



FINANCING THE ARTISANAL AND SMALL-SCALE GOLD MINING SECTOR OF ZIMBABWE: A REVIEW OF OPTIONS

Matsiwira Last 

Chinhoyi University of Technology, Department of Accounting and Finance, Zimbabwe
lmatsiwira@gmail.com

Mabvure Tendai Joseph

Chinhoyi University of Technology, Department of Accounting and Finance, Zimbabwe

Sifile Obert

Chinhoyi University of Technology, Department of Accounting and Finance, Zimbabwe

Abstract

The Artisanal and Small-Scale Gold Mining (ASSGM) Sector is registering a tremendous growth both in Zimbabwe and Africa. In Zimbabwe, this sector is benefiting directly and indirectly over three (3) million people, making this sector very important in employment creation since Zimbabwe has formal employment shortcomings. ASSGM is contributing both at micro and macro levels of the economy. At macro level, it is contributing more than 60% of gold to Fidelity Printers and Refineries, 1.2% to the GDP of the country and 0.76% of government revenues royalties. At micro level, it is helping in poverty eradication and providing income to the unemployed. However, the ASSGM sector is facing financial challenges. This review paper seeks to highlight other financing options that may be used by this sector since financing from the Reserve Bank of Zimbabwe (RBZ), Government, banks and NGOs has shown little success in this sector. There is need for training of small scale and artisanal miners in mining and financial skills to enable them increase their production and manage their finances. The paper noted that the following financing options have capacity to improve the ASSGM mining sector: cooperatives, joint ventures and partnerships are sustainable in this sector.

Keywords: Artisanal and Small-Scale Gold Mining, Efficient Financing, Financing Options, Sustainable Options, Zimbabwe

INTRODUCTION

African Mining Vision (2017) revealed that Zimbabwe's artisanal and small-scale mining activities started around the 15th Century when the Mutapa Committee used to trade gold with the Portuguese. These activities were not formalised and were mainly done to provide source of income for the poor which helped them to eradicate hunger and poverty. With time, this sector has evolved to become one of the pillars of the economy of Zimbabwe in employment creation, forex generation, revenue generation and total gold output to the country (Pact and the Institute for Sustainability Africa, 2015). Although the ASSGM sector has continued to survive for a long period of time, it needs financing options for it to attain sustainable operations which will lead to growth and expansion. This review paper analyses financing options which were availed to this sector and comes up with options which may help this sector achieve optimum production. In analysing different financing options that were availed to the ASSGM sector, the following research questions were formulated:

1. What are the Financing Options that were availed to the ASSGM sector of Zimbabwe?
2. What are the Financing Options that are sustainable to ASSGM sector of Zimbabwe?
3. What can be done to improve efficient Financing of the ASSGM sector of Zimbabwe?

Background to the Study

Over the past 20 years, there has been an increase in the number of people who are venturing in to the ASSGM sector in Zimbabwe and African Continent. A small-scale miner is a miner who is registered and does not have more than 50 workers including contractors, and operates on an area that do not exceed 40 hectares with an annual output of not more than 1200 tonnes (Zimbabwe Mines and Minerals Act Amendment Bill, 2015). Zimbabwe Environmental Law Association ZELA (2020) discovered that both registered and unregistered artisanal small-scale miners have over one (1) million people benefiting directly and over three (3) million benefiting indirectly from ASSGM which makes this sector very important in employment creation since Zimbabwe has formal employment shortcomings. This sector is fast growing in Zimbabwe and the African continent. There are several factors which are fueling the growth of this sector. Almaden (2015) and Banchirigah and Hilson (2010) revealed that the growth of this sector over the past two decades is largely driven by poverty and a quest for survival. In Zimbabwe the growth of this sector is mainly driven by decline in agriculture, economic crisis and often poverty in rural areas (MMSD, 2002). In Africa, around 1990s, this sector has almost ten (10) million people (International Labour Organisation, ILO, 1999) and from 2000s, this sector has almost twenty (20) to thirty (30) million (International Institute for Environment and Development IIED, 2013). The ASSGM sector is playing an important role to

the economy of Zimbabwe both at macro and micro levels. At micro level, it is helping to reduce unemployment levels in the country and provide source of income mostly in rural areas for women and children. It is alleviating hunger and poverty in most rural areas. At macro level, it is contributing more than 60% of gold to Fidelity Printers and Refineries (RBZ Mid-Term Monetary Policy Statement, 2019). According to RBZ MPS (2018), both large scale and small-scale gold mines are contributing 28% on exports. ASSGM is contributing 1.2% to the GDP of the country and 0.76% of government revenues royalties (Pact and the Institute for sustainability Africa, 2015). However, the sector's contributions to the economy and its growth are mainly affected by lack of financing options. Several financing options were tried in this sector with little success.

LITERATURE REVIEW

Although artisanal and small-scale gold mining industry is playing an important role on the growth of Zimbabwe's economy, the industry is still facing several financial problems. Figure 1 shows equipment and tool ownership at mine sites in Zimbabwe:

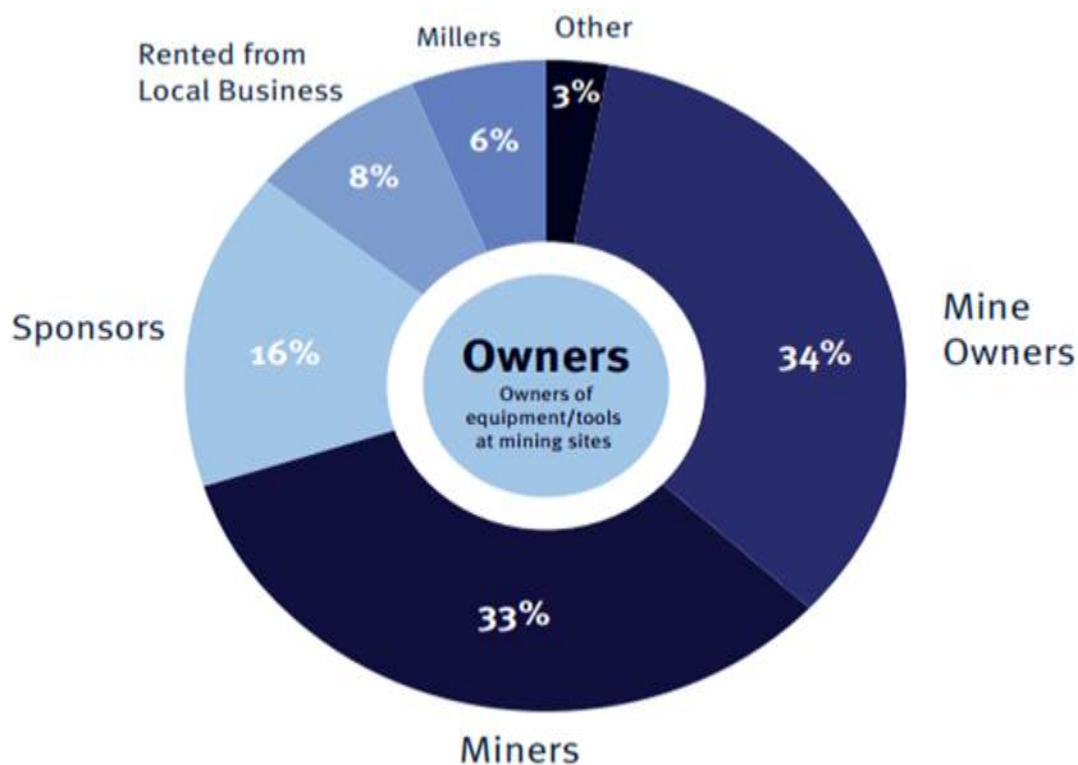


Figure 1 Tool Ownership in ASSGM Sector of Zimbabwe
Source: Pact and the Institute for Sustainability Africa (2015)

It can be clearly seen that there is lack of financing options in the ASSGM sector to acquire mining equipment. Mine owners are not able to provide all the needed equipment.

United Nations Industrial Development Organization, UNIDO (2018) noted that there were a large number of sponsors in the sector and gold buyers are normally the ones providing equipment and other support to ASSGM with less financing from government, donors and financial institutions. Equipment provided includes compressors, explosives, and more rudimentary tools like pickaxes, spades, hammers and chisels (UNIDO, 2018). Adebisi and Olayinka (2013) argue that small businesses faced funding constraints, in developing economies, which hampered their development and long-term existence. Several artisanal and small-scale gold mines use simple mining tools such as: picks; hoes; chisels and shovels mainly because they do not have enough funding to purchase mining machinery that improve their mining methods and increase output (Munyoro *et al.*, 2017). Henschel *et al.* (2005) revealed that small scale mining poses great risks emanating from inappropriate working tools and this poses great health risk with some causes ranging from inappropriate working equipment and lack of protective clothing.

Mining Newsweek Magazine (2020) opined that both small-scale and large-scale mining sectors need funding of over US\$7 billion to renovate their machinery for efficient production every five years. They observed that the major setback is that financial intermediaries are not providing long term funding to this sector making it hard for the mining industry to access funding for recapitalisation or to increase output or for growth and expansion or undertake new projects. The Zimbabwe Chamber of Mines CoMZ (2020) discovered that most big and small mines need to replace old fashioned machinery which are no longer productive and become costly to repair. The Mashonaland West Province Report (2020) noted that the province has an estimated figure of more than 13, 000 small scale miners including those who mine gold. ZIMASCO has allocated their land to small scale chrome miners through the Tribute System Agreement where small miners will mine the mineral and sell it to ZIMASCO. Only 203 small scale miners were allocated the land and others failed because they did not have enough capital and equipment to mine (Ministry of Mines Internal Report Mashonaland West Province, 2020). Zimbabwe Mining Newsletter (2020) revealed that the Ministry of Mines and Mining Technology in 2017 forfeited more than 1000 mining claims for ASSGM in Matabeleland North province, Zimbabwe because they have failed to pay US\$ 100 for inspection fee during six months of starting operations.

Review of Financing Requirements for the Artisanal and Small-Scale Gold Mining Sector to Start Operating

There are a lot of financial requirements which the ASSGM sector has to meet before they are allowed to start operating. UNIDO (2018) revealed that these financial requirements

include: the services of an approved prospector of US\$400, Environmental Impact Assessment prospectus valued US\$138, the value of carrying out Environmental Impact Assessment is US\$3,000 and it may exceed US\$4000. Furthermore, the cost of a license to buy and keep explosives is pegged at US\$1,000. Legal authorization to operate a custom mill requires US\$12,300. Millers are to pay a cost of annual licensing (US\$8,000), Environmental Management Agency (EMA) needs to be paid their own fee (US\$1,000 every 3 months), and ZESA costs US\$3,000 for work to be done, transformer costs US\$11,000, and the cost of ZESA wire per kilometre is US\$4,800 (UNIDO, 2018).

For buyers to be registered and to start operating, they need to have US\$3,500 or more and they have to deposit 500g or more of gold every month. Cooperatives need to have at least US\$10,000 to be registered. According to UNIDO (2018), ASSGM are charged three (3) percent mining royalties on gold and millers are charged the cost of annual licencing (US\$8,000). Most artisanal and small-scale miners, 70% to 80 % they do not afford to raise all the required capital so they remain operating informally (The International Institute for Sustainable Development, 2017). The study points to the need to have funding to the ASSGM sector to raise the required capital.

METHODOLOGY

The study used a documentary review approach to gather information. The information in this study was gathered from secondary sources starting from 1990s to 2021. The study used documentary evidence from 1990 up to 2021 because that's when the ASSGM sector started accessing funding aids from different investors (Government, RBZ, Ministry of Mines Loan Fund, Banks and NGOs) and that's when the ASSGM sector started to be recognised in Zimbabwe. The information was extracted from the reports published by major stakeholders in the gold mining industry of Zimbabwe. These stakeholders include: Zimbabwe Chamber of Mines (CoMZ), Pact and the Institute for Sustainability Africa, MMMD, Zimbabwe Mines Federation, Zimbabwe Ministry of Mines, Zimbabwe government publications, RBZ and Fidelity Printers and Refineries, academic publications in the ASSGM sector of Zimbabwe and reports in the ASSGM sector of Zimbabwe.

FINDINGS OF THE STUDY

Financing Options that are availed to the ASSGM sector of Zimbabwe

Ministry of Mines Loan (Mining Industry Loan Fund)

ASSGM sector is not yet recognised under the Mines and Minerals Act and Gold Trade Act which is responsible for the production and sale of gold (African Mining Vision, 2017). Even

though this sector is still to be recognised, the Ministry of mines has created a loan fund specifically for this sector. MMSD (2001), revealed that around 1990 up to 2006, the loan was availed to small-scale miners and was governed by Mining Affairs Board. The loan has a value of ZW\$2 million per annum. This funding was not enough for the whole sector, the amount was just adequate to capitalise four mines at ZW\$500,000 each. Furthermore, the Mining Industrial Loan Fund (MILF) loan facility from the Ministry of Mines was affected by hyperinflation in 2006 (Pact, 2015), apart from being inadequate for the whole ASSGM sector.

Financial Institutions (Banks)

ASSGM sector has received less funding from banks in Zimbabwe. Lack of collateral has been a major challenge causing ASSGM sector to have less funding from financial institutions (Munyoro *et al.*, 2017). In Zimbabwe the following banks have funded ASSGM sector with little success: ZimBank (now ZB Bank), Barclays (now First Capital Bank) and the Commercial Bank of Zimbabwe (now CBZ Bank). These banks have funded ASSGM with capital that was below ZWL\$300,000 per miner (Dreschler, 2001). Financing from banks in Zimbabwe did not benefit the whole ASSGM sector because most small-scale miners have no or less collateral (Dreschler, 2001). Similarly in Ghana, the following banks provided funding to ASSGM: National Investment Bank, Stanbic and SG-SSB, they provided commercial loans which were highly collateralised with above average rates and stiff settlement plan with a considerable amount of capital around US\$1 million to be given the loan, most ASSGM did not afford to this funding facility and only few has accessed it (Hilson *et al.*, 2014) due to high collateralisation. However, Hilson and Ackah-Baidoo (2011) found out that Grameen bank has successfully provided small scale loans for ASSGM who were operating in Ghana, Yale Mining Camp and recommended social collateralisation, that is providing funding to people who are operating together in groups than one operating alone, a group is likely to pay back the loan than a sole miner. The Grameen Model was also applied in Tanzania and there was relative success (Hilson & Ackah- Baidoo, 2011).

Donor

In Zimbabwe the major donor working with ASSGM is Intermediate Technology Development Group (ITDG) (Dreschler, 2002). It has assisted ASSGM sector with capital and technical support. The major achievement of ITDG was the setting up of the Shamva Mining Centre. The Mining Centre provide several services to the ASSGM in the Shamva area. This project was widely considered as a positive step in improving mining productivity, exchanging mining technology and encourage ASSGM to formalise, since it only permitted formal miners access to milling services (Spiegel, 2015). The following were offering support to ASSGM in

Shamva: EU Micro Projects, they availed capital for different mining schemes for small scale miners including the setting up of Shamva Mining Centre, COMIC RELIEF, they availed money for capacity building to National Miners Association of Zimbabwe (NMAZ). TDH, they helped in the setting up of Shamva Mining School. The school helped in the training of women miners up to the level of certificate of competency. Other donors who have helped ASSGM in Zimbabwe include: Gesellschaft für Technische Zusammenarbeit (GTZ), it was providing capital to miners who were doing alluvial Riverbed Gold Mining in Insiza. It also provided funding to small scale miners at national level and Stichting Nederlandse Vrijwilligers (SNV) the NGO from Netherlands, it has helped ASSGM with different mining skills in the Insiza and Umzingwane rural districts (Dreschler, 2001), AFSM (Austria), this NGO was funding small scale chrome cooperative miners who were mining chrome on the Great Dyke and they extended their loan funding to small scale gold miners (MMSD, 2001). They are few NGOs that are working with ASSGM sector in Zimbabwe mainly because others are not willing to be associated with bad publicity connected with small scale mining especially with regards to environmental degradation (MMSD, 2001). The ITDG project was initially a success (Spiegel, 2015), but it did not find long term success due to early change of leadership from foreign leaders to local leadership (Mugove, 2001). In 2005 UNIDO worked with Ministry of Mines in Kadoma to train ASSGM, and this program was initially a success which resulted in the creation of microfinance which was offering credit facility to ASSGM sector in the area. Although it was a success, there is no information on the number of small-scale miners or individuals who benefitted from the funding moreover, it's very difficult to recognise those who benefitted from the funding facility, particularly between female miners (UNIDO, 2018). This funding also did not find long term success as it was affected by hyperinflation which crippled the whole country during that period (Pact and the Institute for Sustainability Africa, 2015).

Reserve Bank of Zimbabwe (RBZ)

RBZ is the only buyer and exporter of gold in Zimbabwe, through Fidelity Printers and Refineries. RBZ monitored a loan facility of US\$100 million. It was a commercial loan facility to finance the purchase of equipment for small-scale miners (International Monetary Fund, 2015). In 2015, ASSGM sector has about 40 000 registered miners, Zimbabwe Mines Federation (2020) and of the registered 40 000 miners, only 307 miners benefitted. In an attempt to increase gold output from ASSGM in 2017, RBZ extended a loan facility of US\$ 74 million. This loan facility was disbursed to 255 small scale miners (RBZ MPS, 2018). This was noted as a remarkable achievement by RBZ since gold from small scale sector exceeded that of primary producers amounting to 53% of the total gold output 24,843.87kgs. Even though there was an increase in gold output, only 2.5% of the formal ASSGM accessed this funding. Apart from

giving capital which does not cover the whole ASSGM sector, Fidelity Printers and Refineries is paying using the following procedure: for a Sample Grade of 90% and above it's paying US\$55.45/g, 85% but below 90% it's paying US\$54.58/g, 80% but below 85% it's paying US\$53.99/g, 75% but below 80% it's paying US\$53, 41/g and a Sample below 10% but above 5% its paying US\$52.25/g (Fidelity Printers and Refiners, 2021). For Fire Assay, gold above 100g it's paying US\$55.74/g cash. For Fire Assay transfer price, a sample of not more than 10g is deducted (Fidelity Printers and Refiners, 2021). For the gold below 100g, it is not paying in US\$ but it's using the Exchange Rate of that period. Artisanal and Small-Scale Gold Miners pay 2% royalties and Primary Producers (Large Scale) pays 5% royalties (Fidelity Printers and Refiners, 2021). This is fueling parallel market in the ASSGM sector. Other gold is now being smuggled outside the country where there are higher prices. The Finance and Economic Development Minister, Hon Mthuli Ncube revealed that closer to 34 tonnes of the yellow metal were smuggled to Rand Refinery in South Africa whereas President Emmerson Mnangagwa also disclosed in 2019 that he discovered that US\$60 million worth of gold was sold through informal channels to a Dubai-based company (Mining Newsweek Magazine, 2020)

The Government of Zimbabwe

In 2020, the President of Zimbabwe unveiled a ZWL\$18 billion relief funding to help individuals, businesses small and large scale and industries to ease the effects of Coronavirus pandemic. The Economic Recovery and Stimulus Package's objective was to rejuvenate the economy and revive the health sector crisis that was caused by Covid 19 (ZELA, 2020). The mining industry was allocated ZWL\$1 billion, a loan facility to the gold industry targeting both large- and small-scale miners. This money was managed by Zimbabwe Mines Federation. Part of the money was set to be available in foreign currency. However, miners in different parts of the country were yet to benefit from the recovery and stimulus package (ZELA, 2020). The government of Zimbabwe raised a US\$40 million gold mobilisation fund to assist ASSGM (UNIDO, 2018). According to RBZ Mid-Term Monetary Policy Statement (2017), the ASSGM industry is receiving US\$ 40 million Gold Support Facility that is being funded by Fidelity Printers and Refiners. Around mid-2017, US\$30.2 million was distributed to the small-scale miners. UNIDO (2018) revealed that there is no exact number of ASSGM who have benefitted from this facility. According to Zimbabwe National Budget (2015), the government has raised US\$100 million loan facility to assist ASSGM operations. The Government of Zimbabwe entered into an agreement with the Chinese company called Xuzhou Construction Machinery Group. They agreed that the company will offer ASSGM mining machinery on credit bases. It also proposed to offer tax benefits to financial intermediaries that are acknowledging Geologically-Surveyed Reports as collateral for ASSGM borrowing

requirements. However, this loan facility is yet to yield fruits, Mr. Moyo, Mines Deputy Minister noted that the government has failed to meet its 30% bargain of the deal requirements and it has reduced the funding (Nsingo, 2021). The deputy minister further revealed that though the deal is still there, no small-scale gold miners are yet to benefit due to security issues and the funding will now be administered in small trenches to ASSGM (Nsingo, 2021).

Cooperatives

Dzimunya *et al.* (2018) noted that cooperatives are easy to control, they allow organisation between ASSGM and helps to bring favourable working atmosphere for capacity building. It would be easy for different investors in the ASSGM sector to provide funding, education and training to cooperatives members than to an individual miner. In Tanzania there are successful cooperatives: the Mwanza Regional Miners Association and the Tanzanian Women Miners' Association (TAWOMA). The TAWOMA is actively involved in identifying market links, creating favourable environment for relationships between small and large-scale miners, advocating for and training small scale miners as well as giving input to legal reforms (United Nations Environment Programme, UNEP, 2012). In Zimbabwe, the Austrian Foundation for Small Mines (AFSM) have funded small scale chrome miners who were working in cooperatives on the Great Dyke and selling the ore to ZIMASCO. The funding was also extended to small scale gold miners (ZEPARU, 2018).

Partnerships

Small-Scale Miners may partner Primary Producers (Large Scale) which will help in financing them (Zvarivadza, 2018). In Zimbabwe there is ZIMASCO (Zimbabwe Mining and Smelting Company) Tribute System for chrome mining. The mine partnered with local small scale chrome miners. They assisted them in identifying high-grade ore bodies, provision of mining machinery, transport system to ferry ore to the processing plant and the milling plant. The small-scale miners pay the tribute holder based on tonnage of ore and waste. This has helped small scale chrome mines and this method also helped the company to achieve its corporate social responsibility (Pact and the Institute for Sustainability Africa, 2015).

Joint Ventures

Joint ventures are mainly done for a single project. Joint ventures lead to the pooling of resources such that the miners become capable of buying the necessary equipment for their work (Zvarivadza & Neingo, 2015). In Bolivia Coeur d'Alene Mine Corporation that have resources entered into a joint venture with 15 000 formal artisanal cooperatives (The International Institute

for Sustainable Development, 2018). Mandizha (2015) noted that funding from government and NGOs will be easily accessed since these organisations will be communicating with representatives alone rather than giving funding to an individual. For example, the Centre for Natural Resources Governance (CNRG) is working with artisanal miners in Penhalonga, Zimbabwe, by registering claims for them and providing working tools because they are associations (Mandizha, 2015). This establishes an easy communication rapport as the NGOs, governments, and international donors consult representatives of the associations who use the funds in the correct manner. Combined effort of the members of each association leads to the responsibility and protection of the mining area given to that particular association.

Leasing and hire purchase (asset financing)

Most small-scale gold miners use this method when it comes to acquiring the service of a machine in Zimbabwe. This mainly helps ASSGMs to have equipment that they may not be able to buy due to financial challenges. Dzimunya *et al.* (2018) noted that for improvement of ASSGM environmental, access for hire-purchase funding to acquire mining machinery such as: jackhammers; compressors; generators; stamp mills and ball mills and concentrating tables within ASSGM should be aided by the government. ZEPARU (2018) revealed that the Tanzanian government offers equipment on hire purchase which enhance the operations of ASSGM sector. ZEPARU (2018) also noted that to enhance funding to ASSGM, there is need for favorable prices for their gold, monitor illegal gold trading, trading of gold using official channels and provision of correct market information and access to equipment leasing arrangements.

Venture Capital

Financing to ASSGM sector from Venture Capital may be good to this sector since most of them do not have access to equities markets. This funding is mainly used to help small to medium firms for growth and expansion who are failing to acquire funding from formal financial institutions. In Kenya, the use of venture capital for Small to Medium Enterprises proved to be profitable even in an unfavorable market environment. Memba *et al.* (2011) noted that the SMEs that used venture capital experienced an improved growth and their findings encouraged more SMEs to use Venture Capital financing in Kenya. Venture capitalists brings both funds and expertise in to the ASSGM sector. This funding is mainly provided by wealthy individuals.

Revolving funds

Another option that may be employed by artisanal and small-scale gold miners is accessing funding from revolving fund schemes. The Government of Zimbabwe and Non –

Governmental Organizations (NGOs) first engaged in revolving fund around 1990s, the scheme was implemented to finance low-cost mining equipment (pumps, generators and crushers), with payback periods of between one to three years (Planet Gold Report, 2020).

Improving Efficient financing of the ASSGM sector in Zimbabwe

Formalisation of the ASSGM sector

Lack of formalisation of the ASSGM is prohibiting most financial institutions to fund this sector. This ASSGM sector in Zimbabwe has only 50 000 registered miners, Zimbabwe Mines Federation (2020), but it has over 500 000 miners, African Mining Vision (2017). There were several efforts that were done by the government of Zimbabwe to encourage formalisation including: decentralisation policy approach (Statutory Instrument 275 of 1991), EIA and Ecosystems Protection (Statutory Instrument 7 of 2007), Mining Industry Pension Fund (Statutory Instrument 14 of 2016), The Gold Trade Act (Chapter 21:03) this Act singles out RBZ and Fidelity Printers and Refineries as the only buyer and exporter of gold in Zimbabwe, Mining (General) (Amendment) Regulations, 2021 (No. 25) (Statutory Instrument 46 of 2021), recentralisation and reconfiguration of power, *Operation Chikorokoza Chapera* and *Operation Mariyawanda* (UNIDO, 2018) but they did not yield results since less than 10% of ASSGM are formal. Lack of formality is causing ASSGM sector to remain a high-risk zone. Planet Gold (2020) argued that legal status of ASSGM operations is a fundamental barrier to access finance since some are in the informal (and sometimes illegal) sector. Most formal lenders are unable to enter into finance agreements with operations that lack legal status (Planet Gold, 2020).

Familiarisation of ASSGM sector with Financial Institutions

A study by Almaden (2015) and another by Banchirigah and Hilson (2010) revealed that ASSGM is poverty driven activity. In Zimbabwe ASSGM has started mainly in poverty affected rural areas and urban areas. It has started as an informal sector. This sector mainly comprises of children, man and woman with less financial knowledge. Some of the ASSGM might be aware of banks but are not aware of the necessary paperwork needed for them to be given funding. World Bank Global Findex Study (2017) revealed that even when artisanal and small-scale miners have access to financial institutions, they are not familiar with how to obtain funding from them. There is need for financial institution and third-party intermediaries like social enterprises to train, educate, deliver loans and monitor the repayments. ASSGM enterprises may only be aware of local financial institutions but have limited financial knowledge and have less need for large funding since their investments are still small and they are not able to manage large loans. Traditionally ASSGM sector is mainly dominated by youths and less

educated people, so giving them finance is very risk since they are perceived as people who do not know how to invest. Planet Gold (2020) also said many ASSGM operators are unfamiliar with the formal finance structures and do not have the formal business and management training that would enable them to make their business case to financial entities. They also lack data, such as geological information to estimate the size of the gold reserve, which can help finance providers evaluate the future profitability of the business

Training of all ASSGM in Mining Skills

There is need for training of ASSGM on the mining skills. Training in mining skills will help them to grow and expand and give them the ability to pay back the loan from lenders. Their ability to manage finance will enhance their chances of acquiring more funding from financial institutions. Mlambo (2016) noted that there is need of training on simple financial accounting and mining skills for artisanal and small-scale miners. Figure 2 shows miners' training skills and experience in gold:



Figure 2 Miners Training Skills and Experience in Gold

Source: Part and the Institute for Sustainability Africa (2015)

Part and the Institute for Sustainability Africa (2015) noted that 70% of ASSGM lacks experience in mining skills. It can be noted from Fig 2 that most ASSGM lack experience especially from tertiary institutions and they mainly have on the job skills and experience

Training of ASSGM in Financial Skills

Zimbabwe Miners Federation (ZMF) (2020) revealed that most Artisanal and Small-Scale Miners operate without any financial track of their mine performance. In most cases, miners dig into their mining revenue fulfilling their personal expenses. ZMF (2020) further argued that non-existence or poor financial management is one of the internal business challenges that are faced by artisanal and small-scale miners in which they lack proper management of handling business finance to fulfil financial goals of the mine. ZMF (2020) recommended artisanal and small-scale mine owners to have financial documents which will help them in making decisions that are in favour of the development and growth of their mines. Zvarivadza (2018) noted that registered ASSGM should be given necessary training and educative material for miners to acquire knowledge and to undertake their activities safely. Training programs which suit the requirements for ASSGM need to be developed, workshops should be arranged where ASSGMs gather together and share work experiences (Zvarivadza, 2018). The International Institute for Sustainable Development (2018) noted that technical expertise like advising, training and educating ASSGM ensures their compliance with the country's mining policy and legislation.

CONCLUSIONS

The ASSGM sector remain one of the sectors which is contributing immensely to the economy of Zimbabwe. Even though the ASSGM sector is important to the economy of Zimbabwe, it has few financing options. The research revealed several financing options which are availed to the ASSGM sector of Zimbabwe and most of them has shown little success. Apart from showing little success, the financing option availed to the ASSGM sector are not covering the whole sector. Lack of formalisation of the ASSGM sector is causing this sector to remain very risk and most financial institutions are not offering funding to this sector. Other NGOs like the American Jewish World Volunteer Service, the Austrian HORIZON3000 and the British VSO only showed willingness but never helped this sector due to lack of proper mining development programme and some are not providing funding due to bad activities that are associated with this sector (MMSD, 2001). The study recommends for training in the mining and financial skills for ASSGM so that the sector will expand and grow and have the ability to manage their funds. The study further proposes for the use of other financing options like cooperatives, joint

ventures and partnerships which has shown some prospects of success in some countries they were tried including Zimbabwe; hence they were noted as sustainable options. The government of Zimbabwe should come up with some incentives to financial institutions who offer loans to ASSGM sector. Fidelity Printers and Refineries should buy all the gold using cash the (United States Dollar) using international market prices to eliminate parallel market and smuggling of gold out of the country. In the future, the Ministry of Mines of Zimbabwe should come up with policies that recognises the ASSGM sector, there is need for Ministry of Mines and Home Affairs to work hand in hand on enforcement of formalisation and reduction in crime rate in the artisanal and small-scale mining sector. There is need for policy consistence on formalisation issues and decision makers and law enforcement agencies in the ministry of mines and home affairs should be solid in implementing the policies in the ASSGM sector to reduce smuggling and crime rate to increase funding from financial institution and attracting potential investors.

AREAS FOR FURTHER RESEARCH

There is a need for general research on the effects of corruption, (gold smuggling) and crime rate in Zimbabwe's ASSGM sector. The research needs to focus on actors who are involved, the effects it poses to the economy and potential investors and the mechanisms that may be employed to prevent gold smuggling and reduce crime rate. Despite several efforts and mechanisms that were introduced by the government of Zimbabwe, the ASSGM has remained largely informal, less than 10% of artisanal and small-scale miners are formal. There is rise in smuggling and criminal cases due to lack of formalisation. Some of the criminal cases are mainly caused by Machete Wielding Gangs (Mashurugwi). The government of Zimbabwe is losing a lot of money due to smuggling.

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