

Impacts of Fluctuating Commodity Prices on Government Revenue in the SADC Region

THE CASE OF PLATINUM FOR ZIMBABWE

1. Introduction

The commodity sector plays a significant role in Zimbabwe, accounting for an average of 19.9 percent of GDP, 50.7 percent of merchandise exports, about 36.2 percent of total formal sector employment and at least 5 percent of total government tax revenue over the period 2009 to 2016¹. However, commodity prices are relatively volatile compared to prices of manufactured products. The volatility of commodity prices not only complicates the saving and investment decisions of households and businesses but also makes it more difficult for government authorities to develop spending and tax policies that are designed to boost inclusive economic growth and alleviate poverty. Zimbabwe is endowed with vast deposits of mineral resources, but their extraction has not translated into the desired growth. This policy brief gives an assessment of the trends, drivers and implications of fluctuating platinum prices on government revenue, economic growth and social investment in Zimbabwe. Recommendations to Zimbabwe are given.

1.1 Overview of platinum mining in Zimbabwe

Platinum in Zimbabwe is exported as a group due to the absence of further processing within the country. The Platinum-Group Metals (PGM) refers to a group comprising of six chemically similar elements; Ruthenium (Ru), Rhodium (Rh), Palladium (Pd), Osmium (Os), Iridium (Ir), and Platinum (Pt). Most of the PGM minerals are found in the Great Dyke of Zimbabwe. Three platinum mining companies namely Zimbabwe Platinum Mines (Zimplats), Mimosa Holdings and Unki Mines are currently responsible for platinum mining in Zimbabwe. These three mining firms have strong links to their sister companies operating in South Africa, which are also buyers of their products. In terms of market structure and market concentration, the market is highly concentrated given the limited number of players, with Zimplats being the leading player, with an average contribution to platinum output of about 55 percent, while Mimosa is second at 30 percent and Unki has the remaining share at 15 percent². The state owned mining firm Zimbabwe Mining Development Corporation (ZMDC) is also exploring joint ventures in the platinum sector with a number of Chinese companies interested in mining the precious metal³.

1 Statistics from the Zimbabwe Statistics Agency (ZIMSTAT) and African Capacity Building Foundation (ACBF)

2 <http://www.chamberofminesofzimbabwe.com/wp-content/uploads/2016/05/Platinum-Accelerated-Growth-Mr-Chitando-Final.pdf>

3 Zimbabwe Mining Development Corporation ; <http://www.zmdc.co.zw/about-us>

1.2 Drivers of platinum price fluctuations

Platinum price fluctuations have been underpinned by several factors which include demand for industrial, jewellery, chemical, petroleum, electrical, glass, investment, and automotive uses. Global economic expansion driven mainly by China, the world's largest consumer of platinum and less attractive returns on stock and bond markets saw platinum prices souring over the period 2003-2008. However, the global economic crisis encountered in the middle of 2008 resulted in platinum prices plummeting in six months by almost 60 percent from a peak of US\$2052.45 per ounce in May 2008 to US\$840.30 per ounce in November 2008. The slowing down of the world economy over the recent past, combined with the decline in the auto catalyst demand for platinum, appreciation of the USD, expectations of U.S. interest rate increases, and lower financial risks associated with declining oil prices reduced investor demand for platinum and helped lower platinum prices. On the other hand, the supply of platinum has been rugged over the period 2008 to 2016, owing to supply constraints such as erratic electricity supply, industrial actions, safety shutdowns, skills shortages and bad weather which affected South Africa, the world's major platinum producer. These constraints have depressed supplies, creating deficits in the market and consequently driving prices upwards. The net effect of these downward and upward pressures generally explain the fluctuations that have been observed over the past decade.

1.3 Platinum mining sector fiscal regime

According to the Ministry of Mines and Mining Development, mining companies operating in Zimbabwe are currently subjected to the following taxation regime⁴:

- Corporate Income Tax - The corporate income tax rate of 25 percent is applied on all firms operating in Zimbabwe. However, a special rate of 15 percent on taxable income is allowed for holders of a Special Mining Lease (SML) and currently Zimplats and Unki are the only two platinum mining firms with a SML.
- Additional Profit Tax - Additional profits are profits that are gained by holders of a SML as stated in the Income Tax Act. This tax is over and above the normal income tax and is payable upon attaining a specific formula-based level of profitability. The tax is compensation for the generous fiscal incentives granted exclusively to holders of a SML.
- Withholding Taxes - payable on dividends remitted outside the country. The withholding tax for 2015 was levied at 15 percent for both resident and non-resident shareholders.
- Capital Gains Tax - levied on the capital gain arising from the disposal of a specified asset. Specified asset means immovable property (e.g. land and buildings) and any marketable security.
- Pay As You Earn - levied on employee remuneration.
- AIDS Levy - pegged at 3 percent of individual or company assessed income.
- Value Added Tax - pegged at 15 percent. VAT on mining inputs qualifies for deferment for zero rating for exports because the platinum sector is an export oriented sector.
- Royalties – A 10 percent mineral royalty is applicable to the platinum sub sector in Zimbabwe since February 2017.

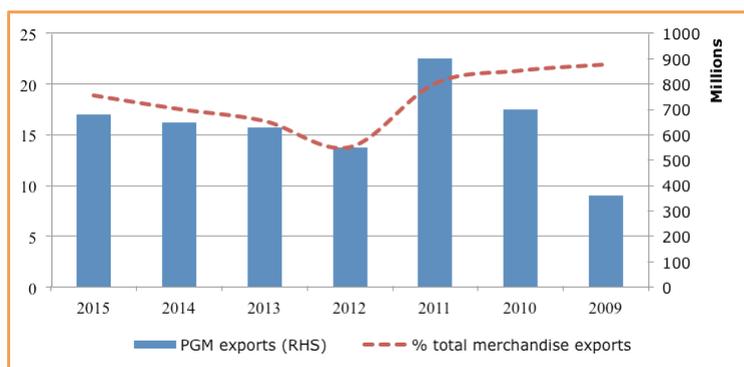
⁴ Ministry of Mines and mining development <http://www.mines.gov.zw/?q=mining-taxation-zimbabwe>

Several government agencies, including local authorities are involved in the collection of mineral revenue and these include Zimbabwe Revenue Authority (ZIMRA), Environmental Management Agency (EMA), Ministry of Mines and Mining Development (MMMD), Zimbabwe Mining Development Corporation (ZMDC) and Minerals Marketing Corporation of Zimbabwe (MMCZ).

1.4 Platinum exports as a proportion of total exports and total output

PGMs account for 32.25 percent of Zimbabwe's mineral production values and about 18 percent of the country's merchandise exports. Platinum exports as a proportion of total exports grew steadily between 2009 and 2011, only to take a sharp dive in 2012 and have not fully recovered (Figure 1). The reduction in exports had an impact on royalties, which are a fixed proportion of exports revenue.

Figure 1: Platinum exports as a percentage of total exports



Source: Chamber of Mines of Zimbabwe (COMZ)

The production of palladium and platinum grew at an average rate of 184 percent and 182 percent respectively between 2005 and 2016. Over the same period the production of rhodium and ruthenium also grew by 194

percent and 231 percent respectively. Prior to 2012, the production of PGM was subdued as the country went through a decade-long economic crisis which saw the country missing out on the commodity boom which started in 2003. However, production began to recover in 2012 as the mining firms responded to relatively high global commodity prices as well as increased production capacity.

Production values of the PGMs do not reflect the same pattern depicted by the volumes, generally underlining the influence of international price movements. For example, while platinum volume peaked in 2016, the value peaked in 2013 at about US\$554 million. While palladium also peaked in 2016 in terms of production volume, its value peaked in 2014 at about US\$228 million⁵.

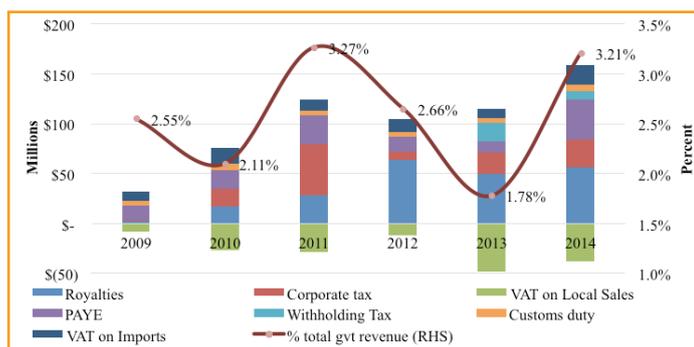
1.5 Platinum revenue as a proportion of total government revenue

Over the period 2009 and 2014, the platinum sector paid a total of US\$ 449.33 million in taxes to government (less VAT refunds) in the form of royalties, taxes on income and profits, VAT and customs duties. The total amount paid constituted an average of 2.6 percent of government tax revenue during the same period. The platinum sector contribution to total government revenue rose from 2.55 percent in 2009 to 3.21 percent in 2014 buoyed by the increase in mineral royalties, corporate tax and PAYE contribution (Figure 2). On the other hand the platinum sector contribution to government revenue was weighed down by VAT refunds on local purchases, because of the destination principle, which sees VAT charged on local purchases being refunded. VAT refunds on local purchases by the platinum sector rose from US\$8.34 million in 2009 to US\$48.07 million and

⁵ Chamber of Mines of Zimbabwe (COMZ)

US\$37.63 million in 2013 and 2014 respectively (Figure 2). The rise in VAT refunds in platinum sector between 2009 and 2014 was mainly due to the changes in procurement policies and investment decisions by the mining firms.

Figure 2: Trend in the Platinum Sector contribution towards government revenue (2009-2014)



Source: Ministry of Finance and Economic Development

A comparison of contribution to government revenue by mineral shows that platinum is the largest contributor followed by gold. Between 2010 and 2014, platinum contributed almost three times the value contributed by gold. This is because platinum mining is highly formalised, characterized by large firms who in addition to paying royalties, also contribute towards PAYE and corporate taxes unlike gold mining which is dominated by artisanal miners who contribute less to the fiscus due to high informalisation.

1.6 Contribution to mining sector employment

The platinum sector is capital intensive as it is highly mechanized, thus it accounts for a small proportion of the total employment in the mining and quarrying industry as well as the non-agricultural employment in Zimbabwe. However, it contributes significantly to total mining sector employment, contributing between 19 percent and 28 percent of total

mining sector employment between 2011 and 2015. The table below shows the employment levels in the platinum sector.

Table 1: Employment Levels in the Platinum Sector

	2010	2011	2012	2013	2014	2015
ZimPlats	3,680	5,367	9,203	5,704	6,074	5,819
Mimosa	1,802	1,796	1,771	1,682	1,550	1,406
Unki Platinum Mine	-	952	1,150	1,232	1,246	1,242
Total	5,482	8,115	12,124	7,386	7,624	8,467
Total Employment in the Mining Sector	36,100	42,100	43,000	39,800	39,200	36,800
Percent Contribution of platinum to mining sector employment	15.19	19.28	28.20	18.56	19.45	23.01

Source: Companies Annual Reports, ZIMSTAT

2. Macroeconomic implications of platinum price fluctuations

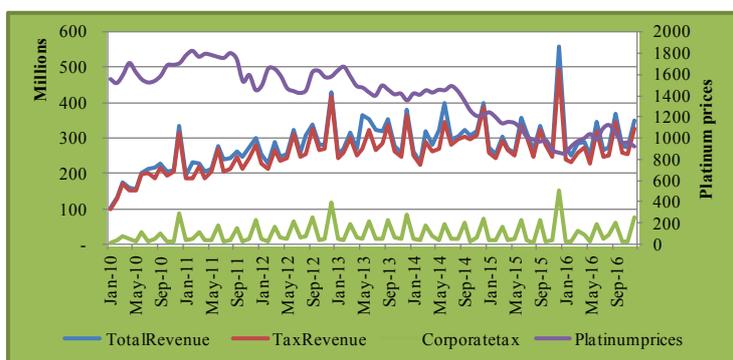
2.1 Impact of platinum price fluctuations on government revenues

In Zimbabwe the impact of platinum price fluctuations on government tax revenues tends to be muted because the contribution of platinum to total tax revenue is small, less than 3.5 percent of total tax revenue. In addition, platinum mining companies have adjusted their procurement policies to effectively exploit VAT refunds on local procurement, thus effectively reducing tax revenue due to the government.

The other reason for the low contribution to total government revenue is that platinum produced in Zimbabwe is not fully processed, hence fetches less on the market.

A look at monthly trends between the international platinum prices and total government revenue, total tax revenue (after removing non-tax revenues from total government revenue) and total corporate tax revenue for government illustrates the relationship (Figure 3). The downward trend in platinum prices does not appear to be related at all to the upward trend that is observed in the other three government revenue categories. This is also confirmed by the correlation co-efficient between platinum prices and these revenue categories which stands at -0.39, -0.41 and -0.11 for total revenue, tax revenue and corporate tax revenue respectively. The negative correlation (even though it is low) mostly reflects the various changes made by government to increase tax revenues as the mining revenue was declining, which increased taxes collected despite the falling revenues.

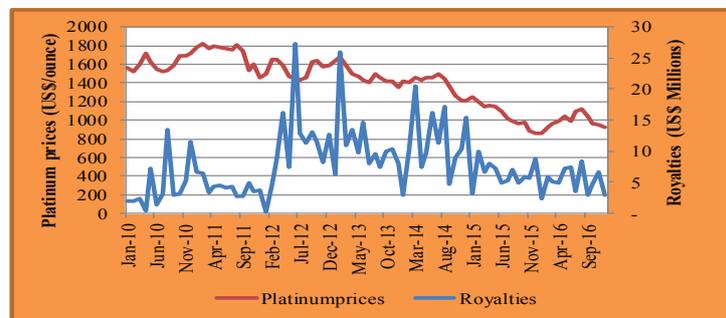
Figure 3: Monthly trend movements in platinum prices (US\$/ounce), total government revenue, total tax revenue, corporate tax revenue (US\$)



Source: Ministry of Finance and Economic Development, Chamber of Mines Zimbabwe and World Bank commodity prices database

Since June 2012, there appears to be a general decline in royalties as platinum prices are declining, even though the relationship between the two is not quite similar (Figure 4). The correlation co-efficient between platinum price movements and royalties is only about 0.08, which is not very pronounced. However, there is a weak positive correlation between the two.

Figure 4: Monthly trends for platinum prices and total mining royalties



Source: Ministry of Finance and Economic Development, Chamber of Mines Zimbabwe and World Bank commodity prices database

Econometric estimation of the impact of platinum price on tax revenue using the ARDL model shows that platinum price does not influence government revenue in the short-run, but its volatility negatively affects government revenue in the short-run with lags. Specifically, an increase in platinum price volatility of 1 percent is associated with a 0.274 percent decline in the tax revenue (expressed as a percentage of Gross Domestic Product (GDP)) a year later after the increase in volatility, and a 0.158 percent decline two years later. However, in the long-run, platinum price volatility does not have a statistically significant impact on tax revenue collections, while platinum price has a significant negative impact of 0.789 percent on tax revenue as a percentage of GDP.

2.2 Impact of platinum price fluctuations on economic growth

In the short-run, an increase in platinum prices has a negative impact on economic development, thus appearing to confirm the existence of a natural resource curse hypothesis with respect to platinum in Zimbabwe⁶. In the long-run, the prices have also had a negative effect of economic growth of -0.587 percent. Platinum price volatility has a net negative impact on economic growth in the short-run, while it is positive in the long-run.

2.3 Impact on social investment

Platinum price has no significant impact on government social investment in the short-run, but its price volatility has a negative and statistically significant impact on social investment. When price volatility increases by 1 percent, the share of social investment in total expenditure declines by 0.091 percent in the same period. However, in the long-run, price volatility impacts negatively on social investment, with an increase in volatility by 1 percent leading to a decline in the share of social investment by 0.180 percent. On the contrary, platinum price growth rate has a positive and statistically significant impact on social investment in the long-run, with a 1 percent increase in platinum price associated with a 0.409 percent increase in the share of social investment in total expenditure in the long-run.

⁶ The natural resource curse hypothesis is said to hold when growth in commodity prices has not contributed to the economic development of resource-rich countries, especially those countries with weaker institutions, poor fiscal management, poor public investment management, weak governance institutions and low financial sector development among others.

3. Responses by government and mining firms to platinum price volatility

(i) Supply management

Supply management is a strategy where the export of raw minerals is controlled, mostly by insisting on value addition. This strategy was tried in the platinum sector in Zimbabwe through imposing a 15 percent export tax on unrefined platinum exports to force companies to process it locally. This has since been temporarily shelved after mining companies engaged government for a reprieve and submitted their plans for platinum beneficiation and value addition.

(ii) National revenue management

Following the declining commodity prices, the government of Zimbabwe put in place the Sovereign Wealth Fund of Zimbabwe. The Sovereign Wealth Fund of Zimbabwe Act [Chapter 22:20] (No.7 of 2014) was gazetted on 10 November 2014. However, the fund has not been fully operationalised and structures are still being put in place.

(iii) Market-based price risk management

Platinum mining firms mostly employ cost management strategies in response to price fluctuations. One of the strategies to cut costs has been to lobby government through the Chamber of Mines as well as through different forums to institute reforms aimed at reducing the cost of doing business, including removal of bottlenecks that undermine capital, such as lack of policy clarity and inconsistencies on the indigenisation law. Other strategies employed include intensified market intelligence, cost management, cash preservation initiatives

to deal with the lower prices, postponement of dividend declaration and undertaking comprehensive review and restructuring of business to reduce unprofitable mining, reduce overheads, improve capital efficiency and limit the volume of loss-making.

3.2 Policy challenges with price fluctuations

There are two main policy challenges that Zimbabwe is facing with respect to dealing with fluctuating platinum prices. The first is designing a proper mining taxation regime. The challenge is to establish an appropriate royalty system that ensures that the economy realises optimal revenues during both boom and bust periods. Currently, Zimbabwe uses an ad valorem based tax system which is not optimal since it is based on export values which are affected by price fluctuations and can also result in lower revenues if transfer pricing by the mining companies and their sister companies in South Africa takes place. A hybrid royalty system, incorporating both the unit based method and value based method would achieve better results in the platinum sector.

The second relates to the lack of an effective beneficiation policy. An attempt to tax exports of raw commodities failed to work as mining houses complained of losses. Minerals beneficiation in Zimbabwe is mainly being pushed through mining sector policies rather than through the industrial policy as the case in Japan and China. This current approach to beneficiation policy is inefficient and ineffective as the incumbent mining firms have mining expertise but do not have the requisite technical capacity to beneficiate the mineral. Therefore, policy needs to identify beneficiation as a secondary industry

which needs not necessarily be undertaken by the mining firms but through investment and other policy incentives to attract the development of a beneficiation industry where any player can participate.

4. Recommendations

(i) Domesticating the AMV, which has guidelines for effective mining regime systems

Zimbabwe needs to undertake mining sector regime reforms by developing a country mining vision (CMV) that domesticates the Africa Mining Vision (AMV). Specific strategies which Zimbabwe needs to adopt as a way of ensuring that it realises maximum benefits from mineral resources include those that are captured by the 'Action Plan to Implement the AMV'. Zimbabwe needs to enhance the share of mineral revenue accruing to the fiscus through: improving national capacity to physically audit mineral production and exports; reviewing mineral regimes in terms of optimising revenues; build capacity and enhancing skills of officials in negotiating fiscal issues and effectively monitoring compliance with taxation laws; negotiating or renegotiating contracts to optimize revenues and to ensure fiscal space and responsiveness to mineral windfalls; develop systems to evaluate components of tax regimes for leakages, losses and tax avoidance & evasion (e.g. transfer pricing); and reviewing terms of double taxation agreements and bilateral investment treaties (BITs) with host countries of mining companies.

Zimbabwe should also improve management and use of mineral revenue through: fully operationalising strategies for investing mineral rents into sovereign wealth funds including stabilization funds and infrastructure funds;

developing and/or strengthening rent distribution systems for allocating part of mineral revenue to communities near mining areas and local authorities; developing and/or strengthening mechanisms to facilitate local communities' access to jobs, education, transport infrastructure, health services, water and sanitation; developing and/or strengthening the capacity of local communities to negotiate partnership agreements; developing and/or strengthening systems for enhancing capacities for national and sub-national bodies for revenue management.

(ii) Intensify the finalization of the refining of platinum in Zimbabwe

Zimbabwe needs to intensify the finalisation of the platinum refining policy, otherwise it will not realise the full benefits from its platinum resources in raw form. The government needs to consider possibilities of exploiting the industrial policy in pushing for the beneficiation of minerals, through encouraging establishment of a secondary industry that is competent to beneficiate minerals.

(iii) Full implementation of the Sovereign Wealth Fund Act

While other measures are being put in place to enhance revenue collection, it is important that the Sovereign Wealth Fund Act be quickly operationalised. The need to support fiscal or macroeconomic stabilization is more relevant now in the face of falling commodity prices. This is currently the main strategy that Zimbabwe has to ensure that during boom periods, resources can be set aside to cater for period when the prices are falling.

(iv) Modify the platinum royalty system to encompass the unit based system

The government should be interested in getting revenue from platinum mining that is commensurate with the amount of resources extracted. There might be need to consider shifting the royalty method for platinum to a unit based method to realise more revenue. This would also help ensure that the government is assured of revenues regardless of the nature of platinum prices.

This policy brief is based on the 2017 AFRODAD study on the "Impacts of Fluctuating Commodity Prices on Government revenue in the SADC region – The Case of Platinum for Zimbabwe", See: <http://afrodad.org/index.php/center-of-excellence/research>
