An Evaluation of the Feasibility of Introducing a Minerals Royalty System in South Africa

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This report is not confidential. It may be used freely by the Graduate School of Business.

I certify that except as noted above the report is my own work and all references used are accurately reported in footnotes.

Signed:

Mashudu Netshipale
Definition of Terms and Abbreviations

Definition of Terms

Draft South African Mineral and Petroleum Resources Royalty Bill - The draft royalty bill referred to in the study will be the fourth and final draft released in June 2008 by the treasury department.

Mineral taxation – Refers to all forms of taxes applied to the minerals industry by the state, this could be in the form of royalties, import duties, income taxes, VAT, etc.

Developing countries – In this study will refer to countries in the South America, Asia (excluding Japan) and Africa.

Success of a change in mineral taxation – success in this study will be measured in terms of growth rate in mineral investment and non-decline in state revenue from mineral development in the country.

Abbreviations

MPRDA – is an abbreviation for the Mineral and Petroleum Resources Development Act of South African

SAMPRB – is an abbreviation for the South African Mineral and Petroleum Resources Royalty Bill

SA – is the abbreviation for South Africa

ASM – is the acronym for the Artisanal and Small scale Miners

DME – is an abbreviation for the Department of Minerals and Energy

SARS – South African Revenue Services
Abstract

South Africa introduced the Minerals and Petroleum Resources Development Act with the intent of vesting the ownership of the minerals in the hands of the state. All mineral rights are expected to be converted to new order rights by 2009. The government can then therefore charge an economic rent for the exploitation of its mineral resources. This study evaluated the feasibility of introducing the proposed royalty bill which has been in draft since 2003. This was achieved through the analysis of other countries performance and comparing those to the South African situation through economic data analysis and interviews with different stakeholders.

The study finds that although most of the mineral investment attraction factors are below global average, the technical aspects of the bill and the process followed to get to the final draft, makes the royalty system feasible.

The study further notes that there are probably other ways of increasing revenues to a large extent than raising taxes as proposed.

KEYWORDS: Minerals and Petroleum Resources Development Act, royalty, economic rent, draft royalty bill, minerals ownership.
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1 Introduction

Mineral royalty is based on the principle that the state or the mineral owner should be compensated for the exploitation of a valuable non-renewable resource (Gonzalez, 2004). Mineral rich countries are faced with the dilemma of increasing new investment in mining whilst at the same time ensuring adequate revenues accrue to the state through taxation of the mining activities (Otto, Andrews, Cawood, Doggett, Guj, Stermole, Stermole, and Tiltonet, 2006, p8). This paper seeks to examine South Africa’s intentions to address this delicate balance.

During the 1960s, 1970s and 1980s in countries such as China and Russia, where socialism was the preferred system, the state assumed the responsibility for discovering and developing mineral resources. As such, the concept of royalty was unnecessary (Otto et al, 2006). Some developing countries like Ghana, Zambia, Chile and Peru also followed suit and nationalised private mining companies (Otto et al, 2006). Most of these countries’ minerals industries suffered, with Zambia probably suffering the worst (The Economist, 2006). Consequently, after the fall of the Soviet Union most of these countries adopted free market policies. This study will examine how some of these countries dealt with changing their mineral taxation and their success in doing it.

Since the dawn of democracy in South Africa the government started a process of reforming the mining industry. The first step of the process was the establishment of the Mineral Policy Process Steering Committee in 2005. This was followed by the introduction of the Minerals and Mining Policy for South Africa in October 1998 (DME, 1998). Considering that the mining sector was traditionally in private hands and the poor success of nationalised mining sector in other countries, the South African government looked at other avenues that were in line with its other policies. The process was kick-started by the revised Minerals and Petroleum Resources Development Act (MPRDA) of 2002, which started the process of transferring all mineral ownership to the state. The next step after the MPRDA was a re-examination of the mineral taxation system given
that the state would become the owner of mineral resources. The chosen route is the royalty route and this paper will examine whether this should be the route taken.

1.1 Background to the research
The South African Mineral and Petroleum Resources Royalty Bill’s (SAMPRB) first draft was released for public comment in 2003 and was followed by a second draft in 2006. The most recent version was released for public comment by the Treasury in June 2008. This is expected to be finalised and implemented in 2009 in line with the transition period for mineral ownership from private hands to the state as required by the MPRDA.

A global study by sponsored by the World Bank has indicated that most countries with mineral wealth have some form of discriminate taxation for mining (Otto et al, 2006). Some studies have shown that the introduction of discriminate mineral taxation has been successful in some countries (Otto, 2002) and not so successful in other countries (Curry, 1984).

The focus of this paper is on analysing the critical success factors that have shown up in other countries where similar bills/systems have been introduced rather than the technical analysis of the bill that has been covered by different commentators (Cawood, 2007; Lilford, 2003; Revenue Watch Institute, 2008).

1.2 Problem Addressed and Purpose of the Study
The aim of this research is to identify the critical factors that are pivotal to a successful introduction of a minerals taxation system in a developing nation such as South Africa and to evaluate the degree to which South Africa fulfils these conditions in light of the South African government’s plans to implement a minerals royalty system in 2009.
1.3 Research Constraints

The study required gathering data on how successful different countries have been in implementing the royalty system. Some of the countries that this paper looked at do not use English in some of their publications. Some of the government websites visited had the same problem (Peru for example). This limited the use of raw data, and as such resulted in the use of secondary data published by international institutions.

The second limitation came during the interview phase of the study were some of the industry heavy weights could not be secured for interviews due to busy schedules and in some cases companies cancelling appointments due to other commitments. Interviews with the key people representing most of the stakeholders (government, industry & independent view – academic) who were actually involved in the drafting of the bill were secured and conducted.

1.4 Report Layout

This report starts by introducing the concept of mineral taxation followed by the background into the study. This is followed by the purposes of the study and problem definition which gives an indication of the problems the study intends addressing. The section that follows defines the hypothesis that the study begins with and intends accepting or rejecting at the end.

Literature review which gives the context of mineral taxation and minerals royalty objectives and dilemmas countries are faced with follows. The report then moves into the research portion which starts of with the explanation of the research methodology, followed by an analysis of key factors that affected success in different countries. A framework of the critical success factors is then outlined to be used in the following chapters to analyse the proposed royalty system for South Africa. The report closes with conclusions and some recommendations with regards to potential areas of study going forward.
2 Problem Definition

2.1 Research Questions

The different outcomes experienced by different countries who have implemented discriminate taxation system raises the following questions:

- What are the key factors that influence the success of mineral taxation policy?
- What are the factors that determine when a country should consider changing its mineral taxation policy?
- How do the factors mentioned above apply to South Africa?
- And lastly is it the right time for South Africa to change its mineral taxation policy?

This paper will explore the above questions to evaluate the prospects of the proposed SAMPRB in achieving the government’s intentions.

2.2 Hypothesis

The global resources sector has been experiencing a boom over the past few years, with high demand for raw material coming from China (The Economist, 2008). South Africa seems to be missing out on this commodity boom (Seccombe, 2008). The power crisis that gripped the country is partly to blame for the low production as some of the mines had to temporarily shut down due to power shortages (Gold Fields and Anglogold Ashanti mines are an example).

Over the past few months there have been signs of a slowdown, with commodity prices falling significantly since July 2008 (The Economist, 2008). Although analysts are divided as to whether it is the bursting of the commodity bubble or not, commodity prices have slumped.

Investment in the South African mining industry has declined over the past few years with some commentators blaming the slow convention process of old mining rights to new mining rights as required by the MPRDA (Campbell, 2006).
From the issues raised above one can argue that investor confidence in the SA mining sector is currently in the low. This is confirmed by the Fraser institute ratings of 2006/2007.

Based on the above the hypothesis is that the critical success factors for a change in mineral taxation are not in favour of South Africa at the moment. It is not feasible to introduce the royalty bill in 2009 and at the same time anticipate investment growth in the mining industry.
3 Literature review

3.1 Mineral Taxation Overview

Most countries tax their mining industries differently to other industries, arguing that the mining industry is different from other sectors (Otto, 2002). Economists term this different treatment, tax discrimination. Otto (2002) argues that mineral tax discrimination is based on two factors, uniqueness and ownership. To add to these the capital intensiveness and high risk nature coupled with long gestation lags in mineral activity further calls for special tax treatment (Sarma and Naresh, 2001).

Otto et al (2001, p16) indicate that the following factors derive the uniqueness part of the minerals industry and as such affect mineral taxation:

- A lengthy period of exploration takes place during which there is no revenue.
- The amount of capital required during the development and construction phase is relatively large than in most other businesses.
- Once the mine is built, the capital is captive and not transportable.
- Equipment tends to be specialized and is available only from a few manufacturers worldwide, so it must be imported.
- Mines can have long lives and will be subject to regime changes and policy instability.
- Revenues are cyclical because commodity prices move up and down more so than is experienced by most other businesses.
- The scale of operations can be very small or very large.
- Large costs will be incurred at the time the project closes (reclamation is required).
- Substantial costs unrelated to production may be incurred, such as investment in community infrastructure or programs.

On the ownership side, in most countries minerals are owned by the state, crown or ruler and in certain countries by the surface rights owner. The taxpayer as such does not own the minerals and will often be subjected to a rent (Otto et al, 2001).
Sarma and Naresh (2001) argue that capital flows are guided by the prevailing fiscal regimes amongst other things. However when it comes to the minerals industry they argue that it is difficult to compare across countries due to the differences in minerals composition, nature and degree of government decentralization and the level of economic development.

Developing countries are faced with a dilemma as to what extent to discriminate for and against the mineral industry (O’Faircheallaigh, 1986). The need for direct investment and the need to increase state revenue to fund public development programs often conflict.

### 3.2 Objectives of mineral taxation

When designing a mineral taxation system governments should strive for mineral taxation regimes that will (Parsons, 1998):

- Provide for a fair participation by the state in the fruits of the mining enterprise
- Be stable over time
- Be transparent and provide an even playing field for all players
- Be easy to understand
- Be easy to administer
- Be internationally competitive.

Investors on the other hand have a slightly different view of what the objectives should be (Otto et al, 2001). On top of the above mentioned objectives they want a tax regime that is stable and predictable, is based on the ability to pay, allows early recovery of capital, responds to downturns in market prices, does not distort production decisions such as cutoff grade or mine life, can be deducted from taxable income for the general income tax, does not add significantly to operating costs, and is amenable to distribution directly to affected stakeholders (Otto et al, 2001, p64).
3.3 Type of Taxes Faced by Minerals Industry

There are basically three types of taxes that a mining company can be faced with (Parsons, 1998). The first type derived from a legal basis is the economic rent. The government collects economic rent as the owner of the mineral resource. Royalties are the most common form of economic rent (Parsons, 1998, p3). Parsons (1998, p2) defines economic rent more clearly as a payment made by the mining enterprise to the state as compensation for using state-owned resource.

Cawood (2007) indicates that royalty systems went through different stages with the pre-World War II royalty systems being simply based on a percentage of the production. The post World War II systems have been more complex as the cyclical nature of the commodities market started influencing the different systems used by countries.

The second type of tax is “User Pay” taxes which are usually derived from contemporary government policies. They tend to change on ad-hoc basis as government policies change (Parsons, 1998). User Pay taxes are based on the principle that companies should pay for government provided services or information. A South African example of Use Pay tax will be the licensing fees required for the different stages of a mineral right application. In most cases these taxes cannot be easily passed on to consumers and as such have a potential to inhibit investment in a certain sector if they are too high (Parsons, 1998).

The third type of taxes also derived from contemporary government policies is corporate citizenship taxes. These taxes are levied by governments to companies and are not earmarked for any particular use but to fund a range of government operations (Parsons, 1998). A South African example of this type of tax is the income tax levied on companies.

Sharma and Naresh (2001) argue for another type of taxation related to sustainable development. This type of tax is aimed at minimising the ecological and environmental impact of industry activities. Just like the other two tax types, this is also based on the government policies that in this case aim to drive sustainable development.
The dilemma that governments are faced with is how to combine these different but important tax types to form a multi-levy system that will attract investment whilst at the same time maximising the potential revenues for the state (Sharma and Naresh, 2001). Ultimately the overall tax system has to be equitable for both the nation and the investor and be globally competitive (Otto et al, 2006).

In this study the focus is more on the first type of taxation, the economic rent taxes, with emphasis on the royalty systems.

3.4 Mineral Royalty Systems

A World Bank study (Otto et al, 2006, p50) defined the mineral royalty as a tax system that contains one or more of the following attributes:

- The law creating the tax calls that tax a royalty.
- The intent of the tax is to make a payment to the owner of the mineral as compensation for transferring to the taxpayer the ownership of that mineral or the right to sell that mineral.
- The intent of the tax is to charge the producer of the mineral for the right to mine the minerals produced.
- The tax is special to mines and is not imposed on other industries.

In South Africa’s case the proposed royalty bill will fit with the first and the third points and as such will be a mineral royalty tax.

One of the key questions concerning policy markers when it comes to royalty is, to what extent to discriminate between mineral types (Otto et al, 2006). The argument for large extent of discrimination is to take care of the differences in how different minerals are mined, beneficiated and sold. Most governments have moved away from a discriminatory system into a more uniform system (Otto et al, 2006). This has the benefits of being stable over time and less administration hassles, which is more in line with the objectives of a mineral taxation system from both the state and company views as set in section 3.2. Although most governments have abandoned the discriminatory approach, some
countries with a well developed and funded tax administration system (some state in Australia) still use it successfully, albeit with some modifications (Otto et al, 2006).

An ideal mineral royalty/economic rent system should be (Parsons, 1998) internationally competitive, relate to the enterprise’s ability to pay and eligible for tax credits in the home country of the inbound investor.

3.4.1 Types of mineral royalty

There are basically three types of royalty systems; unit based, value based and profit based (Parsons, 1998).

Unit based royalties are based on the volume or weight of production whereas value based royalties rely on the gross value of the mineral mined. These two systems do not suit one of the requirements of an ideal royalty system i.e. they do not relate to the enterprise’s ability to pay. The enterprise will pay irrespective of whether it makes profit or not. There is an argument that this is fair since companies could potentially exploit a country’s mineral worth (non-renewable) at a loss and the state as the owner will not benefit from the economic rent (Otto et al, 2006). Most governments prefer the value based approach were a rate multiplied by the value of the minerals is used to determine the amount of rent due to the state (Otto et al, 2006).

Investors on the other hand prefer profit based royalties as they taking into account the ability of the enterprise to pay (Otto, 2000). This type of royalty tends to be more suitable in countries with a well developed and mature tax administration system.

A study by Price WaterHouse Coopers (PWC) in 1998 and the World Bank study of 2006 indicate that there isn’t a single preferred royalty system across countries. Some countries have multiple systems working for different commodities/mineral types. Some countries have adopted a hybrid system which combines value based as well as profit based. The current proposed royalty system for South Africa will fall in the hybrid category due to its combination of a measure of profitability and a value measure.
3.5 History of Mineral Taxation and Ownership in South Africa

In order to understand where the country is going with the royalty bill one has to look at the historical developments that have led to the formulation of the current mineral development policy of South Africa.

South Africa’s mineral royalty system was primarily based on the common law principle which allowed ownership of minerals to be in private hands (Cawood 2007). At this stage mineral rights were tied to land rights i.e. he who owns the land owns the heavens above and the earth below it. The Cradock proclamation of 1813 allowed the state the right to mine certain strategic minerals, Gold and Silver (Cawood & Minnitt, 1998). This is considered to be the first step towards state mineral ownership as it allowed the state to lease the right to mine to whomever it wished. During this period the estimated royalty was around 2.5% of the sales value i.e. a value based royalty system.

The Great Trek ended up with the country being divided into different provinces and each province passed its own mineral laws (Cawood & Minnitt, 1998). The formation of the Union of South Africa in 1910 resulted in the state publishing the Land Settlement act of 1912 which attempted to give all ownership of the minerals to the state. This was later reversed in 1917 to the ownership of the land belonging to land owners, however the state still reserved the right to mine strategic minerals.

Between the above period and the dawn of Democracy in the early nineties different laws were passed to try to move the ownership towards the state and some laws to move it towards private hands. One of the Acts that had the biggest impact was the Minerals Act of 1991 that came into force in 1992. It allowed for exclusive private ownership of all mineral rights (Cawood & Minnitt, 1998). This was not to last long as the new government’s policies indicated yet another shift in favour of state ownership of the minerals. The 1998 green paper on Minerals and Mining Policy gave a clear indication of the new direction, ‘Government’s long-term objective is for all mineral rights to vest in the State’ (Cawood & Minnitt, 1998).
The MPRDA was enacted and allowed for all ownership of mineral rights to be vested with the state from 2009 onwards. The MPRDA paved a way for the introduction of a mineral royalty/rent system. The first royalty bill was published in 2003 for public comments. It proposed a value based royalty system with the rate ranging from 0 -8% of the sales value (Cawood 2007). The second draft reduced the rate to between 0 and 5%. Both versions of the bill were not favoured by the industry and investors as the feeling was that the rates were too high and would reduce reserves and shut down some of the mines that were already marginal (Cawood 2007). The bills were debated and all stakeholders were given an opportunity to present their views to the government. These processes lead to the development of the third and fourth draft of the bill which is the subject of this paper.
4 Research Methodology

The research process followed involved the following key steps. These steps follow directly from the sub questions that have to be answered by the study:

- Investigate the key factors that may affect a change in mineral taxation – this was done through desktop research looking at past experiences from other countries. Some economical and production data was used to substantiate the importance of each factor. The data was obtained through desktop research and a framework of factors was developed to use in the second step.

- The second step is to analyze the applicability of these factors in the South African environment – this was done through a combination of desktop research as well as interviews with stakeholders in the South African mining industry.

- The last step (which goes hand in hand with the second step) was to look at the status of each of the applicable factors and how they impact on the potential success of the proposed bill. This was done by analyzing information that is made public by government departments/bodies (the Department of Minerals and Energy and Statistics South Africa are good examples) and industry bodies like the Chamber of Mines and the South African Institute of Mining and Metallurgy amongst others.

The interviews were focused on answering the sub problems that attempts to answer the questions posed by the study. Formal questions to be asked during the interviews were drafted and tailored for each participant before the interview. Questions were open-ended, allowing the participants to fully expand on their answers (See Appendix I).
5 Mineral Taxation in Different Countries

In this section the aim is to look at other countries that have implemented or changed their royalty systems to determine what made them successful or unsuccessful in implementing them. It is important to note that although taxation plays a role in determining the success of a country’s minerals industry there are other factors (geological potential, level of exploration and political environment) at play as well that could potentially negate any benefits of a favourable royalty system. Zimbabwe is a good example of where there is no royalty system and the tax system is fairly competitive yet the minerals industry is dwindling due to other factors (political uncertainty being one of them). In real life one cannot easily separate the impact of the royalty system from the impact of other factors that occur simultaneously.

It is also important to take note of lag effect of a change in minerals industry due to its high initial investment nature. Changing the taxation system might not have an immediate result in the industry because some mines might have already sunk the money. Some mines can span over twenty years from initial investment to closure. As Otto noted (Otto et al, 2005) it is also very difficult to predict what would have happened if nothing had changed.

5.1 Peruvian Experience

Just like other developing countries in Latin America (Argentina and Chile) Peru moved from the state owned and operated mines when a new government was put in place in 1990 (Bastida, Irarrázabal and Labó, 2005). As part of the industry reform the government of Peru changed most of its minerals related policy to pro-investment policies. Mining companies were allowed accelerated depreciation and reinvestments into the country were free of income tax. From 1992 to 2004 about US$1.5 billion was invested into exploration whilst about US$5.5 billion was invested for the establishment of new ones as well as the expansion and enhancement of existing mines (Bastida et al, 2005).
During this period Bastida et al (2005) argue that the relaxation of some of the tax requirements including other reforms was critical for the increase in investment in Peru’s minerals industry. The country’s objective in this case was to increase investment in the minerals industry to benefit its population. This as mentioned earlier is common amongst developing countries. There is a need to increase investment to assist with economic growth.

Government changes in the early 2000 resulted in a recall of the tax benefits mentioned above as a result of pressure from groups within the country who felt mining was enjoying too many perks. Exploration however benefited with VAT redemption tax law (only current for five years only since 2003) for all goods used during exploration phase (Bastida et al, 2005). At the same time annual concession fees were also increased. So the net impact was an increase in the overall tax rate, bearing in mind that some of the tax changes resulted in tax payment irrespective of profit making or loss.

The early to mid 2000 were further characterised by conflicts between communities and the mines. As Labo (Bastida, 2005) argued, the communities felt that they were only receiving negative externalities from mining companies (environmental damage, disruption of life etc). The community complaints might have been founded in good ground since only 16.7% of the tax paid by mining companies between 1992 and 2003 was spent on investment projects (Bastida et al, 2005, p9). Moreover Labo further argues that only 16.5% of the total tax turnover was spent on the communities and regions were mining took place.

To exacerbate the situation the Peru government sought to solve the crisis by increasing the amount of tax collected from mining companies. In 1994 the government of Peru introduced a value based royalty system based on the value of the mineral concentrate. The Fraser Institute Mine Survey of 2002 rated Peru’s tax regime as one of the most attractive to investment (see figure 1). Fast forward to 2006 and Peru is rated on the bottom quarter of countries with investment friendly tax regimes (see Figure 1). Of the 30% respondents that indicated that the tax regime was not attractive, 50% of them felt it was sufficient to push them away from making an investment in the country. The number of jurisdictions in the survey increased from 53 in 2002 to 65 in 2006, this has a slight
bearing on the rankings, although from 2004 onwards the number of jurisdictions has remained fairly constant. The percentage deterred refers to the percentage of respondents who felt the taxation regime was a deterrent and in certain cases would actually force them not to invest.

![Fraser Institute Annual Taxation Regime Ratings](image)

**Figure 1: The Fraser Institute 2002 & 2006 Tax Regime Attractiveness Index**

*Source: The Fraser Institute*

To test whether these perceptions transfer to actual investment decisions one has to look at the budget/actual spend that companies allocate to investment in that country. The Metals Economic Group conducts annual spending surveys of the global exploration activity to see where companies are spending their money. It is interesting to note that Peru has remained in the top ten of exploration spending since 2003, even with the mineral taxation issues. Exploration spend dropped from just above 6% of global in 2003 to 3.5% in 2004 and has remained there ever since as shown in Figure 2 (Data from
Metals Economic Group). This change is in line with the perception survey results shown in figure 1.

![Peru Exploration Budget Spend As Percentage of Global](image)

**Figure 2: Peru annual exploration spend as percentage of global**

*Source: Metals Economic Group*

The key issue that seems to be important for implementing a new tax system in this case is the tax distribution and collection part. Decentralised collection and distribution will allow the regions affected by mining to benefit directly from the mining activities that occur and will avoid pressure on government from civil society. There is an expectation from the communities around which mining happens that they also should share on the spoils and as such even if there is a central tax collection system, the distribution should reflect were mining takes place, to avoid problems experienced by Peru.
The changing of the tax system over a short period of time seems to have created uncertainty and a sense of instability for investors. As a result one of the key objectives of a tax system from an investor’s view, that of predictability, is therefore lacking.

5.2 Chilean Experience

Chile’s mineral taxation policies were developed on the back of major changes in the economic policies of the country in the late seventies and early eighties (Bastida et al, 2005). The Chilean model refers to a set of economic reforms that were established by the Chilean government to improve its economic position during the mid to late seventies. These reforms included the Foreign Investment Statute which allowed certain agreements between the state and companies (Rivas, Renard, Vela, Rigo, Godinez and Roder, 2005).

Amongst these agreements are the agreements to return all capital brought into the country without paying tax and tax invariability for ten years. The ten years is extended to twenty years if the investment is greater than US$50 million (Rivas et al, 2005, pg 3). In exchange to the invariability companies pay a fixed rate tax on income and dividend excluding the specific mining tax.

The Chilean tax system also offers incentives for capital intensive industries, with the organisation and start-up costs considered tax deductible up to six consecutive years. Other deductions that are pro-investors with high capital investments are also allowed for (accelerated depreciation etc).

In 2006 Chile introduced the specific mining tax (royalty type) which is based on both profits and volume of sales (a hybrid). Fiscal invariability even in the specific mining tax can still be guaranteed through the Foreign Investment Statute. So although the introduction of the royalty would have the impact of increase tax, the guarantees in the Foreign Investment Statute ensures that the tax rate is almost predictable. Depending on
the political environment the rate could be stable and satisfying some of the investors’
requirements when it comes to mineral taxation.

Before the introduction of the 2006 specific mining tax there was some uncertainty as the
government had tried to put through a royalty bill that would have excluded the
protection from the Foreign Investment Statute.

The Fraser Institute survey indicates that Chile has remained in the top ten in terms of tax
regime attractiveness except in 2004 and 2006 (see figure 3). 2004 to 2005 is the year
when the Chilean government proposed the first royalty bill which was rejected. It is
obvious the survey reflected this as it was a moment of uncertainty. The 2006 to 2007
effect can be attributed to the revised royalty implementation.

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Figure 3: Chile Annual Taxation Regime Ratings

*Source: The Fraser Institute*
Although the significant change has only happened about two years back and it is still difficult to see the impact of the changes, the Fraser Institute rating of 2006 on tax regime suggests a minor shift into a negative since 2002. The actual exploration investments are in line with the perception, the passing of the bill seems to have had a calming effect as exploration spending increased in 2007 (see figure 4, 2006 figure estimated as Chile was out of the top ten).

It is quite clear in this case that the Chilean government looked at some of the key variables important to the minerals investors and satisfied them whilst at the same time ensuring a good level of revenue to the state. The minor movements in investor perception and exploration spend are a good indication of the way Chile has managed its mineral taxation. The impacts of the different taxation regime changes are reflected in the investor’s perceptions (see figure 3) and actions (see figure 4).
The net result of Chile’s taxation regime is that it is home to most of the copper mines developed in the past twenty years (Otto et al, 2005). One should however not attribute all the investments just to this single part of an over arching policy.

5.3 Zambian Experience

In 1970, President Kenneth Kaunda of Zambia announced that a new mineral taxation scheme would be introduced charging a flat rate of 51% on net profit, thereby yielding to company demands for lower taxes (Curry, 1984). Prior to the 1970 promulgation of the scheme the tax structure for the mining industry in Zambia resulted in a marginal tax rate of about 73% (Curry, 1987). Even though the revised taxation system attracted more investment, the global economic situation forced global demand for copper (the main mineral in Zambia) to plummet. Companies were able to reduce their profit base by deducting capital expenditures through depreciation, thereby reducing the tax base and effectively the net state revenue. The decline in the copper price due to the low demand and the cost structure (due to deeper mines) of the Zambian mines as Curry (1984) argued led to the collapse of the Zambian economy by the mid 1970s. During the 1965 to 1969 period the mineral industry in Zambia contribute almost 60% of the entire state revenue compared to less than 3% between 1975 and 1979 (O’Faircheallaigh, 1986). The situation in Zambia has changed with new legislation and industry structure that came about as a result of the early 2000 changes (The Economist, 2006). A royalty system has also been introduced providing for a single rate across the industry based on certain level of investments to cater for artisanal and small scale miners (ASMs) (Otto, 2002).

The Zambian case seems to indicate the importance of a stable system that will be suitable during the good/boom times as well as when companies are under strain. The flat rate does not seem to have been a good technical solution. The number of tax changes that have taken place also contravene one of the investor’s general expectations; the stability over time since mining has long lag times.
5.4 Experience from other countries

Papua New Guinea’s emergence from colonial rule in early 1970s was followed by a similar process currently happening in South Africa, on a small-scale. The new government felt that the taxation terms imposed on one of their main mining companies by the previous colonial rulers were too generous (O’Faircheallaigh, 1986). The Papua New Guinea government enlisted top mineral economists to assist with developing a global comparable taxation system. Although the system developed by the economists was not adopted in its entirety, the government used its underlying principles to develop a taxation system that suited the country and the investors. The government adopted a hybrid system, part value based part profit based. O’Faircheallaigh (1986) further argues that because of the medium term aid agreement with Australia, Papua New Guinea was not forced into immediate revenue maximization and as such also had time to think through their new system.

In his conclusion O’Faircheallaigh (1986) indicates that he deemed the investment success and growth of industry ten years after the introduction of the new tax system, as a net result of a well-thought system. He argues that a well-thought system in terms of technical understanding of the industry is the key to success. He also further argued that part of the success was also due to the setting up of the system such that it takes into account the ability of the companies to pay. The overall taxation system in essence took into consideration the uniqueness of the minerals industry as well as the stability objectives (the system worked during boom and bust times) as outlined earlier in the literature review. All these lead to an increase in the amount for exploration activities as well as the amount spent in developing new mines.

Canada took on the challenge of increasing investments in its mineral resources by introducing certain tax incentives. In 1983 the Canadian Federal Government introduced what was considered then the most stimulus tax system the industry had ever seen (Harper and Andrews, 2001). They introduced the concept of follow through tax with accelerated flow through depletion allowance in the stock exchange. The result of the change was the strongest cycle in mineral exploration Canada had ever witnessed (Harper
and Andrews, 2001). The increase in exploration has led to numerous discoveries of Gold and Uranium. Canada remains the leader in exploration investment (see figure 5) due to their well established tax system and most importantly they have geared their stock exchanges to this system and as such provide an attractive environment to do exploration.

![Figure 5: 2007 Distribution of exploration spend for the top ten countries](source: Metals Economic Group)

Whilst the rest of Canada’s mineral taxes are in line with the global trend, it is its ability (through tax) to allow companies to raise exploration funding in its stock exchange that’s makes it stand out as the best. This forms Canada’s unique selling proposition to mining companies and from a policy point of view shows what can be achieved when a country focuses on what it is economically good at. Canada is therefore able to obtain almost optimal revenue from its minerals whilst at the same time increasing investment to benefit its population.

From these different countries’ experiences it is clear that the outcome of the tax system change or implementation is dependent on certain factors. The general objectives of the tax system as discussed above seem to hold true and the extent to which a country tries to meet those objectives determines the success or failure of such a system.
### 5.5 Framework of Success Factors

From the different countries’ experiences and the literature review conducted, the following factors seem to be important to successful mineral rent taxation:

- The technical soundness of the tax system
  - Royalty type in relation to the country’s mineral deposits
  - Level of simplicity/complexity of the calculation
  - Overall potential effective tax rate
- Predictability and Stability of the system
- Transparency of the system
- Level of administration complexity
- Government ability and experience to administer
- Distribution of the tax revenues
- Direction of other investments determinant factors
6 Analysis of SA's Proposed Changes

In order to address the potential impacts of the bill, one has to first look at the importance of the minerals sector to SA’s economy. The South African mining industry contributes about 6.8% to GDP (Chamber of mines annual report, 2007-2008) directly without taking the multiplier effect into account. The industry employs about half a million people directly. In a country riddled with high levels of unemployment and a need for economic growth, increased investment in the minerals industry is needed. Mining companies constituted 35% of the Johannesburg Securities Exchange (JSE) as of December 2007 and most importantly contributed 18.5% (about R20.9 billion) of company taxes to the state (Chamber of mines annual report, 2007-2008).

There is a general consensus amongst the stakeholders interviewed that attracting investment in the mining sector is important to SA’s growth, with the Chamber of Mines holding the strongest view. In the next pages we will look at whether the proposed taxation changes are indeed going to maintain or increase investment in SA’s minerals industry.

The current global view of SA’s taxation regime is not very positive if the Fraser Institute Survey results are to go by. South Africa is currently (2006/2007) ranked 57th out of 65 jurisdictions. There is however the possibility that the ratings in question were still based on the old royalty bill drafts, which were considered to be imposing too much tax and out of kilter with global trends. It would therefore be interesting to re-look at the ratings after the elections and the bill has been enacted.
6.1 Minerals Investment Determinant Factors

As indicated in 6.5 one of the factors that may influence the success of the proposed taxation change is the direction of other factors that affect the investment decision. The Fraser Institute has classified these factors under the following subheading:

- Uncertainty on existing regulations
- Environmental regulations
- Taxation regime
- Uncertainty on native land claims
- Uncertainty on protected areas
- Regulatory duplication and inconsistencies
- Infrastructure
- Socioeconomic agreements
- Political stability
- Labour regulation
- Geological database
- Security

To get an understanding of how investors rate SA at the moment one can look at the Institute’s survey results of three periods (2004/2005, 2005/2006 & 2006/2007) and see how the country ranks amongst 65 other jurisdictions. Table 1 below shows SA’s rank, above means SA is placed above the 32nd spot whilst below indicates a rank below 32nd. The overall rank at the bottom gives the dominating rank.

From Table 1 it is clear that the rest of the industry view, is that South Africa’s mineral investment attractiveness is below average, even if the tax regime was positive the overall outcome (assuming all factors weigh the same) would still show SA as below average. The proposed bill has the net effect of increasing taxes, given that the overall picture is already red, the bill will most likely worsen the situation or not change it all depending on the percentage increase in effective tax. The chamber of mine’s view through their chief economist (Roger Baxter Interview) is certainly that the country can increase its tax
An Evaluation of the Feasibility of Introducing a Minerals Royalty System in South Africa

revenue from mining by simply improving some of the factors highlighted above without even imposing a royalty.

Table 1: SA's investment attractiveness rankings per factor

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<tr>
<td>Environmental regulations</td>
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<td>Uncertainty on native land claims</td>
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<td>Uncertainty on protected areas</td>
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<td>Regulatory duplication and inconsistencies</td>
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<td>Infrastructure</td>
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<td>Socioeconomic agreements</td>
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<td>Political stability</td>
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<td>Labour regulation</td>
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<td>Geological database</td>
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<td>Security</td>
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<td>Below</td>
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</tr>
<tr>
<td>Total Above</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Total Below</td>
<td>9</td>
<td>7</td>
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<tr>
<td>Net (Above - Below)</td>
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Source: The Fraser Institute Annual Surveys

Table 1’s results are sort of confirmed by the report in engineering news which indicated that year on year investment in the South African mining industry decreased in 2004, 2005 and 2006 (Campbell, 2006). The Chamber of Mines of South Africa’s annual report of 2007/2008 indicates that investment growth was experienced in 2006 to 2007 period and 2008 seems to be following suit. The recovery in growth can however be attributed to the recent resources boom.

The Chamber of Mines (2008) further argues that the impact of the decline in investment will still be felt in reduced production as there is a lagging effect between investment and production in mining. For 2008 this is difficult to tell as there is also the impact of the electricity crisis that needs to be taken into account.
Considering the effective tax rate increase expected from the imposition of royalties all commentators interviewed agree that it will not affect the taxation regime view dramatically, which in turn will mean that the situation will most likely remain as is. SA will still be considered below average in terms of attractiveness but the imposition of the royalty as proposed currently will not worsen this view. Given the number of areas were investors rate SA poorly on, the view expressed by treasury that even a tax cut (or an attractive tax system) will not improve the situation seems to hold.

6.2 Technical Soundness of the Proposed System

To understand the technical soundness of the bill, one has to look at the proposed rates calculations which form the backbone of the bill. The current bill proposes that the royalty be calculated as shown in figure 6 below, which shows a clause from the bill.

A. For refined minerals and for Oil and Gas:
\[
Y(\%) = 0.5 + \frac{\text{EBIT}}{\text{Gross Sales multiplied by 12.5}} \times 100
\]

This rate will capped at a maximum of 5.0%.

B. For unrefined minerals:
\[
Y(\%) = 0.5 + \frac{\text{EBIT}}{\text{Gross Sales multiplied by 9.0}} \times 100
\]

This rate will be capped at a maximum of 7.0%.

For the purpose of calculating the royalty percentage rates a negative EBIT will be set equal to zero.

Figure 6: Proposed royalty calculation methods

Source: Department of National Treasury South Africa

The South African government has gone for a formula based hybrid royalty type system. The calculation takes into account both value and profitability and as such sort of
supports both stakeholders (government & industry). The new system came about after lengthy consultations and all stakeholders interviewed felt it is a fair compromise. The latest Chamber of mines annual report sums it up nicely:

“Industry and government have travelled a long journey to arrive at a royalty system that is competitive, predictable and stable, and which captures an appropriate balance between the needs of the state and those of companies and investors. Formula based royalties are at the cutting edge of royalty systems around the world.” (Chamber of mines of South Africa Annual Report 2007 - 2008)

All parties interviewed however agreed that there are still some parts that will cause some headaches such as double royalty. This is due to the MPRDA which allows private royalties to continue concurrently with government royalties. The industry (mostly represented by the Chamber) has a very strong view on this technical matter. The government has suggested that companies convert the old royalties with private communities into equity schemes, like the Royal Bafokeng arrangement. The Chamber’s argument is that such schemes do not fit all circumstances and as such some companies will be forced to continue paying double royalties. There is a potential that this matter will end in court when the bill is enacted and companies have to start paying.

There is a general consensus amongst those interviewed that the bill in its current format is simple enough for companies and government to work out. There is still however the issue of determining the value of some minerals (coal, iron etc), but the general consensus is that this will be resolved as the bill is implemented and stakeholders work out a workable base.

With regards to the net increase in taxes, there is a general consensus that it is a fair deal for the state and industry/investors. From an academic point of view the new bill has removed most of the fears of significantly decreasing SA’s mine-able reserves. The formula based royalty takes into account marginal mines (in essence takes into account
profitability) and as such will not have a huge impact on the Gold mining industry as was early thought.

Another concern raised by the chief economist of the Chamber of Mines was the minimum limit for royalties to kick in. The Gross Sales limit set at R10 million is too low if the aim is to encourage smaller miners. The costs of collecting taxes from small-companies exceeding R10 million might prove to be too high, for the extra revenue that the state will collect. He argued that the limit should have been set around R50 million.

From a technical soundness point of view the bill seems to be in line with global trends and takes into account to a certain extent some of the peculiarities of the South African mining industry (mineral diversity, ageing gold mines, importance of sector to GDP, etc). All interviewed commentators agree it is a technically sound piece of legislation.

6.3 Predictability and Stability

The technical soundness of the proposed bill sorts out most of the issues associated with predictability and stability. The formula based system allows companies to incorporate the royalty calculations into their projections and investment models. Once again there is agreement across all the stakeholders interviewed that because of its technical soundness there will be no requirement to adjust the system during boom or recession times.

In fact one of the things that treasury set out to do was to ensure that the system introduced works whatever the economic situation or profitability a company finds itself. One of the questions raised to the interviewees was around the timing, with the global slow down and all respondents agreed that there should barely be any major impact. The royalty system is designed to cater for all economic situations.

Stability also involves how often the bill or the royalty system could be changed by political leaders due to economic or political pressures. With regards to the political side there is some concerns emanating from the business side. The recent utterances with regards to a state mining company tend to support a view that the state is not getting
enough from mining companies. This in turn suggests that political pressure could mount for an increase in mining taxes going forward. The current political situation seems to affect the political stability perceptions (see table 1) of investors. Where there is no political stability one can expect regulation changes to happen.

There is also a view that the number of regulation changes that have come from the side of the DME is also supporting investor’s perception of an unstable regulatory environment. There are no period guarantees in the proposed system, compared for example to the Chilean system discussed earlier.

Whilst all agree that there is enough technical stability and predictability there is some uncertainty around the political and regulatory stability. Interviewees expressed disillusionment with the proposed state mining company. If the current political utterances from the ruling party (state mining company, economic policy changes towards the left) are anything to go by, there is a good reason for investors to worry about the stability of the proposed system. An establishment of a guarantee clause could assist with improving stability and predictability, whilst at the same time catering for mining’s unique investment profile.

The bill as proposed is stable and predictable and on this factor alone should be enacted.

6.4 Transparency of the Royalty System

The proposed system is applicable to all companies in South Africa and all we be treated using the same principles and formulas. There are no private negotiations of rates as is the case in Angola and China (Otto et al, 2005). Most importantly though the information required in calculating the royalty is often public information (for public companies) produced as part of annual or semi-annual reporting.

All stakeholders interviewed felt that part of going to the new system was to forego the privately agreed royalties which are company discriminatory and against the global trend
in minerals royalty. Transparency is one of the key cornerstones of the proposed system and as such supports the enactment of the bill.

6.5 Distribution of Collected Revenue

As the Peruvian experience has shown, communities were mining takes place expect to see most of the benefits in terms of reinvestment happening in their area. In countries like Canada and Australia each state/region has its own royalty regime. Each state collects its own taxes and distributes them accordingly. Otto (Otto, 2001) terms this approach the decentralisation approach to mineral taxation. The idea of a decentralised approach is to match the impacts of mining/metals extraction on the surrounding community and environment with the fiscal resources that will mitigate those impacts in a sustainable manner (Otto, 2001, p16).

For a company pay tax used for local investments will probably mean fewer problems with the surrounding communities and has a potential of reducing company costs in extra sustainable development expenditure. Companies could therefore be more willing to spend as it would elevate some of the problems it would have with local economy and surrounding environment. There would be no need to pay the tax and still spend extra money on the local sustainable development initiatives as is the case and will be the case if the bill is passed as is.

The chamber’s view on the matter, which seems to be supported by the unions as well, is that the distribution of the collected money should reflect where it is collected from i.e. more benefits should accrue to the mining towns and communities. This could avoid the Peruvian situation where government had to increase revenue as local communities started complaining about lack of benefits from mining companies. The real question in the South African case will be since the companies will now be paying extra tax, will the government takeover some of the community initiatives being run by companies. After all companies pay taxes so that the government can furnish society with its needs.
The view of distributing the revenues collected towards the affected mining areas was supported by the academic professional interviewed on the matter. The treasury’s view on the matter however is bound by the MPRDA which indicates that the minerals of South Africa belong to all who live in it.

There is however some sort of an agreement in principle that the distribution should reflect where the money is coming from. However the treasury views the allocation of the budget as a process that will ensure that everyone gets an equitable share. This view is correct as long as the environmental impact and infrastructure deficiencies in the key mining areas are addressed by the national/provincial budgeting processes.

The bill as it stands right now does not accommodate localised distribution of the collected revenue. One would have to argue that going forward this could present a problem if surrounding communities do not see the benefits accruing to them. However one has to take into account the current local and provincial government capability to administer the collection and distribution system effectively. Perhaps the tax collection and distribution system is not mature yet to allow for a decentralised approach to managing royalties.

6.6 Administration of the Propose Bill

A key component in any regulation is the administration part. It is no use passing the bill if the state cannot administer it properly. This could lead to unfairness amongst companies, as other companies could be assessed properly and others not. As mentioned in 7.5 the bill will be administered nationally by the South African Revenue Services (SARS).

From a treasury point of view the bill has been long in the making and SARS should be ready to start administering as soon as the enactment is done and the implementation date is set. There is general consensus amongst the speakers interviewed that SARS is more than capable of implementing the bill. The view from the Chamber of mines is that there could be some technical hassles with regards to some definitions but those should be
sorted out with time. SARS has been efficient in collecting taxes over the past few years. The consensus amongst the speakers confirmed this. In terms of administration, the government has a capable department to administer the bill. The “simple” nature of the bill will also make it easier to administer.
7 Conclusion

There is general consensus amongst the different stakeholders that the introduction of the royalty bill is in line with the global trends. The real issues at hand seem to have been the type of the royalty and its impact on overall taxation of the minerals industry. Most importantly there is a greater appreciation of the level of consultation and discussions that went into the process. This has resulted in all stakeholders feeling that the bill is a fair compromise. The bill as it stands represents a technically stable piece of legislature that does not require changing or amending with each economic cycle. It provides for equitable sharing of the economic benefits between the state and the companies in the eyes of the different stakeholders.

Current perception of the country as a whole from a minerals investment point of view however does not bode well for increasing taxes. There are certainly other factors that are currently below average that could be bettered and would increase the amount of revenue collected by state through increased minerals investment as shown in Table 1. Not only would the state gain more revenue it would also increase employment opportunities as opposed to merely collecting revenue from existing investments. There is a more multiplier effect in attracting more investment than increasing taxes.

Within the above in mind one can therefore say it is feasible for the South African government to introduce the proposed minerals royalty system. The state will increase its revenue potential, however as mentioned above there are probably other ways to get the same if not more benefit without increasing taxes.

It is suggested that further studies look at how South Africa can improve its minerals investment attractiveness given the current status as indicated by the Fraser Institute Surveys.
8 Bibliography


9 Appendices

9.1 Appendix I - List of Potential Interview Questions

1. Please confirm your name and occupation for the record of consent for this interview – for academic research purposes.
2. Mining industry global trends?
   a. Developing countries?
   b. SA trends?
3. View/comments on current SA mineral taxation compared to the rest of the world?
   a. Global ratings – Fraser institute?
   b. Impact on the introduction of the change/bill?
4. Views on state ownership of the minerals?
   a. State vs private ownership - MPRDA
5. Views on discriminate mineral taxation policies in general?
   a. View on the global village tax systems?
6. Views on the process of introducing the bill?
   a. Importance of parameter to success
   b. SA case vs Global cases.
7. Views on the technical aspects of the bill?
   a. Importance of parameter to success
   b. Royalty type – profit base vs ad volerm?
   c. How does it rate – mine feasibility?
8. Views on the timing of the bill?
   a. Importance of parameter to success
   b. Investor’s perception?
   c. Economic issues – global/mining boom?
9. View on implement-ability and monitor-ability?
   a. Importance of parameter to success
b. State capacity to implement?

10. Views on national vs provincial royalty system?

11. Impact forecast?
   a. What can be done to change negative impacts?

12. Other issues?
   a. Completion of the convention process - impact?
   b. Double royalties for companies – De beers, Angloplat?
   c. Overall competitiveness impact on employment – SA not efficient vs Oz/Canada?
   d. Political environment – state owned mines ala Zambia or Botswana – impact on overall perceptions?
   e. Small miners relief – good enough?