

Paper An Evaluation of the Mining Licensing Regimes in the SADC Region:

The case of Angola, Botswana and Zambia

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Abstract— Mining is an important strategic sector in the Southern African Development Community region with significant contributions to the gross domestic product, employment, poverty reduction and foreign exchange earnings in many of its member countries. It is also a major producer of rhodium cobalt, chromium, tantalum, manganese, industrial and gem diamonds where some of the member countries are ranked among the top ten global producers.

The limited mine development in most African countries due to insufficient investment and inadequate exploration for minerals has resulted in most African countries to compete with the rest of the world for risk capital from foreign mining companies who in addition to technical and managerial abilities have the ability to mobilise the high-risk capital needed for such investment. Consequently, most African countries revised their mining codes to cope with the stiffer competition for foreign direct investment and mounting pressure from major donors.

An appropriate mining regulatory framework is one of the four factors for attracting investment and reducing investment risks for private mining companies. The regulatory framework together with mining codes stipulate the allocation, tenure, and operation of mining rights. Therefore, the licensing regimes enshrined in the mining codes are critical factor for analysing the mining regulatory framework.

This paper evaluates licensing regimes for Zambia, Angola and Botswana mining codes to assesses whether they are appropriate for attracting investments and minimising investment risk for private mining companies. A six-point assessment tool was developed based on the characteristics of an appropriate regulatory framework to make the assessment.

It was found that the three countries under review have favourable regulatory frameworks to attract FDI and reduce the investment risk with Botswana meeting 92% (5.5 out of 6) of the requirements, followed by Zambia with 75% (4.5 out of 6). Although the Angolan mining rights could not be explicitly evaluated it was found to meet at least a third of the requirements. In addition, artisanal and small-scale mining that are reserved for citizens in all the three countries are not expected to attract foreign direct investment.

Keywords— Mining rights, mining legislation, mining regulatory framework, mining codes, SADC mining

I. INTRODUCTION

Mining is an important strategic sector in Southern African Development Community (SADC) region. It contributes significantly to the gross domestic product (GDP), employment, poverty reduction and foreign exchange earnings in many of its member countries. The latest SADC official compilation from [1] for GDP and Mining's contribution to it for the period 2006 to 2015 is presented in the Table 1.

Table 1: GDP and contribution to GDP from Mining in SADC Countries

Country	Average GDP (US\$ Million) (2006 to 2014)			GDP (US\$ Million) (2015)		
	GDP (Total)	Mining	Mining (% of GDP)	GDP (Total)	Mining	Mining (% of GDP)
Angola*	98,097	37,928	39	115,114	25,512	22
Botswana	13,059	2,948	23	14,384	2,625	18
Democratic Republic of Congo (DRC)	24,890	3,913	16	37,587	6,647	18
Lesotho	2,252	141	6	2,280	167	7
Madagascar	8,956	16	0.18	8,920	20	0.22
Malawi	5,824	52	1	6,430	n.a	n.a
Mauritius	10,374	32	0.31	11,681	25	0.21
Mozambique	12,843	349	3	15,466	772	5
Namibia	10,611	1,281	12	11,545	1,428	12
Seychelles	1,096	0	0	1,380	0	0
South Africa (RSA)	337,846	26,854	8	314,792	22,431	7
Eswatini	4,077	12	0.3	3,946	6	0.15
Tanzania	33,904	1,338	4	45,772	1,821	4
Zambia	20,575	2,736	13	21,274	2,697	13
Zimbabwe	10,357	767	7	14,419	1,098	8
SADC Total	594,761	78,367	13.18	624,990	65,249	10.44

*Includes Petroleum

Source: Compiled from [1]

For the period under review, South Africa generated the highest income from mining at more than US\$22 billion in 2015 accounting for about 7% of its GDP. The most significant percentage contributions to GDP from mining was 22% (Angola), 18% (DRC and Botswana), 13% (Zambia) and 12% (Namibia). The strategic position of Mining in SADC including its contribution to the gross domestic product

(GDP), employment and poverty reduction and as a source for earning foreign exchange has also been highlighted by [2]

Table 2: Status of Mineral Production in SADC in 2020

Country	Mineral	Percentage of Global Production	Ranking in Production	
			Global 2020 (2019)	SADC 2020 (2019)
Angola	Gem Diamond	11.22	4(4)	2 (2)
	Industrial Diamond	1.68	7(7)	5 (5)
Botswana	Gem Diamond	19.04	3(3)	1 (1)
	Industrial Diamond	10.96	5(4)	3 (2)
Congo DR	Cobalt	67.07	1(1)	1 (1)
	Tantalum	35.67	1(1)	1(1)
	Copper	8.24	4(4)	1(1)
	Tin	5.29	7(7)	1(1)
	Gem Diamond	4.17	6(6)	4 (4)
	Industrial Diamond	22.43	3(3)	1(1)
Madagascar	Graphite	5.11	3(4)	1 (2)
	Cobalt	0.75	12 (8)	2 (2)
	Titanium	2.62	10(9)	3 (2)
	Beryllium	0.50	4(3)	2 (2)
Mozambique	Graphite	1.93	6(2)	2 (1)
	Zircon	8.42	4(4)	2 (2)
	Tantalum	5.59	6(7)	2(2)
	Titanium	10.57	3(3)	2(2)
	Beryllium	1.32	3(*)	1 (1)
	Uranium	11.34	3(4)	1(1)
Namibia	Gem Diamond	2.30	7(7)	5(5)
	Industrial Diamond	0.16	10(10)	6 (6)
South Africa	Fluorspar	2.77	5(5)	1 (1)
	Vermiculite	28.38	1(1)	1 (1)
	Zircon	25.23	2(2)	1 (1)
	Steam Coal	4.25	6(7)	1 (1)
	Iron	2.38	7(7)	1 (1)
	Chromium	45.49	1(1)	1 (1)
	Manganese	31.04	1(1)	1 (1)
	Titanium	11.28	2(2)	1 (1)
	Vanadium	8.12	3(3)	1 (1)
	Palladium	33.15	2(2)	1 (1)
	Platinum	67.62	1(1)	1 (1)
	Rhodium	80.93	1(1)	1 (1)
	Gem Diamond	5.48	5(5)	3 (3)
	Industrial Diamond	11.05	4(5)	2
	Zambia	Beryllium	0.03	7(6)
Copper		4.24	7(8)	2
Zimbabwe	Vermiculite	6.33	6(6)	2
	Chromium	4.78	5(5)	2
	Lithium	0.46	7(5)	1
	Palladium	6.47	5(5)	2
	Platinum	9.06	3(3)	2
	Rhodium	6.52	3(3)	2
	Gem Diamond	0.86	8(10)	6
	Industrial Diamond	4.63	6(6)	4

Compiled from [3]

In addition, SADC region is endowed with vast mineral resources that are of global significance. Table 2 below shows the minerals mined in each country as well as their ranking and

contribution to the global mineral production among the top ten for 2019 and 2020. The region contributes significantly to global mineral production of Rhodium (RSA (80.93%)), Cobalt (DRC (67%)), Chromium (RSA (45%)), Tantalum (DRC (36%)), Manganese (RSA (315)), Industrial diamonds (DRC (22%), RSA (11.5), Botswana (11%))and Gem Diamond (Botswana (19%), Angola (11%)).

However, there is limited mining development in most African countries due to insufficient investment and inadequate exploration for minerals. As indicated by [4], investment in the mining sector in the developing world (Africa inclusive) has relied on aid and soft loans during independence era (1960 to 1990) and predominantly on Direct Foreign Investment (DFI) before and after that era. As such, African countries must compete with the rest of the world for risk capital from foreign mining companies who in addition to technical and managerial abilities have the ability to mobilise the high-risk capital needed to invest for locating and developing new mineral deposits [5,6]

On the other hand, mobilising financial, technical and managerial resources for mine development entails a mining policy that fosters predominantly private sector participation in the operation and development of mines while the government focusses on regulating and promoting the mineral [5]. To cater for this, most African countries revised their mining codes [4] to cope with the stiffer competition for foreign direct investment and mounting pressure from major donors [7]. Moreover, large-scale mineral exploration and development often leads to the development of improved legal frameworks that foster foreign investment in mineral extraction [8]. Likewise, SADC countries have revised and enacted mining codes to create a conducive investment environment for foreign mining companies, to attract foreign investment and ultimately boost mineral production [9].

A survey of 80 international companies that invest in developing countries revealed that after the mineral potential and existing infrastructure, stable legal and fiscal framework, including a mining code are among the other criteria used for making such investments [6]. The same study recommended appropriate regulatory frameworks, economic and fiscal policy, institutional reforms and infrastructure, as well as environmental effects as the four main strategic areas for attracting investments and reducing investment risk for private mining companies. The concept of the regulatory framework as used in the survey to denote both "the mining code and the issue of mineral rights and licenses" has been adopted in the study.

This paper evaluates licensing regimes in mining codes for Zambia, Angola and Botswana to assesses whether they are appropriate for attracting investments and minimising investment risk for private mining companies. The three countries selected represent a major base metal producer (Zambia), a diamond producer (Botswana) and a country where mining is not the main stay but second after petroleum (Angola).

II. METHODOLOGY

To assess the mining codes against attractiveness and low risk to investment the research was divided into two phases. The first phase involved reviewing literature to identify the characteristics of a mining regulatory framework that make it attractive for and reduce risk for investment for the development of an assessment tool. Phase two involved applying the tools developed to the licensing regimes in the mining codes.

A. The mining regulatory framework factors for attracting and reducing risk for investment

As reported by [6], mining code was defined by the world bank as "the combination of statute law, regulations and agreements which governs the allocation, tenure and operation of mining rights". In addition, the mining code together with the issuance of mineral rights constitute the regulatory framework. Therefore, the licensing regime in a mining code is critical factor for analysing the mining regulatory framework.

An appropriate regulatory framework reduces the investment risks in two ways; firstly, by having stable policies and reducing the uncertainty factor; and secondly by providing protection against foregoing mining rights. To be appropriate, a regulatory framework must have following six characteristics;

- It must be clear and stable, with minimal ministerial discretion, and coordination with other legislation.
- It must be impartial (equally applied) to all investors irrespective of their category (private or public) or their origin.
- The mining rights must be transferable.
- It should provide long-term security of tenure
- The provisions for conditions of termination should be clearly stated
- The conversion from exploration and exploitation licenses should be easy.

B. Development of an Assessment tool

Based on the factors above, a mining licence regimes Assessment tool has been developed in table 3 below.

Table 3: Tool for assessing the attractive to and minimizing risks to mining investment

Criterion	Description
1	Clarity and stability of the framework
2	Impartiality of the framework
3	Transferability of mining right
4	Security of tenure of mining right
5	Clarity of conditions for terminating a mining right
6	Ease of conversion of mining right from exploration and exploitation

III. ASSESSMENT OF LICENSING REGIMES

In this section the tool developed above is applied to assess the mining licence regimes for the three countries.

Assessment of mining rights for Botswana

The mining rights in Botswana are prospecting licence, retention licence and mineral permit [10]. Table 4 presents the assessment of Botswana licensing regime.

Table 4: Assessment of Botswana licensing framework

#	Criterion	Exploration licence	Retention Licence	Mining licence	Mineral Permit
1	Clarity	Application requirements including obligations and rights of holder as well as types of minerals are clearly stated			
	Stability	Not Stable Although the licence is offered by the minister, the government can acquire mining rights over an area			
2	Impartiality	No specific Preference for Government Investment	Except for	reserved for citizens or citizen owned companies as small-scale mining operations	
3	Transferability of mining right	Possible upon approval by the minister		Not transferable	Possible upon approval by the minister
4	Security of tenure of mining right	adequate for the stage of mining (3 years and renewable)	adequate for the stage of mining (3 years)	Adequate for the stage of mining (25 years; renewable)	Adequate for the type of mining operation (5 years; renewable)
5	Clarity of conditions for terminating a mining right	Conditions for refusal, suspension or closure are clearly stated for both individuals and companies			
6	Ease of conversion of mining right from exploration and exploitation	Not Applicable New Minerals can be included Can apply for a mining licence upon expiry of licence	Can apply for a mining licence upon expiry of licence	Cannot be converted to any other licence	

Assessment of mining rights for Angola

According to [11] the characteristics of the 2011 Mining Code (approved by Law 31/11 of 23 September 2011) are as follows:

- The Angolan legal system does not impose any restrictions on mineral rights that can be acquired and exercised by foreign entities
- Mineral rights for exploration or mining of minerals for civil construction or mining of mineral-medical waters may only be granted to Angolan citizens, or to companies co-owned with Angolan citizens,
- Artisanal mining is reserved for Angolan citizens only.
- The mineral rights for exploration are granted for an initial period of up to five years, with possible two one-year extensions

- Mining rights are granted for a period of up to 35 years with possible extension of one or more 10-year periods.
- Mineral rights are granted, from the outset, for the whole of the mineral process under a single-contract model.

Although the mining rights for Angola could not be explicitly evaluated due to unavailability of the English version of the mining codes, the following could be deduced from the mining law reviews.

- The mining codes meet the impartiality, security of tenure and conditions for termination or refusal of a mining right.
- The contract model adopted in the mining code is unique.

Assessment of mining rights for Zambia

The mining rights in Zambia are the exploration and mining licence [12]. Table 5 presents the assessment of Zambian licensing regime.

Table 5: Assessment of Zambian licensing framework

#	Criterion	Exploration licence	Mining licence
1	Clarity	Application requirements including obligations and rights of holder as well as types of mining operations are clearly stated	
	Stability	Not Stable Although the licence is offered by a committee chaired by the director of mining cadastre, the minister may close an area and the government can acquire mining rights over an area	
2	Impartiality	No specific Preference Except for Government Investment	Artisanal and Small-scale mining operations are reserved for citizens or citizen owned or empowered companies
3	Transferability of mining right	Not mentioned	Not mentioned. However, operations may be differed upon written approval
4	Security of tenure of mining right	adequate for the stage of mining (4 years and renewable)	Adequate for each scale of mining 2 years for artisanal mining 10 years for small scale mining 25 years for large scale mining All are renewable
5	Clarity of conditions for terminating a mining right	Conditions for refusal, suspension or closure are clearly stated for both individuals and companies	
6	Ease of conversion of mining right from exploration and exploitation	application for a mining licence within 6 months before expiry of prospecting licence	Conversion is not catered for

IV. DISCUSSION AND CONCLUSIONS

The mining Acts for Botswana and Zambia have been used to assess the mining rights using the six-criteria tool developed from the literature review. However, the mining rights for Angola could not be explicitly evaluated due to unavailability of the English version of the mining code in public domain.

It has been found that:

- All the mining rights meet the criteria of security of tenure for both the various stages of mine life cycle and the scales of mining operations
- The Application requirements including obligations and rights of holder as well as types of minerals are clearly stated in the mining Acts of Botswana and Zambia
 - Except for the retention licence, all mining rights in Botswana are transferable upon approval by the minister. The Zambian act is silent on the matter.
 - Only artisanal and small-scale mining operations are reserved for citizens. However, large scale mining operations are generally not subject to any restrictions.
 - The conditions for termination and conversion of one mining right to the other are clearly stated

It can therefore be concluded that the three countries under review have favourable regulatory framework to attract FDI with Botswana meeting 92% (5.5 out of 6), followed by Zambia with 75% (4.5 out of 6).

Although the Angolan mining rights could not be explicitly evaluated it meets at least a third of the requirements. Artisanal and small-scale mining that are reserved for citizens are not expected to attract DFI.

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