Study to Review Benefits Beyond Direct Mine Taxes in Zambia

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Abstract: There is a common public perception that the major contribution of mining in Zambia is through direct tax revenues. This study sought to explore and investigate the economic benefits of mining beyond these direct tax revenues. Over seventy percent (70%) of Zambia's copper production is by four mining companies namely Barrick Lumwana Mines, First Quantum Minerals (FQM) Kansanshi mine, Konkola Copper Mine (KCM) and Mopani Copper. These mines were the focus of this study. The objectives of the study were to determine how much they paid in terms of taxes; employment created; investments made in terms of procurement of local goods and services; assessment of the social benefits from the four mining companies and other macroeconomic benefits of mining in Zambia. And finally, to compare mine tax revenue to other benefits of mining in Zambia and determine which of the two is greater. Using data collected from the four mining companies, Zambia Chamber of Mines, Zambia Revenue Authority and Action Aid, the findings were that the four mining giants during the period of investigation, made immense contributions to the country's economy. In 2012, they directly employed 56,300 people, spent about US\$3.0 billion on the procurement of goods and services and US\$70 million on social investments. However, these companies spent about only US\$1.7 billion in form of total taxes. This study has therefore, demonstrated that the four mining companies comparatively generated significant economic benefits to the country outweighing the taxes paid in three areas of employment, procurement of goods and services and social investments. Clearly, the findings from this research do not support the common perception that the payment of taxes is the main and most important benefit derived from the mining activities in Zambia. The study concludes that tax revenue is but a small benefit of mining in Zambia. There are significant benefits in terms of support for local business, social investments and other macro-economic benefits that needs strengthening through appropriate policy interventions. Being a mineral dependent economy, this conclusion is not meant to demean the desire by the government to have more direct tax revenues to pay for other equally demanding sectors of the national economy but to create awareness that other important benefits do accrue to the country other than direct taxes.

Keyword: Social investment; mine tax revenues; local businesses; macroeconomic benefits; Zambia.

1. Introduction

Zambia's economy is largely dependent on production and export of copper for its revenue. As expected, this has been a source of intense debate on whether mining companies are paying their fair share of taxes. Besides the general public, many civil society organizations have been very critical of the contribution that mining companies make towards the national treasury in terms of taxes. It is thus a general view that mine tax revenue is the main benefit that mining brings to the country's economy to an extent that when mines do not make much contribution in terms of taxes, the public perception is that having mines in Zambia is not in any way beneficial. However, the general public may not be aware of other benefits that come with mining projects in Zambia which is the focus for this discussion.

The objectives of the study were to determine how much they paid in terms of taxes; employment created; investments made in terms of procurement of local goods and services; assessment of the social benefits from the four mining companies and other macro-economic benefits of mining in Zambia. And finally, to compare mine tax revenue to other benefits of mining in Zambia and determine which of the two is greater.

2. Review of Mine Taxes in Zambia

Generally, there are two categories of mining taxes applicable in Zambia (Manley, 2013). These are Direct Taxes and Indirect Taxes. Under Direct Taxes there are two categories which are Profitbased taxes and Revenue-based taxes. Profit-based taxes include Company Income Tax and Excess or Variable Profit tax. Under Revenue-based tax, there are Mineral Royalties and Windfall tax. Under Indirect Taxes, there is Value Added Tax (VAT), Customs and Import Duty.

A. Direct Taxes

Profit Based Taxes: These are categorised according to their tax base which include profit and revenue.

Company Tax: This form of tax is not exclusive to the mining companies but applicable to all businesses. This form of tax is complex because taxable profit upon which this tax is applicable has various definitions and is subject to several deductions which can be used to change the amount of tax payable. This form of tax can be affected by variations such as the Excess or Variable Profits taxes. Many countries with extractive industries apply this form of tax. The aim of Excess Profit tax (EPT) is to be progressive. This means that as a company increases its profitability, so does the tax obligation. This tax is levied on profits above a certain defined threshold. However, the standard corporate tax is still applicable on that portion of the profits below the threshold. Corporate taxes are based on Resource Rent Tax which according to Arnaut and Ross (1975) are intended to reap maximum possible revenue from a mining company without scaring away

potential investors so that the mining companies are preserved as a source of government revenue. The general public considers Variable Profit Tax as being fair since an increase in the profits of a mining company would result into an increase in its payment of taxes. This is especially favourable to the general public which expects mining companies that are reaping huge profits, resulting from factors of high mineral prices, to increase their taxes.

Revenue Based Taxes: Revenue-Based taxes are usually applicable where governments find it hard to administer profit-based taxes. These forms of taxes are based on a company sales or its revenues instead of its profits. This form of taxation is easier to administer. Revenue based taxes are categorised into Mineral Royalty taxes and Windfall Taxes.

Mineral royalty tax rate differs, depending on a mineral but are below 10%. Currently, mineral royalty tax on copper mining is 6%. Mineral royalty tax is based on gross sales value, that is, whole sales and not profits. In some instances, however, royalties do permit some deductions like transport, insurance and in some instances processing costs. When costs are added to the deductions, this changes the characteristics of the tax from being royalty to profit-based although the extent to which this effect is made is quiet limited.

Mineral Royalty Taxes have several advantages to the administering government that include their charge being based on the value of the extracted mineral and so are suitable for compensating for the loss of the resource to the government. Further, royalties are used in influencing timing and level of risk of payments made to the government. They are thus more reliable than profit – based taxes because they are collected when the company start making revenues whether it makes profit or not.

For the very fact that mines do take many years to start making profits, the country does not have to wait to reap revenue in form of taxes. The final advantage of royalties is that they are an easy to administer because all the taxing authority needs to know from the mining company is the sales volume and the unit price. Sometimes the pricing that can be disclosed by the mining firm may be unreliable. If that happens, verification can be done by consulting independent price reference published by the London Metal Exchange or another agency.

Windfall Tax is defined as a "tax that is levied on the value of a company's sales of a particular mineral in which the rate increases with the price of the mineral" (Manley, 2013). This is a useful tax instrument which has advantages of a standard fixed rate royalty which aims at eliminating some disadvantages. When the owner of the mineral resource has been sufficiently compensated by the mining company, there is no need to impose regressive taxes. Avoiding a regressive tax may involve lowering the rate of the royalty and tax based on profit that is not regressive. However, the taxing authority should have the capacity to balance this with principle of feasibility. Alternatively, a taxing authority can use royalty tax with a varying rate in accordance to the mineral's market price. When such is done, royalty which is variable-rate becomes less regressive than the one which is at a fixed rate which is affected by rising or falling of prices. Royalty tax however is not as progressive as those taxes that are profit-based. The Zambian government introduced Windfall Tax in 2008 (ibid).

B. Indirect Taxes

Value Added Tax (VAT) - mining companies are under obligation to pay VAT, but this form of taxation is rarely significant. This is so because exporters such as mines receive refunds from the Zambia Revenue Authority (ZRA) for the VAT which is levied on their inputs. In certain instances, VAT is zero-rated, meaning that the copper export has a VAT tax of 0%. The rationale for zero rating VAT is to avoid levying tax on production instead of consumption. However, since most, if not all, the copper which is produced is for export and not domestic consumption, any VAT the exporter has to pay would be on production and not consumption. Notably, production taxes are inefficient as they counter the desire of many governments to promote economic growth through export industries which are expected to earn foreign exchange (Otto, 2000). Therefore, without VAT refunds, the taxation system would, effectively, be taxing inputs which would have similar effect as revenue based taxes which are taxes paid whether a company makes a profit or not.

Customs Duty mostly applies on imports, though there are at times export duties. Zambia charges export duties when copper concentrate is exported. This form of tax serves a double function for the government. Firstly, it is a good source of revenue as it is easier to administer than other forms of taxes. Secondly, it is an effective economic tool for protecting local industries against foreign companies. For example, the rationale behind customs duty on the export of copper concentrate is to encourage and promote value addition such as processing of copper into copper cathode of higher value.

C. Tax Adjustments

Governments make several adjustments to their tax systems in their quest to encourage investment and maximise revenue collection in the extractive industry. There are four notable types of adjustments. These include Depreciation Allowances, Loss Carry Forward Provisions, Ring-Fencing and Tax Holidays (Manley, 2013). Besides their regular cash costs, companies incur depreciation costs. The mining venture has huge capital costs even before commencement of production. This cost percentage is allowed to be claimed as depreciation. For the sake of attracting investments, some governments allow mines to claim what is referred to as 'accelerated depreciation' which is the high rate at which expenses are depreciable. When depreciation rate is increased, profit and tax are reduced in the initial years but are expected to increase in the later years. Essentially, this amounts to postponing payable tax.

The other adjustment is Loss Carry Forward Provisions. If in a particular year a company makes a loss, many governments allow the company to carry the loss to the following year so that taxable income in that year is reduced. When that happens, tax is paid when profits that accumulate are greater than accumulated losses. If a company incurs huge losses for a number of years, then the company can only start paying taxes years after it starts making profits.

The other adjustment that is made to taxable profits is Ring-fencing. This involves separating the operations of the company when calculating taxes. Separating can be based on factors such as geographic positions of the operations of a firm. Ring-fencing is used by companies so as to limit their abilities to use costs from one operation to offset profits for tax purpose in another operation.

The other incentive that government gives to mining firms is Tax Holidays. These are temporal measures to reduce or even eliminate taxes. Its purpose resembles that of loss carry-forward. It is used to help the company with cash flow problems in the early years of production. Keen and Mansour (2010) highlight various dangers that are associated with tax holidays. Since tax-holidays are time-limited exemptions from corporate income tax, they may not be renewed. They are ill-designed form of investment incentive and pose a danger to a wider tax system.

3. A Review of Benefits other than Taxes

A. Employment

The mining sector in Zambia has made significant contribution to the country's employment levels. Though the sector has not been the largest employer, there have been significant levels of direct employment which is defined as people that are on the company's payroll and the long-term contractors operating on the mine site. For instance, in the year 1991, the mining sector had a workforce of 64,000 employees. At the time when ZCCM was preparing for privatization, employment had dropped to about 22,000. After privatization, employment levels recovered to 46,706 by 2009 (GRZ, 2011:124). According to the 2012 Labour Force Survey, employment in the mining sector was estimated to be 90,000 representing about 1.7% of the total economy-wide employment on the national level (CSO, 2013). In the same year, the total formal employment in both private and public sectors was 894,175 which accounted for 16.6% of the total employment in the country. Out of this, the mining sector accounted for 74,254 jobs which was 8.3% of the total formal employment and 25% of the total formal employment in the private sector. In comparison to other sectors, data from the 2012 Labour Force Survey shows that only the education sector which had 141,672 jobs, the Agriculture sector with 87,927 formal jobs and the Manufacturing sector with 77,408 formal jobs surpassed the mining sector.

Notably in mining towns, the percentage of formal employment is mostly higher than any other sector. For example, in the Copperbelt and North-Western provinces, the mining sector has the highest percentage employment than any other sector. Further, jobs from the mining sector are well paying and are skills intensive. When compared to other sectors, the mining sector has proved to be outstanding in the aspect of employment creation as shown in Table 1.

SECTOR	2004	2005	2006
Manufacturing	4,577	4,691	4,838
Agriculture	2,448	3,575	4,028

TABLE: New jobs created

Mining	5,574	6,266	18,375
Tourism	1,843	1,957	1,742
Other	1,535	1,680	2,466
Total	15,977	18,169	31,449
Mining	35%	34%	58%
Contribution			

Source: Zambia Development Agency (2008)

The four mining companies are located in both the Copperbelt and North-Western provinces. In these areas, the mining sector is by far the largest employing sector. In 2012, the four mining companies created 56,200 direct jobs (CSO, 2013). Of this, the two Copperbelt province-based companies generated 40,600 jobs or well over two thirds of the total employment of which 16,800 were direct employees while 23,800 were contractors. The remaining one third (15,600) was accounted for by the North-Western province based mining companies. However, those based in the North-Western province have a higher percentage of contractors than their Copperbelt counterparts to the tune of 78% of direct employment. The four mining companies accounted for about 80% of the 74,254 formal employees in the mining sector countrywide (ICMM, 2014).

Indirect and Induced Employment

The mining sector is a great source of indirect employment. This type of employment includes people who are employed by the suppliers to the mining company and work off-site. There is further induced employment which includes people who are employed as a result of direct and indirect employees spending their wages locally. It is, however, common to overlook induced employment mainly because it is difficult to link it to the mining sector and it is mostly in the informal sector. It is, however, a significant contributor to the local income especially among the poor and forms a strong basis for diversification especially in the agriculture sector. Fig. 1 below shows the direct, indirect and induced employment in the two mining provinces.

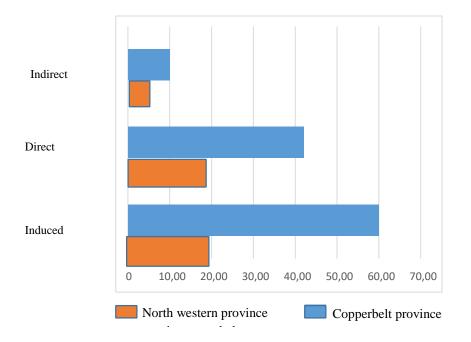


Figure 1. Head count of direct, Indirect an Induced employment at the four mining companies *Source:* Company data and OPM calculations (ICMM, 2014).

B. Procurement of Local Goods and Services

According to data collected by Kasanga (2012), services that are procured by the mining sector are mostly from the Zambian companies but largely imported goods. In 2012, total procurement from the four mining companies was around US\$3.0 billion of which US\$1.6 billion went to services and US\$1.4 billion went towards goods. However, about 80% of the goods procured are not manufactured in Zambia. The total estimate for procured goods is about US\$1.75 billion annually of which only US\$87 million or 5% are locally manufactured.

C. Social Investments

Mining companies have been making huge investments in the social sector of their catchment areas. The survey conducted by the International Labour Organization (ILO) indicate that over 200 community development programmes that are performed in the mining area, over 80% are done by the mining companies. This entails that social investments in communities where mines are found are high in relation to company profits and that mining companies undertake social investments in their catchment areas. In the year 2012, the four mining companies spent about US\$70 million on social investments. This is about 0.3% of the country's GDP. The largest contributor towards social investment was by the Copperbelt province-based mining companies as shown in Fig.2.

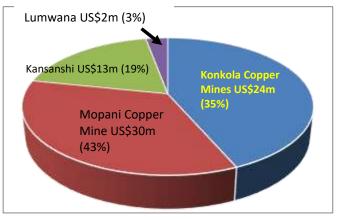


Figure 2: Social investments by mines in 2012 *Source:* Company data (ICCM, 20140

Priorities for social spending differed between the Copperbelt-based firms and those in North-Western province due to community differences. While the Copperbelt is an established urban area with good infrastructure yet high levels of unemployment, HIV and populations which expect a lot from the mining sector, North-Western province on the other hand is predominantly rural, sparsely populated and limited infrastructure. With the coming of mining activities, many people have flocked to mining areas, thereby putting an intense pressure on social spending and increased levels of HIV/AIDS.

These social investments by the two Copperbelt-based mining firms were undertaken at privatisation for running two large mine hospitals each, about eight health clinics each and two primary and two secondary schools each (ICMM, 2014). Running educational and health facilities is unusual for commercial mining companies and the cost of running them, especially hospitals, significantly increase the companies' total spending in social investments and staff numbers (Manley, 2013).

The four mining companies have different approaches to social investment. Lumwana and KCM follow a bottom-up approach where an established process for planning and implementation is followed. This is done through consultation with local communities as well as the local government when deciding which investment to undertake. They also use the available government survey data to assess the current needs of the community. The two firms implement social investments in partnership with others such as the local government, civil society and community members (ICMM, 2014).

Lumwana Copper Mine

Lumwana is involved in social investment activities. According to its Corporate Profile (2014), the mining firm has brought about a lot of economic benefits both to the country as well as the

local communities. The company explains that it has a responsibility to protect the environment, conduct business that is based on high ethical standards and make a meaningful contribution to the community in which it operates. Its aim is to share the benefits of mining with its employees and the community so as to foster economic and social development. It takes social and cultural concern of the local communities and offers skills training to the local residents and provides economic opportunities through local procurement. In 2014, the company spent \$1,360,379 in community development.

Konkola Copper Mines (KCM)

KCM exercises Corporate Social Responsibility commitments in matters of education, health, sustaining livelihoods, the protection of the environment and biodiversity. From 2005 to 2014, the company spent US\$150 million on Corporate Social Responsibility (KCM, 2013). The mine operates the Kitwe Trades School which is Africa's largest private vocational training centre. Recently, the company invested US\$2.6 million to increase enrolment and upgrade the curriculum. Further, the company provides training programmes to students both locally and abroad. So far, it has sponsored over 250 students for fulltime degree programmes and other tertiary programmes. The company operates two hospitals and eight satellite clinics. It further runs two schools with over 1,900 pupils. It has one of the largest malaria roll-back programmes in Zambia. The company has rolled-out several community health initiatives that include the distribution of 23,000 free eye glasses, the fitting of artificial limbs and undertaking eye cataract operations. KCM is also involved in the sponsorship of four football teams in the top Zambian soccer league which is referred to as KCM Supper League (Manley, 2013).

Mopani Copper Mine

Mopani spends more on social investments in absolute terms than the other mining companies. However, it adopts more of a top-bottom approach and an ad hoc approach to investment. Through its corporate affairs department, the company engages with communities in a more responsive way than proactive manner. Among the activities that the mining firm has involved itself in as a good corporate citizen include sponsoring of the Council of Southern African Football Associations (COSAFA) Senior Challenge cup. The mining firm has also undertaken the rehabilitation of the Nkana Stadium. This cost the mining firm US\$500,000. Between the years of 2000 and 2011, the mining firm spent an average of US\$320,000 per annum. In July 2011, the mining firm contributed US\$50,000 towards the staging of the regional soccer showpiece. It further provided Man of the Match cash prize amounting to US\$4,000 for the four matches that were held at Nkana Stadium. The support that the mining firm has made to soccer clubs such as Nkana Football Club and Diggers Rugby Club has helped in their revival and the restoration of their pride. By investing in the rehabilitation of the Stadium, the firm provided an example to other corporate citizens to be involved in CSR.

Besides the Nkana stadium, Mopani Copper Mines has been sponsoring non-soccer tournaments such as the Commonwealth Swimming Gala that was hosted in 2011 at the Olympic Youth

Development Centre in Lusaka. Due to rehabilitation works, Nkana Golf Club was able to win the hosting of the prestigious 2014 Zambia Open Golf championship. The mining firm signed a Memorandum of Understanding (MoU) where the mining firm has been able to rehabilitate the Club House, locker rooms and the surrounding, maintaining of the golf course and the provision of golf expertise, labour, course irrigation and a water reticulation system. It has further been maintaining the club's security through electric fencing of the perimeter boundary, increased security patrols and placement of fire breaks around the perimeter. The mining firm contributed about US\$30,000 towards the live broadcast of the 2013 Africa Cup of Nations held in South Africa. It further hosted the third league gala of the Zambia Amateur Swimming Union (ZASU) at the newly-built swimming pool in Mufulira for the training and leisure of the community. Further, the mining firm has been involved in health matters as part of its CSR. It has donated a 30-seater staff mini-bus together with assorted medical equipment worth US\$20,000 to Kitwe Central Hospital. The equipment which is aimed at supplementing government's efforts in improving health services delivery included patient trolleys, wheel chairs and other patient monitoring equipment. Other health institutions expected to benefit included Ronald Ross and Kamuchanga hospitals in Mufulira. The company has rehabilitated the first quarter of the 15.1 km of the Sabina-Mufulira road which connects the mining town of Mufulira on the Copperbelt to the rest of Zambia. This is part of the \$10.5 million road rehabilitation project launched in 2011 which also involved the rehabilitation of the 6.7 km Central –Street and Mindolo-Chibuluma roads. The company has further been involved in free cervical cancer screening for women, the treatment of congenital disorder and the integrated malaria control programme which has led to reduction in malaria prevalence rates in the company's catchment areas of Kitwe and Mufulira to about 15 per 1,000 when compared to the rest of the Copperbelt area which averages more than 250 per 1,000.

Mopani Copper Mine is also involved in many HIV/AIDS prevention and treatment activities inside and outside the workplace (MCM Corporate Profile, 2015). The beneficiaries amounted to 45,000 to date. These include both employees and non-employees who avail themselves of the company's voluntary counselling and testing programme. About 14,000 have accessed free treatment and care. As far as free cervical cancer screening is concerned, 300 women benefited from the service between November 2012 and May 2013. This screening has been done at Wusakile and Malcom Watson hospitals Kitwe and Mufulira respectively. An amount of US\$250,000 was spent to set up two cervical cancer screening centres targeting over 32,000 women aged between 20 and 65 years in Copperbelt province. Fifteen wheel chairs worth US\$5,000 have been donated for children with cerebral palsy in Kitwe (MCM Corporate Profile, 2015).

Kansanshi Mine (First Quantum Minerals -FQM)

Though it traditionally uses a top-down approach, Kansanshi mine involves the community. It heavily relies on inputs from traditional chiefs. The implementation of many projects is done with partnership with others. The company's corporate social responsibility efforts are summed up in the idea of respect. Since coming to Zambia, the mining giant has made tremendous contributions

to the community where it operates. In the year 2013 alone, FQM spent about US\$44.5 million in community investment. One area in which the mining giant has helped the community is in conservation farming. This involves teaching local farmers simple agriculture technics which makes farming more sustainable. This has been of great help where farmers have exhausted the soil in one area and have moved on to another. Conservation farming involves minimal tillage, teaching farmers to create furrows just deep enough to hold seeds and fertilizer, learning the ideal items for farming, thinning and weed control. They also learn precise standards for spacing, thinning and weed control. These efforts have yielded results. In the first year of the program, some farmers' output increased to about 800% and such results have been sustainable year after year. By 2012, 550 local farmers were supported in conservation farming practices. The company spent US\$750,000 in 2012 (ICMM, 2014).

On skills training, US\$372,482 was spent and US\$1,283 was spent through the Kansanshi Education Quality Improvement Programme (Kan EQuiP). The aim of the project was to improve the quality of basic education for 22,000 pupils in 15 schools. It focusses on improving the teaching competencies of educators, strengthening head teachers, district education managers and provincial education officers and the provision of school instructional resources such as text books and school desks. The company spent US\$60,000 in construction of teacher houses and a classroom block. A further US\$32,000 was spent on the construction of the Solwezi Public Library (FQM, 2012).

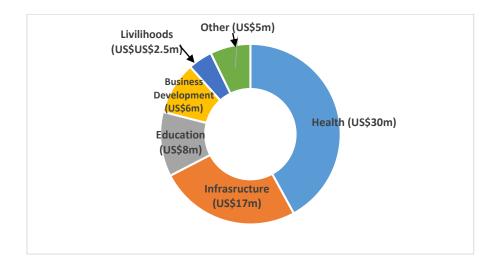
On adult literacy, the company spent US\$3,267 in 2012 to roll out adult literacy to 152 community members. On local business development, it spent US\$132,820 supporting initiatives that are aimed at building capacity and skills of local businesses (ICMM, 2014). Those who undergo these training learn on register a business, managing money and writing business plans. Further, there are business development workshops held for local entrepreneurs in aspect such as cash flow management, business plan compilation, business registration and local labour laws. There was further training for contractors in which prospective bidders were taught courses in areas such as tendering and estimating, reading and interpreting drawings, planning and organising a construction contract, concrete technology and quality control on construction sites (Manley, 2013).

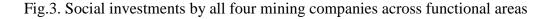
The mining giant has also been involved in areas of health, education, skills training and the conservation of the environment. In the aspect of biodiversity conservation and protection of the environment, the mining giant spent US\$669,746 at Bwana Mkubwa mine and US\$5,535,680 at Kansanshi mine in the year 2012 alone. In total, the social expenditure for the mine was US\$67,099 at Bwana Mkubwa mine and US\$13,535,114 for Kansanshi in 2012. These finances were used for improvement of health care through providing health facilities and service providers, improving basic infrastructure and basic services in communities such as houses, roads, electricity, water, sanitation and others. It further includes improving infrastructure and basic services in communities such as roads, housing, electricity, water and sanitation. The company further

facilitates access to enterprise development opportunities for local entrepreneurs. In terms of health, the company spent US\$10,000 on radio programmes that focuses awareness on diseases such as cholera, typhoid and dysentery. It further spent US\$50,000 on prevention of malaria and water borne diseases. On community health roadshows, the company spent US\$30,000 in 2012 alone and US\$2.2 million on upgrading Solwezi General Hospital. On HIV/AIDS project training, the company spent US\$20,000. The company further offered medical scholarships through sponsoring various professionals. It spent US\$150,000. An amount of US\$125,000 was spent on the maternal clinic and Child Health Wing.

While many of the CSR that the company engaged itself in occurred in its catchment area and so went unnoticed by the majority of Zambians, FQM undertook a major step in its exercise as a good corporate citizen. It spent about US\$260,000 (K1.3 billion of the then local currency) to broadcast live the 2012 Africa Orange Cup of Nations Games (AFCON) on Zambia National Broadcasting Corporation-ZNBC television and radio. The total amount that was required was K2.1 billion of the local currency, hence the mining giant contributed to well over sixty percent (60%) of the total budget for the tournament's broadcast rights.

Despite the huge investments that mining companies have made in the communities where they operate, Mondoloka (2013) explains that perception of mines have largely remained negative. This is partly because social investment contributions are often shielded by concerns over negative effects of mining activities such as pollution and resettlement. However, such negative perception can be improved upon by taking the right approach towards social investment. As already noted, mining companies differ in areas where they invest in their communities. In 2012, the largest proportion of social investment went towards health which amounted to US\$ 30 million or 43%, while infrastructure development gobbled US\$17 million or 24%. This is depicted in Fig. 3 below. The four mining companies have further made huge investments in their employees.





Source: Companies data as compiled by ICMM (2014)

C. Training and Human Development

Mining companies in Zambia significantly contribute to the development of the local economy through the provision of training to their direct employees and contractors. Training employees such as through "on-the-job-training" is beneficial both to the employees and the mining companies. The knowledge and skills gained through such training can be passed on to other sectors and has a diverse application, hence promoting diversification. The mining sector has thus made a huge contribution towards human capital development in the country. This is in the face of low educational levels in the country.

Training at the four mining companies includes a mixture of in-house and outsources training. The four mining companies together spent about US\$5 million in the year 2012. This has kept on increasing in subsequent years. However, these four companies differ in their approach to training. Kansanshi is more focused on technical and safety training and largely relies on external training providers. Mopani on the other hand provides in-house training with a mixture of technical and managerial training. Konkola Copper Mine on the other hand has mixed approach with a technical and managerial approach and a combination of both external and in-house training. Lumwana largely uses in-house safety training though it is still formalizing its training system. The four mining companies have made the following contributions to skills training:

Further Education Scholarships

The three companies of Kansanshi, Mopani and KCM awards scholarships for further education. In 2012, Kansanshi was sponsoring 33 employees in various disciplines at different levels ranging from diplomas to graduate and post-graduate levels. While the majority were studying at Zambian institutions, others were doing their studies outside the country. Mopani identifies both high school and university students for the award of scholarships in both technical and post-graduate qualifications. One of the main conditions of the scholarship is that a person has to work for Mopani once the studies are completed. KCM on the other hand has wide ranging scholarships which are distributed across employees, their dependants and promising students who learn at KCM trust schools. Other scholarships are provided by those who are high performing at public universities which are in no way connected to the mining company. By 2014, 52 Zambians were sponsored by the mining company in Zambia, India or Namibia (ICMM, 2014).

On-the-Job Training, Apprenticeship and Secondments

Depending on the need, all the four mining companies provide on-the-job-training for both new and experienced employees. Attachments for students from Zambian institutions are offered by Kansanshi and Mopani mines. These mines also run graduate development programmes. KCM on the other hand has a foreign group exchange program where graduates get secondment to other Vedanta operations for periods ranging between 6 and 12 months (Manley, 2013).

Technical and Managerial Training

Technical training is offered to employees of the all mining companies. However, there is a difference in the way training is delivered. KCM provides technical training through satellite technical training schools, courses that are offered at Kitwe Trades School and by technical training officers who are located in various departments. Kansanshi on the other hand provides technical training internally in each department as well as through external training providers while both Lumwana and Mopani have an in-house training. Most of these companies provide their employees with managerial and supervisory training. This is done either through in-house courses such as those offered by Kansanshi and Mopani or Master of Business Administration (MBA) sponsored programmes as provided by KCM which also provides training for surgeons who work at mine hospitals and pays for the same training to surgeons working at government owned hospitals (Myondi, 2014).

Support for Trade Schools

Support for technical trade schools is provided directly as is the case with KCM which runs Kitwe Trade School and Kansanshi which runs Solwezi Technical Training Institute in conjunction with the government and Mopani which opened its trade school in 2014 (MCM, 2015). Support is also indirectly provided such as Mopani's payment of higher fees for employees who attend training at trade training schools in the process subsidising non-mine students. Besides the provision of training to direct employees, mining companies invest in skills development of those who are employed as contractors.

4. The Macro-Economic Contribution of the Mining Sector in Zambia

The contributions of the mining sector in the above three areas of employment creation, procurement of goods and services and social investments have had a positive impact on the country's economy at the macro level in the aspects of production, exports and Balance of Payments (BoP), the exchange rate and Foreign Direct Investment (FDI) (ICMM, 2014)

5. Conclusions and Recommendations

This study has demonstrated that mining in Zambia is contributing immensely to the social and economic wellbeing of the country. It therefore makes the following recommendations:

- 1. There should be a win-win situation in the negotiation of taxes with the mining companies. The government should not simply consider taxes as the only benefits that mining companies bring in the country.
- 2. As presented in the findings, there has continued to be a negative perception of mining companies in Zambia despite the huge investments that the firms have continued to make. This is partly because there has been a perception that taxes are the only major economic

benefits that mining brings in the country. There is thus need to bring to the attention of the general public and Non-Governmental Organizations of the many benefits that mining companies have brought to the economy besides taxes. This publicity may be done by the Zambia Chamber of Mines.

3. As presented in the findings, mining activities are largely located in two provinces of the Zambia: Copperbelt and North-Western Provinces. However, the country's economic mainstay is the production and export of copper. Hence, the country largely depends on the two provinces for its economic livelihood. This in some cases has been a source of contention by people who live in the two provinces, that wealth that is generated in the two provinces benefits other parts of the country in most instances at the expense of the two provinces. It is for this reason that corporate social responsibility activities are done in communities where mining companies operate. However, as explained in the findings, mining firms have their own approaches towards social investments and they are not required by law to exercise corporate social responsibility. It is therefore recommended that the government comes up with a policy guide on corporate social responsibility where it becomes mandatory for a mining firm to carry out social investments in the community in which it is found.

6. Future research

This study recommends that further research be done in the following areas:

- How a win-win situation can be established between mining companies and the government
- A framework for conducting Corporate Social Responsibility in the mining sector.

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