angolans.

Strategic minerals according to Mining Code (2011), are defined as one with an economic significance and strategic application in accordance with the Executive Branch´s pre-requisites, namely the mineral's scarcity, relevance to economic growth, high demand on the global market, significant job creation, importance for cutting-edge technology, positive influence on the balance of payments, or importance to the military industry. The Mining Code and Presidential Decree 231/16, specifically designate diamonds, gold, rare earth elements and radioactive materials as strategic minerals. **Table 7** summarises the four mineral rights under Angola's Mining code as follows:

- exploration title: for the reconnaissance, exploration, evaluation and appraisal of mineral resources;
- mining title: for the mining of mineral resources;
- mining permit: for the exploration or mining of mineral resources used in civil construction; and
- mining ticket: for artisanal mining.

Exploration rights are granted for an initial term of up to five years, extendable for two additional one-year terms plus one year to complete the feasibility studies. Mining rights are granted for up to 35 years, which can be extended for one or more 10-year terms. The extension and renewal of titles and licences is subject to the holder complying with the conditions of the mining title, terms of the contract, tax and social security conditions.

Table 7. Organisation of Angolan Mining Titles

Type of Mineral Right	Objective	Duration	Conditions for renewal
Exploration Title	Reconnaissance, prospecting, and evaluation of mineral resources	up to 5 years, extendable up to a maximum of 7 years	Renewal is granted if the holder complies with the conditions of the mining title, terms of their contract, and tax and social security conditions.
Mining Title	Exploitation (mining) of mineral resources	35 years	
Mining Permit	Prospection or exploitation (mining) of mineral resources applicable in civil construction	Prospection (exploration): 3 years and extendable for two more periods of one year each. The right to exploit (mining): 5 years, extendable for periods of equal duration.	
Mining Ticket	Artisanal exploitation (mining)	Three years can be extended for another three years, and then one-year extensions until the mineral resource can no longer be used.	

Sources: Extracted Angolan Mining Code (2011); Lexology (2022)

4.3 The Fiscal Regime Applicable to the Angola Mining Sector

The fiscal regime for the mining sector in Angola, as outlined in its sector legal framework, is a variation of the royalty-tax regime system that is often observed in mining industries worldwide. Table 8 provides a summary of the taxes applicable to Angola. Currently, mining companies are subject to income tax, royalties, surface tax, artisanal mining tax and taxes that apply in connection with other activities conducted by the relevant entities (Mining Code, 2011; PwC Angola, 2020):

Table 8. Summary of Taxes Associated with the Other Mineral Resources Sector

Corporate Income Tax (CIT)					
25%					
Tax on the value of mineral resources (Royalty)					
Strategic Minerals	5%				
Precious metallic minerals and precious stones	5%				
Semi-precious stones	4%				
Non-precious metallic minerals	3%				
Other minerals, construction materials	2%				
Surface Fee (USD/Km²)					
Minerals	**1º year**	**2º year**	**3º year**	**4º year**	**5º year**
Diamonds	7	12	20	30	40
Other strategic Minerals	5	10	15	25	35
Precious metallic minerals and precious stones	5	10	15	25	35
Semi-precious stones	4	7	10	15	20
Non-precious metallic minerals	3	5	7	12	18
Other minerals, construction materials	2	4	6	10	15
Artesanal Tax					
Rough Diamond Industrial Segment	5%				
Brute Diamond Semi-Industrial Segment	3%				

Source: Mining Code (2011).

4.3.1.1 Direct Tax Instruments

Corporate Income Taxes (CIT): The country applies a standard corporate income tax rate of 25% on the earnings from commercial operations that resident or non-resident firms having a tax permanent establishment carry out in Angola. With respect to excess profit, it is not clear how it is treated at the moment since there is no specific mention of it either in the mining code or the general tax legislation.

Withholding Taxes: Withholding taxes of 6.5% are payable on dividends remitted outside the country. However, in 2020, one of the measures that had the most significant effect on foreign investors was raising the withholding tax rate from 6.5% to 15%, which applies to services rendered by non-resident entities (PwC Angola, 2020). This may not be good news for overseas investors or potential investors. It made sense when it first emerged to discourage hiring services from overseas in favour of hiring local workforce. However, it might not work because many of the technical workforce contracted from overseas are unavailable locally. In conclusion, businesses will still be compelled to pay extra for overseas services.

Capital Gains Tax: A 10% Capital Gains Tax (CGT) is levied on the capital gain arising from the disposal of a specified asset. A specified asset means immovable property (e.g., land and buildings) and marketable security.

Employment income Tax (IRT): IRT is a method of paying income tax on remuneration whereby the employer deducts tax from salaries or pension earnings before paying the employee the net salary or pension. IRT has been one of the largest contributors to the government's revenue. In 2022, the IRT rate table was reformulated to exempt the lowest incomes, keeping the tax burden on the income of the intermediate brackets and adding some progressivity on the highest incomes. As a result, more brackets are incorporated, and the maximum rate, previously 17%, now stands at 25% (for incomes exceeding Kz 10 000 000).

4.3.1.2 Indirect Taxes

Royalties: The tax on the value of mineral resources or royalty is levied on the value of the minerals extracted at the mine head or, when processing is appropriate, on the value of the concentrates. In the artisanal mining of other minerals, whether strategic or otherwise, the royalty is levied on the value of the minerals acquired by public marketing bodies and other authorised buyers. Rates vary from 2 % to 5 % (See Table 6).

Value Added Tax (VAT): The VAT is 14% on domestic sales. VAT on mining inputs qualifies for deferment for zero rating for exports.

Mineral Export Taxes: According to the Mining Code, mining products can be exported directly or indirectly by the mining rights holder without any additional customs duties. However, attention is brought to the tax regime applicable to gold's value chain in which the mining code does not contemplate the manufacturing and sale process. No tax incentives are given, unlike in the diamond value chain.

Customs Duties: Companies are usually granted tax concessions on importing capital equipment and inward investment. All capital expenditure on exploration and development incurred wholly and exclusively for mining operations is allowed.

Stamp Duty: is levied on several Stamp Duty acts and contracts. Businesses are also liable to stamp duty on all receipts issued, at a 1% tax rate.

Property and Transfer Tax: Real estate owners are subject to tax at a 0.5% tax rate over the tax value of the immovable property, as determined by law. In the case of rented real estate,

a 15% effective tax rate applies to the rental income. A 2% transfer tax rate is levied (tax due by the purchaser) on the transfer of immovable property,

Social Security: Contributions amount to 11% of the employee's salary. The employer is liable for 8%, while employees are liable for 3%.

Loss carry-forward, Depreciation: The period to carry forward tax losses has been extended from 3 to 5 years due to the general tax review to manage the effects of COVID-19.

4.3.1.3 Non-Tax Instruments

Prospecting Licenses: In October 2022, the government introduced a new schedule of prices for mining prospecting license fees.

Surface Fees: Fees charged on the concession area granted are due in the exploration stage. The value of the surface charge can range from US$2 to US$40 per square kilometre, depending on the size of the concession area, the kind of mineral discovered, and the particular exploration year. If the exploring period is extended, these sums are doubled (Fialho & Viana, 2017; Sousa & Moreira, 2016).

Environmental Licenses/Permits: The mining operator must present an Environmental Impact Assessment (EIA) and pay an environmental guarantee.

Mine Development and Environmental Fund: Mining rights holders (except artisanal mining activities) are required to make provisions for the costs of repairing environmental damage caused by mining and geological activity during the duration of the operation's useful life. The rates and contribution cap are established in line with the sum ascertained by the environmental impact study.

Local Content: Regarding service provision, the Mining Code provides for local services and suppliers, provided that costs are not more than 10%. Unfortunately, this provision does not promote local content because everything in the country is imported to provide such services. Unlike the oil and gas industry, the mining sector has yet to have dedicated Local Content Legislation to regulate mining companies and service providers.

State Participation: State participation happens through a minimum 10% equity interest and an option to purchase an additional shareholding in proportion as the project's IRR increases. Concerning Carried interest, the Mining Code does not explicitly provide for a state-free carried interest right. However, official financial commitments are uncommon, especially when state

involvement in mining and marketing projects (as opposed to exploration projects) is legally mandatory.

Fiscal Stabilisation: Angola does not have any laws specifically addressing this issue. However, under their applicable mineral investment contracts, investors frequently request the addition of particular tax stabilisation clauses.

Tax Incentives: Mineral rights holders are eligible to apply for and receive investment premiums (uplift), cost deductions, income tax payment grace periods, and any other legal tax incentives upon request to Ministry of Finances (MINFIN), subject to the Ministry of Mineral Resources, Petroleum and Gas's (MINREMPT) opinion. At the contractual phase of the investment process, the request for tax exemptions is deliberated, worked out and included in the contract. Tax incentives may be given in response to the following economic activities that are pertinent to the nation: (a) Utilising the local market to obtain additional goods and services; (b) expanding operations in isolated areas; (c) aiding in the education and training of local human resources; and (d) conducting research and development projects in collaboration with Angolan academic and research facilities; 5) local mineral processing and treatment; 6) relevant contribution to the rise in exports.

Social contributions: The Mining Code requires licence holders to contribute to the education and training of local communities and others.

4.3.1.4 Other

Double Taxation: To date, Angola has not concluded any double taxation agreements (RFF,2017).

Provincial and local taxes: The Mining Code (2011) in article 245 states that 5% of the income tax rate for the mining industry must revert to the municipality under whose jurisdiction the respective mine is located. However, Joint Executive Decree No. 189/16 of 30 March was revoked, which allocated revenues of 10% of what is collected from the mining sector to the provincial government and 5% to municipal administrations.

On October 25, 2022, through Joint Executive Decree No. 536/22, the National Agency of Mineral Resources (ANRM) was appointed to collect the taxes owed to the State for prospecting and mining services across the nation. However, while the decree´s purpose is to allocate revenues collected in the mining sector, it fails to direct the allocation of revenues (from the export of ornamental stones, surface tax, royalty, income tax, as well as other revenues) from the sector to the competent provincial government due to the territory. The

exceptions include only revenues collected from administrative processes of mining investment in construction materials in the prospecting and exploration phase.

From the latter, the percentage of money that provincial governments and competent municipalities earned from granting licences to exploit aggregates increased from 10% to 80%. Among the revenues from fees and emoluments resulting from the prospecting and exploitation of diamonds and other strategic minerals, 75% is allocated to ANRM, 15% reverts to the Treasury, and the remaining 5% goes to the social welfare fund of MIREMPET workers (Expansão, 2022).

4.4 Fiscal Revenue Collection Framework

The payments of taxes and fees made by the entities of the mining sector are channelled directly to the State through the Ministry of Finances (MINFIN). The framework is depicted in **Figure 2**. Several government agencies, including local authorities, are involved in the collection of mineral revenue, and these include the General Tax Administration (AGT), the National Agency for Mineral Resources (ANRM), the Geological Institute of Angola (IGEO; Sodiam-E.P and Ministry of Resource Minerals, Petroleum (MIREMPET).

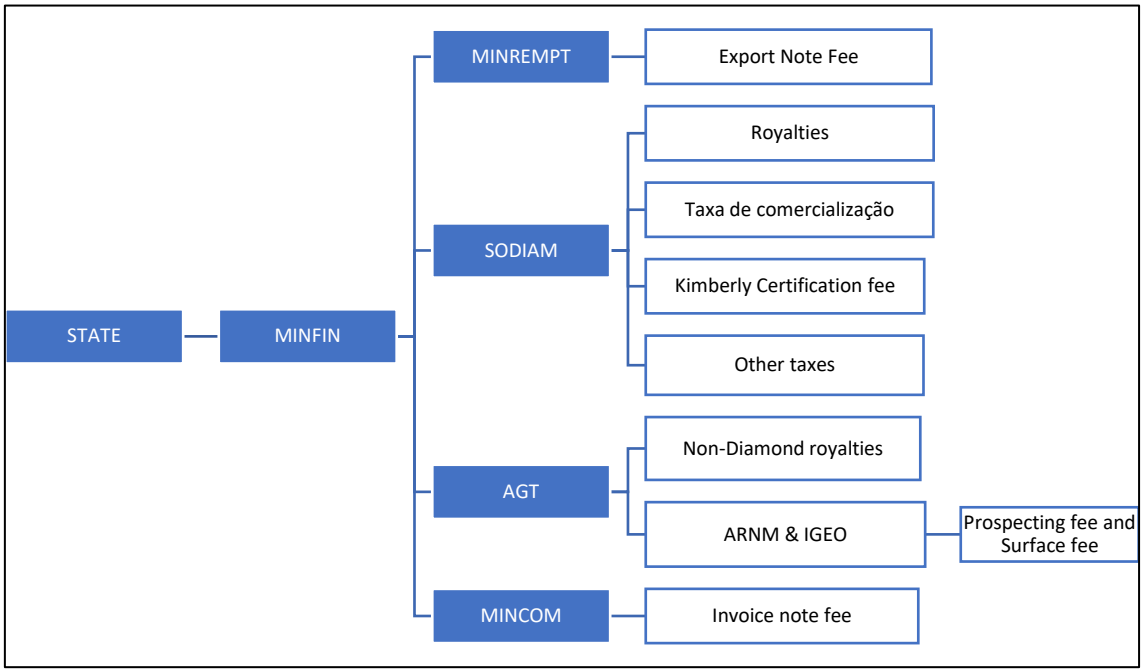


Figure 2. Framework of Fiscal and other revenue for Diamond and Other Minerals

Source: Researcher (May, 2024)

The process flow associated with contributions deducted from the gross sale value of diamonds and other minerals is as follows (EITI Angola, 2023, pp 123-124):

1. Contributions payable to the Ministry of Finances (MINFIN):
    - Advance of industrial tax by 2.5%;
    - Royalty rate as per mineral type
    - Industrial tax withholding tax of 6.5%;
    - VAT of 14% on domestic sales;
    - Surface Fee received by AGT but directly allocated to ANRM through SIGFE (Integrated State Financial Management System);
    - Fees received by AGT but directly allocated to ANRM through SIGFE (Integrated State Financial Management System);
    - Fees as provided for in the Joint Executive Decree No. 536/22, of October 25, collected using a settlement and collection note made by ANRM or IGEO.
2. Contributions payable to SODIAM E.P.:
    - Marketing tax (includes 1% for ENDIAMA E.P., 0.3% for customs costs and 0.15% for the service of the independent valuer);
    - Royalties received that are received by SODIAM E.P. and transferred to MINFIN;
    - Other fees for SODIAM E.P., according to percentages negotiated between SODIAM E.P., the producer and the customer;
    - USD 5,000 for Kimberley process certification (for applicable processes).
3. Other costs associated with the sales transaction:
    - 1,000 USD paid to MIREMPET for the issuance of the export note (sales abroad);
    - USD 1 500 paid to the Ministry of Commerce for affixing the invoice.

4.5 Conclusion

While diamonds will likely remain the country's primary mining income source, international mining companies are increasingly interested in exploring its other resources due to the rising demand for strategic minerals, non-ferrous metals, and rare earths driven by the global energy transition and their use in lithium-ion batteries.

The fiscal regime for the mining sector in Angola, as outlined in its sector legal framework, is a variation of the royalty-tax regime system that is often observed in mining industries worldwide. This method involves the government charging a royalty before enacting the generally applicable tax regime, frequently in conjunction with specific unique clauses, exemptions, etc., for the mining industry where applicable. The main mineral taxes and rates have not suffered fluctuation reforms over the last 11 years, except for the main ones in the

general tax regime to improve the industrial sector, encourage foreign investment, and create jobs. The government introduced a new schedule of prices for mining prospecting license fees in its effort to improve the governance of the sector. The Fiscal Revenue Collection Framework is one in which payments of taxes and fees made by the entities of the mining sector are channelled directly to the State through the Ministry of Finances (MINFIN). Several government agencies, including local authorities, are involved in the collection of mineral revenue, and these include the General Tax Administration (AGT), the National Agency for Mineral Resources (ANRM), the Geological Institute of Angola (IGEO; Sodiam-E.P and Ministry of Resource Minerals, Petroleum (MIREMPET).

5 RESEARCH METHODOLOGY

5.1 Introduction

This chapter addresses the methodology employed to accomplish the project goals. The goal was to understand and evaluate Angola's mineral fiscal regime and its effectiveness in securing government revenue and attracting investment. The section discusses the research design strategy utilised and the constraints of the methods used.

5.2 Research Design

The study used a mixed method to analyse the research problem (Creswell, 2009), combining the strengths of qualitative and quantitative methods by collecting and analysing data separately and integrating them to answer the research questions (Teddlie & Tashakkori, 2009). The study employed a descriptive survey design with a qualitative and quantitative approach to better understand the research project's problem and goals. Descriptive survey research allows the gathering of large volumes of data that can be analysed for frequencies, averages and patterns, and it is a suitable option when little is known about the subject or issue (McCombes, 2023). In addition, a popular technique for assessing qualitative data is thematic analysis, often known as qualitative content analysis (QCA) (Kuckartz, 2019). The main goal of QCA is working with categories (codes) and creating a category system (coding frame).

5.2.1 Qualitative Approach

The study relied on qualitative assessment to understand and evaluate the current fiscal regime. Thus, desktop literature research was conducted to inform the situational analysis of the prevailing mining fiscal regime by following the steps below:

(i) Conducted desktop literature research for the situational analysis
(ii) A questionnaire with high-level pertinent questions was developed from extracts of the Country Mining Vision (2014) guidebook to assess Angola's mineral fiscal regime from stakeholders in the sector.
(iii) Conducted a comparative analysis of rates in regional and international countries with those applicable in Angola.
(iv) Identified loopholes in the current mineral fiscal regime and made recommendations to improve tax authorities' ability to maximise revenue collection.

The questionnaire text went through a qualitative content analysis (QCA) method consisting of five steps:

- Step 1: Preparing the data, and coding of participants in accordance to gender initiating text work through an initial read-through of the responses
- Step 2: Forming main categories and subcategories corresponding to the questions asked in the interview and aligned to research questions
- Step 3: Coding data
- Step 5: Category-based analyses and presenting results

5.2.2 Quantitative Approach

Descriptive statistics, in the form of means and standard deviations, were used to analyse the mineral fiscal revenue contribution from the Diamond sector, to determine how much mineral tax is Angola collecting and how effectively is it collecting.

5.3 Target Population and Sample Size

From a researcher's perspective, studying the entire population is ideal since it yields responses from all sides. However, researchers frequently have to acquire data from a smaller group, known as a sample, due to financial, scheduling, and accessibility constraints (Cohen et al., 2007). This study chose a subset of the population by using a sampling technique. Zikmund (2000) explained that there are two main types of sampling techniques: probability or representative and non-probability or judgmental. Non-probability sampling is a technique in which sample units are chosen based on convenience or subjective judgment, whereas probability sampling assigns a known non-zero probability of selection to each member of the population. A non-probability sampling technique was used in this investigation.

It follows that, from the above, high-level officials from state-owned companies (MINREMPT, ENDIAMA, ARNM, and AGT) and fifteen private companies were chosen based on their capacity to respond to the interview questions in the required manner. However, although the initial sample consisted of twenty-seven participants, only 30% of the population (corresponding to 8) participated in the survey.

5.4 Data Collection

For a study to be completed successfully, data is required. According to Saunders et al. (2009), the main goal of the research is to collect pertinent data and information that will enable researchers to address a variety of research issues and ultimately aid in problem-solving. There are two types of data: primary and secondary. Both primary and secondary sources of data were used in this investigation.

Primary data

The primary tool used to gather primary data was the questionnaire, which also served as the interview guide. This tool was designed to address the research questions in chapter one of this study. Qualitative data was collected from both the questionnaire and the interview. The interviews were 60 minutes long, structured with each participant and a questionnaire they filled out. These interviews were based on open-ended questions where the researcher wanted to know more about the information given. The interviewees were ensured of the confidentiality of the information they would submit and were informed about the goal of the research prior to the interview. The researcher used the face-to-face method to conduct the interview herself. The researcher asked the interviewees for permission to record the interview to ensure that all of the material was recorded, but only one participant accepted.

Secondary data

Data was obtained from various sources, including books, journals, reports from Angolan institutions, articles from Law firms, credible local newspapers, and other research relevant to this study, providing the theoretical and empirical foundation required for the data analysis. The researcher looked into Angola´s Ministry of Finance (MINFIN) annual reports and compared the fiscal revenue from 2011 to 2021.

5.5 Data Analysis

According to Saunders et al. (2009), data analysis involves breaking down data and clarifying the nature of the components to establish a relationship between them. Data can be analysed qualitatively or quantitatively based on the nature and objectives of the study. Qualitative data analysis enables a researcher to develop a theory from data, while quantitative data analysis enables the researcher to explore, present, describe and examine relationships and trends within quantitative data (Saunders et al., 2009, p.145). For this study, both quantitative and qualitative analyses were conducted. The quantitative analysis was conducted using descriptive statistics using means and standard deviations using fiscal revenue data from the Diamond sector. Charts were also used to establish trends and relationships among the study variables.

Lastly, the following process was used to analyse both the questionnaire and the interviews: (i) the interview was transcribed; data examined to establish themes using content analysis; (ii) results were summarised; and then presented in the form of tables were possible.

5.6 Challenges Experienced

Due to constraints and limitations outside the researcher's locus of control in obtaining reliable production and operational data on the mines from the institutions, the following questions of this study could not be achieved: (i) Determine the cost to the Angolan government with the current fiscal regime and tax incentive scheme, (ii) Determine the effective tax rate and understand if it is attractive for both domestic and foreign investment. Thus, the researcher's study's overall results may be affected by the limited opportunities to (i) engage meaningfully on taxation instruments and other fiscal elements of the Mining Code (2011), (ii) interact with some members of the intergovernmental negotiation committee, and (iii) obtain a broader perspective from some mining companies on what are the main challenges they experience.

5.7 Ethical Considerations

The study complies with the University’s ethics clearance procedures since it involves humans. The necessary permission to publish any company data has been obtained from the sample population and issued Clearance certificate number EMINN/2020/30.

5.8 Conclusion

This chapter outlined the methodology used to evaluate Angola's mineral fiscal regime, focusing on its effectiveness in generating government revenue and attracting investment. A mixed-method approach was employed, combining qualitative and quantitative research strategies. The study involved a descriptive survey design, thematic analysis, and data collection through questionnaires and interviews. Challenges included limited access to reliable data and stakeholder engagement, which may have impacted the findings.

6 RESULTS AND DISCUSSIONS

6.1 Introduction

This chapter is divided into two major sections. Section 6.2 is subdivided into five sections covering the qualitative results of the questionnaire assessing Angola's mineral fiscal regime from stakeholders in the sector, an analysis of the mining code; Benchmarking the Angolan Mineral Fiscal Regime; an Analysis against the Principles of Taxation Best Practice; Benchmarking Angolan's Fiscal Regime´s Perceptive Attractiveness. This understanding serves as the cornerstone for comprehending the quantitative analysis. Section 6.3 presents the Quantitative Results of the Study of the Diamond Sector by seeking to answer How much mineral tax revenue is collected by Angola and How effectively does Angola collect taxes from the mining industry.

6.2 Qualitative Results on the Mining Sector in General

6.2.1 Questionnaire – Assessment of Angola´s Fiscal Regime

The questionnaire provided an overview for the situational analysis of the prevailing mining fiscal regime. The questionnaire has 18 questions accessing three areas, namely (i) the political economy of the mining sector, (ii) fiscal regime design to understand what revenues the government should be entitled to collect and (iii) the level of knowledge and implementation of transfer pricing in the mining sector to prevent loss of income tax revenue. Below are responses to the questionnaire-interview phase giving context to the summary in Appendix C.

A. <u>Understanding the political economy of the mining sector</u>

How would you characterise the Angolan government? (i) institutionalised party regime; (ii) individualised political authority built on a hierarchy of cronyism? (iii) political competition?(iv) electoral competition based on programms?

Participants characterised the Angolan political regime as a one-party government. They said the regime's governance has been stable and democratic for the past 11 years.

B. <u>The fiscal regime design: What revenues should the government be entitled to collect?</u>

Does the fiscal regime deliver value for the country over the long term?

Participants were divided. While 50% of the sample believed the fiscal added value to the country, the other 50% do not believe so and believe that improvements are required.

How does the fiscal regime ensure that the government receives a rising share of the revenues with the rising profitability of mining activities (progressivity)?

In terms of meeting government and investor´s needs, participants' perceptions were that the Mining Code (2011) and the fiscal regime are attractive and offer stability to national and foreign investors, judging by the perceived positive interest and foreign investment attention the country has been subjected to lately after the reforms implemented in the mining sector post elections in 2017.

Does the fiscal regime guarantee appropriate minimum government revenue in all production periods and price cycles (stability)?

The mining code does not mention stability, but the government does offer stability clauses in negotiations. However, the participants could not say how long a stability clause would last. It was also revealed that stability clauses are only negotiated with foreign investors because national investors lack knowledge and understanding of the mining code and the negotiating skills required to negotiate mining investment contracts.

Is the fiscal regime designed to encourage long-term investments?

It is not clear if the mineral fiscal regime is good for the country in the long run because royalties are not subject to formal fiscal analysis on projects. Angola’s mining industry is in its infancy stage and most national and foreign investment is going into greenfield projects, making it hard to predict income. Also, it is thought that the fiscal regime is simple to use in terms of how it is calculated.

Does the fiscal regime inspire confidence that the country is collecting what is due or owed and what is fair?

The Participants believed that the government gets a fair share of mining companies' profits because royalties are based on the mineral's gross market value. However, participants were unsure if the fiscal system gives confidence that the government is collecting what is due to specific unknowns such as the level of monitoring, control, and reconciliation (checks and balances) exerted on the entire mining value chain from exploration through sales from the relevant institutions.

Does the fiscal regime limit opportunity or create tax avoidance and evasion loopholes?

Whilst most of the participants believe the fiscal regime presents opportunities to avoid tax, two of the participants were unsure of it. The latter based the answers on the fact that there is a General Tax Administration called (AGT) responsible for regulating, monitoring, and controlling all aspects of the general law and mineral tax regime. However, one of the participants, an AGT specialist and senior manager confirmed and raised concerns that there was not enough human resource capacity and logistics to meet all the needs of the sector.

This participant also raised the lack of communication between AGT and the various intergovernmental and related agencies in the sector. In general, all participants also raised concerns that the Mining Code presents ambiguities that could, under the right circumstances, lead to tax avoidance and evasion.

Does the fiscal regime facilitate and encourage mineral economic linkages?

Regarding economic linkages, participants, relating to the provisions in the mining code believed to promote economic linkages such as local beneficiation, mining development fund, social responsibility contributions and a few others. Although legislation dictates a percentage to be reverted to the provinces where mining activities occur at this point, the benefits are yet to be seen since the relevant institutions have yet to show the programmes and results associated with the distribution and management of mineral fiscal revenue in those regions of the country.

C. Transfer pricing in the mining sector: preventing loss of income tax revenue

Does the law define transfer pricing? Should taxpayers use the arm's length principle to determine the value of related party transactions? Do these rules apply to mining companies?

Regarding transfer pricing and the arm´s length principle, two out of eight participants were unaware of such legislation and had no understanding of the topic. Other participants stated confidently that there was no transfer pricing legislation or regulation in existing public legislation; however, if it exists, its enforcement was questionable.

In the same way, participants did not know what administrative controls the tax authority has in place to keep an eye on the tax deductions and allowances of mining companies. This includes how much access tax authorities as well as agencies (National Mineral Resource Agency and ENDIAMA-E.P) have to information about mine production volume, production costs, and other things. Still, all companies are required by law to go through audits, so it is thought that such violations would be found.

What is your view on the incentive schemes attributed to an investor? Is there a standard?

As for incentives, the participants perceive the existing incentive schemes as fair given the sector´s poor development and, most importantly, the project´s location and degree of development in such regions. It was revealed that incentives are negotiated on a project-by-project basis and it is difficult to standardise the incentives. The mining code limits incentive negotiations since all approvals are subject to the Ministry's discretion. However, one

multinational has benefited fully from the Private Investment Law (Law 10/2018 of June 26, 2018) because of the remoteness of the region where the mineral concession was awarded.

From the participant's experience, there has not been any incentive associated with taxing rate reduction but rather freezing terms. It was also revealed that incentives have only been negotiated with foreign companies because they have international experience and are knowledgeable about the fact that incentives are not standardised for Multinational enterprises.

In summary, there seems to be a consensus amongst the participants that improvements to the existing mining code and revenue administration agency, as well as harmonisation of various incentive legislation, are required. However, such improvement ought to be methodical and phased out since the sector is characterised by entrenched bad practices from the past.

6.2.1.1 Questionnaire Content Analysis

Following the methodology of qualitative content analysis (QCA), the analysis of participants' responses, resulted in seven thematic subcategories based on the questions asked: (1) Institutionalises one party; (2) Effectiveness; (3) Efficiency; (4) Progressivity; (5)Prevention of revenue loss; (6) Generous incentive schemes and (7) Promotion of economic linkages. Furthermore, it was created five evaluative categories with the codes ‘yes’, ‘no’, ‘don’t know’, ‘not sure’, and ‘need review with ratings attributed to each evaluative category varying from 1 to 5 (see Appendix C1).

The category-based analysis offers the option of focusing on qualitative and/or quantitative aspects. A frequency analysis of the subcategories under the main category, *Fiscal Regime Design*, shows that the vast majority of participants may not yet have any practical experience or possess a solid understanding of the role of mineral fiscal regime in maximizing revenues and promoting linkages. **Table 9** summarises the category themes and provides a comparison between the participants.

Finally, in **Table 10**, an analysis of the ratings for each evaluative response code shows that the perceived trend of the participants regarding the adequacy of the prevailing mineral fiscal regime is that it needs to be revised (NR) at an average score of 4,15. This tendency is represented in **Graph 4**.

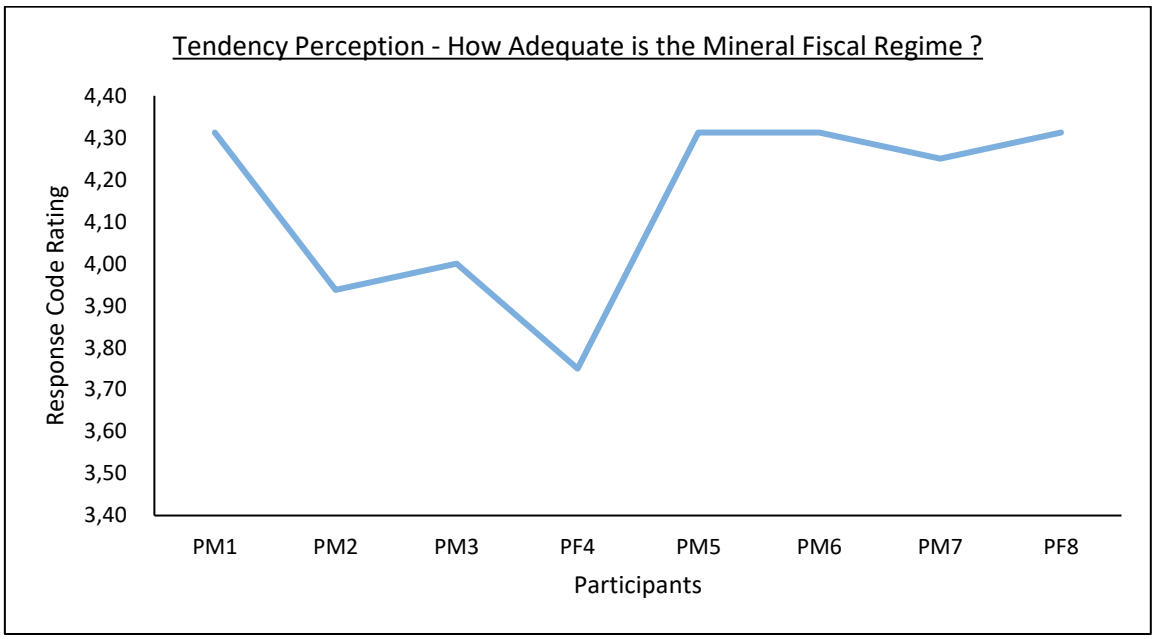
Table 9. Summary of Themes and Comparison between Subcategories

PARTICIPANTS	A. POLITICAL TYPOLOGY	B. FISCAL DESIGN					C. ECONOMIC GROWTH & DEVELOP.
	Institutionalises one party	Effectiveness	Efficient	Progressive	Prevention of revenue loss	Generous incentive schemes	Promotion of ecomic linkages
PM1	Y	NR	NR	Y	NS	NS	Y
PM2	Y	NR	NR	N	NS	NS	Y
PM3	Y	NR	NR	N	NS	NR	NS
PF4	Y	NR	NR	N	NS	NR	Y
PM5	Y	NR	NR	N	NS	NS	Y
PM6	Y	NR	NR	Y	NS	NS	Y
PM7	Y	NR	NR	Y	NS	NS	NS
PF8	Y	NR	NR	Y	NS	NS	Y

Legend	
Response Code	Code Rating
NO (N)	1
DONT KNOW (DK)	2
NOT SURE (NS)	3
NEEDS REVIEW (NR)	4
YES (Y)	5

Table 10. Participant Perceived Trend on Mineral Fiscal Regime Adequacy

MAIN CATEGORY	QUESTIONS	PARTICIPANTS										
		PM1	PM2	PM3	PF4	PM5	PM6	PM7	PF8	TOTAL	AVERAGE	RESPONSE CODE
A. POLITICAL TYPOLOGY	Q1	5	5	5	5	5	5	5	5	40	5,00	Y
B. FISCAL DESIGN	Q2	5	5	5	5	5	5	5	5	40	5,00	Y
	Q3	5	1	1	1	5	5	5	5	28	3,50	NS
	Q4	5	5	5	3	5	5	5	5	38	4,75	NR
	Q5	4	4	4	3	4	4	4	4	31	3,88	NS
	Q6	4	4	4	4	4	4	4	4	32	4,00	NR
	Q7	3	4	4	4	3	3	3	3	27	3,38	NS
	Q8	5	5	5	5	5	5	5	5	40	5,00	Y
	Q9	5	4	4	4	5	5	5	5	37	4,63	NR
	Q10	5	5	5	5	5	5	5	5	40	5,00	Y
	Q11	4	4	4	4	4	4	4	4	32	4,00	NR
	Q12	5	5	5	5	5	5	5	5	40	5,00	Y
	Q13	5	5	5	4	5	5	4	5	38	4,75	NR
	Q14	5	5	5	5	5	5	5	5	40	5,00	Y
C. ECONOMIC GROWTH & DEVELOP.	Q15	2	1	1	1	2	2	2	2	13	1,63	N
	Q16	2	1	2	2	2	2	2	2	15	1,88	N
	AVERAGE	4,31	3,94	4,00	3,75	4,31	4,31	4,25	4,31		4,15	NR



Graph 4. Participants Perception Trend

6.2.2 Review of the Legislative Framework – Mining Code

A review of the prevailing mining code, a critical aspect of the study, reveals significant implications for the mining sector:

- Despite the penalty clauses in place, the legislation does not clearly provide administrative mechanisms to monitor and enforce the legal framework.
- There is no evidence of legislation on fiscal stability, ring-fencing, arm´s length principles, or transfer pricing.
- Article 248 of the mining code, contains a list of costs and losses that can be deducted. The wording of the law suggests that this list should take precedence over the general rules in the general CIT code. This finding has significant implications, as it implies that some of the CIT's rules about losses and deductions may not apply to the mining sector. Such nuances in the legislative framework can have a profound impact on the mining sector's operations and financial management.
- Fiscal regime calculation appears to be simple, yet there is no clarification or methodology regarding the calculation of several taxes imposed in the Mining Code as in other jurisdictions (Oshionebo, 2020).
- The conditions of the Mining Code on the provision of local goods and services, a key aspect of the study, have real-world implications that work against the objectives of promoting local content. The research, informed by the researcher's experience as a service provider to the sector, highlights that any specialised local service provider in the mining industry must import everything it needs to meet such services' technical

obligations (including human capital expertise). This, coupled with the inherent costs of logistics on importation or export and the tedious bureaucratic practices associated with Angola's bank services, will always exceed the 10% markup margin rate, thereby impacting the sector's competitiveness and sustainability.

6.2.3 Benchmarking the Angolan Mineral Fiscal Regime

The mining fiscal regime of Angola was compared across ten mining jurisdictions (Chapter 3), namely: four African nations (the Democratic Republic of the Congo (DRC), Tanzania, Bostwana, Ghana, and South Africa), two South American nations (Brazil and Chile), two OECD nations (Australia and Canada), and one Asian nation (China). These nations were selected as they are widely recognized as key players in the mining sector, thereby making the comparison with Angola's fiscal regime more meaningful.

This benchmarking focuses on two rates with which investors are often concerned (Haglund, 2013), royalty and corporate income tax rates. The rates for these two taxes in a number of mining jurisdictions are contrasted in **Tables 11** and **Table 12**. Significant differences exist in the definitions of the "bases" on which these rates are applied for cost base definition, as Table 9 in particular demonstrates. Similarly, in Table 10, the concept of "corporate income tax" can differ greatly throughout nations based on the prevailing accounting standards that determine how the cost base is determined. The results and analysis of royalty and corporate income tax are as follows:

(i) Royalty

In general, Angola has one of the lowest royalties. With respect to gold royalty rates, some of the regional rates are, Angola 5%, Tanzania 6% and 4% where refined locally, Botswana 5%, South Africa 3% unprocessed and 1.5% refined, and the Democratic Republic of the Congo 3.5%. Diamonds and other precious stones are subject to comparatively high royalty taxes (10%) in Australia, Canada and Botswana.

However, mineral by mineral, besides diamond, other precious stones, and platinum, which are charged at 15%, 10% and 10%, respectively, royalties for other minerals are generally competitive globally. For example, for copper, Angola is at 3% while Canada is at 16%, DRC 3.5%, and Botswana 3%. For coal, Angola is at 3% (Non-precious metallic minerals), Canada 17%, Chile 14%, China 4%, and DRC 3%. Depending on the kind of mineral, South Africa has royalty rates ranging from 1% to 5%. Similarly, Ghana’s mining royalty changed, with a current fixed rate of 5% replacing a range of 3-6% (Lexology, 2019). With the exception of Chile, all other jurisdictions apply restrictions on tax losses for up to about 5 years.

(ii) Corporate Income Tax

A comparison between Angola's mining corporate income tax with other mining jurisdictions reveals that most countries apply a standard national rate in the range of 22% to 35% which is in line with Angola's corporate tax rate of 25%. Ghana has the highest corporate income tax at 35%, followed by Australia (30%), South Africa (28%), Chile (24%) and Canada (23%). Canada appears to have provincial general corporate income is also levied between 8% to 16%.

In South Africa corporate income tax is levied at 28% for both resident and non-resident companies, with gold mining companies taxed according to a special formula (Deloitte, 2016). Ghana´s corporate income tax is pegged at 35%. In China, CIT is only applied when a Permanent Establishment is created. The effective rates range from 3.75% to 12.5% depending on the applicable deemed profit rates (PwC, 2012).

In summary, following Chapter Three of the study, it is once again confirmed that no two countries tax extractive resources in quite the same way (Smith, 2012; Otto, 2018; Baunsgaard, 2001). This makes benchmarking rates across countries challenging because different governments use different tax instruments and define the underlying tax bases in different ways. Nevertheless, both headline taxes, mineral royalty and corporate income tax, are within regional and international norms. Hence, the country could continue to operate at the same tax rates.

6.2.4 Analysis against the Principles of Taxation Best Practice

Chapter two of the study discussed the characteristics of an effective and efficient tax system, which evolved from both the canons and optimal tax theory. Otto and Cordes (2022) define an efficient system as one that provides the government with the required financial resources and an effective system as one that considers all five tax system design principles (equity, efficiency, convenience, certainty, and flexibility) while optimising for their trade-offs.

(i) Royalty

The ad valorem royalty regime in Angola meets some of the canons of taxation because, as Guj (2012) puts it, (i) it is highly revenue productive in the short term; (ii) it guarantees that royalty will be paid for as long as the mine is in operation (stability). Naturally, the amount of money received by a government will fluctuate since it is influenced by shifts in the price of commodities; (iii) It is easy to understand and administer (simplicity); (iv) it has been stable over the past 11 years (stability), fostering the competitiveness of the nation as an investment destination for regional and international investors and (v) provides certainty in terms of estimating future liability in the year (certainty).

However, the royalty regime is inefficient. As Otto (1998, 2006, cited in Laporte et al., 2022) explains, the royalty regime in rem, raises the company's production costs despite guaranteeing the government's revenue from the start of production, regardless of how profitable the mining company is. The latter makes it inequitable (not based on the ability to pay) since it taxes both loss-making and profit-making mines or projects. If royalties are raised they raise the cut-off grade and can easily sterize marginal resources. This means that the country could rank as being resource-poor in comparison with other countries with lower royalties or personal royalty regimes (Chigumira et al., 2016).

Thus, the royalty setting in Angola may have a short-term view of revenue productivity by sterilizing resources, discouraging exploration, mine development, and production in the near future, and hence limiting long-term revenue as well as other economic development initiatives such as the social and responsibilities companies are required to meet as per the Mining Code.

(ii) Corporate Income Tax

It is classified as a progressive tax in the sense that larger, more profitable firms pay more than smaller firms. It is based on profit alone, but the revenues collected by the government may be eroded by a fall in the profitability of the project and by the misuse of transfer prices (Laporte et al., 2022).

In summary, although it is useful to look at the characteristics of each instrument in isolation, the fiscal regime comprises multiple instruments, in which case it is necessary to assess the tax system in its entirety in terms of its impacts on economic efficiency, rent collection, government risk, and, lastly, administration and compliance costs (IMF, 2010). Thus, the Angolan mineral fiscal system might qualitatively be effective and efficient to some extent, but the overall picture can only be known by determining the average effective tax rate of the industry, which will account for the tax incentives the government offers in the quest to attract local and foreign investment to revitalise the sector. Thus, judging by the current industry life cycle characterised by greenfield exploration activities the effectiveness and efficiency of the current tax system might be compromised.

Table 11. Cross-country comparison of Headline rates (Mining Royalty)

Type of Tax	Australia	Brazil	Canada	Chile	China	South Africa	DRC	Ghana	Botswana	Tanzania	Angola
Level at which applied	State	Federal	Provincial	State	Federal	Federal	State	Federal	Federal	Federal	Federal
Mineral tax											
Copper	2.5% - 7.5%	2%	1% - 17%	5% - 14%	Various	0.5% - 5/7%	3.50%	5%	10%: Precious stones	6.00%	5%: Strategic minerals; precious metallic minerals and precious stones
Gold	2.5% - 5.0%	1.50%	1% - 17%	5% - 14%	Various	0.5% - 5%	3.50%	5%	5%: Precious metals	6% / 4% where refined locally	4%: Semi-precious stones
Iron ore	2.75% - 7.5%	3.5%	1% - 17%	5% - 14%	Various	0.5% - 7%	1.00%	5%	3%: Other minerals	6.00%	3%: Non-precious metallic minerals
Coal	2.75% - 15%	2%	1% - 17%	5% - 14%	Various: 1%-9% +Rmb 7/ton	0.5% - 7%	1.00%	5%		3% / 1% where used as industrial raw material	3%: Artisanal diamonds
Nickel	2.5% - 5%	2%	1% - 17%	Various	various: 2%-10% + Rmb 7/ton	6%	3.50%	0.5% - 5.0/7.0%		6.00%	2%: Other minerals & construction materials
Lithium	2.5% - 5%	2%	1% - 17%	Various	various: 2%-10% + Rmb 7/ton	3%	1.00%	0.5% - 5.0%		3% / 1% where used as industrial raw material	Same as Strategic minerals
Cobalt	2.5% - 5%	2%	1% - 17%	Various	various: 2%-10% + Rmb 7/ton	6%	10%	0.5% - 5.0/7.0%		6.00%	Same as Strategic minerals
Diamond	7.5% of net revenue or 22.5% of net profits	2%	13% of net profits		4%	5%		3% - 12%	stated above	5%	stated above
Basis of definition	Generally, the applicable mining royalty will either be a set amount, a fixed percentage of the volume of minerals extracted or calculated on the realised value of the minerals mined.	Ajusted revenues	Basis of mineral taxes varies depending on the province or territory in which the mineral is situated. As a general rule, the basis for the more common mining jurisdictions are mine specific revenue less mine specific costs with various non-deductible costs	Mining Operational taxable: ad-valorem component (1%) and an operating margin component (8%-26% for big mining companies)	Ad valorem royalty + per unit charge	Formula based percentage applied across to adjusted sales	Mining royalty applies to mineral production valuated on the basis of gross commercial value.	Revenue	calculated from the gross market value of mineral sales at the "Mine gate"	Royalty is calculated as a percentage of the "gross value" of minerals.	Royalty is calculated as a percentage of the "gross value" of minerals.

Source: PwC Corporate Taxes – Worldwide Summaries, 2023; Deloitte, March 2016; Haglund, 2013; Two Ducks Resources, (2008); EY (2023).

Table 12. Cross-country Comparison of Corporate Income Taxes

Type of Tax	Australia	Brazil	Canada	Chile	China	South Africa	DRC	Ghana	Botswana	Tanzania	Angola
CIT	25% - 30%	34%	23% - 31%	27%	25%	28%	30%	35%	22%	27%	**25%**
Level at which applied	Federal	Federal	Federal and Provincial	Federal	Federal	Federal	Federal	Federal	Federal	Federal	**Federal**
Basis of definition	The rate of corporate income tax in Australia for groups with global income of more than AUD 50M is 30%	The rate of corporate income tax rate in Brazil is 15% plus an additional 10% over the portion that exceeds BRL 20,000 per month. There is also a social contribution on net income which is 9%. Both taxes have the same tax basis and, therefore, the combined corporate income tax rate is generally considered to be 34%	Provincial income rates vary between 8% to 16%.	A tax reform contained in Law No. 20,210, published on February 24, 2020 in the Official Gazette, established the partially integrated system as the sole taxation regime for large companies, with a rate of 27%, eliminating the alternative system of attributed income that existed until such date.		Tax on excess profits in the mining sector only applies to gold mining. The tax rate on excess profits for gold mining companies is determined by a formula that is linked to profits.	The standard rate of corporate income tax is 30%, applicable to all operators including for mining activities. A super profit tax at a rate of 50% was implemented. The super profit tax is due when the commodity prices rise by 25% in comparison to those referred to in the feasibility study. The revenues subject to the super profit tax are then exempted from the profit tax (i.e., the corporate income tax at 30%).				

Source: PwC2012/PwC Corporate Taxes – Worldwide Summaries, 2023; Deloitte, March 2016; Haglund, 2013

6.2.5 Benchmarking Angolan's Fiscal Regime´s Perceptive Attractiveness

An alternate method for contextualising Angola's mining fiscal regime internationally is to conduct surveys with executives in the mining industry about subjective perceptions among mining investors. The Fraser Institute Annual Survey of Mining Companies (2015) gives an international view of Angola's mineral tax system and level of attractiveness for foreign investment.

Figure 3 shows the perceptions concerning Angola's mining fiscal regime specifically, compared to the average for Africa and the world. It shows Angola's rating as being broadly in line with the average across Asia and South America. Based on this survey, 50% of those surveyed consider Angola's fiscal framework for mining a deterrent to some extent. Furthermore, the data above illustrates how averaging over large samples reduces the usefulness of cross-country comparisons.

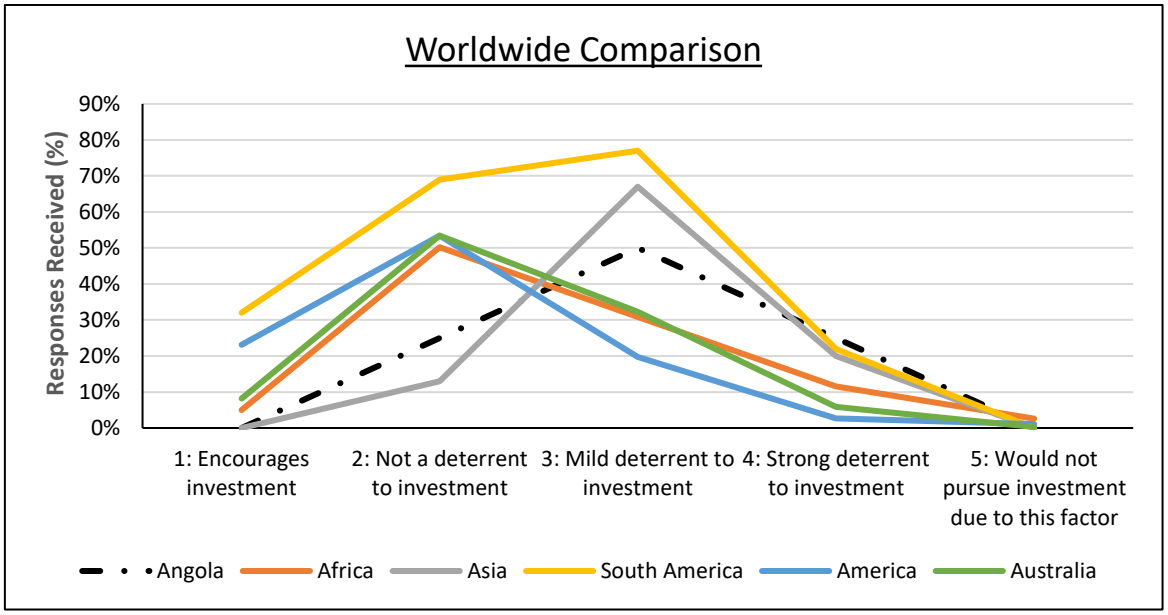


Figure 3. Perceptions of Angola´s Minerals Fiscal Regime – Worldwide Comparison

Source: Frase Institute, 2015.

Figure 4 compares Angola to five regional peer countries, all with large mining sectors. It points to perceptions of the fiscal regime of Angola's mining sector as similar to that of the Democratic Republic of Congo and less attractive than the rest of its peers in the region. In addition, it also shows that investors, on average, consider the mining sector fiscal regime in Botswana more attractive than that of Angola or the Democratic Republic of Congo. Judging by the period this survey was conducted and the state of the mining sector in Angola, the value of such

perceptions-based data is that it allows comparison across minerals, i.e. perceptions on both Botswana and Angola will be provided by current or would-be investors in the diamond sector.

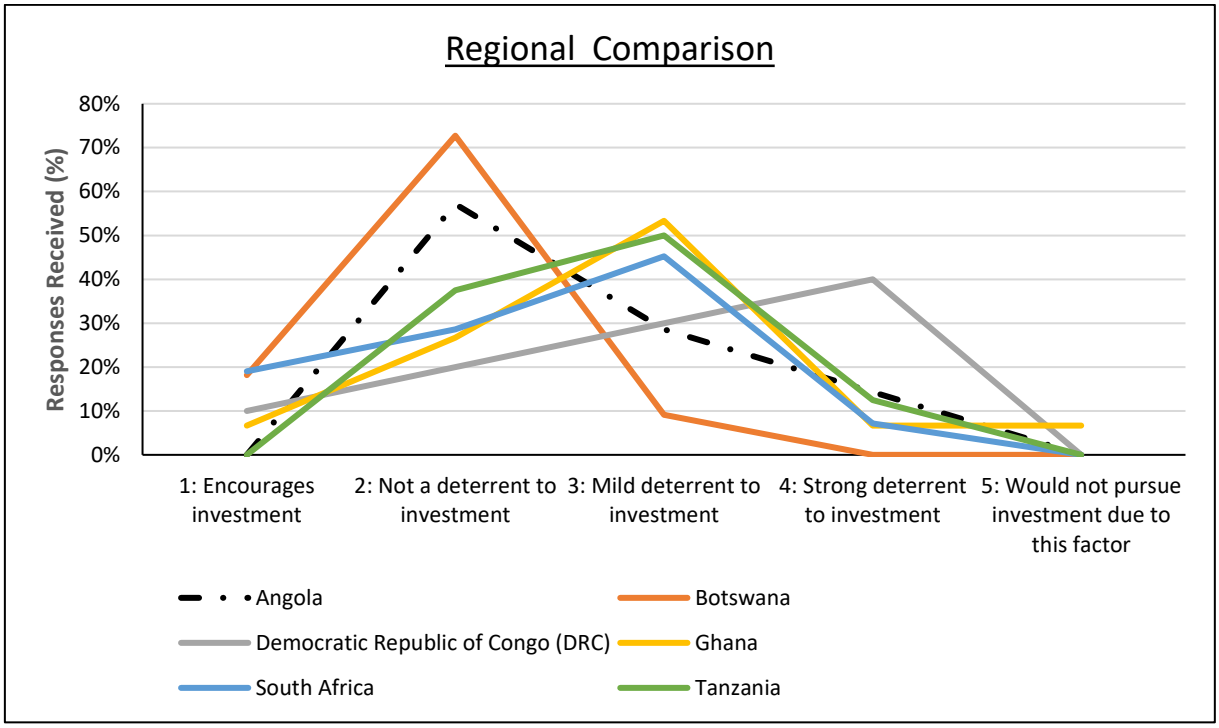


Figure 4. Perceptions of Angola´s Minerals Fiscal Regime – Regional Comparison

Source: Frase Institute, 2015.

It should be emphasised that an assessment of perceptions regarding the 'attractiveness' of a fiscal regime relative to other countries will include many other factors beyond the fiscal rates, which can help to explain the divergence between, e.g. Angola and Botswana in the figure above. Some of these issues are discussed below:

- Survey´s Sample population: According to the report (Fraser Institute, 2015, p. 16), the sample population from Angola for this survey totalled 9 responses. This sample size is not representative and hence distorts the analysis of this survey.
- Organization and status of Angola´s mining sector in 2015: From Chapter Four, note should be taken that there was very limited transparency around the mining sector even after the new Mining Code came into effect in 2011. Also, only the diamond sector was operational. Since then, important reforms have been carried out with the aim of reorganizing and transforming the sector as one of the major contributors to the Angolan economy, and one of the priority sectors in the strategy to reduce dependence on oil, including (i) increased efficiency in the sector; (ii) Robust and stable regulatory environment; (iii) sustainable management of mineral resources; (iv) effectiveness of institutional coordination in the mining sector; (v) reduction of the direct presence of the

State in the economic activity of the mining industry; (vi) optimising the role of private actors; (vii) prevention and elimination of conflicts of interest; (viii) increase in the transparency of acts and procedures relating to access to and granting of mining rights.

Nevertheless, Fraser´s report enabled a preliminary identification of Angola's main limitations by identifying an international standard of tax best practices. Hence, preliminary conclusions from this are:

- The most competitive and efficient countries have a special mineral tax regime constituted by a mix of royalty or tax incorporates a minimum specific or ad valorem royalty component generally in a profit-based or economic rent-based tax to limit the risk that the government may collect no revenue if in any year there is no taxable profit or rent (Guj, 2012); and
- In African countries, tax stability agreements are crucial to maintaining the investors' confidence (Otto, 2018; Land, 2010; Tilton & Guzman, 2016).

6.3 Quantitative Results of the Study of the Diamond Sector

This section seeks to answer two questions raised by the preceding sections: (i) How much mineral tax revenue is collected by Angola? (ii) How effectively does Angola collect taxes from the mining industry?

6.3.1 How much mineral tax is Angola collecting?

The Angolan diamond mining industry contributes significantly to global diamond production. It is the third largest producer of diamonds after Botswana and contributes 13% of the world´s production by value (see **Figure 5**). As a result of Angola's diamond production capacity, mining companies in Angola have contributed significantly to its economic development over the years through taxes and royalties. **Table 13** shows the total mining fiscal revenue of US$ 909 million of which the diamond sector contributed with US$ 702 million, equivalent to an average of 81% of the revenue collected.

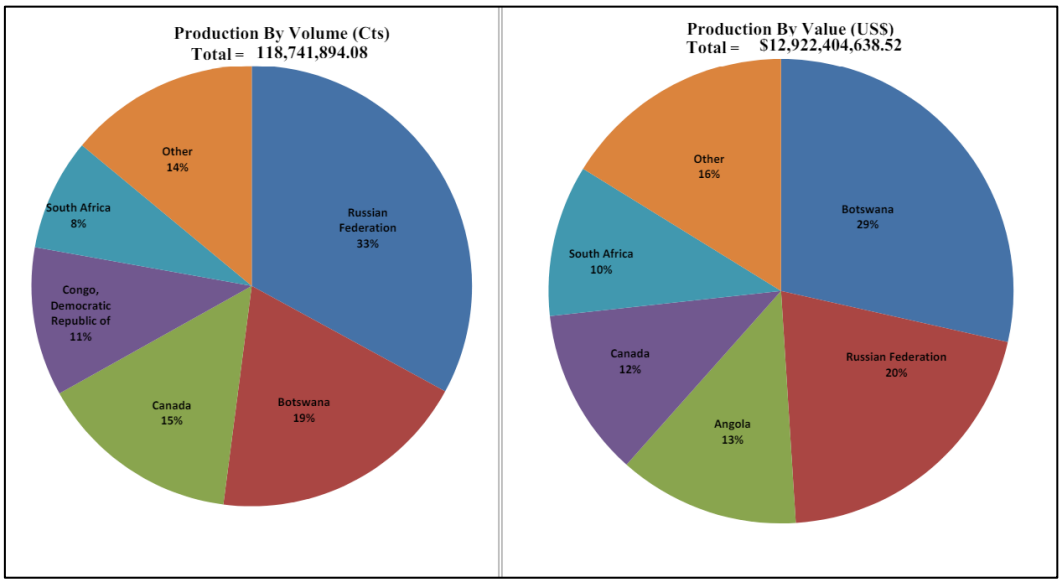


Figure 5. Diamond production outputs of Diamond-producing countries

Source: Kimberly Process Statistics, 2024.

Table 13. Mining Sector Contribution to Total Government Revenue 2011 to 2021.

Year	Total Gov Revenue (USD)	Total Mining Fiscal Revenue (USD)	Diamond Sector Share (USD)	% Diamond Mining Contribuition
2011	52 818 081 284,30	135 163 439,43	117 665 824,43	87%
2012	53 239 198 873,49	118 563 677,57	104 031 690,72	88%
2013	65 032 287 998,80	77 594 827,85	44 414 364,42	57%
2014	67 881 139 898,05	87 864 351,40	51 599 372,89	59%
2015	40 052 733 812,87	88 321 691,62	45 699 863,00	52%
2016	49 093 394 981,24	67 718 965,51	55 129 146,34	81%
2017	40 571 362 732,15	60 460 635,52	54 372 847,96	90%
2018	58 376 243 956,74	96 056 751,48	45 566 756,47	47%
2019	40 555 025 637,79	39 191 355,09	52 353 902,15	134%
2020	17 993 539 820,13	64 460 058,76	64 392 180,67	100%
2021	25 588 163 279,66	74 145 904,07	67 586 157,81	91%
Total / Aver	**511 201 172 275,21**	**909 541 658,29**	**702 812 106,86**	**81%**

Source: Angola National Budget Report. www.minfin.gov.ao

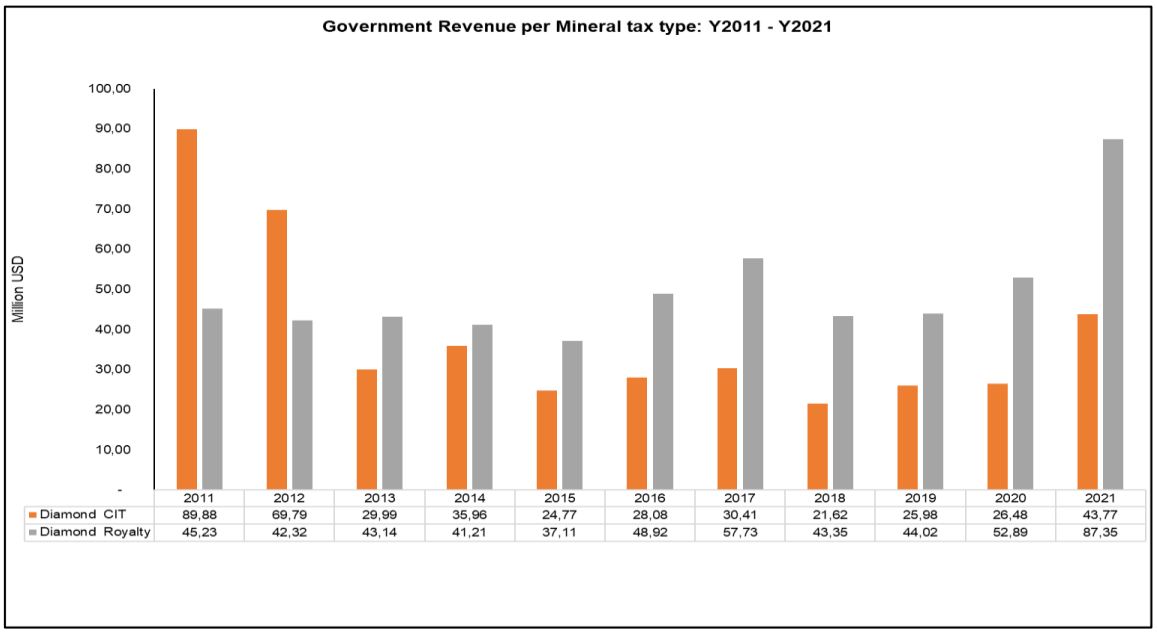
Table 14 captures the descriptive statistics of taxes paid by the mining industry in general and by the diamond sector in particular to the government for the past eleven years (2011 to 2021). However, with a high standard deviation of $27m, it can be seen clearly that these mining fiscal payments have been seeing significant fluctuations. This may probably be due to fluctuations in diamond prices over the past eleven years, which have also affected the total revenues of the taxes.

Table 14. Diamond Sector Share of Mining Fiscal Revenues

Descriptive Fiscal Revenue Share by the Diamond Sector over the 10 years (2011-2021) USD (M)						
	N	**Minimum**	**Maximum**	**Sum**	**Mean**	**Std.Dev**
Total Mining Fiscal Revenue (USD)	11	39,19	135,16	909,54	82,69	27,05
Diamond Sector Share (USD)	11	44,41	117,67	702,81	63,89	24,52

Furthermore, due to the lack of clarity on the nomenclature of taxes found in the government´s financial reports, only direct taxes, such as income taxes and royalties levied against diamond production, are analysed because it is the only mineral resource over which the mineral taxes are clearly discriminated against. Although Withholding taxes and VAT play a significant part in the government revenue, they are not included in the analysis because the data available does not discriminate which mining sub-sectors are levied against. As for other indirect taxes (import and export duties, mining funds) and non-tax instruments (licence and surface fees, etc.), not only are the revenues insufficient in comparison to what the income and royalty produce, but there is also a lack of data reporting consistency for the period in analysis.

Thus, according to **Graph 5** between 2011 and 2021, corporate income taxes (CIT) contributed 44%, and royalties contributed 56% of total mineral fiscal payments. The performance of Corporate Income Tax (CIT) versus royalty indicates that there could be challenges in the system, either in the form of collection issues, poor performance from mining companies, or even tax concessions and exemptions (tax incentives) from corporate income taxes.



Graph 5. Government Revenue per tax instrument.

Source: MINFIN government Budget Report 2011- 2021

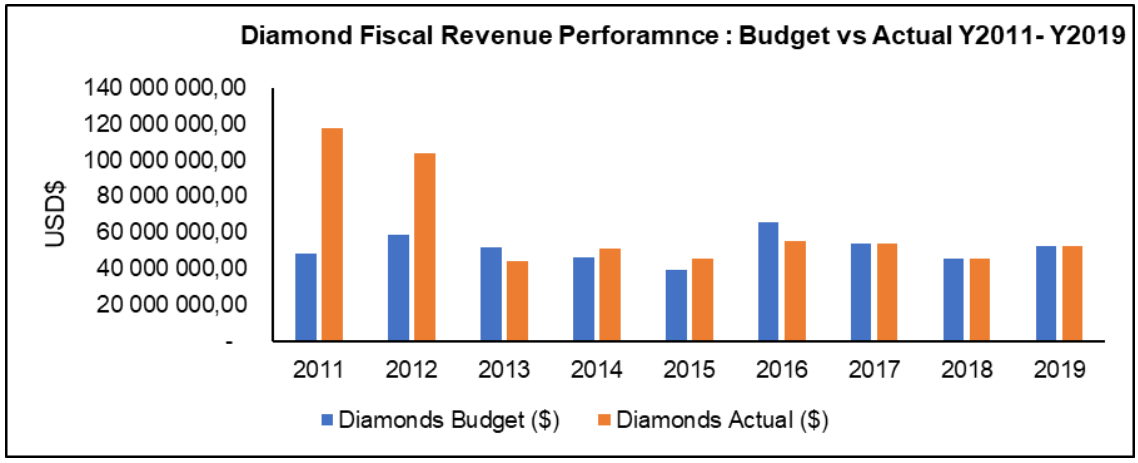
Additional observations of the data are summarised as follows:

- The performance of surface and administration fee collection has been insignificant and inconsistent. Similarly, for precious metals and other minerals, the low financial contribution representation reflects the status of the mining activities in the sector in the early stages of greenfield exploration.
- The above inconsistencies could be also a result of (i) poor information sharing and integration between related institutions; (ii) poor control and management of tax assessments and payments; limited institutional administrative capacity; (iii) failure to account properly for resource tax revenues; (iv) a poor organisational structure in revenue; and (v) low and poor human resource capacity, amongst others. These concerns have been raised by the participants as well.
- Some consequences of low revenue collection may include weak, low human resource capacity and highly inefficient organisational processes between intergovernmental and tax administration agencies. This, in turn, indicates high costs to the Angolan government.

6.3.2 How effectively and efficiently does Angola collect taxes from the mining industry?

Determining the extent of the effectiveness and efficiency of the fiscal regime would require determining the effective tax rate by analysing the effects of all government taxes (direct taxes, indirect taxes and non-tax instruments) on both the industry and the government´s treasury. Through this exercise, it will be possible to identify, quantify and qualify all deficiencies in the existing (and future) fiscal regime as much as provide a solid basis for understanding which other options are viable considering their effects.

The latter is out of the scope of this study due to time constraints. However, section 6.2.4 and section 6.3.1 provide a qualitative assessment of the effectiveness and efficiency of the mineral fiscal regime, which is complemented by an analysis of the government's ability to budget and collect diamond rents between 2011 and 2022. **Graph 6** depicts the fiscal revenues collected from the diamond sector. It indirectly reveals that the government´s ability to collect taxes income taxes and royalties for the diamond sector surpasses the budget. Thus, the current corporate income tax and mineral royalty rates seem to ensure that a reasonable share of the resource rent is collected by the government.



Graph 6. Government´s performance on mineral fiscal planning

Source: MINFIN Government Budget Reports 2011 to 2021

Questions about whether Angola is collecting what it is due from the mining sector are yet to surface. However, the previous section gives a glimpse of the status of fiscal collection for some of the indirect and non-tax instruments. The challenges around effective tax collection are a reflection of the inter-linked complexities in the fiscal regime, possible extensive use of incentives through exemptions and concessions, and weak institutional capacity within key government agencies reiterated (Otto,2018; Ayatc, 2018; Barma et al., 2012; Daniel et al., 2010):

- First, although the mining code is considered liberal and there have not been changes to provisions for the past 11 years, according to Fraser´s Institute survey, the subjective perception among mining investors is that the mineral fiscal regime is a deterrent to doing business in Angola. This could mean a contested understanding of applying the tax code, including the definitions of prices and concepts used in accounting standards. This could make it difficult to collect revenues effectively.

- Limited transparency in the mining sector continued when the new Mining Code came into effect in 2011 until the new government took power in 2017. The reforms in place, aiming to reorganize and transform the mining sector by increasing efficiency and implementing the EITI process in June 2022, have brought a welcome sense of improvement in the transparency of the sector's governance. However, the same is yet to be felt about the fiscal payments the sector has made.

- Finally, although Angola's tax regime broadly follows international practice, the capacity of the different government agencies involved in enforcing and administering revenue mobilisation from the sector has remained weak. Greater coordination across Ministries regarding the reform initiatives could be achieved, but its success can be held back by the limited day-to-day integration across public agencies and bodies (Barma et al., 2012, p.137).

  During the guided questionnaire and interview session, delegates of the General Tax Administration (AGT) and National Mineral Resources Agency (ARNM) raised concerns about the shortage of human capital, technically specialised and experienced in the tax administration agency as well as sector´s agencies to attend to the mineral sector´s needs; that way ensure the monitoring, and enforcement of processes and procedures in accordance with the legal framework.

6.4 Qualitative Recommendations on the Design of an Optimal Fiscal Regime

According to the findings of sections 6.3 to 6.5, the current mineral fiscal regime, Ad valorem royalties (based on sales value), has performed fairly in meeting the government´s main objectives of administrative efficiency and stability in government revenue. But is it optimal? An optimal mineral fiscal regime should minimize taxes that add to costs and maximize taxes on the surplus rents generated (Otto, 2018; Guj, 2012; Baunsgaard, 2001; Barma et al, 2012).

In designing the optimal mineral fiscal regime for Angola, two options were considered based on best practices: (i) sliding royalty scale rate and (ii) a mixed tax system combining resource rent tax or profit-based royalty with ad valorem.

Table 15 makes it clear that when it comes to maximising revenue efficiency, optimising the tax base, economic allocative efficiency (optimal resource exploitation), and equity (fair distribution of the tax impact), a resource rent-based tax (RRT) is preferable to the current basic ad valorem system alone. However, the RRT tax system has shortcomings in terms of income volatility, potential transparency (ease of assessment by the community and other stakeholders), and inefficient administrative processes. Therefore, for Angola, a mix of the resource rent tax (RRT) and the conventional ad valorem royalty would be recommended, with the former completely deductible against the latter (ECA, 2017, p.34-36). However, a "stability fund" could be established in addition to transparent application in accordance with the Extractive Industries Transparency Initiative, and the revenue authority would be covered in order to overcome the three challenges of the RRT and reinforce the strength of ad valorem in these same areas. Furthermore, to improve administrative effectiveness, companies should perform "forensic tax internal audits" on a regular basis (CMV, 2014, p 69).

These measures have been adopted in both developed and developing economies, such as Australia, Canada, Guinea (ECA, 2017), Kazakhstan, and Liberia (IMF, 2010), to reduce efficiency losses, increase the fiscal system's flexibility, and increase the share of rent collected through royalty. In addition, Barma et al. (2012) also recommend the mixed tax system for a Hegemonic political and economic setting like Angola (Chapter 2).

Nevertheless, is the above proposed optimal fiscal regime executable in Angola in the short to medium term? From the researcher´s perspective, it would be ideal that in the short term (3 years), the mineral fiscal regime sticks to Ad valorem. But as part of the country's National Development Plan, adopts a staged and progressive approach in integrating more mature and complex fiscal instruments every five years for the next 13 years considering the following aspects below :

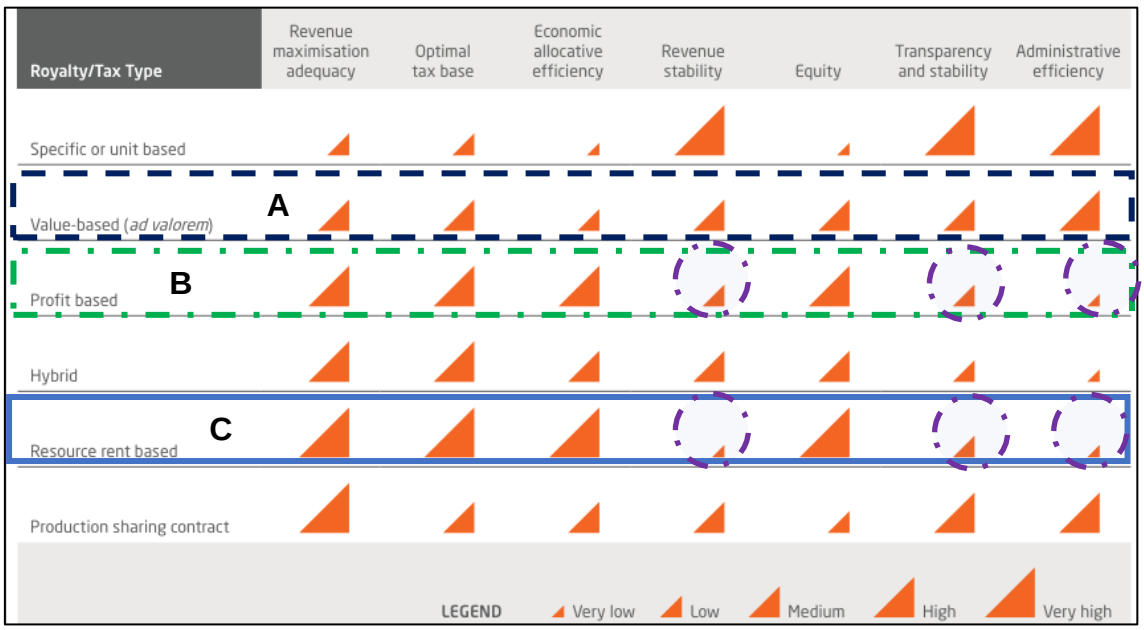
- the infancy stage of the mining industry and the reform initiatives in place;
- the fact that there are more small mines than large ones;
- the increasing methodological and administrative complexity and the potential for ambiguity and disputes (Guj, 2012, p.8) for resource rent-based and profit-based royalty tax, which will in turn require higher compliance and auditing costs for both government and industry; and

- the shortage of human and administrative capacity experienced by the tax administration agency and sector agencies in attending to the mineral sector´s needs.

The phased approach should follow the following order:

- short term (3 years) – Ad valorem based on sales value;
- medium term (5 years) - mixed tax system combining profit-based royalty with valorem;
- long term (10 years) - mixed tax system combining resource rent tax with ad valorem.

Table 15. Qualitative assessment of the various royalty/taxation types with regard to the government's fiscal objectives.



Source: Guj P. 2012 "Mineral royalties and other mining-specific taxes", IM4DC p7.

6.5 Summary of Findings

The general objective of the study was to examine the effectiveness of the current mining tax regime in securing government revenue and attracting investment into Angola. Four out of five specific objectives were examined: (i) undertake a situational analysis of the current fiscal regime through a comparative analysis of headline rates in regional and international countries; (ii) evaluate the effectiveness and efficiency of the mineral fiscal regime; (iii) analyse the tax revenues raised by the mining industry for the past 11 years (2011-2021); (iv) make possible recommendations towards improving the current mining tax regime.

This research began by reviewing Angola´s fiscal regime and placed it in international comparison by comparing headline rates for royalties and corporate income tax in Angola and other major mining jurisdictions. However, this assessment found that there were significant differences between countries in how these taxes are calculated (in particular, the bases used for their calculations). As a result, such a comparison of 'headline rates' provides limited insight into how would-be investors perceive the mining sector. Both headline taxes, mineral royalty and corporate income tax, are within regional and international norms. Hence, the country could continue to operate at the same tax rates. In addition, given the prevailing reform initiatives the mining sector is undergoing, the overall fiscal regime system qualitatively meets some of the canons of taxation, such as providing the government with revenue stability and lower administration and compliance costs.

It was argued that perceptions offer an alternative and complementary approach to examining how Angola compares to other mining countries from the perspective of investors. Based on this assessment using the Fraser Index component covering fiscal regimes specifically (2015) data, Angola places around the median of African countries and is on par with DRC and China, worse than Botswana and the rest of its regional peers. It is noteworthy that opinions regarding the attractiveness of Angola's mining fiscal regime do not always imply that fiscal rates are also favourable (given the bases that each nation has chosen), and vice versa.

Regarding the effectiveness of Angola's revenue collection and management from the mining industry, it was mentioned that the industry has welcomed greater transparency as a result of its recent membership in the EITI, but its reach is still restricted. Whether Angola is collecting what is owed is still up for public debate, but the diamond royalty and corporate income tax rates have consistently contributed a significant share of the government's direct tax revenues over the last ten years, and the government seems to be effective in collecting the revenues so far as budget planning is concerned. The survey conducted through a guided questionnaire and interview to get an overview (assessment) of the perceptions of stakeholders in the sector about Angola's mineral fiscal regime adequacy shows that the prevailing fiscal regime may need revision.

Angola's primary challenges seem to be the absence of enforcement and compliance mechanisms for the mining code, the sector fiscal framework and the need to strengthen government agency capacity to oversee and gather fiscal contributions from the sector. Addressing these issues without making other sudden changes to the current fiscal framework can benefit government, business, and development partners in the short and medium term. However, the lack of progressivity renders the prevailing mineral fiscal regime inefficient because the ad valorem tax system taxes both loss-making and profit-making mines or projects

despite guaranteeing the government's revenue from the start of production and the light to the manageable administrative burden they place.

This dilemma can be resolved by a combination of tax tools such as resource rent-tax or profit-based royalty with a basic ad valorem tax system. This measure has been adopted in both developed and developing economies to reduce efficiency losses, increase the flexibility of the fiscal system and increase the share of rent collected through the royalty (IMF, 2010). Nevertheless, given the atopic condition Angola currently finds itself in, characterised by an infancy stage of the mining industry and the reform initiatives in place; there are more small mines than large ones; increased administrative complexity for resource rent-based and profit-based royalty tax, which will in turn require higher compliance and auditing costs for both government and industry; and the shortage of human and administrative capacity experienced by the tax administration agency and sector agencies in attending to the mineral sector´s needs. It is proposed that for the short term, the mineral fiscal regime remains unchanged, but as institutional capacity increases, progressively introducing a more complex system starting with higher administrative efficiency, i.e., a mixed tax system combining profit-based royalty with ad valorem followed by the mixed tax system combining resource rent tax with ad valorem.

7 CONCLUSIONS AND RECOMMENDATIONS

This chapter seeks to present a general conclusion to the entire study and makes recommendations based on the findings.

7.1 Conclusions

The following conclusions are drawn from this study:

(ii) Status of Angola's current mining fiscal regime and possible improvements

- Angola's political economy setting resembles that of a Hegemonic government characterised by an institutionalised one-party regime (Barma et al., p.56, 2012).
- The mineral fiscal system in place is ad valorem-based royalties, which are considered simple to administer and guarantee stable revenues for the government. This tax system is appropriate for the current political economy setting, which requires a simple and easy-to-administer fiscal regime.
- The current fiscal regime could be improved by combining it with resource rent or profit-based royalty tax to guarantee that the government manages fiscal loss and revenue delay while providing a relatively efficient mechanism for rent collection from higher-profit resource projects.
- Diamond royalties and corporate income tax rates contribute the most to mining fiscal revenue. However, other mineral revenue is collected at a low and inconsistent rate, probably due to poor coordination between the sector's key players (ministry, agencies, and tax administration agency) and possibly between government levels (Barma et al., 2012, p.137).
- The challenges around effective tax collection reflect the interlinked complexities in the fiscal regime, the possible extensive use of incentives through exemptions and concessions, and low capacity in the form os specialized personnel within key government agencies to adequately address the needs of the mineral sector.
- Poor coordination between the key players of the sector (ministry, agencies and tax administration agency) and possibly between levels of government may be the reason for low and inconsistent collection of mineral revenue (Barma et al., p.137, 2012).
- Angola's primary challenges point to a possible absence of enforcement and compliance mechanisms for both the mining code and the sector fiscal framework.
- Having recently joined and adopted the Extractive Industries Transparency Initiative (EITI) requirements for reporting the payment and collection of resource revenues may improve the lack of transparency in revenue collection and weak accountability of resource revenue use (CMV, 2014, p.67).

(iii) *Meeting the interests of the government and the investor*

- Based on the principle of purely benchmarking against global practices for headline rates such as corporate income tax and royalty rates, the existing mineral fiscal regime is deemed competitive and appealing to investors by keeping the mineral and general rates in balance with neighbouring and international countries.
- The sector´s average effective tax rate could not be determined at this stage through quantitative analysis, but a high-level qualitative analysis (section 6.4, Table 15) of the current fiscal regime against the principles of best taxation indicates that the Angolan mineral fiscal regime might possibly be effective to a certain extent only, since it is not possible to ascertain the impacts and cost of tax incentives, double taxation, and the efficacy of transfer pricing rules on the overall mineral fiscal revenue. The efficiency of the system may also be questionable. Thus, there is no real evidence that the government's interests are being met through the prevailing regime.

(iv) *The cost to the Angolan government with the current fiscal regime and tax incentive scheme*

- From the latter statement, without a diligent analysis using tools like the FARI (Fiscal Analysis of Resource Industries) model, it is not possible to determine the cost of the prevailing mineral fiscal regime to the government´s revenue. Further work is required to close this gap.
- Nevertheless, assuming there was an efficient tax revenue collection administration and evidence of ring-fencing and transfer pricing mechanisms in place to guide and monitor all mining-based transactions, the actual mining revenue could be significantly higher than the revenue that has been captured to date. The decrease in income corporate tax over the years as well as the lack of consistency and data for surface fees indicate challenges in the system,
- Low revenue collection may be the result of weak, low human resource capacity and highly inefficient organisational processes between intergovernmental and tax administration agencies. This, in turn, indicates high costs to the Angolan government.

7.2 Recommendations

The following recommendations are put forth for possible improvements to the existing state of Angola´s mineral fiscal system:

(i) *Political economy and mineral fiscal design*

- Improve communication, coordination and alignment between different agencies and levels of government.
- Consider conducting further studies on the proposed mineral regime combining the resource rent or profit-based royalty tax with ad valorem, as well as recommendations for "good fit" fiscal and non-fiscal instruments for the Hegemonic political setting, briefly highlighted in section 2.4.1 of Chapter 2 of this study (Barma et al., 2012, pp.143-153).

(ii) *Meeting the interest of government and Investors through an effective and efficient fiscal regime.*

- As this was a gap in the study it is recommended that further quantitative studies be conducted using the FARI (Fiscal Analysis of Resource Industries) tool model to determine the cash flow created during a project's whole life cycle split between an investor and the host government. Through this exercise, it will be possible not only to determine the country´s sector effective tax rate but also to identify, quantify, and qualify all deficiencies in the existing (and proposed) fiscal system and provide a solid basis for understanding which other options are viable considering their effects.

(iii) *Legislative Framework – Mine Code*

- Development of a Regulation of Local Content and establishment of tax benefits that promote Local Content implementation.
- Clarify the calculation methodology regarding the several taxes imposed in the Mining Code.
- Review the government's mineral fiscal policy to make sure it sets clear, specific, measurable, and time-bound goals that add real value to the government's regional and strategic goals.
- Seek to synchronise the mine code and all applicable relevant legislation and regulations in one document.
- Use international experts in mineral law to help strengthen the legal framework by adding provisions that support the arm's length principle and transfer pricing rules. This will help address the risks of transfer pricing in the mining sector.

- Creation of specific mechanisms to encourage investments, namely Double Tax Treaties (DTT), with a thorough understanding of the potential trade-offs to the country arising from double taxation agreements (CMV, 2014, p.63).
- The Country Mining Vision Guidebook provides guidelines to address many of the challenges associated with the fiscal regime and revenue management raised in this study.

Finally, an effective, efficient, and transparent mineral fiscal system can only exist first and foremost through intentional collaboration and alignment of objectives among the sector's stakeholders.

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APPENDIX A

Definitions of typology of four distinct countries as extracted from Barma et al., 2012, pp.54-58:

- *Patrimonial rule*: limited restrictions on the use of power and individualised political authority typically rests on a cronyism hierarchy. They can be typified by dictators who shun the creation of institutional frameworks that would limit their power, or they might be in an environment of ongoing instability, intense political rivalry, and frequent turnover among rival parties. Time horizons are short, economic activity is limited, extractive capacity is poor, and the exploitation of public resources for personal benefit is widespread in these environments. For example, the Democratic Republic of the Congo (DRC) and Niger.
- *Hegemonic government*: is defined as an unchallenged, institutionalised political power or one-party system that effectively monopolises "theft" through consistent taxation, hence fostering social cohesion and a modicum of public benefit. Hegemonic regimes can be seen as comparatively kind or predatory. Regime stability and increased institutionalisation expand time horizons, allowing for credible intertemporal commitment. Examples include the People's Democratic Republic of Laos (PDR) and Angola, which are better able to attract foreign investment to explore new areas, choose tax structures that maximise revenues over time, and provide a stable fiscal environment for investors because there are established mechanisms to determine succession in power and enforce intertemporal agreements.
- *Clientelist pluralism:* Characterised by a certain level of political rivalry through election contests, typically predicated on vast patron-client networks. Since there is little institutionalisation and, therefore, little restraint on authority, politics is characterised by generally unpredictable outcomes and short time horizons. In this category are countries like Bolivia, Ecuador, and Mongolia, where electoral norms are frequently perceived as the subject of manipulation and choice.
- *Programmatic pluralism:* Election rivalry centred on policies aimed at enhancing communal welfare and emphasising the supply of public goods for society. An increased institutionalisation makes it easier to articulate and defend property rights, creates credible intertemporal commitment, and incorporates democratic processes of horizontal and vertical accountability. Trinidad and Tobago and Chile fall into this category, where the electoral and fiscal systems are stable and encourage political parties to form and uphold agreements.

APPENDIX B

In addition to the Mining Code, there are other legal statutes governing the mining sector, notably the following:

- Angolan National Bank Order 2/23, of 9 February 2023, which approves the foreign exchange regime applicable to the mining sector;
- Joint Executive Decree 536/22, of 25 October 2022, which approves the fees and charges applicable to the Mining Sector;
- Presidential Decree 161/20 of 5 June 2020 (as amended by Presidential Decree 6/22, of 12 January 2022), which establishes the National Agency for Mineral Resources;
- Presidential Decree 143/20, of 26 May 2020, which approves the Governance Model for the Mining Sector;
- Presidential Decree 85/19 of 21 March 2019 (as amended by Rectification 18/19, of 28 June 2019), which approves the regulations for semi-industrial mining of diamonds;
- Presidential Decree 35/19 of 31 January 2019 (as amended by Rectification 11/19, of 8 May 2019), which approves the technical regulations for the marketing of rough diamonds;
- Presidential Decree 175/18 of 27 July 2018, which approves the new rough diamonds marketing policy;
- Executive Decree 346/17 of 14 July 2017, which sets forth the criteria for delimitation of concession areas for exploitation of construction materials;
- Joint Executive Decree 316/17 of 27 June 2017, which approves the list of equipment (for use in exploration and mining activities) exempted from customs duties and fees;
- Presidential Decree 231/16 of 8 December 2016, which classifies rare metals and rare earth elements as strategic minerals;
- Presidential Decree 158/16 of 10 August 2016, which sets forth administrative offences and relevant penalties; and
- Order 255/14 of 28 January 2014, of the Ministry of Geology and Mines, on monitoring of posting of bonds and payments of surface fees and royalties under the Mining Code

APPENDIX C – GUIDED QUESTIONNAIRE

1. INTRODUCTION

The following sample questionnaire will be used to analyze the political economy of the mining sector (identify specific barriers and opportunities); understand the effectiveness of the existing tax regime and impact of tax incentives/exemptions.

There are three questions that according to African Mining Vision Action Plan (2013), the Department for International Development´s tool kit and Natural Resource Governance Institute, focus on key indicators for resource revenue transparency across different categories. The questions are divided into the following three categories: Political economy of the mining sector, Fiscal Regime Design, Transfers Pricing,.

2. BACKGROUND

Name:

Date:

Address:

Telephone: home ( ) _____ Work ( ) _____ Gender: F/ M (circle)

Current position: _____ Anonymity: Y/N (circle)

A. UNDERSTANDING THE POLITICAL ECONOMY OF THE MINING SECTOR

1. How would you characterise the Angolan government? (i) institutionalised party regime; (ii) individualised political authority built on a hierarchy of cronyism? (iii) political competition?(iv) electoral competition based on programms?

B. QUESTIONS ON FISCAL REGIME DESIGN (WHAT REVENUES THE GOVERNMENT SHOULD BE ENTITLED TO COLLECT)

2. Does the fiscal regime deliver value for the country over the long term?
3. Does the fiscal regime ensure that the government receives a rising share of the revenues with rising profitability of mining activities? (progressivity)
4. Does the fiscal regime guarantee appropriate minimum government revenue in all production periods and price cycles?
5. Does the fiscal regime ensure robustness to changing circumstances (stability and flexibility)?
6. Is the fiscal regime designed to encourage long-term investments?
7. Does the fiscal regime limit opportunity or create tax avoidance and evasion loopholes?

8. Are the instruments of the fiscal regime easy to implement?

C. TRANSFER PRICING IN THE MINING SECTOR (PREVENTING LOSS OF INCOME TAX REVENUE)

1. Does the law define transfer pricing? Should taxpayers use the arm's length principle to determine the value of related party transactions? Do these rules apply to mining companies?
2. Are there regulations that provide details on how mining companies should implement the transfer pricing legal provision?
3. What is your view on the incentive schemes attributed to an investor? Is there a standard?
4. What improvements can be made to this process?

APPENDIX C1

Table 16. Questionnaire- Assessing the Angolan Mineral Fiscal Regime

		PARTICIPANTES							
		PM1	PM2	PM3	PF4	PM5	PM6	PM7	PF8
	GOVERNAMENTAL INSTITUTION	MINREMPT	ARNM	ARNM	AGT	TOSYALIS	PRIVAT	ENDIAMA	ARNM
No	A.UNDERSTANDING THE POLITICAL ECONOMY OF THE MINING SECTOR								
1	How would you characterise the Angolan government? (i) institutionalised party regime; (ii) individualised political authority built on a hierarchy of cronyism? (iii) political competition?(iv) electoral competition based on programms?	Y	Y	Y	Y	Y	Y	Y	Y
	B. FISCAL REGIME DESIGN (WHAT REVENUES THE GOVERNMENT SHOULD BE ENTITLED TO COLLECT)								
2	Does the fiscal regime deliver value for the country over the long term?	Y	Y	Y	Y	Y	Y	Y	Y
3	Does the fiscal regime ensure that government receives a rising share of the revenues with rising profitability of mining activities? (progressivity)	Y	N	N	N	Y	Y	Y	Y
4	Does the fiscal regime guarantee appropriate minimum government revenue in all production periods and price cycles?	Y	Y	Y	NS	Y	Y	Y	Y
5	Does the fiscal regime ensure robustness to changing circumstances (stability and flexibility)?	NR	NR	NR	NS	NR	NR	NR	NR
6	Is the fiscal regime designed to encourage long-term investments?	NR	NR	NR	NR	NR	NR	NR	NR
7	Does the fiscal regime limit opportunity or create tax avoidance and evasion loopholes?	NS	NR	NR	NR	NS	NS	NS	NS
8	Are the instruments of the fiscal regime easy to implement?	Y	Y	Y	Y	Y	Y	Y	Y
9	Is cost/benefit analysis conducted before negotiating an investment contract and discussed with the investors? And what recommendations can you make about improving the above process?	Y	NR	NR	NR	Y	Y	Y	Y
10	Does the government offer stability clauses? Are they appropriate instruments to achieve the desired outcomes, and are they limited in duration?	Y	Y	Y	Y	Y	Y	Y	Y
11	Does the fiscal regime inspire confidence that the country is collecting what is due or owed and what is fair?	NR	NR	NR	NR	NR	NR	NR	NR
12	Does the country have oversight audit institution(s) and Mechanisms?	Y	Y	Y	Y	Y	Y	Y	Y
13	Does the country have adequate administrative capacity and institutions with clear roles/mandates to collect all revenues?	Y	Y	Y	NR	Y	Y	NR	Y
14	Does the fiscal regime facilitate and encourage mineral economic linkages?	Y	Y	Y	Y	Y	Y	Y	Y
	C. TRANSFER PRICING IN THE MINING SECTOR (PREVENTING LOSS OF INCOME TAX REVENUE)								
15	Does the law define transfer pricing? Should taxpayers use the arm's length principle to determine the value of related party transactions? Do these rules apply to mining companies?	DK	N	N	N	DK	DK	DK	DK
16	Are there regulations that provide details on how mining companies should implement the transfer pricing legal provision?	DK	N	DK	DK	DK	DK	DK	DK
17	What is your view on the incentive schemes attributed to an investor? Is there a standard?	See questionnair							
18	What improvements can be made to this process?								

Table 17. Questionnaire Summary and Coding

QUESTIONS	PARTICIPANTS							
	PM1	PM2	PM3	PF4	PM5	PM6	PM7	PF8
Q1	Y	Y	Y	Y	Y	Y	Y	Y
Q2	Y	Y	Y	Y	Y	Y	Y	Y
Q3	Y	N	N	N	Y	Y	Y	Y
Q4	Y	Y	Y	NS	Y	Y	Y	Y
Q5	NR	NR	NR	NS	NR	NR	NR	NR
Q6	NR	NR	NR	NR	NR	NR	NR	NR
Q7	NS	NR	NR	NR	NS	NS	NS	NS
Q8	Y	Y	Y	Y	Y	Y	Y	Y
Q9	Y	NR	NR	NR	Y	Y	Y	Y
Q10	Y	Y	Y	Y	Y	Y	Y	Y
Q11	NR	NR	NR	NR	NR	NR	NR	NR
Q12	Y	Y	Y	Y	Y	Y	Y	Y
Q13	Y	Y	Y	NR	Y	Y	NR	Y
Q14	Y	Y	Y	Y	Y	Y	Y	Y
Q15	DK	N	N	N	DK	DK	DK	DK
Q16	DK	N	DK	DK	DK	DK	DK	DK

LEGEND	
Response Code	**Code Rating**
Yes (Y)	**5**
No (N)	**1**
Dont Know (DK)	**2**
Not Sure (NS)	**3**
Needs Review (NR)	**4**