Experience of Mining Fiscal Reform and Renegotiation of Mining Contracts:

THE CASE OF ZAMBIA

Third World Network-Africa

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Accra, Ghana

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is published by
Third World Network-Africa
No 9 Asmara Street, East Legon, Accra
Box AN 19452, Accra, Ghana
Tel: 233-302-500419/503669/511189
Website: www.twnafrica.org
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ISBN: 9988271329

Foreword

This is a research report about Zambia's reform of its mining fiscal regime and renegotiation of contracts with the foreign mining companies that dominate its copper industry, during the commodity boom, to improve the country's earnings from the mineral which is its main export. Revenues are the main benefit African countries like Zambia derive from the production and export of largely unprocessed mineral commodities. During the recently ended mining boom which lasted for roughly a decade from the early 2000s, the average price of minerals tripled. This occurrence exposed the stark inequities in the relations between African countries and the foreign transnational mining companies that dominate the continent's mining sector. During the boom, the profits of the biggest transnational mining companies rose dramatically, increasing by an average of 20% between 2000 and 2011.

African mineral producing countries did not fare that well. Across Africa, including in Zambia, there was a huge disparity between the huge jump in the profits of the mining TNCs and the comparatively modest increases in the revenues accruing to governments from the increases in the price of minerals. The inequitable distribution of the benefits of the mining boom in favour of foreign investors was due to two main factors. The giveaway terms of the contracts under which they had privatised their state-owned mining companies as part of Structural Adjustment Programmes (SAPs) and the fiscal regimes offered to investors as part of the liberal mining regimes of the SAP reforms.

Zambia was one of many African countries which sought to rectify these contractual imbalances and legislative giveaways. These reforms are consistent with one of the key objectives of the Africa Mining Vision (AMV) agenda - increasing the fiscal returns from mining.

The analysis of the Zambian experience is one of several TWN-Africa commissioned to contribute to our understanding of ongoing efforts to advance the AMV agenda.

TWN-Africa is grateful to Wilfred Lombe and Bernadette Mwakcheya for conducting the research and preparing the report.

We also thank the Ford Foundation for their funding support for the project.

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1. Introduction

Mining has always been the mainstay of Zambia's economy. It accounts for 10 per cent of the Gross Domestic Income, over 70 per cent of foreign exchange earnings, 30 per cent of government revenue, and 8 per cent of formal employment. It is the second largest formal employer after the government. Because of its importance to the economy, successive Governments have implemented different fiscal regimes to secure its growth and improve its contribution to the country's economic and social development. Given the centrality of mining to the Zambian economy, fiscal reform and the contestations that accompany it have always been a major feature, especially during the post privatisation period.

From 1970 to 1997, the Zambian mining industry was state-controlled. This followed the partial nationalisation in 1969, when the government, through the Matero reforms, purchased a majority of shares in the mining companies. Following nationalisation, the government adopted a fiscal regime to enable the mines play a greater role in the economic and social development of the country. For instance, in 1970 the government abolished mineral royalty and replaced it with mineral tax, which was based on profits at 51 per cent on copper, 13 per cent on lead, zinc, amethyst and 20 per cent on gold. This happened because the government was the major shareholder and had control on industry decisions.

The onset of nationalisation unfortunately, coincided with a global economic recession and a slump in copper prices in 1975. This led to a spiral of falling export revenues, a lack of capital for reinvestment in mining operations and declining production volumes. The privatization of an underperforming mining sector became inevitable.

Following the change of government in 1991, and the subsequent liberalisation of economic policy, the fiscal regime was re-designed to attract Foreign Direct Investment (FDI). The new fiscal regime brought

in tax incentives seen as necessary to attract private sector investment. The incentives were negotiated by the government with individual mining companies and enshrined in Development Agreements (DAs), which in effect overrode existing mineral sector legislation. The incentives in the DAs included stabilisation of the fiscal regime for 15 years, and significantly, arms-length provisions that allowed the mines to export mineral products and retain foreign exchange, including hedging of earnings. The stabilisation clauses meant that the government would have to forego tax revenue over a period of time. However, the justification was that the country's current need for revenue should not compromise future revenues and other benefits, such as a boost in employment generation which was expected from increased new investments.

Soon after the privatisation of the mines in the early 2000s, metal prices began to rise exponentially around 2003 and the performance of the industry improved. Copper prices reached a peak of US$9,000 per metric tonne in 2008. Despite the dip during the global economic and financial crises of 2008-2009, prices strongly rebounded by the end of 2009. Some economists believed that metal prices were experiencing a super cycle, a prolonged, upward price trend normally, lasting ten or more years (AUC and UNECA 2011). As a direct result, copper production, which had declined to 250,000 tonnes per annum in 2000, rapidly increased to over 600,000 tonnes in 2005 and 833,000 tonnes in 2011. A combination of the above trend in copper prices and increased output translated correspondingly to high copper export earnings, which reached a record of US$6.7 billion in 2011 (36 per cent of GDP), up from US$0.6 billion (14 per cent of GDP) in 2003 (Simpasa et al, 2013).

Notwithstanding the increased production and rising metal prices, revenue collection from the mining industry remained low. While this was mainly attributed to the generous tax incentives granted to the mining companies under the DAs, it deepened contestations that the country was not benefitting from its immense resource wealth. Following public demand and advice from international financial institutions, such as the World Bank, Zambia, like many other mineral-rich African countries, reviewed the fiscal regime. This started in 2007 with the

amendment of the Mines and Minerals Act of 1995, which sought to stop the Minister from signing DAs with mining houses. In 2008, rather than re-negotiate the DAs, the government abolished them altogether by repealing the 1995 Mines and Minerals Act and revising all taxes for the mining sector. Further changes in later years were made to the taxes to address the challenges the industry or the government was facing. In all, some eight changes have been made to the fiscal terms for the mining sector since 2007.

This report reviews the fiscal reforms introduced in Zambia in the last twenty years. It briefly outlines key aspects of mineral taxation in Chapter 3 before describing the fiscal regime changes, the driving motives for these changes and their outcomes in Chapter 4. Chapter 4 also evaluates the extent to which the reforms achieved the intended purpose, the processes followed; and the contestations that arose from the changes, particularly the influence of industry on policy outcomes. Chapter 5 presents the perceptions of stakeholders about the fiscal changes outlining weaknesses in the approach and the perceived reasons for the divergence between the objectives of the reform and the outcomes achieved. Chapter 6 provides a reasoned analysis of the reforms against the conceptual framework and best practices, and argues that some reforms were unnecessary and exposed government's incapacity for policy and regulatory design. The chapter further provides recommendations to address the observed weaknesses introduced by the fiscal reforms.

2. Methodology

The study primarily relied on desk research using a combination of internet searches and a review of published reports by individual researchers, government and other organisations. The desk review aimed to gather information on the tax reforms Zambia has undertaken in the past twenty years, so to understand the purpose of the reforms, the reasons behind them and the extent to which key stakeholders participated in the reform process. The desk review was supplemented by limited interviews with a small selection of stakeholders based in Lusaka. Resource limitations narrowed the number of stakeholders interviewed even in Lusaka. The limitations also prevented a visit to the Copperbelt and North-western province where mining operations and the majority of mining-related CSO are based.

The stakeholders interviewed included two mining companies, two mining associations, government officials, one CSO and two cooperating partners. The interviews followed a semi-structured format with a set of pre-prepared questions around the tax reforms undertaken. It gathered stakeholders' understanding of the main objectives of the reforms and investigated whether these were accomplished. It also captured reactions of the mining companies and their actions. Further, it recorded opinions on the institutional capacity of government to design and implement the changes; discussing the processes followed and any institutional weaknesses observed. Annex 1 summarizes the questions prepared for the interviews based on the terms of reference. The questions encouraged a conversation rather than present a questionnaire to be completed by participating stakeholders. The results of the interviews were supplemented by observations from previous interviews recently undertaken by the authors on similar projects.

3. Conceptual framework

3.1 The principal objective of mining taxation

Taxation represents one of the government's principal methods of raising funds to support the implementation of national economic and social development objectives. While this principle is generally accepted by all stakeholders, including mining companies, mining taxation is one of the most challenging and contentious issues particularly for developing countries. In part, this is due to competing, and often, conflicting interests between the demands of public policy and the interests of private mining companies.

From a public policy viewpoint, governments seek to maximise the economic and social value of mining projects, particularly as they exploit a non-renewable resource. Governments are hence more concerned with the sustainability of the benefits of such projects beyond the project life. This includes minimising environmental damage and creating useful linkages with other sectors of the economy. Linkages include employment, economic value added, infrastructure, and technology transfer. This approach to public policy is part of the government's attempt to convert the intrinsic finite value of mineral assets into long term capital stock.

Mining companies, on the other hand, see a good tax policy as one that allows a fair return on investment; is predictable, stable and defendable through the rule of law; and has unfettered repatriation of dividends and profits. It should, be based on profits and not turnover; permit the early payback of invested capital; and encourage further investment in exploration and mine development. While the social licence to mine is important to many mining companies, many will argue that their primary responsibility is to their shareholders; therefore government's economic and social objectives should be met through taxes. These are not company responsibilities.

These differences of opinion are exacerbated by most developing

nations' incapacity to design remunerative fiscal terms relative to companies' profitability over the project life. Secondly, their inability to negotiate appropriate fiscal terms due to the knowledge asymmetry relative to mining companies. This leads to entrenched perceptions and suspicions that companies are generally not transparent and extract excessive benefits relative to host countries that own the mineral wealth. These suspicions worsened, particularly during periods of high commodity prices between 2003 and 2012. In Zambia, this has been particularly the case.

More generally, in designing mining taxation regimes, governments must balance these objectives:

Revenue maximisation – this relates to the need to determine the optimal share of revenue between mining companies and government. Government is usually confronted with a choice of a range of taxes and any mining tax policy must maximise the net revenues in the short and long run; measured against tax incentives for both attracting investment and achieving specific public policy objectives.

Economic efficiency – mining taxes generally must be "economically neutral." This implies that the tax should attract the same level of exploration and mining activities, at a minimum, even after it has been applied. If such activities reduce, the tax is said to be "rent seeking" and this affects future investment and operational decisions.

Revenue predictability – mining taxes should ensure predictable revenue streams over the mining project life. Some taxes are front loaded, others back loaded while others occur throughout the project life. The aim should be to ensure that the government secures revenue across the entire project life without compromising its viability.

Equity – this principle demands that all taxpayers across the mining industry are treated in the same way. This goes against, for example the Development Agreements (DAs), in which different mining companies were treated differently, depending on their negotiating capacity.

Transparency and stability – transparency requires full information disclosures both by mining companies and government. Mining projects are generally high risk. These include, for example, geological, commercial, political, economic and social risks, which are difficult to project in the long term. The projects therefore are sensitive to policy changes. This calls for greater transparency and stability in the tax regimes to allow for invested capital to be recouped. Fiscal stability is perhaps the most highly prized attribute by mining companies.

Box 1 – Examples of mineral taxes

Direct tax instruments

- Exploration taxes
- Corporate income tax (plus withholding tax)
- Progressive profit taxes (such as South Africa's formula tax on gold)
- Resource rent taxes
- Windfall profit tax, additional profit tax, super-profit tax

Indirect tax instruments

- Royalties ad valorem, specific/production volume
- Import duties
- Export taxes
- Value-added tax (VAT)/goods and services tax (GST)
- Labour levies (skills, unemployment)

Other imposts

- Competitive bonus bidding, auctions (as for hydrocarbons)
- Surface fees
- Licence fees
- Production-sharing contracts
- State equity participation

Source: AUC & UNECA, 2011

3.2 The main elements of mineral taxation

Box 1 illustrates the main forms of taxes common to the mining industry. Direct taxes are those that are imposed against the company (in personam) as a legal entity (Otto and Cordes, 2002). They are often based on some definition of net revenues or profits. This category includes proportional income tax, progressive income taxes, additional profits taxes, resource rent taxes and withholding taxes on dividends and interest earned. Generally, direct taxes are the principal method for collecting revenues from mineral production.

Indirect taxes are imposed in rem against the deposit (Otto and Cordes 2002). They involve tax appropriations against the asset itself or against inputs required to exploit it. The most common are specific royalties and ad valorem royalties, export duties, sales taxes and value-added taxes.

3.2.1 Direct taxes

Proportional Income taxes – more popularly known as corporate income tax, proportional income taxes are the most common method of revenue collection for all businesses, including mining operations. Significantly, taxes are due only when realised annual revenues exceed some measure of operating costs and allowances. The most important characteristics, therefore, are the definition of taxable income and the rate applied.

The biggest challenge in applications of corporate income tax lies in the definition and monitoring of taxable income. What constitutes revenues is subject to accounting practice and requires regular financial audits, coupled with monitoring of the selling price and extracted volumes. In most practical applications, provisions are made for allowances which affect the timing and magnitude of revenue. These provisions, for example, include:

- Accelerated capital allowances;
- Interest deduction;
- Carry-forward losses;

- Reinvestment tax credits; and
- Tax holidays.

The above provisions inadvertently encourage aggressive cost accounting, especially in the absence of stringent financial and production audits. Guj et al, caution that issues of capital recovery and asset creation are common sources of great complexity in mining taxation (Guj et al, 2013). While they allow mining companies to recoup their investment through deductions for corporate income tax, they reduce or substantially erode the tax assessed and eventually paid. Determining rates of depreciation, or mine development capital and other costs to regulate taxable income, is never an easy task for government. Added complications arise in determining the right levels of allowable corporate overheads between a subsidiary, in Zambia, and the holding company, which often operates in several fiscal regimes around the globe.

The above issues often lead to transfer pricing between the subsidiary and the other affiliates of the holding company. Guj et al argue that transfer pricing is one of the difficult issues that the mining fiscal legislation must address.

Progressive (variable) profits and additional profits taxes (APT) – in the simplest form, a progressive or variable profits tax provides a schedule of increasingly higher tax rates on taxable income above the conventional income tax base. These taxes are attractive as they allow governments to share some of the resource rent particularly during periods of high prices and profitability.

Several difficulties, however, arise in their application. The first is the challenge earlier outlined regarding determining levels of taxable income. The next challenge is defining and agreeing on the sliding scale for progressively increasing the tax burden above the tax base. Thirdly, firms can choose their marginal cost of mining and this affects the annual tax base. This provides room for manipulation through adjustment of extraction profiles. For these reasons, progressive tax schedules are seldom used today (Guj et al, 2013).

A variant approach to progressive taxes is the additional profits tax (APT). This involves a higher tax rate on taxable revenue once an

agreed upon threshold rate of return on investment has been reached. Investment often includes both equity and debt. The project is initially taxed on a basic profits regime and the retained earnings discounted at the threshold rate. After the net discounted cash flows become positive, the project is then subjected to a much higher tax rate relative to the base rate (e.g. at 70% compared to, say, 30%). The benefit is that APTs allow the project to pay back borrowed capital and do not hence distort investment decisions. Difficulties for government are that it accrues no revenue until the threshold is reached. Additional challenges arise from disagreements on rates for discounting the cash flows, and which and how allowable capital allowances are deducted. APTs are hence difficult to administer in the developing country context and are rarely used (Guj et al, 2013).

Resource rent taxes – these are based on the fact that the mineral deposit is an asset which belongs to the state. The notion of resource rent[1] justifies imposing a greater tax burden on mineral investment in times of exceptional profitability based on the resource rent argument that ore deposits are a vital factor input into a mining investment, just like capital, labour and technology. Since all owners of the other factor inputs are compensated for their contribution to production, owners of ore deposits should also be fairly compensated over and above regular taxes when profits are exceptional. This is the basic argument behind variable or additional profits. This is also the argument for windfall taxes.

In its pure form, an RRT defers payment of tax until all expenditures have been recovered and the project has yielded a pre-specified rate of return. A very high marginal rate of tax then applies to all subsequent operating revenues. In effect, the mining project is granted a tax holiday in anticipation of exceptional government revenues, which may not materialise. For this reason, RRTs are often modified to allow for some

[1] From a public policy viewpoint, a resource rent is a tax which does not alter existing decisions on production and consumption. This is because economic rent is measured by financial returns in excess of those needed to induce a firm's initial investment. It involves the notion of a surplus and its existence predominantly involves distributive, rather than resource allocation consequences.

revenue collection in earlier years. This form of tax is also known as the windfall or super profits tax.

An RRT is conceptually superior to other forms of taxation and is used where the government seeks to capture high proportions of the resource rent while sharing operating risks with the mine owners. This is achieved through fully dispensing capital assets, deduction of operating expenses and uplifting carry forward losses. In the pure form, such as Brownian RRT approach, the government in fact ought to refund to the company a proportion of the carry forward losses. This has never been adopted in practice (https://en.wikipedia.org/wiki/Minerals_Resource_Rent_Tax).

In the Australian version of the RRT applied to iron and coal mines, government did not commit to sharing long-term losses, while "normal profit" for accounting purposes was set at the Long Term Bond Rate (LTBR). Initially, the LTBR was set at 5%, but later negotiated to 12%. The tax finally, introduced in July 2012, levied 30% of the "super profits" on iron ore and coal mining. A company paid tax when its annual profits reached AUD75 million, a measure designed not to burden small business. Following a change of government in 2013, the tax was repealed in September 2014, despite public opinion to the contrary (https://en.wikipedia.org/wiki/Minerals_Resource_Rent_Tax)

Yet, a further variant of RRT or windfall tax is to agree on a graduated price sensitive scale tax rate above the "normal profits" instead of a large windfall rate after all expenditures have been recovered. A graduated rate is triggered when the price of the mineral commodity reaches a particular threshold. This approach was attempted in Zambia with a graduated windfall tax at 25 per cent when copper prices exceed US$5,600 per ton; 50 per cent when it exceeded US$6,720 and 75 per cent when it is over US$ 7,840 (Simpasa et al, 2013). This was, however, later repealed.

While RRTs are attractive because they do not in principle affect investment decisions, they suffer from challenges in computing the taxable income and agreeing on the characteristics for taxing the excess profits. Also, challenges exist in linking the accounting rate of return to permissible allowances. Opinions remain divided with the proponents

citing investment risks inherent in mining as justification for companies disproportionate sharing of profits. The opponents cite government ownership as more than sufficient justification for participating in the excess profits. This requires agreement between government and mining companies depending on specific national circumstances.

Withholding tax – is essentially charged for services, loan interest and dividends. Withholding tax on dividends is intended to discourage repatriation of profits in favour of local reinvestment. Withholding tax on interest mostly affects the design of the financing package of the project.

3.2.2 Indirect taxes

As stated earlier, indirect taxes are imposed against discreet company actions or activities, such as mine production, capital equipment import duty, export taxes to encourage beneficiation, skills development levies, etc.

Royalties and ad valorem – these are based on the notion that mining operations should compensate the investor not only for taking the investment risk, but reward the host government for exploiting a non-renewable resource (Otto and Cordes, 2002). Some reward is due to the host country once its minerals are extracted and sold, regardless of whether the operation reports a profit or not.

More generally, royalties are imposed against some definition of production, revenues or profits. Profit-based royalties apply a percentage rate to some accounting notion of profit. However, given the challenges earlier elaborated, profit-based royalties are more complex for both Government and company and differences in interpreting profit often arise. More commonly, royalties are based on the gross value of sales even though mining companies generally object to this because it does not allow the deduction of costs incurred beyond the mine gate.

Royalties are both specific and unit-based, or ad valorem. Unit-based (specific) royalties are calculated on the aggregate volume or weight of minerals produced and the realised value when sold. For example, the reference point is in dollars per cubic meter or per tonne and hence an agreed published price, such as the LME price or other similar metal

market price is required. This type of royalty generates a stable stream of revenue and is administratively easy to audit.

Ad valorem royalties are defined in terms of the aggregate value of production and apply a percentage rate to the value of the product sold. Administratively, agreement is required on the valuation point e.g. at mine gate and how the value of minerals is to be determined at that point. The percentage rate to be applied also needs to be determined. Variants of specifically negotiated arrangements are also possible. An example is the declining royalty rates that are progressively applied to refined metal products to encourage beneficiation. This is particularly relevant to countries where there are multiple saleable products from the mineral chain, such as ore, concentrate, blister copper and refined metal. This is the case for Zambia.

Otto and Cordes stress that royalties are in effect attractive to Governments for several reasons. First, they are based on production each year and hence they are certain and reasonably predictable. Second, they ensure a stable flow of revenues over the life of the mine even when company profits are low or non-existent. Finally, they are relatively easy to calculate, collect and monitor. Ideally, governments estimate, at the feasibility study stage of a mining project, the royalty payments likely to be received over the project life so that revenue can be built into budget forecasts (Otto and Cordes 2002).

However, royalties impact a mining project's variable cost. Mining companies argue that they are not based on the company's ability to pay. If the value of minerals produced is based on the mine gate, this does not consider downstream costs, such as transportation and the cost of sales. For these reasons, royalties more generally tend to be unpopular with mining companies (Otto and Cordes, 2002).

3.3 Conclusions

This brief section on the conceptual underpinnings of mineral taxation does not attempt to give an exhaustive review of the subject. Rather, it seeks to highlight the main taxes commonly imposed on mineral projects, the general considerations for their use and more generally some of the challenges that arise during their use. The section illustrates

the complexity of mineral taxation and why developing countries like Zambia rarely do well in designing, implementing and monitoring the impact of tax instruments given the paucity of capacity. Yet, even relatively more developed economies, like Australia, have struggled as the RRT example shows. This is despite the availability of tax design capacity they possess.

For most developing countries, the challenge is how to integrate the different taxes into a regime that optimises revenues not only across the life of mining projects, but also accommodates their economic and social development objectives. Taxes cannot just be seen as sources of developmental revenue but also as a means to stimulate economic growth and development. For example, taxes and tariffs on imports offer opportunities to enhance economic linkages through value addition and local content development and are hence enablers of economic diversification. Conversely, high tariffs for imports on finished or assembled products protect domestic manufacturers or beneficiators along the value chain.

There are many other ways the fiscal regime may be used as a tool to implement developmental objectives. Corporate income tax may be used to incentivize local ownership. For example, in India domestic companies are subject to a tax rate of 30 per cent, while foreign companies bear a 40 per cent rate (World Bank, 2013). Other notable measures include allowing investments in the training of nationals to be recovered against capital and operational costs. Using mining taxation in this manner is well beyond the realm of this brief section and adds to the complexity of mineral taxation.

From the viewpoint of revenue maximisation, Otto and Cordes and Guj et al are among works that have discussed mineral taxation in great detail, and raise issues important to tax policy. These include the mix of direct and indirect taxes, the types and levels of taxes, the maximization of government revenue in the short and long run; and tax incentives available for achieving specific policy objectives. They present useful models for estimating optimum tax revenues across the value chain and the level of administrative capacities required.

At the very least, a good understanding of the applicability of each

tax and its elasticity; and the valuation points in the mineral value chain is necessary. For example, the sale of copper products can occur at the ore, concentrate, blister copper or refined stage. Each product is potentially a tax point. Further, a good understanding of the impact of each tax on government revenue and on business operations is also required. Ultimately, developing countries must build capacity for tax design and administration, as well as for financial and production audits. Peer learning and information sharing with other countries would also help.

4. Review of fiscal and contractual reforms in Zambia

Zambia has in the past twenty years implemented different fiscal regimes to attract investment in the sector whilst simultaneously maximising benefits for the nation. The major reforms can be classified into: (i) Pre-Privatisation era; (ii) Privatisation era; and (iii) Post privatisation era.

4.1 Pre-privatisation era

During the pre-privatisation period, the mining industry was under state control with the government owning 51 per cent of the shares. During this period, the mining fiscal regime comprised a mineral tax of 51 per cent and corporate income tax at 45 per cent. Through these tax measures, the government hoped to raise the much needed revenue to fund economic and social development activities. However, these tax rates were high and hence discouraged investment and growth of the industry. They consequently had a negative impact on the industry.

The period of nationalisation also coincided in 1973 with a massive increase in the price of oil, followed by a slump in copper prices in 1975 due to a global recession. Copper prices fell by more than 40 per cent compared to the pre-nationalisation period, resulting in a diminution of export earnings. By 1975, export earnings had halved in value and the industry was confronted with a negative spiral of falling export revenues, a lack of capital for reinvestment in mining operations and declining production volumes.

Mining being Zambia's major economic activity and main source of foreign exchange, the poor performance of the industry affected the economy negatively. By 1976 Zambia had a balance-of-payments crisis, and rapidly became massively indebted to the International Monetary Fund (IMF). The poor performance of the economy and failure by

government to raise revenue from mining to fund key social-economic programmes were used by donors, to whom Zambia turned to for assistance, to push for economic liberalisation. Privatisation of state enterprises was a major pillar of the economic reforms. The mines were among the main state-owned assets that had to be privatised and key to the process was the creation of an investor friendly environment to attract private capital to resuscitate an ailing industry.

4.2 Privatisation era

The lack of recapitalization and/or modernisation, besides falling copper prices and production levels, characterised the last two decades of the pre-capitalization era. There was a need for massive recapitalization of the industry, which the government could not afford. This strengthened the case for privatizing the mining sector. Thus, following the change of government in 1991, the government adopted a pragmatic mineral policy designed to enhance private sector investment in the mining industry. This reduced the role of the government to that of facilitator rather than an investor. The privatisation of the mining industry was part of the broader framework of Structural Adjustment Programme (SAP) of the IMF aimed at restoring economic stability. Implementing SAP led to a major shift in fiscal policy for the mining sector. Thus, the privatization of the mines was facilitated by the repeal of the Mines and Minerals Act of 1972 and the enactment of the Mines and Minerals Act of 1995.

The Mines and Minerals Act of 1995, provided incentives for investors in the mining sector. This included the reduction of mineral royalty rate to 3 per cent of the net value of minerals produced and relief from paying import duty on equipment and machinery used in mining operations. The Act also allowed the Minister of Mines to sign Development Agreements (DAs) with specific mining companies, under which more incentives than what was enshrined in the Act, including reduction in mineral royalty rate, were granted.

The initial DAs concluded between 1997 and 2000 included generous tax and non-tax concessions. Table 1 summarises the main terms in the DAs (Simpasa et al, 2013).

Table 1 – Terms of Development Agreements signed by government prior to 2008

Company	General terms and conditions agreed
Konkola Cooper Mines (KCM)	• Stability period (originally 20 years for AAC, amended to 16 years following acquisition by Vedanta four years after the initial sale) • Company income tax fixed at 25 per cent (on net income arising from all mining activities) for duration of stability period • Royalty rate of 0.6 per cent of gross revenues, except in the first five years, charged at 0 per cent. Throughout the stability period, royalty payable deductible against liability of corporate income tax. • Customs duty set at 15 per cent, the payment of which was limited to US$16 million in first year, and US$15 million per year, inclusive for four years thereafter • Excise duty on purchase of electricity set at 0 per cent • Withholding tax of 0 per cent; after expiry of stability period, charged at 10 per cent • Loss carry forward permitted for 10 years from the date incurred • Capital expenditure deductible allowance of 100 per cent • Price participation payment to be treated as an expense and thus deductible when calculating corporate income tax; royalty payments also deductible for income tax liability purposes • VAT on mine products charged at 0 per cent. • Facilities to be treated as a single large-scale mining unit
Mopani Copper Mines (MCM)	• As in the case of KCM, except: • Stability period was set at 15 years • Excise duty on purchase of electricity set at 10 per cent of the amount paid to ZESCO by Copperbelt Energy Company and only payable after expiry of stability period
Kansanshi	• Stability period of 15 years • Royalty rate of 3 per cent on the net back value, however, the actual royalty rate was scaled down to 0.6 per cent in tandem with KCM and MCM, see (GRD Minproc, 2003)

	• Import duty exempt for level above 5 per cent under section 97 (1) of the Act • Payment of duty on rural electrification levy at the applicable rate for duration of stability period
Chambishi	• Same as in KCM/MCM, except: • Stability period of 15 years • Company income tax of 35 per cent, but, if listed on the Lusaka Stock Exchange, reduced to 30 per cent • Royalty rate of 2 per cent on net back value and payment, deductible for income tax liability purposes • Excise duty on purchase of electricity same as in the case of Mopani • VAT on mine products charged at 0 per cent
Chibuluma	• Similar to Chambishi's incentive structure • As in KCM/MCM

Source – Simpasa et al, 2013

Notable concessions included: a mineral royalty rate of 2-3 per cent, which was revised downwards to 0.6 per cent after further negotiations; long stability clauses ranging from 15-20 years in fiscal terms during which the law could not be amended; capital expenditure deductible allowance of 100 per cent ; and excise duty rebates on electricity purchased from the state utility company. (Simpasa et al, 2013). In addition, corporate income tax was reduced from 35 per cent to 25 per cent; withholding tax on interest, dividends, royalties and management fees to shareholders and affiliates were reduced to zero; and the period for carry forward losses was increased from 10 to 20 years.

The above generous concessions were attributed to the government being in a weak bargaining position due to the poor state of the mining industry at the time. Government depended entirely on donors' support to finance social and economic programmes. Generous concessions were thus meant to attract private investors to turn around the underperforming industry and save government resources. It was believed that government was spending huge amounts of money to sustain the mines. The pressure to develop such policies perceived to create an attractive environment characterised by fiscal incentives mainly

came from donors, particularly the International Monetary Fund (IMF) and the World Bank. However, even prospective investors joined in pressing government to provide the above incentives.

Although, it was known right from the beginning that the DAs were lopsided and would cause substantial reduction in tax revenue from the industry, government signed the Agreements on the understanding that the loss in revenue would be offset from other benefits that would arise from the revived mining industry. These included: increased copper and cobalt production and foreign exchange earnings through expansion and modernisation of existing mines and opening of new projects; and increased employment due to the expansion of activities and indirectly through the growth of support industries.

The main objective of the fiscal regime established through the DAs was to revive the mining industry through Foreign Direct Investment. This objective was to a large extent achieved as stated by the then Minister of Mines and Minerals Development. In a statement to Parliament, the Minister indicated that "with these incentives, government's objective of resuscitating and saving the industry was achieved. Large amounts of investments have since been made by the new mine owners. The investments include the acquisition of new mining equipment, rehabilitation of infrastructure and the opening of green field operations. Over US$2 billion has been invested in the mining sector since the completion of the privatisation. Under the circumstances copper production increased from 256,884 metric tonnes in 2000 to 515,010 metric tonnes in 2006" (Mwansa, 2009).

4.3 Post privatisation era

Shortly after privatization, the commodities markets experienced a surge in prices. Copper prices, for example, climbed to a peak of US$9000 per tonne in 2008. High commodity prices, coupled with the generous concessions, resulted in huge windfalls for the newly privatized mines. Questions on whether the government was getting a fair share of the windfall resource revenues arose. The general public demanded a fair share of the windfalls from the mining companies.

Therefore, the need to change the prevailing fiscal framework embedded in the DAs became inevitable. In 2006, the World Bank also made recommendations for fiscal reforms pertaining to the mining industry. The recommendations included the removal of the powers of the Minister of Mines and Minerals Development to vary or include fiscal terms in the DAs. In 2007, the 1995 Mines and Minerals Act was amended to remove the provision that allowed for signing DAs and the mineral royalty rate was raised to 3 per cent . However, these initial changes did not affect existing DAs. The main obstacle to effecting the changes was the stability clauses in the DAs. The government finally resolved to enact a new law, the Mines and Minerals Development Act of 2008, which repealed the 1995 Act and annulled the existing Development Agreements.

The 2008 Act also established a new fiscal regime to be uniformly applied across the mining industry:

i. The corporate tax rate was increased from 25 per cent to 30 per cent;
ii. Mineral royalty rate was increased from 0.6 per cent to 3 per cent;
iii. Withholding tax on interest, royalties, management fees and payments to affiliates or subcontractors in the mining sector was reintroduced at 15 per cent and withholding tax on dividends was set at zero per cent;
iv. Introduction of a variable profit tax of up to 15 per cent on taxable income, only applicable if prices were below the windfall tax trigger price;
v. Introduction of a windfall tax applicable at different price levels for different base metals. For copper, the windfall tax rate was 25 per cent when copper prices exceeded US$ 5,600 per tonne; 50 per cent when it exceeded US$ 6,720 and 75 per cent when it was in excess of US$ 7,840 ;
vi. Capital allowance was reduced from 100 per cent to 25 per cent;

vii. Hedging income was treated as a non-mining activity and was taxed at 35 per cent; and
viii. Introduction of a reference price to assess mineral royalties payable. This was the price obtaining at the London Metal Exchange or any other commodity exchange market recognized by the Commissioner General.

The standout aspects of the reforms were: the introduction of the windfall tax; the introduction of the variable profit tax and the abolition of the DAs. Implementation of the 2008 fiscal regime proved challenging mainly because of weaknesses in its design. Applying this regime saw a rise in effective tax rate to between 64 and 96 per cent for high cost mines and 57 and 64 per cent for low cost mines. This went higher than the effective tax rate of 47 per cent initially intended. The design of the windfall tax contradicted international practice as it was based on revenues as opposed to profits. These implementation challenges resulted in a sharp reversal that saw the abolition of the windfall tax in 2009, barely a year after its introduction. The nullification of development agreements also posed threats of arbitration as the government had violated the stability clauses contained therein.

According to Simpasa et al, the government had projected that under the prevailing commodity prices, implementation of the 2008 fiscal regime would cause an increase in revenue from US$20 million (0.1 per cent of GDP) in 2007 to US$250 million (1.7 per cent of GDP) in 2008 mainly from mineral royalty payments. However, actual payments for that year amounted to US$90 million, reflecting only 36 per cent of the projected revenue. One reason given for the low revenue collections was the contest that mining companies put up against the new regime. This delayed some tax payments by mining companies. Added to this was the fall in copper production during the global financial and economic crises when many operations were temporarily put on hold. Some of the money, it appears, was paid in 2011 through back taxes (ICMM, 2014).

Owing to petitions by mining companies and the decline in copper prices, the 2008 fiscal regime was short-lived. It was revised in 2009.

The revision involved the abolishment of the windfall tax and the increase in capital allowance to 100 per cent. These revisions followed the collapse of metal prices because of the 2008-2009 global economic and financial crises. Copper, for example, had declined by 53 per cent over pre-2008 prices and this had led to a significant loss of tax revenues, an estimated loss of 10,000 jobs in the industry and the closure of several operations including Luanshya mine, Munali Nickel and Chambishi Copper smelter. Several others were put on care and maintenance (UNECA-SA, 2009). Research by UNECA-SA, however, shows that the collapse in commodity prices was short lived. The dramatic recovery was led by copper, which at year end in 2008 was pegged at US$2,902 but rebounded to US$7,346 by year end in 2009. Struggling mining operations returned to profitability and copper output actually increased by 18.5 per cent by November 2009. By 2011, copper prices had peaked at an incredible high of US$9,728 but the concessions given to mining companies during the 2008/2009 recession remained in place. In 2012, following a change of government, mineral royalty rates were again revised to 6 per cent for all minerals. Table 2 summarises the changes in the fiscal regime for base metals that have taken place from 2006 to 2016.

Table 2 shows that the major policy shifts since 2008 were the introduction of the January 2015 fiscal regime which initiated a one-tier tax system. Corporate Income Tax was abolished and replaced with a mineral royalty as a final tax. In addition, a distinction was made between open pit operations and underground mining operations. Open pit operations were assumed to have lower production costs compared to underground operations. Consequently, the mineral royalty rate for open pit operations at 20 per cent was more than twice that of underground operations which was fixed at 8 per cent. The justification for changing the tax structure for the mining sector was to achieve a more equitable distribution of mineral wealth between the Government and mining companies (Chikwanda, 2015 Budget Speech). The government argued that the new fiscal regime was a product of a long period of study, reflection and internal debate and was entirely focused on developing the country while providing mining companies and other investors with

Table 2 - Summary of changes to the fiscal regime from 2006 to 2016

Type tax	2006	2007	2008	2009	2012	2013	Jan 2015	July 2015	2016
Mineral Royalty	0.6%	3%	3%	3%	6%	6%	8% underground mines & 20% open pit mines	6% underground mines & 9% open pit mines	5% for base metals other than copper Copper: 4% (when cu price is less than $4,500/t) 5% (when cu price is $4,500 or greater than $6,000/t) 6% (when cu price is $6,000/t or greater)
Corporate Income tax	25%	30%	30%	30%	30%	30%	0%	30%	30%
Corporate income tax on income earned from tolling	None	None	None	None	None	None	30%	35%	35%
Corporate income tax on income earned from processing of purchased material	None	None	None	None	None	None	30%	35%	35%
Variable Income tax	None	None	Yes	Yes	Yes	Yes	Yes	None	None
Capital allowance	100%	100%	25% mining 100% exploration	100%	100%	100% exploration 25% mining	100% exploration 25% mining	100% exploration 25% mining	100% exploration 25% mining

Withholding tax on interest, dividend and fees to shareholders	0%	0%	15%	0%	0%	0%	15%	15%	15%
Property transfer tax	None	None	None	None	10%	10%	10%	10%	10%
Export duty on unprocessed or semi-processed minerals (%)	None	None	15%	15%	10%	10%	10%	10%	10%
Loss carry forward period (years)	10	10	10	10	10	10	10	10	10

Source: ZRA

the opportunity to operate profitably.

The fiscal regime was meant to address imbalances observed in national revenue derived from the mining industry relative to income sources. It was observed that despite high levels of copper production and revenues in excess of US$6bn per annum, only two large-scale mining companies were consistently paying corporate income tax. The situation was unfair to the two tax compliant companies. Hence, the removal of corporate income tax and an increase in mineral royalty rates was meant to compel all mining companies to meet their tax obligations. This was based on the understanding that royalty payments are always due whether the operation makes a profit or not.

Regarding the structure of income sources, the Zambian employee, through Pay As You Earn, was seen to shoulder a heavy burden to finance national development programmes. By introducing high mineral royalty rates, the government expected to expand the tax base and hoped to alleviate the pressure on workers whilst continuing with national development projects.

Unfortunately, this new fiscal regime was short lived. Soon after its introduction, several mining companies threatened to close their operations. The high mineral royalty rates contributed to an increase in production costs at a time when metal prices were falling. In July 2015, the mineral royalty rates were revised down and the corporate income tax re-introduced. The mineral royalty rate was reduced to 6 per cent and 9 per cent for underground operations and open pit operations respectively. The fiscal regime was further revised in July 2016 following consultations with the mining industry. A graduated mineral royalty rate of 4 per cent to 6 per cent, depending on the price, was introduced for copper. The distinction between open pit and underground operations was done away with. This was based on the understanding that the new open pit mines were highly capital intensive and hence not necessarily cheaper to operate.

4.4 Conclusions

From the above accounts, it can be inferred that the reforms that took place during privatisation were largely driven by donors and investors.

Pressure points were created by the under-performance of the mining industry and the economy. There was an urgent need to attract investment into the industry, on the one hand, and donor support for the economy, on the other. The driving force for the reform was the need to create a policy environment conducive to private sector investment to meet donor conditionalities and relieve the government from running a non-performing industry. While privatisation took place against low metal prices, there was no anticipation these would improve soon. Copper prices, like other mineral commodities, are cyclical and a price simulation would have probably led to more informed government decisions.

However, at the time of privatisation, government institutions had no capacity to negotiate and enforce the DAs. Little was done to build that capacity. The lack of capacity became apparent when copper prices increased shortly after privatisation. The continuing lack of capacity in government institutions responsible for monitoring the mining industry is probably the most important reason for the country's failure to significantly benefit from the copper price boom. On the need to change the fiscal policy in 2006, one of the World Bank's recommendations to government was to build the capacity of the Ministry of Mines and Minerals Development and the Zambia Revenue Authority.

The frequent changes in the fiscal policy since 2008 also indicate inadequate analysis of the possible impacts of the changes. This arose partly from inadequate consultation with key stakeholders, especially the mines. Although, there is a requirement to undertake a Regulatory Impact Assessment (RIA) before introducing a new law or policy, no assessment was done on the fiscal policy changes. Public pressure, based on perceptions that the nation was not benefitting from the extraordinarily high copper prices, added to the urgency and frequency of the changes. Based on high prices and increased production, the government expected to increase revenue collection from the changes. However, the total tax take from Zambia's mining sector has not met the expectations and most companies continue to pay less than the full complement of tax because of accounting losses.

The low contribution of the mining sector to Government revenue has been the concern of government, 'development' partners and the public. The International Monetary Fund (IMF Country Report, 2015) argued that between 2000 and 2007, the sector's contribution to Government averaged less than 0.1 per cent of GDP mainly due to concessions granted to mining companies. A preliminary analysis by the World Bank on the causes of the low revenue also indicates that the overall low income tax collections, result from specific issues unique to certain producers (reference). The low revenue collection has little to do with tax rates. Instead, these issues, some of which are unique to each mine, were identified:

(i) The stage of the mining operations in their lifecycle;
(ii) The cost competitiveness of operations affecting overall profitability levels;
(iii) Large tax 'assets' that are the result of unredeemed capital redemption allowances or 'inherited' by companies because of the structural re-organisation of Zambia's mining sector;
(iv) Fiscal stabilisation and historical tax incentives granted by government; and
(v) Challenges of administering profit-based taxes.

Introducing the 2015 regime attempted to evade the above issues by avoiding profits based taxes altogether, instead of addressing the underlying incapacity issues to administer the existing regime.

5. Results from field interviews

5.1 Views of stakeholders

The view of the industry is that government must raise tax revenue, but this has to be done so it does not cripple operations or throttle new investment. Industry suggests that the recommendation to increase the 2015 mineral taxes came from the Mineral Value Chain project at the Zambia Revenue Authority. It was executed by the Ministry of Finance and the Zambia Revenue Authority to increase the tax revenue accruing to the government. There was no real consultation with the mines and there was no modelling of the impact the decision would have on the operations of the mines.

The mining industry had several meetings with the Presidency, post the changes, to explain the negative impacts on operations. Essentially, the main effects would be mine closures and the retrenchment of workers. The plummeting copper price and the reduction in electricity supply already had adverse impacts on the industry. Zambia, being a high cost producer had already seen the closure of some facilities at Nkana and Mufullira mines. Government's downward revision of the 2015 tax, royalty regime was equally attributed to the pressures the industry was going through and the fact that the tax changes would accelerate closure of more operations, with resultant job and revenue losses.

Generally, the mining companies believe that the government does not have the capacity to design and implement mining tax provisions. It is widely held that the government does not fully understand the impact of its frequent tax changes on industry and business decisions. The industry sees the frequent changes as a direct result of the lack of capacity at the Ministries of Finance and Mines and Minerals Development, together with the Zambia Revenue Authority. This is exacerbated by government's lack of a consultative approach. Companies generally view the Ministry of Mines and Mineral Development as a "Junior Ministry," hence the Ministry of Finance did not consult it in drafting

the 2015 fiscal legislation. More generally, the government ministries do not talk to each other and industry has observed many cases of conflicting legislation in other areas such as between mining, environmental and water rights.

As outlined earlier, the DAs had insulated the mining companies against any changes in fiscal terms through the 15-year stability provision. Generally, all the major mining companies insist that the frequent tax changes went against this. They insist that they have not abrogated their rights to legal action against the government for unilaterally abrogating the DAs in 2008. They are aware, however, that taking government to arbitration could come with some form of backlash and hence elect to sit on their rights for now.

Generally, the mining companies see the top three issues requiring government's attention as the frequent changes to the mineral tax regime, the increasing sovereign risk and the political nature of government's decision making.

The private sector business associations reiterated the fact that the 2015 tax revisions were imposed without consultation with stakeholders. And as was the case with previous changes, this is harmful to business operations. The tax rate should have been agreed with industry and the implementation, possibly staggered to allow business to adjust to the new tax changes. Mining has a long-term horizon and is sensitive to changes in the tax environment.

The government did not achieve the intended objectives of raising more revenue. Instead, the lack of consultations worsened an already poor relationship with industry, and deepened the existing standoff. This led the mining industry to arm-twist Government and put it in an awkward position. It also created precedence for the other economic sectors to push back on government decisions. For example, a tourism levy introduced in 2016 was suspended when this industry pushed back.

The associations believe the Ministry of Finance, which spearheaded the tax reform, does not have the capacity to design taxes for the mining sector. The Ministry does not understand the impact of its decisions on mining and the data used for decision making was very poor.

This explains why ZRA implemented the Mineral Value Chain Monitoring project. There is an opinion within the private sector that some government officials are compromised, worsening the effect of current low capacities. Government's coordinating capacity is also seen as weak. According to the business associations, the top five issues Government must address are:

i. Policy inconsistency;
ii. The need to institutionalise consultations as part of policy making;
iii. Government's seeming preference to govern through Statutory Instruments (SIs), which allows it to legislate without consultations;
iv. The lack of an informed approach to policy and regulatory issues and the need for regulatory impact assessments; and
v. The politicisation of economic decision making which dilutes accountability.

The Parliamentary Committee on Economic Affairs, Energy and Labour oversees the Ministry of Mines and Minerals Development, providing checks and balances to ensure that public policy benefits the country. Regarding tax changes, the Committee indicates that the weight is on the executive to execute legislative provisions. The Committee can object to specific aspects such as taxation and cause amendments if implementation is defective. Legislation itself, including tax provisions, is initiated by the government. The Committee knows that generally consultation is inadequate both at the government initiation level and at parliamentary level. Capacity and time constraints, coupled with the rigidities of Committee program schedules prevent a thorough assessment of government-initiated legislative provisions. This dilutes the effectiveness of the Subcommittee to scrutinise legislation in greater detail than desirable.

There are several CSOs generally working within the extractive industry, including tax governance. Their focus has been on community-level interventions to build an understanding of the extractive

sector. One area of focus has been the mineral revenue sharing debate. The current 2015 Mines and Minerals Act does not have provisions for mineral revenue sharing between central government, local authorities and communities. The 2008 Act had such a provision, but this was removed in the 2015 Act because of the lack of a mechanism for implementing it. The CSOs have been sensitising communities on the issue and building their capacity to provide knowledge and capacity for engaging government and mining companies.

The CSOs pointed out that the Act treats the mineral royalty tax (MRT) as an expense and this is wrong. There is the need to clearly define what qualifies as tax deductible. By the same token, corporate social responsibility (CSR), payments are treated as expenses and are used to reduce the tax liability. This externalises the cost of CSR and in truth communities at large pay for it. They feel that the tax allowances are far too many and government has no capacity to monitor what is tax deductible. They further suggest that the government must put in place the fiscal architecture for revenue sharing.

While the CSOs understand the government's desire to increase tax revenue, they feel that government should have opened up the 2015 mineral royalty tax process to wider consultations. They further argue that the mines took advantage to arm-twist government into concessions. Partly, this is because government is seized with attracting FDI inflows and creating employment. In the process, the government offers non-remunerative incentives. Government needs to address the challenge of raising sufficient tax revenue to fund development in a much better and remunerative manner.

5.2 Conclusions

The main issues raised by all the non-government stakeholders are policy inconsistencies as reflected by the frequent fiscal changes, the generally insufficient consultation by the government in policy making and regulatory administration, the limited capacity for policy design and regulatory control of the government and an insufficient understanding of the impacts of policy and regulatory authority. The stakeholders clearly understand the need for government to raise revenues to levels

commensurate with the profitability of the industry, particularly during boom periods. They do not believe, however, that government achieved this intention through the frequent fiscal changes. On the contrary, the changes simply increased levels of policy inconsistency.

Aside from stakeholder consultation, the other issues raised by stakeholders revolve around government's capacity for informed decision making. Mining companies are global entities and have accumulated tremendous bargaining power operating in different jurisdictions. There is therefore a commonly held view among stakeholders that there is a significant asymmetry of knowledge and bargaining power between the weak capacities of the state and the cumulative experience of mining companies. Government's apparent obsession with FDI and job creation as the key headlines has created circumstances in which mining companies easily arm-twist it.

Central to resolving the above issues is the need to create capacity for policy and legislative design, as well as regulatory control, based on a clear understanding of regulatory impacts. Stakeholders strongly, believe that until this happens, government policy and regulatory control cannot improve and mining companies will always hold an upper hand.

6. Discussion and recommendations

6.1 Discussion

This paper reviews Zambia's fiscal reforms for regulating the mining sector, which have been implemented since the nationalisation era in the early 70s. The main reasons underlying the fiscal changes and the outcomes have been assessed. What is clear from the review is that Zambia has struggled to put an effective fiscal framework in place. The country is yet to design a framework which is consistent with its economic and social development aspirations, and is agreeable to all stakeholders from the viewpoint of equity in rewarding both the government and mine investors. This is probably surprising given Zambia's long mining history stretching back to the 1930s. It is expected that Zambia would have accumulated a wealth of experience given its long mining history and large pool of skilled people; however, this expectation seems unmet.

From Chapter 3, it was established that the main principles in mineral tax design are revenue maximisation, economic efficiency, revenue predictability, equity, transparency and stability.

Revenue maximisation requires that government optimises its share of mineral revenue over the life of a mineral project. This must be done, taking into account, tax incentives available for attracting investors into the industry, and for achieving specific public policy objectives. Revenue maximisation relies on tax predictability so the government is assured of income streams across the life of the project. This requires that some taxes are front or back loaded, the latter to allow for the repayment of borrowed capital, while some like royalties, occur throughout the project life to secure a steady stream of revenue. This calls for a good understanding of the elasticity and impact of each tax element on revenue and the combination that maximises government revenue. It appears, from this report, that government achieved neither revenue maximisation nor regular and predictable revenue streams.

The nationalised period saw an ailing industry that was overtaxed to provide resources for an ever-expanding social sector. This occurred amidst declining commodity prices occasioned by the 1975 global economic crisis. Thus, the much-needed reinvestment capital for the industry was not created, leading to a near collapse of the industry. The privatisation era ushered in high levels of FDI flows estimated at US$2,231 in 2014. This resulted in a successful private sector recapitalisation of the industry. High levels of investment, particularly in the mining sector, significantly contributed to high GDP growth rates averaging 6.4 per cent between 2005 and 2014. This growth in reinvestment was driven by booming commodity prices, which made investment capital liberally available for mining projects. Copper prices peaked at US$9000 per tonne before crashing to US$2,902 at the end of 2008. Despite this blip, prices rebounded to US$7,346 by the end of 2009 and reached an astronomical high of US$9,728 per tonne in 2011.

The growth in private sector-led mining operations, however, occurred against a backdrop of development agreements. These DAs provided excessively generous conditions to the mines, amidst the boom prices, which started around 2003, and the rapidly rising production volumes. Public discontent rose as the mines took advantage of the market circumstances to the detriment of the state. Mining revenues were inconsistent with the overall profitability of the mines and this added to pressures to reform the fiscal space. The DAs were consequently repealed in 2008 and a spiral of fiscal changes occurred. Yet, as earlier stated, these reforms failed to optimise mineral revenues or bring stability and predictability to the fiscal space. The factors that may have impeded revenue maximisation, and invariably led to instability in the fiscal terms must be explored.

First, the DAs ignored the tax rule of equity. This required all taxpayers across the industry to be treated the same way. The government, without the capacity to negotiate a single development agreement, negotiated multiple DAs[2] with varying conditions. Table 1, for example,

[2] Government retained Clifford Chance, a London legal firm to draw up the DAs

indicates there were initial differences in the DAs regarding stability periods, royalty rates, duty on purchases of electricity, and import duties, among others. These differences created pressures on government to align DA terms amongst the different mining companies. The government yielded to these pressures.

Significantly, however, there appears to be no evidence within the development agreements themselves that the tax provisions were based on some model to predict government revenue flows over the life of the privatised mining operations. It is hence unclear if there was a prior assessment of the impact of each tax element on government revenue and if any attempts were made to optimise this. Many terms in the DAs were questionable and contradictory, and hence point to an absence of deliberate optimisation of tax revenues. The terms, for example, include stability periods that went beyond the life of some of the existing operations. There were prolonged carry forward losses, 100 per cent tax deductible capital expenditure for recapitalisation and royalty rates that were well below average[3] and, which rather oddly, were tax deductible for purposes of calculating corporate income tax. As argued in Chapter 3, and strongly noted by CSOs in interviews, royalties should not be tax deductible. As earlier outlined, methodologies exist for qualitative and quantitative modelling and optimising tax revenues across the value chain (Otto and Cordes, 2002, Guj et al, 2013). Given that the government was in a weak, vulnerable negotiating position, with no tax design capabilities, these inadvertent lapses were inevitable.

In light of the above weakness, it is not surprising that prior to 2008, little tax revenue was collected in relation to overall company revenues and profits. In the years when prices and output were falling (between the mid-1970s and early-2000s), mineral revenue as a share of total Government revenue was, on average, about 4 .per cent. Between 2001 and 2007, when copper output and prices were rising, the average mineral revenue remained at 1.6 per cent (Simpasa et al, 2013). Partly, however, the depressed Government mineral revenues can be attributed to

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[3] See for example Annex 5 of UNECA 2004 for a comparison of fiscal terms

a drop in both production volumes and commodity prices during the global economic and financial crises in 2008 ((ICMM, 2013)

The post-privatisation reforms of 2008 and beyond, made bold attempts to redress the perceived inequities of the DAs. While tax revenues substantially improve from US$20 million in 2007 to US$90 million in 2008, projections suggest this was well below the potential revenue of US$250 million (Simpasa et al, 2013). It is very unlikely, therefore, that the 2008 regime would have optimised Government revenues, despite their improvement. In any case, the shortfall was also attributable to the fact that some mining companies had petitioned Government and hence withheld their tax payments. Implementation of the 2008 fiscal reforms raised other rather interesting challenges. The mines argued that introducing the windfall and variable profits taxes had increased the effective tax rate to between 64 per cent and 96 per cent for high cost mines and 57 per cent and 64 per cent for low cost mines. This was much higher than the effective tax rate of 47 per cent initially intended or 51 per cent ceiling that ordinarily is the maximum effective tax rate for mining operations. These arguments need further exploration.

Firstly, collecting corporate income tax from the mines has always been a challenge for Zambia and other third world mining countries. The reasons for this have been alluded to in Chapter 3. These revolve around the definition of what constitutes taxable income, and its monitoring. An insufficient analysis of the impact on revenue of accelerated capital allowances; carry forward losses; reinvestment tax credits; and prolonged tax holidays worsen it. While these provisions allow mining companies to recoup their investment through deductions to corporate income, they inadvertently create conditions for aggressive cost accounting. This erodes tax assessed and can completely eliminate government revenues from the corporate income tax stream (Guj et al, 2013). This appears to have happened in Zambia and probably explains why only a few mines have consistently paid the full tax complement.

The problems of capital recovery and asset creation are generally common sources of worry in mining (Guj et al, 2013). A 2013 PwC survey of 27 mining analysts cited cost reporting and production

information as key areas where mining companies needed to improve their reporting (PwC, 2013). That report further expressed the view that "cost reporting requires increased consistency and transparency across the industry. It needs to highlight operating costs, sunk costs, future capital, sustaining of costs and also reconcile these to the financial statements" (PwC, 2013). The report further argues that in an industry such as mining, where multiple products are produced from one source, significant management judgment is required to allocate costs across the product base to determine the cost per unit. With a lack of information from the reporting entities on how these allocations are made and how the reported figures reconcile to the primary financial statements, transparency is lost (PwC, 2013). These considerations apply, for example, to Zambian copper exports, which always contain collateral values of cobalt, gold and arsenic. It is not known whether there are attributive costs to these values and whether they are accounted for in the revenue streams. This level of detail has not been addressed in this report.

A significant factor in costs of production is the technical efficiency of production processes, particularly for marginal mines. During the boom period of 2003-2012, mining companies quickly adjusted strategies to focus on delivering volumes into the market. Marginal operations became profitable to the detriment of productivity. The focus on quickly delivering volume led to inefficiencies now structurally built into many mining operations (PwC, 2013). The slowdown in global commodity prices, which started in 2012, led to record write-downs of assets. As a result, the financial markets lost confidence in mining, that costs could be controlled; that capital discipline would occur and that returns on capital employed will improve (PwC, 2013). Lack of prudent cost control has contributed to the challenges the industry has been experiencing.

The considerations above raise several fundamental issues. The first relates to sustainability and resource efficiency. The Mines and Minerals Act does not demand sustainability and resource extraction efficiency and hence no sustainability audits take place for mines in Zambia, unlike in South Africa. More importantly, costs impact taxable incomes

negatively; and there are no metallurgical audits. It is not clear, therefore, what constitutes reasonable costs of production and if there are inefficiencies, who ultimately pays for these between the government and the mines.

A further interesting observation is that the 2008 Act imposed an additional profits tax alongside a windfall tax. The reasons for this are not clear. Both these taxes serve to extract additional government revenues based on the notion that "normal business costs" have been recouped and hence exceptional profits should be shared between the company and the government (Otto and Cordes, 2002, & Guj et al, 2013). Additional profits taxes suffer from the same challenges of determining what constitutes taxable income and profit. There are added difficulties in agreeing on rates for discounting the cash flows, and which and how allowable capital allowances are deducted. APTs are hence difficult to administer in the developing country context and are rarely used (Guj et al, 2013). For the specific case of Zambia, they do not appear to have been necessary, given the windfall taxes levied.

The reasons advanced for the withdrawal of the 2008 tax regime were that the effective tax rate increased to between 64 per cent and 96 per cent for high cost mines and 57 per cent and 64 per cent for low cost mines against an intended effective tax rate of 47 per cent . From the above analysis, this argument is superfluous. These appear to have been arguments on paper rather than effective implementable tax rates. On paper, the figures were unacceptably high; but in actual implementation, and for reasons discussed above, neither corporate income tax nor additional profits taxes appear to have been regularly paid except for two mines. The APT was for all intent and purpose a paper tax and should have been removed from the effective tax rate as it impacted little on actual Government revenues. Also, the generous incentives for reducing the physical tax burden, including unwinding any accumulated capital allowances were not considered in the effective tax rate argument. These issues render the argument of an effective tax threshold academic, if taxes are not being paid or are circumvented.

While the issue of an inordinate tax burden is now academic as the 2008 provisions were repealed, the complications of mineral tax design

and its maximisation remain. These challenges underline why Zambia in 2015 sought to introduce a flat royalty as a final tax and eliminate corporate income tax altogether. Given that the incentives remain in place, it is doubtful whether even this would have led to an optimum tax collection from the mines. This emphasises the need to return to basics through tax modelling to determine the impact of the 2016 fiscal changes on government revenues.

The 2016 mineral royalty tax rates raise other interesting issues. They appear to be a hybrid of a windfall tax, with price driven escalations to capture exceptional earnings, and royalties which are attractive because they are payable whether the mining operation makes a loss or not. Both these taxes are reported attractive to developing countries because they are administratively easy to implement (Otto and Cordes, 2002 & Guj et al, 2013). The motives for the 2016 amendments are hence quite clear. These relate to simplifying tax administration at the same time as widening the pool of tax compliant mining companies, given the complications of corporate income tax. What is less clear, however, is how the new royalty taxes will be applied. Firstly, in Section 94, the 2015 Mines and Mineral Development Act allows for deferment of royalty payments if the:

> *"Cash operating margin of the holder in respect of mining operations… falls below zero. The deferred royalty is accumulated and becomes due in respect of the next mineral royalty payment period or periods in which, after the deduction of the mineral royalty then due, the cash operating margin is positive. The sum payable on any particular occasion, shall not exceed that which would reduce the cash operating margin for the relevant royalty payment period below zero." (GRZ, Aug 2015)*

It is not clear if the provisions of the Act will apply if companies declare losses and these are routinely permitted as carry forward losses. This contradicts the fundamental principle of a royalty, that taxes are due despite a loss making status. Secondly, as earlier stated, royalty payments are tax deductible for purposes of calculating corporate income tax. It is not clear whether these provisions will continue to apply. An

alternative to the 2016 royalty tax would have been to introduce a separate 4 per cent royalty rate that applies the full royalty principle, and a windfall tax with similar rates as the 2016 royalty tax. These provisions would be similar to those in the 2008 Act and would have the benefit of providing a steady stream of revenue across the full life of mining operations, and a share of windfalls when commodity prices escalate. At the time of writing this report, copper prices had recovered to more than US$ 7,000 per tonne. It is further worth noting that mining companies appear to have welcomed the provisions of the 2008 Act even though they raised petitions that they were not consulted when the DAs were unilaterally abolished (ICMM, 2014).

The principle of Economic efficiency requires mining taxes to be "economically neutral." This simply means that a tax should attract the same level of exploration, mining and investment activities, at a minimum, even after it has been applied. If such activities reduce, the tax is said to be 'rent seeking' and this negatively affects future investment and operational decisions. The main arguments persistently raised by mining companies over the frequent fiscal changes, other than the need for fiscal stability, have been that the reforms have negatively affected mining operations. They have been able to effectively deliver the message to the government of the consequences of job and revenue losses, and the negative impact on investment decisions. In the eyes of the industry, the government's behaviour has been rent seeking and has not considered the principle of economic efficiency. As one mining company puts it in an interview, "government cannot tax its way to prosperity without killing the goose". There are elements of truth in this. The government has neither considered the impacts nor effectively consulted the mines in making the fiscal changes.

It is doubtful, however, that these negative impacts can be exclusively adduced to the fiscal changes. As indicated by PwC, the mining companies became cost-careless during the boom period and made investments that were inefficient. These structural inefficiencies are a continuing aspect of the cost profile of the mines and have nothing to do with the outcomes of fiscal reform. The World Bank points out that the stage of the mining operations; the cost competitiveness of opera-

tions; and unredeemed large tax 'assets' are all more important factors to (the) profitability of Zambian mines, rather than the tax rates themselves (World Bank Group, February 2015).

This view is shared by PricewaterhouseCoopers, that while 2013 saw a softening of commodity prices, the long-term fundamentals remain optimistic. The challenges that the industry has been going through are a loss of confidence that the mines are not capable of capital discipline and cost control. These are not issues of tax rates per se. Notwithstanding this, Zambia is a high cost producer given some of its aged mines, high input costs and long evacuation distances to ports. Government hence must remain sensitive to high costs of production through inadvertent regulatory control. Yet, the natural cycle of mining dictates that operations become increasingly marginal and unsustainable and invariably close. Government must be mindful not to hold itself hostage due to potential job and revenue losses which are inevitable.

From the viewpoint of Transparency and stability, this requires full information disclosure both by mining companies and government. Government, and other stakeholders, need the correct information from industry to make informed decisions. It appears that in the case of Zambia, there has been obscurity in reporting production data, accounting costs and general levels of profitability. This has subtracted from the quality of decision making and the debate around the benefits of mining (ICMM, 2014). This has deepened levels of suspicion of mining companies by other stakeholders and has led to repeated allegations of transfer pricing and mispricing by the industry.

In a recent study, UNCTAD found substantial levels of copper export over-invoicing of US$31.8 billion and US$4.4 billion, to Switzerland and the United Kingdom respectively, over the 1995–2014 period. China accounted for US$5.6 billion of export under-invoicing during the same period. Together, China and Switzerland account for 67.7 per cent of Zambia's total copper exports. Copper exports to Switzerland presented a peculiar case, as no such exports are recorded in Switzerland. UNCTAD argued that it is possible that exports are recorded as destined to an importer in Switzerland when the importer did not reside there, as would be the case with transit trade. Therefore, it would

be important to investigate the effective destination of Zambian copper marked as exported to Switzerland that never arrives in that country (UNCTAD, 2016). ICMM and the Chamber of Mines of Zambia have dismissed trade mispricing in Zambia (ICMM, 2014). Whatever the case, such allegations continue to gather strength, adding to suspicions of a lack of transparency in the industry.

On the part of government, there are calls by industry and non-government stakeholders for greater transparency and stability in the tax regimes. The government's frequent fiscal changes and the manner in which they have been undertaken subtracts from transparency and stability. It deepens the industry's view of the government's lack of technical capabilities to regulate it (ICMM, 2014).

The government's policy inconsistency has not been restricted to changes in fiscal terms. It has manifested itself in several statutory instruments (SIs) which have been annulled after a few years of existence. For example, SI 55 was introduced to improve tax revenue retention and compelled exporters to repatriate all foreign currencies earned back to Zambia. SI 33 made it illegal to quote for goods and services in foreign currency. VAT rule 18, in existence since 1997, was amended in 2013 to accommodate SI 55. The amendment required companies to obtain import documents, including tax invoices and proof of payment from destinations of exports. The mining companies pushed back that these changes added to their cost of doing business[4]. The SIs were revoked and VAT rule 18 amended so that transit documents were sufficient proof of export.

Given the alleged over-invoicing of copper exports to Switzerland and under-invoicing to China referenced above, it is not implausible to question whether an added cost to business, was the real motive for the push-back. Significantly, however, the stand-off led to a huge backlog of VAT refunds to mining companies. This is currently estimated at US$800 million and is a continuing source of friction between government and mining companies who are more than willing to use it

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[4] In some cases, this created a discrepancy between where the money was going (e.g. Switzerland) and where the copper was going (e.g. China).

as leverage against paying their taxes (interview with the Chamber of Mines).

The government's lack of capacity and the frequent reversals in fiscal terms since 2009, and in the SIs, have led to a commonly held view of state capture by mining companies. The state's bargaining power against the industry appears to have been grossly weakened by this. Government's fear of job losses, the politicisation of the sector's decision making, the lack of understanding of the impacts of the regulatory changes, and the lack of reliable production and mineral export data are all factors that have contributed to government's weak hand and the erosion of its bargaining power. This view is commonly voiced by several researchers on the subject (Fessehaie et al, 2016 and Kragelund 2016) and interviewed stakeholders.

6.2 Recommendations

This report has undertaken a detailed review of the fiscal reform that has taken place in Zambia starting with nationalisation in the early 70s to the post privatisation changes in 2016. Against the backdrop of the general principles of good tax design, and the contestations that have characterised tax collection and revenue optimisation, analysis has yielded these general conclusions and recommendations.

Building stable, predictable and optimised revenue streams – Government has not done well in optimising its revenue income streams over the useful life of the portfolio of mining projects in Zambia. This has been due to a mixture of factors related to the challenges of tax design. Particularly as relates, but not exclusively, to income tax, royalty payments, and windfall taxes, measured against the tax incentives in place in Zambia. There is a need to model existing taxes and incentives to build up an understanding of the options available for optimising tax revenues and balancing the revenues over the useful life of current mining projects. This should bring long-term stability and predictability to tax administration in Zambia.

Improving financial and production reporting systems – It is surprising that despite so many years of accumulated mining experience, Zam-

bia continues to struggle with the quality of production and financial data on which both government and the mines heavily rely for decision-making. There exists considerable uncertainty about total levels of production in the country, the costs of production and how the costs are arrived at. There is currently no requirement in the Act to report on the technical efficiencies of production, although the 1972 Mines and Minerals Act required such reporting to be done. There is need to develop a standard data reporting template that provides uniform data and information reports by all mining companies. This should help the government with informed decision making and also make available data and information for research. It is understood that the problem may have been partially addressed through the ZRA Mineral Value Chain Monitoring Project, which has been assessing the industry's production figures. There is the need to closely look at this and build in metallurgical accounting procedures to promote data transparency and resource efficiency. Along with this, metallurgical and financial audits must be inbuilt into the Act.

Mending the regulatory gaps – It is clear from the report, and the analysis that there are inconsistencies in the legislative regime. Many of the fiscal incentives provided to mining companies run against revenue optimisation and were embedded in the DAs to attract FDI. It does not appear logical to upfront inform a company that it will not be liable for tax if by paying it will go into the red. At which point does accumulated tax liability get paid if it perpetually makes losses, on account of its cumulative capital claw-backs and carry forward losses? The 2015 Mines and Minerals Development Act must be scrutinised for inconsistency. Reporting on operations need to be improved and penalties for blatant violations must be strengthened and firmly applied.

Bridging the trust gap – It is clear from both the literature review and the interviews that there exists deep seated mistrust amongst all the stakeholders in relation to how the industry is run. There are persistent allegations of lack of transparency in reporting production and financial accounting; cost allocations, and overseas sales and marketing of Zambian copper. Allegations of mispricing and under-invoicing

views these functions as its exclusive preserve. There is need to deliberately improve dialogue amongst all stakeholders. Transparency by all parties will greatly reduce suspicion. Further, Zambia does not also continue to grow. Government on its part has persistently not been transparent in its policy making and regulatory design. Government appear to have provisions in the act against transfer pricing. Probably, there is need to include provisions that address over- and under-invoicing.

Improving knowledge of equipment costs – The problem of over- and under-invoicing equipment probably distorts cost inputs and affects taxable income. It probably also exaggerates capital write-offs and carry forward losses. Government needs to improve its access to equipment sources and their costs. Such costs are routinely available from equipment manufacturers and are commonly used in plant design. This would help insulate government from over-invoicing for tax purposes.

Government must build its capacity and optimise use of non-governmental capacities – This is central to resolving the issues raised in the report concerning the need to create capacity for policy and legislative design, as well as regulatory control. Capacity is also required in analysing regulatory impacts, particularly but not exclusively, on business. Analysis of regulatory impact applies to many non-business situations, including government revenues, and economic and social impacts. The capacity need not reside exclusively in government and rarely does it do so even in advanced mineral economies like Australia. Good policy design is consultative and widens ownership of policy instruments to include other stakeholders. This promotes dialogue and eliminates friction and suspicion between government and industry. Finally, a consultative policy and legislative design process reduces the power asymmetry as all stakeholders participate to build consensual policy and regulatory outcomes.

It can be assumed that the frequent fiscal changes would have been avoided if the government had the capacity for policy design and regulatory control. The corollary is also true; that the fiscal space will probably never stabilise in the absence of such capacity.

References

1. African Union Commission (AUC) and United Nations Economic Commission for Africa (UNECA), Minerals and Africa's Development – The International study Group Report on Africa's Mineral regimes, November 2011.
2. Chikwanda A., Minister of Finance, Budget Address 2015, Government of the Republic of Zambia
3. Fessehaie J., Rustomjee Z. and Kaziboni L., Can Mining promote industrialisation? A comparative analysis of policy frameworks in three southern African countries, United Nations University Wider Working Paper 2016/83, June 2016
4. Guj P., Bocoum B., Limerick J., Meaton M. and Maybee B., How to improve mining tax administration and collection frameworks – A source book, World Bank, April 2013.
5. International Monetary Fund (IMF) Country Report No. 15/153, 2015, Zambia Selected Issues
6. International Council on Mining and Metals (ICMM), Enhancing Mining's contribution to the Zambian Economy and Society, 2014
7. Kragelund P., The copper boom and the development bust – institutional impediments to resources-led development in Zambia, April 2016
8. Lungu J., The Politics of Reforming Zambia's Tax Regime, Southern Africa Resource Watch Insight Issue No. 8, August 2009
9. Mwansa K., Minister of Mines and Minerals Development, Ministerial Statement on Mineral Royalty, 2009, Government of the Republic of Zambia
10. Musonda C., A Legal Perspective of Taxation in the Zambian Copper Mining Industry Following the Privatisation Programme, University of Zambia, 2010

11. Otto, J and Cordes J , The Regulation of Mineral Enterprise: a Global Perspective on Economics, Law and Policy, Rocky Mountain Mineral Law foundation, May 2002
12. PwC, Mine - A Confidence Crisis, Review of Global Trends in the Mining Industry, 2013
13. Simpasa A., Hailu D., Levine S. and Tibana R.J., Capturing mineral revenues in Zambia – Past trends and future prospects, UNDP and EU Global partnership on Land, Natural Resources and Conflict. August 2013.
14. United Nations University-Institute for Natural Resources, Review of the Mining Tax Regime - Achieving an optimal mining tax regime, 2015.
15. United Nations Economic Commission for Africa, Southern Africa Office, Harmonisation of mining policies, standards, legislative and regulatory frameworks in southern Africa, December 2004
16. United Nations Economic Commission for Africa, Southern Africa Office, The Impact of the Current global financial Crisis and Recession on the SADC mining sector, May 2009
17. United Nations Conference on Trade and Development (UNCTAD), Trade Misinvoicing in Primary Commodities in Developing Countries: The cases of Chile, Cote D'Ivoire, Nigeria, South Africa and Zambia, 2016.
18. World Bank, Local Content Policies in the Oil and Gas Sector, Silvana Tordo, Michael Warner, Osmel E. Manzano, and Yahya Anouti, a World Bank Study, 2013.
19. World Bank, Zambia's Recently Introduced Simplified Mining Tax Structure: Comments, Analysis and Recommendations, Lokanc Martin and Stern Richard, February 2015.