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Publication date
2012

Link to publication

Citation for published version (APA):
Nyankweli, E. M. (2012). *Foreign direct investment and poverty alleviation in Tanzania: a case of Bulyanhulu and Geita Gold Mines Limited in Kahama and Geita districts*.

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Conclusion and policy recommendations

Overview

This thesis sought to uncover the impact of FDI on the livelihood of rural communities as well as on the national and regional economy. Specifically it quantified the economic, social and environmental effects of the gold mining sector, as a component of FDI in Tanzania, and its specific contribution to poverty alleviation. In addition to revealing the socio-economic gains and losses, the thesis also traced private-public partnerships by exploring and assessing corporate CSR policies and practices. As mining became a crucial part of the broader package of policies and development initiatives by the Tanzanian government, the gains and growth in the sector provided big potentials for poverty alleviation. However, the recent findings in the literature indicate that booming FDI in the mining sector has brought limited economic growth and scarce benefits for Tanzania and other mineral-rich African countries. This thesis does not challenge these findings, but rather goes deeper into the argument about the contribution of the mining sector to Tanzania's economy. The economic growth associated with the mining boom, while limited on the national scale, is large and significant for the rural communities directly affected by mining operations.

A successful mining venture should be defined as one that helps combat poverty through broad-based growth. Its primary goal should not be only to provide high returns on investment, but rather to maximise its potential positive impact on employment, skills

development, provision of education, health and social amenities as well as to cultivate mutually beneficial relationships with neighbouring communities in the framework of CSR. It is a known fact that CSR requires a commitment to social development principles, which can help communities deal with development challenges. CSR also provides for participation in poverty reduction efforts, in line with key policy documents, such as Tanzania Vision 2025 and Tanzania Assistance Strategy for Growth and Reduction of Poverty. The governments of Tanzania, Zambia, South Africa and the Democratic Republic of Congo are under pressure to review their legislation and contracts with mining companies in order to increase the revenue they collect from mining rents and ensure a win-win situation for both investors and the country. Critics have argued that African governments have not been able to optimise the mining tax revenue. They are criticised for not having taken advantage of the 2003-2008 price booms and captured the anticipated windfalls (Curtis & Lissu, 2008; SARW, TWN Africa, TJN Africa, Actionaid & Christianaid, 2009). In order to analyse the direct and indirect impact of FDI in the gold mining sector in Tanzania, the following sections will provide succinct answers to the three research questions (Table 3.4). The final sections will present the conclusions and policy recommendations, and suggest areas for future research.

The contribution of the gold mining sector in Tanzania

Economic impacts of gold mining

The first research question of the thesis, regarding the contributions of the gold mining sector in Tanzania, was subdivided into five subquestions (Table 3.4) that addressed issues of revenue, employment, mining legislation reforms and its implication to economic growth. The first, second and third subquestions assessed the share of gold mining in national exports and foreign exchange, compared to other Tanzanian export products. They also examined mineral legislation and its reforms, tax systems and types as well as the revenues accrued from the sector. The fourth and fifth subquestions quantified the employment opportunities gained with large-scale mining development and compared them to the employment benefits of small-scale mining, focusing on

differences in income levels between these two mining subsectors. These questions examined the argument that Tanzania's mining resources are being exploited for the primarily benefit not of the country but rather of the foreign investors. While acknowledging some shortfalls, the thesis does not support this argument: the findings of the thesis registered several success stories of mining investments.

Thus, the thesis' findings lead to the conclusion that the impact of large-scale gold mining in Tanzania is beneficial in terms of volume of investment, technology transfer and export revenue, but less positive in terms of contributions to growth and poverty reduction. The country's highly attractive mining investment policy coupled with a relatively stable political environment and sound legal and fiscal policies—introduced during the period of economic liberalisation—has provided strong incentives for FDI. Although the earliest organised prospecting and mining took place prior to independence (key gold discoveries were made in 1894), production was insignificant until the economic liberalisation of the late 1980s and 1990s. Part of the reason for the poor prior performance of the industry is the 1968 nationalisation of the mineral sector and the failure of the State Mining Company (STAMICO) to develop the sector (blamed on inadequate human and capital resources). The legal, financial and market reforms provided new impetus for foreign and local investments, especially in mining. Thus, FDI inflows grew considerably in the second half of the 1990s when the accumulation of market-oriented reforms reached critical mass. It provided a sound enabling framework for attracting FDI, triggering a positive response from private foreign investors abroad, largely focused on gold mining. The implemented reforms redefined the role of the government as regulator, promoter, facilitator and service provider. The ending of the state monopoly opened up opportunities for any citizen to register claims and sell minerals. Subsequently, the number of artisanal and small-scale miners increased enormously.

Before the reforms, domestic private companies, small-scale miners and artisanal miners accounted for about 10% of total mineral production in Tanzania, equivalent to $55 million per year, with agricultural cash crops principally dominated exports. The entry of

FDI in mining considerably improved mineral production: today the country's exports are dominated by mineral products, with gold enjoying phenomenal growth. FDI in mining implies the transfer of the right to the mining area in exchange for some economic rent paid to the government. Economic rents from natural resources are known as 'resource rents' since they are derived from natural resources. In the case of mining, resource rents encompass all direct revenues (taxes and fees from mining activities) paid to the government for the privilege of using and developing the country's mineral resources.

Government revenues from major mining operations have been increasing consistently since 1999, from about $2 million to over $66 million in 2005 (Figure 5.3). The increase in revenue is notable, despite the fact that most large-scale mining projects (including BGML and GGML) are in their early stage of operation. Actual revenue to the government from these mining operations averages between 3.1% and 4.3% of total yearly domestic revenue. This has prompted many observers (Curtis & Lissu, 2008; SARW, TWN Africa, TJN Africa, Actionaid & Christianaid, 2009) to conclude that exploitation of Tanzania's mineral resources does not principally benefit the development of the country, but rather the foreign investors, as the overall contribution to GDP remained under 4%, despite the impressive growth of the mineral sector (Table 5.2).

Large-scale mining investments have created new jobs, albeit in limited numbers. Their limited contribution to local employment is partly due to the capital-intensive nature of production in large-scale mines. Another reason is that large-scale mining companies (such as BGML and GGML) usually recruit labour outside of the mining site (largely in the commercial capital, Dar es Salaam). Sometimes labourers are brought in from countries with a history of skilled mining, such as South Africa, Australia, Canada, Ghana and Namibia. According to World Bank research, mining employment fluctuates with production levels and may not be a sustainable source of long-term employment for Tanzania (World Bank, 1992). As said earlier, most companies have not yet recovered their capital expenditure, and therefore are yet to start paying corporate profit taxes (OPM, 2009).

The comparative 10 year analysis (1999-2009) concludes that employment in small-scale mining is inversely proportional to employment in large-scale mining. Employment in small-scale mining has taken a nose dive, with the associated loss of income totalling $44 billion. Compared to the $1.2 billion earned by workers in large-scale mining, it is a staggering 36 fold reduction (Figure 5.5 and 5.6). Employment has fluctuated considerably for Tanzanian professionals and other cadres, particularly as the sector became more capital-intensive (Table 4.1). Thus, I support the argument that the development of large-scale mining in Tanzania has made significant contributions in some aspects (production, revenue, technology and exports), while, on the other hand, there is limited progress in terms of growth (contribution to GDP and employment).

Mining legislation reform and its implications for economic growth

Tanzania overhauled its mineral law in order to align itself with the new neoliberal market economy. The reform aimed to enhance the institutional capacity for effective supervision, regulation and monitoring of mining production. Tanzania is a very attractive destination for multinational gold mining corporations, because it offers clear incentives to foreign investors, such as royalties of only 3% of the 'net back value' of exported gold (URT, 1998, p.133); corporate income tax of 30%; a 10% withholding tax on dividend and no tax on expatriate salaries and no import duties or value added taxes (VAT) and many others benefits discussed in Chapter 4. Tanzania's mining policy regarding redistribution of mining revenues between the state, corporations and their investors was reformed. It is the most liberal of its kind in the world, providing very favourable conditions for investment without guaranteeing substantial government revenue (Otto, 1997; Campbell, 2004; Otto *et al.*, 2006). Mining companies are exempted from import duties or value added taxes, allowing them to import or export billions of dollars in capital goods or gold without paying taxes (Emel & Huber, 2008).

The royalty tax rate of 3% is one of the lowest in the world (Otto, 1997; Campbell, 2004; Otto *et al.*, 2006). Legislation that permits mining companies to carry forward losses indefinitely makes Tanzania even more attractive: a company that never shows profit,

never has to make income tax payments. Apart from the royalty tax, the only other fixed payment for the Tanzanian government comes from mining licensing fees, which are insignificant in relation to the size of the industry. For instance, in 2005 Tanzania received an estimated $30 million in royalties and corporate taxes, while the companies produced $640 million worth of gold (Tanzanian Chamber of Minerals and Energy, 2007). Assuming that production costs account for half of the total value (a very generous underestimate), profits are still very high—ten times above government rents (Emel & Huber, 2008).

Attracting FDI is an achievement in itself and should be evaluated separately from the distribution of wealth. With record high gold prices (estimated at $700 per ounce)[2] and expectations that they will stay high because of growing demand from China and India, the absence of windfall profit taxes and higher royalties confirms that there is a persistent relationship of disproportionately benefiting from gold exploitation—private investors gain much more than Tanzania. The strategic risk notion in neoliberal thinking situate the 'landlord' (the Tanzanian government) at a disadvantage in this struggle over distribution of wealth from natural resources. Despite its achievements in attracting FDI, the current policy framework in Tanzania is not adequate for sound management of natural resources and the mitigation of negative externalities.

Effects of gold mining on livelihood in the LVGB

Gold mining changes livelihoods in LVGB

The second research question of the thesis dealt with the effects of gold mining on the livelihoods of the communities in the Lake Victoria Greenstone Belt. The question was supported by four subquestions (Table 3.4), which sought to assess changes in livelihoods of the Sukuma people (the dominant group in the area) during key periods: pre-independence, post-independence socialist and economic liberalisation (the first and third subquestion). The first subquestion also investigated the influence of mining development

[2] Gold prices are volatile and have been going up steeply in recent years. For instance, during our fieldwork in 2007, the estimated price per ounce stood at $700, while the autumn 2010 price was almost double—$1,377 per ounce.

on livelihood in LVGB. The second subquestions identified the perceived socio-economic impacts on the local neighbouring communities. It specifically identified the environmental, health, social, cultural and economic effects of gold mining on the LVGB. The questions were prompted by the argument that the development of large-scale mining in the LVGB has influenced social and environmental conditions (Akabzaa & Darimani, 2001). The findings of the thesis confirm that there are clear changes in livelihoods in the mining neighbourhoods of LVGB, noting socio-economic improvements in comparison with similar rural communities (despite the environmental and health concerns reported). The findings also noted that government and mining companies are taking steps to mitigate the adverse effects of mining activities and to ensure that TNCs implement responsible mining practices.

The Sukuma people settled large areas of land covering Mwanza, Shinyanga and Tabora. Recently (in 2007) they also further expanded to Rukwa, Kagera, Mbeya, the Coast and Mtwara regions, as pastoralists were removed from the Ihefu wetland. Population pressures and increased awareness of market potentials—especially cotton—prompted significant changes. Previously the Sukuma were solely dependent on livestock (sheep, goats, cattle, and donkeys) and crop farming (cotton, potatoes, legumes, maize, sorghum, sesame and vegetables), and were organised under communal land ownership, characterised by unrestrictive individual ownership under chiefdoms. Their villages consisted of scattered households with strong social networks *nzengo* or neighbourhood groups. Under colonial rule most of these local traditional structures were reformed; a process that accelerated their disappearance. Agro-pastoralism was the main mode of livelihood among the Sukuma at pre-independence period. Their reliance on cotton as the main cash crop has weakened in recent years, due to meagre returns (which can be blamed on declining cotton prices and inefficient marketing). Now, food crops are replacing cotton as primary cash crops. Trading of agricultural crops—mainly maize and rice—has emerged as important non-farming activity, whereby rice is sold and maize is bought.

Customary land tenure is still dominant but is severely threatened by population pressures, land scarcity, disappearing land reserves and the market economy. The 'villagization policy'[3] increased population density and distance to the farms, which affected agricultural practices and led to the abandonment of traditional farming systems that were important for restoring soil fertility (e.g., fallowing). Now people acquire land through buying, hiring and borrowing. Public land for grazing has been transformed to farmland in direct response to escalating demand for arable land. The severity of land scarcity in Sukumaland is rooted in the population increases and the competition for land among different social groups and economic activities. Insufficient land, poor land use planning and land alienation to private large-scale mining as well as to other commercial land uses (e.g., plantation farming) are responsible for the uncertain future that farmers and livestock keepers now face. They must seek out new ways to secure livelihood.

Among the Sukuma wealth differentiation traditionally was centred on agricultural performance; however, recently many people have grown uncomfortable with agriculture and see no future in it (the result of a number of causes: insufficient capital, shortage of labour, land scarcity and unreliable markets). Hence, new ways for securing livelihood are gaining importance, such as employment in private large-scale mining and small-scale mining sectors as well as trading. Ownership of assets (e.g., plots of land, cattle and a modern house) is viewed as an important indicator of success. There is a general shift from community indicators of wealth towards individual indicators.

Thus mining emerged as an important non-farm activity for individuals who have no other resources than their own labour—the *kijungu-jiko* group. The youth involved in mining are largely primary school and secondary school leavers. Women also participate in non-farming activities, but mainly connected to traditional female roles, such as food vending, brewing, firewood collection and water fetching. Large-scale mining companies are a relatively new phenomenon in Sukumaland and are offering opportunities to the

[3] The 'villagization policy' was one of the milestones of the famous Arusha Declaration. It aimed to transform rural life by increasing agricultural production through organised *Ujamaa* villages (communal settlements).

community to move out of their agriculture base. However, as indicated by ethnic diversity data, most miners are migrants from other parts of the country (Table 2.1). The majority of the local communities living in mining neighbourhoods are primary school leavers, while smaller proportions attended secondary or college level education. This is an unfavourable situation for the local population as far as employment in large-scale mining is concerned. They lack skills and knowledge to find work in the advanced technology mining plants and cannot compete with other skilled job seekers. Therefore, local people have very limited job opportunities in the mines. Nevertheless, the thesis concludes that the livelihoods of mining neighbourhoods were significantly shaped by large-scale mining development, as it helped push the population to search additional strategies for securing livelihood (also hastened by population increases and land scarcity).

Environmental and health impact of large-scale gold mining

The main challenge associated with mining in Tanzania is to ensure sustainability and to integrate environmental and social concerns into mineral development programmes. Sustainable mining requires balancing the protection of flora and fauna as well as the natural environment with the need for social and economic development. It seems this trade-off is not being achieved; as this thesis and several other studies have documented, serious negative environmental impacts are associated with small- and large-scale mining in Tanzania (Mwaipopo *et al.*, 2004; Kulindwa *et al.*, 2003; Van Straaten *et al.*, 2000; Appleton *et al.*, 2004; Drasch & Boese-O'Reilly, 2004; Law Reform Commission, 2001). The 2001 Government Law Reform Commission stated that 'while it is true that small-scale mining endangers the environment, it is also true that large-scale mining is even more damaging' (URT, 2001).

The massive scale of TNC mining operations is responsible for the size of the negative impact on the environment. For example, Chapter 6 observed that environmental concerns over destruction of rock material see it as the cause of major damage to the local environment. Specific environmental concerns include soil erosion and degradation, air

pollution, water pollution, mercury, cyanide and other chemical spills as well as noise pollution. Dust pollution in the area around the Geita Gold Mine has polluted the drinking water supply of nearby villages. Deforestation is another negative impact, as large-scale mining already cleared substantial tracks of land (Kulindwa *et al.*, 2003; George, 2003). The example provided in Chapter 6 indicated that 70% of GGML's special mining licenses are for locations in Geita Forest Reserve. Already a significant portion has been cleared to make room for the plant, housing and infrastructure. The evidence already shows visible adverse environmental effects, ranging from direct observable noise and erosion to the build up for long-term pollution in the air, water and soil. The disturbances have serious consequences on the health of the inhabitants of this region.

The thesis further cited BGML and GGML as prime examples of multinational corporations' engagement in natural resource development, and how their activities have resulted in further impoverishment, marginalisation and violation of the rural communities living in mineral-rich areas (Boxes 6.1-6.4). However these incidents also have made Tanzania aware of adverse environmental consequences. In this regard, the National Environmental Management Council (NEMC) has taken actions to provide guidance and advice on environmental issues. The present regulatory framework for environmental protection, the 1983 National Environmental Act, was reviewed in order to ensure proper and adequate supervision of the environmental aspects of mining operations. Currently Tanzania has drafted national environmental impact assessment guidelines and requires all mining operations to prepare environmental impact assessments for their investments.

With the aforementioned problems notwithstanding, it should be emphasised that most mining TNCs in Tanzania do comply with environmental standards, as prescribed by the 1998 Mining Act (which stipulates environmental management plans and conducting environmental impact assessments as pre-requisites for being awarded special mining licenses). Environmental management plans include proposals for preventing pollution, waste treatment, protection and reclamation of land and water resources as well as for the elimination or mitigation of adverse environmental effects. Nevertheless, the thesis

uncovers that environmental standards are not given the same (high) level of priority as the need for fair distribution of mineral revenues: not because they are not important but because of the pressing immediate need to reduce poverty. (Environmental pollution is seen as having impact in the long-term.)

Social impacts of large-scale gold mining

Mining has both positive and negative social impacts, similar to its environmental and health impacts. This thesis has demonstrated that mining operations are 'successful vehicles for social integration', as they attract migrant labourers from all over the country and abroad. Mining communities, therefore, have become much more diverse than the typical Tanzanian village. Mining localities are associated with highly mobile populations, which through the actions of mining, trade and consumption create connections within the region and between rural and urban areas. This process has unleashed various social ills, such as prostitution, increased crime and drug use. Mining neighbourhoods have also become more like townships and urban centres, where increased living costs are placing many basic amenities beyond the reach of people with average incomes. This is blamed on a group of high-income earners; their presence stimulates price inflation for the majority of goods and services in the neighbourhoods. Average household expenditures fall above most urban centre and Dar es Salaam households, and are much higher compared to similar rural areas prior to mining development (Table 5.6).

Several factors are cited as explanation for the high prevalence of HIV/AIDS in mining neighbourhoods, including lack of awareness, a carefree attitude, widespread prostitution, and lack of access to quality health services (Kulindwa *et al.*, 2003). George (2003) found that similar problems fuel the spread of HIV/AIDS also in GGML neighbourhoods. The HIV/AIDS problem cuts across all sectors in Tanzanian society and is not specific to mining areas; however, mining operations often provide favourable environment for dangerous expansion of HIV/AIDS.

Generally, socio-demographic indicators in mining neighbourhoods reveal that general well-being is improved compared to similar rural areas and urban centres without mining investment. The household size is slightly below the national average, except for some villages where it is slightly higher (Nyakabale and Igwamanoni). The dependency ration is higher than the national average, because most households in mining neighbourhoods have many members living together. This tendency increases the likelihood of poverty among these households and therefore poverty incidence at household level is still high. It was also discovered that significantly fewer women are involved in mining activities than men. Considerably more men live in mining neighbourhoods (85% men to 15% women), because the hard manual labour required by mining primarily attracts young male migrant labourers. Some women do find work in mining related activities.

Housing characteristics of mining neighbourhoods reflect the affluent state of the neighbourhoods compared to other rural areas and urban centres (NBS, 2002). Conditions in GGML are much better than in BGML. Nearly 60% of households own houses roofed with corrugated iron sheets and asbestos; the rest have grass-thatched roofs. The thesis showed that the remaining 40% population falls below the basic needs poverty line, which corroborates the NBS 2002 findings. Other basic needs (clothes and food) were not discussed at length in the thesis. The quality of building materials is above the national average of 43%, while water is mostly provided from unprotected sources and is below the national average of 45% (NBS, 2002). The primary cooking fuels are firewood and charcoal; paraffin and electricity are rarely used. The percentage of electricity consumers stands at 16% and is above the national average of 12%. Electricity is primarily used for lighting and operating domestic appliances. A small percentage of the population uses private diesel generators.

Despite the lack of clear links with other sectors of the economy, large-scale mining companies do indirectly create employment opportunities through infrastructure investments, especially in the water, health and roads sectors. Another contribution is their investment in enhancing the skill of the local population. Skill inadequacies and shortages have long been a key challenge to development (ESRF, 2002; UNCTAD, 2001;

World Bank, 2001; Wangwe, 1999). Although literacy rates are improving—moving from an estimated 67% in 1999 to 84% in 2005—much remains to be done (URT, 2005). Some other studies of Tanzania's experience are less optimistic and point to the need for government and other stakeholders to step up their efforts to equip workers with the necessary skills for the local and global labour market (URT, 2003). Kweka (2007) documented that the on-the-job training administered by enterprises in Tanzania is mainly geared at compensating shortages of skills in the industry, despite the existence of well-educated manpower.

With skill shortages limiting productivity and growth, FDI is expected (at least in the short- and medium-term) to be the prime source for development of Tanzania's human capital and of new technology. The literature assesses FDI impact not only on its effect on multiplying jobs and increasing wages, but also on its performance in encouraging investment in human capital through the transfer of skills (training) and knowledge to the local workforce (Kweka, 2007; Mutagwaba *et al.*, 1997; OPM, 2009). All large-scale mining companies administer some type of training to their staff in various fields: geology, mining, electrical and mechanical engineering related to mining operations; mining techniques and safety measures; processing; finance and management (see Chapter 7). Jenkins & Thomas (2002) stressed that, because technical, entrepreneurial and managerial skills are scarce in the country, the training of local personnel by foreign subsidiaries could bring about considerable diffusion of these skills. The findings of this thesis strongly support their argument.

Corporate social responsibility and local economic development

The third research question concerned the linkages between gold mining and local economic development and was accompanied by three subquestions (Table 3.4). The first subquestion sought to provide a review of corporate CSR strategies and policies as well as to identify CSR practices and delivery approaches. The second subquestion examined the nature of private-public partnerships between mining companies and CSOs, NGOs, CBOs and local government in mining locations. The third subquestion was meant to track the multiplier effects of gold mining development in the LVGB. The questions were

prompted by the argument that the mining sector has weak links with the local communities and the national economy (Kweka, 2007). The thesis' findings reveal that mining companies have influenced socio-economic development through their corporate CSR policies and interventions as well as through multiplier effects from the influx of various traders and contractors who flocked to mining neighbourhoods after the development of large-scale mining in these rural areas.

Thus, the thesis' findings indicate that large-scale mining companies provide benefits for local communities where they operate. Driven by their CSR principles, mining companies are helping their respective local communities improve roads, health, education facilities and water supply systems. Expenditures in social-economic infrastructure are important in supporting the community's efforts to fight poverty at local levels (Chapter 7). While the amount—cumulative total of $35.8 million spent on CSR activities (Table 7.1)—seems small compared to the total of $2.5 billion invested in mining projects, the impact is substantial (partly because poverty is so widespread in most rural areas). According to a study by Phillips *et al.* (2001), perhaps the most important impact is the indirect benefits from the expansion of mining activities in these areas. The thesis shows that the liberalisation of mining (and the subsequent expansion of mining activities) in Tanzania contributed to reducing poverty in rural areas in the 1990s, far above the impact of donor funded job creation efforts. Secondary business opportunities have been an important incentive for job creation in the vicinity of both large and artisanal mines. Miners and supporting communities need temporary lodging, restaurants, equipment and supplies, transportation, and health and other services.

Both BGML and GGML have made important social-economic investments in the local community, totalling $5.9 million between 1999 and 2005 (Chapter 7). These included support for education ($285,785); improvement of health facilities ($499,869); construction of water pipeline from Lake Victoria to the Geita Gold Mine ($2 million), which provides water to surrounding villages; and construction of the Kahama-Geita road ($2.6 million), which has opened up the Kahama-Geita corridor improving communication links; as well as providing support through microfinance ($115,677). In

addition, 1,923 workers have been trained at a cost of $2.4 million. These are voluntary contributions by the company but are an important supplement to state efforts to provide social and welfare services to rural communities.

General conclusion

The main objective of the thesis was to analyse the direct and indirect impacts of FDI in the gold mining sector on local livelihoods, the regional and national economy. The thesis' findings indicate that in general large-scale mining investments have a positive impact on development, although this impact is limited in extent and limited to specific areas. Three aspects should be emphasised when analysing the direct and indirect impacts of large-scale mining in Tanzania. First, the impact on export revenue, employment, technology, skills and knowledge, and government revenue is significant relative to the low base from which the industry started in the late 1990s. Second, regardless of the massive revenues accruing to multinational corporations and the environmental degradation associated with mining operations, there is notable positive impact on livelihoods in local communities (through high-paying employment, various socio-economic services and infrastructure). Third, the developmental impact of FDI in mining is stifled because it is not substantially connected to the national economy and does not provide multiplier effects (contrary to the claims of 'trickle-down' theory). However, this is to be expected: links with the national economy are poor due to the country's low level of industrial development, shortage of skilled labour and poor infrastructure. Table 8.1 presents a comprehensive framework of the impact of FDI on Tanzania; it examines FDI's positive and negative impacts by revisiting the multiple economic, policy, social and environmental impacts examined in this thesis.

Table 8.1 The positive and negative impacts of FDI in the gold mining sector

Criteria	***Positive impact***	***Negative impact***
Economic impacts		
	Created employment in large-scale mining (8,000-12,000) between 1999-2009	Reduced employment by 1,400,000 jobs in small-scale mining between 1999-2009
	Workers in the large-scale mine are paid competitive income (total income earned $1.2 billion during 1999-2007 period)	Small-scale mining lost $44 billion in income (reduction of 36 times)
	Mining offers more opportunities compared to other utility sectors, such as water, gas and electricity	Generally, people from areas outside of the local villagers in mining neighbourhoods work in large-scale mines. The local population lacks the required skills and education. Only a few can find opportunities in large-scale mining and most work as day labourers.
	Increased production output from large-scale mining as FDI provided access to technology and good management	
	Increased value of mined minerals due to booming prices	
	FDI enabled modernisation of Tanzania's mining sector by introducing state of the art technology, know-how, machinery and operational capital, enabling ore excavation from thousands of feet below ground	
	Increased foreign currency income from mined products as minerals have dominated exports earning due to rising prices	Reduced agricultural contribution to export earnings due to low market prices on world market (despite its important contribution to GDP and GNP)
	Increased government revenue from $2 million to $66 million	Relatively low increase compared to the potential (due to low tax rates and tax breaks offered to investors)
		Limited growth in terms of GDP and GNP compared to sectors like agriculture and manufacturing (3.1%-4.2% GDP). Less than 10% as was stated in the 1997 Mineral Policy.

	Increased FDI stocks in mining, especially gold (doubled from $2.78 billion in 2000 to $5.94 billion in 2007). Tanzania attained middle ranking among African FDI recipients, behind key oil producers and South Africa.	
	Increased growth in mining sector (faster than other sectors of the economy—with gold mining enjoying phenomenal growth)	
	One hundred percent foreign owned (private ownership), ending government dominance in the mining sector and other business sectors in Tanzania	Government lost ownership over the mines
	Increased benefit to local supply chains by locally buying and contracting services	
Policy impacts		
	Stable political environment with sound legal and fiscal incentives made Tanzania popular with foreign investors	Less popular among local investors as few incentives are offered to local investors. Due to the low tax rates and tax breaks, the government is not guaranteed substantial tax revenue.
		Limited linkages with other sector of the economy make it difficult for benefits to trickle-down to the poor.
	Increased control and management of mining claims through licensing and mining rights	
	Changed the role of government to promotion, regulation, facilitation and service provision; restored trust among foreign investors and ended the government monopoly	

Social impacts		
	Increased non-farming activities and diversified income sources in mining neighbourhoods	Competition for quality labour between mining and agriculture
	Maize and rice became tradable products as the population of mining neighbourhoods grew and less people were engaged in agriculture	Less people are engaged in agriculture, which implies high risk of food shortages in mining neighbourhoods
	Frees up land resources for use by investors through special mining licenses	Land become scarce, thus loss of grazing and farming plots for local residents, and dislocation of large numbers of households
	The population grows rapidly and market opportunity emerge	Population surges lead to increased social ailments, like crime, prostitution and drug use
	Increased individualisation of all aspects of life	Increased living costs make life difficult for poor and middle income households
	A segment of the population became affluent with the earnings from the sector and could diversify away from agriculture. The inhabitants enjoy improved well-being, compared to other similar rural setting (even though, poverty levels still remain high).	Widens the income gap among the residents of the mining neighbourhoods. Increased incidence of STD, especially HIV/AIDS
	Mostly men participate due to the labour intensive nature of mining work	Less employment opportunities for women
	Mining companies increasingly assist in strengthening socio-economic infrastructures, such as roads, health, education and water supply in mining neighbourhoods through CSR initiatives	CSR spending is almost insignificant compared to the value of capital invested and amount of returns or foregone revenue.
		Disrupted social networks (*nzengo*) due to relocation of communities
		Seriously affected food production for smallholders that lost their farms due to relocation, bringing reduced income and increased uncertainty for these household

Environmental impacts		
	Mining companies have comprehensive plans to mitigate and monitor environmental damage	
	Reduced environmental damage from small-scale mining due to replacement by large-scale mining	
		Considerable disruption of land areas (estimated 40-60% of land) by the end of mining operations
		Deforestation leads to changes in soil characteristics and fallow practices due to land scarcity
		Causes pollution in mining neighbourhoods (dust, noise, chemical contaminations)
		Increased structural damages due to explosions and blasting of rocks
		Increased incidence of infectious diseases due to mining activities (malaria, tuberculosis, eye and skin ailments, and HIV/AIDS)
		Increased concentration of heavy metals, above WHO prescribed standards in plants, water and soils. Ultimately the heavy metals find their way to the foodstuff for people and livestock.
	Devised National Environmental Management Council (NEMC) to put in place, regulate and monitor environmental norms with drafted EIA guideline	
		Loss of life—deaths of people and animals attributed to pollution in mining neighbourhoods
		Environmental standards and concern are not given higher priority than the economic aspects of immediate needs for poverty alleviation

The impacts in Table 8.1 reflect the historical background of Tanzania's political economy and the dynamics of FDI and private property ownership in general. By adopting the liberal economic model, Tanzania eliminated the policy of direct government control over the economy, established after the Arusha Declaration in 1967. These liberal measures were meant to lure investors (they stayed away during the period of socialist policy) by offering them lucrative incentives and protection for investing. Therefore, the government had to forego some of the benefits it used to enjoy, in order to subsidise investment and secure longer-term benefits (20-25 years). The lucrative incentives were intended to restore investor trust and facilitate the flow of FDI into Tanzania, while establishing a favourable environment for investors to realise profits (which was successful accomplished).

In the same period, the country lowered tax rates and exempted mining companies from paying some taxes (among other incentives), to ensure that mining investment are established in Tanzania. Thus, current tax revenues fall notably below the potential; however, this is offset by increased production and exports as well as the gains in technology and know-how enjoyed during the first decade of FDI influx. This is an indication of anticipated revenues in the next ten years: as more FDIs are expected, the government stands to harness more benefit. The effects of mining will hardly be felt in other sectors of the economy, especially during the first decade of investment, largely due to the relative small size of the mining sector. However its significance is highlighted by the fact that it is a substantial share of export earnings, partly due to the current boom in mineral prices.

Social and environmental concerns are equally important when analysing mining policies and sustainability of large-scale mining operations in Tanzania. Gold mining helps to tackle poverty by helping develop local economies, for example, by introducing new supply and distribution chains, trading and outsourcing markets (Blomström & Kokko, 1997, 1998; Markusen *et al.*, 1997; Kabelwa, 2006). The resulting income and employment (despite being small) have an impact on poverty levels, in particular helping reduce income poverty of the local communities. Those destitute who manage to secure

employment in these mining companies or the supply chains can reduce their poverty. In addition, through CSR initiatives the companies have supported health and education services, which help reduce poverty in the long run by improving the well-being and capacity of rural communities.

Furthermore, gold mining has diversified local economies by encouraging secondary business activities. These secondary businesses have multiplier impacts on employment and services to the local population, which would not be there without the large-scale mining operation. Mining companies have also established and improved infrastructure and social service facilities, which can be easily accessed by poor communities in mining neighbourhoods.

Nevertheless, there are also some negative effects—also negative economic effects—from gold mining. These include the large-scale transfer of revenue out of host country and exclusion of local businesses, inhabitants and products, which results in loss of income for the displaced (Kabelwa, 2006; Luvanga & Shitundu, 2003). This thesis does confirm that FDI and the associated CSR activities do play a role in reducing poverty; however, due to the process of globalisation, modernisation and application of new ICT, the poor may not automatically benefit from poverty reduction through FDI activities (gold mining). It should be noted that gold mining is a complex industry and a small component of Tanzania's economy. Gold mining is driven by the private sector—often by large multinational companies that may have little or no interest in ensuring durable poverty alleviation among the local population. There are also leakages of mining revenue, through importing skilled labour and luxury products, repatriation of profits by multinational companies, and the considerable role of marketing, transport and other services based in the FDI home country. However, in general this thesis supports the theory that FDI and CSR in combination with good partnerships at community, CSO and government levels can reduce poverty.

There is also growing prevalence of HIV/AIDS infection in communities surrounding mines. Mining operations have indirectly contributed to the growth of small market towns with young affluent men and women, increasing the risk of spreading the epidemic. The HIV/AIDS problem, however, cuts across all sectors of Tanzanian society, threatening to slow economic growth and wipe out gains in life expectancy. Environmental concerns are related to soil erosion and degradation, air pollution, water pollution and noise pollution. Although GGML and BGML have conducted their EIAs, much remains to be done to eliminate cumulative adverse social and environmental effects, in order to achieve sustainable development in the LVGB.

Tanzania's mining policy and legal framework is favourable to TNCs but less so to local mining companies and small-scale artisanal mining operations. The new policy has added Tanzania to the list of countries that enjoy special treatment by international insurance agencies. The fiscal regime is also overly pro-investor, without adequate provision for fair and equitable distribution of the benefits of mineral resources between investors, government and local communities. More importantly local investors in Tanzania feel largely neglected by the policy, protesting that they enjoy relatively few incentives. Two conclusions are worth noting in this case. First, the provisions offered to foreign investors are not applicable to local investors—they are deliberately designed to promote increased flows of FDI in the economy. Second, size is important in being eligible and ultimately securing lucrative fiscal incentives. Compared to TNCs, local investments are much smaller in terms of value and most of them are artisanal. Consequently, they are not eligible to benefit from these incentives. The incentive system consists of deliberate fiscal measures that do not seek to achieve equity but rather to realise certain macroeconomic goals. Nevertheless, collectively, local investors make up a significant portion of the industry. Despite wielding smaller capital value, they have substantial impact, especially regarding reinvestment of mineral revenue in the economy, tax revenue and job creation.

Policy recommendations

Based on the conclusions above, the following broad recommendations can be made.

Mining policy and associated laws should be reviewed in order to assure fair and equitable sharing of proceeds from mining

Despite the sector's fast FDI fuelled growth, the sector can play only a limited role as an engine for growth and poverty alleviation. The feasible way to address this problem is three fold. First, mining policy and laws need to be regularly reviewed, in order to assure that they provide fair and equitable sharing of mining benefits among investors, government and local communities. The review should ensure honest recording of mineral revenue and revision of low royalty tax rates. Second, Tanzania's government should engage in further dialogue with multinational corporations in the mining sector in order to persuade them to reinvest a larger portion of their profits in the country. Third, Tanzania's government should provide a framework for better and more effective implementation of CSR principles.

Activities that add value to mining outputs should be promoted

Most minerals mined Tanzania are shipped abroad without being processed. As primary producer and exporter, Tanzania currently earns lower returns than it could from the sale of processed minerals. The practice of exporting unprocessed minerals also reduces the opportunities for 'trickling-down' benefits and technology into the local economy. Encouraging value-adding activities will create more jobs for Tanzanians and will enhance the position of mineral resources in the nation's economic development. Therefore, the government should help and assist (also through improved regulation) domestic industries in improving their capacity to take on value-adding processing activities such as gemstone cutting, particle separation and grading, refinery, blending, recycling and fabrication to name a few.

The links between large-scale mining operations and the local and national economy should be improved

Multinational mining companies have brought some improvements to local communities, for example, by providing basic infrastructure. However, the expansion in the mining sector did not trigger significant local economic growth, partly because mining operations are generally detached from local and national supply chains. By creating avenues for local investors to enter into partnerships with the owners and management of the TNCs, the government could greatly improve the links between large-scale mining and the local economy. Therefore, the government should institutionalise joint-venture partnerships between TNCs and local owners of mining land, and let local authorities administer mining licenses directly. This will forge tighter partnerships between companies and local government and will further allow local government bodies to retain substantial share of licensing revenue.

Conduct strategic social and environmental impact assessments

Most TNC mining projects are located within the Lake Victoria Greenstone Belt. The current practice is for each investor to conduct an independent social and environmental impact assessment for its projects. Such assessments are likely to miss the cumulative social, economic and environmental effects associated with mining operations around the LVGB as a whole. Therefore, a strategic social and environmental impact assessment for the entire LVGB would effectively integrate the environmental, social and economic impacts of mining projects in the area. In addition, a strategic environmental impact assessment could facilitate strategic decision-making, including spatial planning; improve the quality of policies, plans and programmes; and ultimately foster sustainable development of the mining areas and LVGB.

Further research

Future research should focus on the relationship between profit, corporate income taxes and CSR as well as its implication on foreign mining companies. CSOs, NGOs, media and members of the public have repeatedly protested the current situation whereby large-scale mining companies reap much greater profits than what they give back to the community. This observation is supported by the findings of this thesis. It is assumed that the state would have benefited more if the companies had paid higher taxes and these taxes had been reinvested in social and economic infrastructures to support the economy. Future research could help establish clear linkages between FDI and its full potential as agent for poverty reduction in Tanzania and other African countries. A good example of such initial studies is Jansen's (2009) analysis of corporate behaviour in Ghana's gold mining sector, but more research is sorely needed.