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MINERAL EXPLOITATION AND SOCIAL ECONOMIC GROWTH IN GOMA MUNINCIPALITY, NORTH KIVU, DR CONGO

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Abstract: *The purpose of this study was to investigate mineral exploitation and social economic growth in Goma Municipality North Kivu, Democratic Republic of Congo. It set out to determine the effects mineral exploitation on infrastructure development and expansion, employment creation and income generation as key drivers that influence standards of living of people in North Kivu. The study adopted a descriptive design, targeting provincial administrators, mining companies and individuals, NGOs and religious institutions involved in Mineral business and trade in the Goma. Using Stratified Random sampling technique and Cochran's formula, the study sampled 91 participants and data were collected through interviews, observation and key informants. The SPSS package was predominantly employed to analyze quantitative data while the qualitative responses were categorized in themes and processed qualitatively. Data are presented in frequency tables, graphs, pie charts and bar graphs. The study found that, mineral exploitation has led to amassing of wealth by many individuals leading to establishment of good high class real estates, transport companies and communication facilities. Beside development of infrastructure, mineral exploitation destroys water transmission in the city, blockage of drainage system and corrosion although most of the effect of mineral exploitation is environmental degradation as well. The study recommends that the government should restructure and control the mining sector through proper licensing and taxation to ensure that all the investors enjoy equitable share of the business and reduce the black market deals. Mineral mining should be the heart of wealth redistribution to help the marginalized and poor community members to access the necessary services like education, health care and social security among others like safe drinking water and above all, a stable system of governance. Government should also facilitate learning in higher levels like university for more skills and all genders should be protected and given opportunity to work according to skills and qualifications they possess. The Government should set strict laws to conserve the environment around the mining areas for the future generations not to suffer the consequences of the current poor mining practices.*

Key terms*: Mineral, Mining, exploitation, social economic growth, Wealth, Employment, social security*

1.1 Background of the Study

Mineral exploration plays a vital role in the economic development of many countries. Historically this has been the case in many parts of the developed world, and while mineral development is an important factor for economic growth it can also, if done responsibly, be a catalyst for social growth in developing countries (Walser, 2012). There is no doubt that mineral exploitation can be an important source of foreign exchange and fiscal receipts for governments, providing an adequate legal and fiscal framework is in place. When well- managed, these resources can be used as an engine for overall economic growth and the outcome of mining operations can thus produce a significant impact on national economies, as in the cases, for example, of Chile, Peru, Botswana, Ghana, Mali, Papua New Guinea and others (Walser, 2012). Another important economic impact of mineral exploitation can be measured in terms of employment and income generation. Commercial-scale mining provides employment and skills transfer to more than 2 million workers with, in addition, an employment multiplier effect by a factor from 2 to 5. While mostly a poverty-driven activity, small-scale mining provides income to about 13 million workers and their families worldwide, in countries such as Bolivia, Brazil, Colombia, Venezuela, Burkina Faso, Ghana, Madagascar, Mozambique, Tanzania and Indonesia, among many others (Walser, 2012).

1.2 Statement of the Problem

Minerals are important material foundations for social and economic development. As an emerging industrial country, China is at the stage of rapid industrialization and urbanization, so the consumption of minerals is increasing significantly. Ghana's mining industry contributed in no small measure to the impressive 14.4% GDP growth the economy chalked in the 2011. According to the Gold Fields Mineral Survey, Ghana was the 9th leading producer of gold in the World and the 2nd in Africa despite the 2% decrease in production from 92 tonnes in 2010 to 91 tonnes in 2011. The exploitation of minerals is an important source of income for many communities in eastern Democratic Republic of Congo (DRC). Yet this mineral wealth also plays a significant role in the continuation of insecurity in parts of the country.

Whilst recognizing that this mineral wealth is not one of the root-causes of conflict, their trade does play a central role in funding and fueling conflicts in the DRC, further weakening the already fragile government. Many scholars have focused on the relationship between mineral development and socio-economic development, drawing disparate conclusions about the effects of mineral development on society and the economy. For example, Hajkowicz et al. (2011) found that mining activity had a positive impact on incomes, housing affordability, communication access, education and employment across regional and remote Australia. However, Auty (1993) supported the concept of a "resource curse" through empirical research, Sachs and Warner (2001) confirmed this view by studying the impact of mineral exploration on economic growth in developing countries. Many studies have also been conducted across the world like Ghana, China, turkey but few published works exist from the perspective of DR CONGO. In addition, previous research tends to focus on certain categories of minerals in individual provinces, with little work addressing the national effects of multi-mineral development. So it is difficult to comprehend the complete effects of mineral exploitation and economic growth and to compare them across industries. Therefore need to conduct a study to determine the mineral exploitation and its effect on social economic growth Goma Municipality North Kivu, DR. Congo.

1.3 Study Objectives

The main of objective of this study was to investigate mineral exploitation and social economic growth in Goma Municipality North Kivu, DR Congo, to achieve this the study used the following specific objective

Specific objective

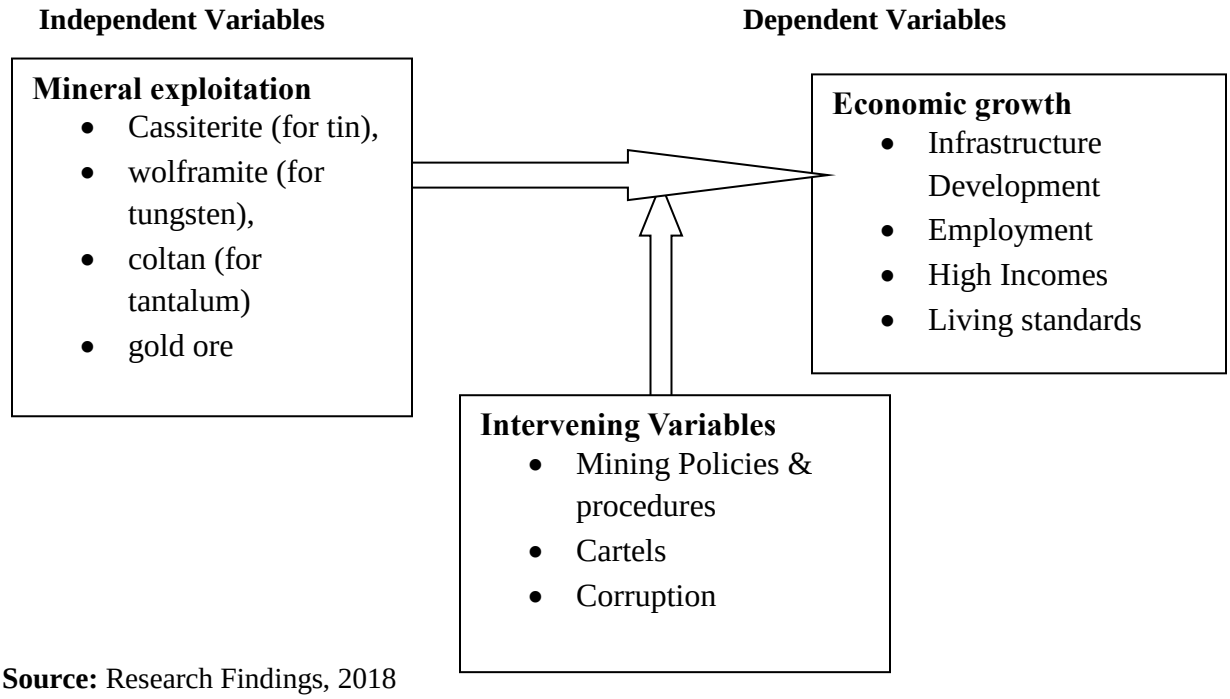
To determine the effect of mineral exploitation on infrastructure in Goma Municipality, North Kivu, DR Congo

1.4 Study Justification

Since 1996 the DRC has experienced a succession of wars and lower scale conflicts that according to a survey of the International Rescue Committee have been the cause of more than five million deaths over the 1998-2008 period (IRC 2008) and an estimated number of 1.7million internally displaced people (Internal Displacement Monitoring Center 2011). Conflict and wars have been as a result of mineral which the state and cartels as fighting for. If these mineral resources could be managed well, it is believed that DR Congo could be one of the richest countries in the world, however rather than promoting social development in the eastern part DRCongo the trade of these minerals has added fuel to the armed conflict that is the cause of much poverty and human rights violation including indiscriminate killing mass rapes, mutilations and forced child soldier recruitment. Therefore this study indented to investigate the effect of mineral exploitation and economic growth on infrastructure, employment and income and on the living standards of people in Goma municipality North kivu, DR Congo.

1.5 Conceptual Framework

The conceptual framework below (fig 1) shows the relationship between variables of the study, the independent variable, dependent variables and the intervening variables. An independent variable influence another variable, it causes an effect because they predict the amount of variation that occurs in another variable. In our case, mineral exploitation is the independent variable, mining's and procedure, cartels and corruption are our intervening variables and social economic growth is the dependent variable, depend variables are influenced; they vary as a function of the independent variable. They receive the caused effect. The intervening variables alter the effect.



Source: Research Findings, 2018

1.6 Review of Empirical Study

According to Thomashausen and Ireland (2015) study S*hared-use mining infrastructure in sub-Saharan Africa: challenges and opportunities*, highlighted the growing challenges and opportunities related to infrastructure needed for major mining projects in sub-Saharan Africa. The study show that the current depressed commodity price environment, large investments in infrastructure required to develop major, 'world-class'. Deposits is difficult to justify, causing many important projects to be delayed or cancelled. At the same time, the World Bank has identified a funding gap of US$31bn (or 5.1 per cent of GDP) annually to meet the wider-infrastructure needs of sub-Saharan Africa's growing population and economy. Emerging economies have accounted for most of the growth in global production of iron ore and nickel, and effectively all of the growth in global production of aluminum and steel. The study done in the Democratic Republic **of** Congo and Zambia, showed that Chinese investments in mining were accompanied by commitments to invest $8.5 billion in infrastructure in 2007 alone (Humphreys 2009). These investments that combine mining and infrastructure have been presented by the governments as "a major step toward ensuring that in the future the resources of the country would be used to benefit its people" (Komesaroff 2008; The Economist2008).

According to the study by Nelsen (2010) on *Sustainable socio-economic development in mining communities: north-central British Columbia perspectives*. The study showed that Mining development could create new jobs through economic development, reducing the exodus of skilled workers and nurturing the already fragile state of many rural communities, including First Nations. Recent issues over new BC mining projects and their impacts on surrounding communities prompt consideration of an approach to project planning that goes beyond simply aiming to mitigate environmental and social impacts. The opportunity exists to involve the participation of communities early in the planning process and to place greater consideration on the contribution of a project to building social capital in these mining communities. There is also the possibility to consider the role of a particular project in a more

strategic sense, as part of regional development planning that deals with wider issues, time spans and synergies relating to socio-economic development in mining communities.

In China, most scholars study economic and social effects of natural resources development from the aspect of economic growth. From the perspective of the aggregate economy Guan (2004) compared the output value of resource property with the gross output value of agriculture and industry between 1985 and 2001, and calculated the contribution of natural resources to China's economic aggregate to be approximately 30%. Wu (2006) proposed that the exploitation and utilization of mineral resources had a positive role on economic growth in Tibet by analyzing the effects of mineral development on the aggregate economy, economic growth, and industrial structure. However, some scholars have argued that natural resource development had a negative impact on social and economic development. Based on the statistical data of GDP and energy consumption from 31 provinces of China between 1985 and 2004 Han et al. (2007) found a positive correlation between energy consumption, and economic output and growth rate; however, as energy production increased, economic development declined.

A study by Amponsah (2011) in Ghana on the *mineral and economic development,* found out that the mineral sector in Ghana continues to be one of the highest contributors to the Internal Revenue Service through the payment of mineral royalties, employee income taxes, corporate taxes and ancillary levies. The responsiveness of mining companies to their social responsibilities motivates them to contribute both in cash and kind to the development of their host communities. Indeed mining companies' interest in their host communities have in recent times been expanded to include social investments projects where they collaborate with the communities to fund projects that yield both social and economic returns to the communities

Mining remains a key industry for the growth and development of the country.

According to the Price water house Coopers (2012), study *Economic Impact Analysis*, 2011, Mining Association of British Columbia. The mining industry spent nearly $5.2 Billion in British Columbia in 2010 for goods and services. These expenditures were directly related to mining and were used for operations (materials, salaries), capital (land & mining rights, construction, machinery), exploration and development, environmental control (reclamation, waste permits), and public interest (donations, grants). The economic benefits of mining extend beyond this direct spending however, since the purchase of these goods and services will stimulate further purchasing. For example, when a mining company purchases goods from a supplier, the supplier must purchase additional stock from others. Suppliers to the mining industry include heavy equipment, engineers, metal fabricating, machining, transport equipment, and water treatment. The mining industry also uses various contractors and consultants for everything from construction to accounting. In china, the exploitation of mineral resources plays an important role in promoting national economic development. Mining is an essential component of China's industrial economy. Using grey correlation method to analyze the correlative effect of mineral resources exploitation to relevant industries, using national income method to calculate the pulling effect of mineral resources exploitation to economic growth and using graphs as well as tables to analyze the income distribution effect, the article obtains active economic effect of mineral resources development in Bijie, Guizhou. Moreover, from the view of resources-cored effect, the article analyzes negative effects such as single industrial structure brought by mineral resource development. Through analysis, we find that mineral resources exploitation to some extent brings active effects including gross domestic product growth, local financial revenue growth and relevant industries development; however, its negative effects

should not be ignored. The negative effect can be lightened by diversifying industrial structure and prolonging industrial chain.

1.7 Theories Framework

New growth theory

The new growth theory is an economic growth theory that posits humans' desires and unlimited wants foster ever-increasing productivity and economic growth. The new growth theory argues that real GDP per person will perpetually increase because of people's pursuit of profits. As competition lowers the profit in one area, people have to constantly seek better ways to do things or invent new products in order to garner a higher profit.

The theory also argues that innovation and new technologies do not occur simply by random chance. Rather, it depends on the number of people seeking out new innovations or technologies and how hard they are looking for them. In addition, people also have control over their knowledge capital

Under the new growth theory, nurturing innovation internally is one of the reasons for organizations to invest in human capital. By creating opportunities and making resources available within an organization that encourages individuals to develop new concepts and technology?

For example, in our case of this study, innovation and creativity is needed in mineral exploitation, there is need to use technology and new ways of exploitation. Large mineral companies might allow part of its staff work on independent, internal projects that might develop into new innovations or companies. In some ways, the enterprise lets them to function like startups being incubated inside the organization. The desire of the employees to launch a new innovation is spurred by the possibility of generating more profits for themselves and the enterprise therefore improving GDP, living standards, trade through foreign exchange.

Natural Resource Theory

Natural Resource Theory is the economic theory of exhaustible and renewable resources. These resources last for more than one period of time and so function as a type of capital. They are also used for food, fiber and energy and so function as ordinary goods. Oil, Coal, gold etc. These provide value by being used up. Significantly, natural resources play a key role in triggering and sustaining conflicts. And the resources that generate many of these problems are largely oil and gas, diamonds, columbium tantalite (coltan), drugs, gold, platinum, uranium and other gemstones; and also timber, coffee, water, land, grazing pasture, livestock and rubber. In some cases, resource conflict is embedded in the social and economic grievance narrative. As a result, many see a ‘resource curse’ in Africa, whereby easily obtainable natural resources and commodities have essentially hurt the prospects of several African national and regional economies by fostering political corruption and feeding violence and rebellion. In our case, mineral resources in North Kivu are the exhaustible and non-renewable. These have led to conflict each and every particular time interested parties try to explore new mine field.

1.8 Research Methodology and Data Collection Instruments

The study used various methods to collecting data from the participants. The study used content analysis, observations, interviews, and focus groups. The study used both secondary and primary sources of data. Secondary sources will include online sources for instance journals, textbooks, articles both in print and online. Primary data was collected from the participants in Goma.

Content analysis is a widely used qualitative research technique. Rather than being a single method, current applications of content analysis show three distinct approaches: conventional, directed, or summative. Here, 'content' analyzed were contents associated with topic of study or multimedia material for example film/videos, photos and websites. Other content were generated from data collected by other studies. The content examined include types of minerals, mineral policies applied in various areas, importance of minerals in Goma for instance cash from minerals and the effect of mineral on the community such as creation of employment. Observational research (or field research) is a type of correlation (i.e non-experimental) research in which a researcher observes ongoing behavior. It is simply studying behaviors that occur naturally in natural contexts, unlike the artificial environment of a controlled laboratory setting (May, 2001). The researcher used classes of miners in different areas in North Kivu from which, the following were observed daily activities such as type of routine works, gender, remuneration packages for instance payment, general environment for example pollution from the mine factories and the effect on the landscape. The study used structured interview, structured interviews are essentially, questionnaires, in which a list of predetermined questions are asked, with little or no variation and with no scope for follow-up questions to responses that warrant further elaboration. Consequently, they are relatively quick and easy to administer and may be of particular use if clarification of certain questions are required or if there are likely to be literacy or numeracy problems with the respondents. However, by their very nature, they only allow for limited participant responses and are, therefore, of little use if 'depth' is required. Interviews were being done to the key informants and managements in the mining companies. From the same structure interview, the questionnaires were formulated and had subsections guided by research objectives. The questionnaires were hand delivered to the sampled participants

1.9 Research Findings

Participants' response

Number of questionnaire	Frequency	Percentage
Completed questionnaire	44	67.69
Failed	11	16.92
Informant	10	15.38
Total	**65**	**100**

Source: Research Findings, 2018

The table shows the relationship between the age of the participants and the level of academic qualifications they have attained.

Age * education Cross tabulation

Table 2: **Respondent's Education Level**

			Education			
			tertiary	**diploma**	**bachelors**	**Total**
Age	below 19	Count	3	0	0	3
		% of Total	5.6%	0.0%	0.0%	5.6%
	20-24	Count	7	6	5	18
		% of Total	13.0%	11.1%	9.3%	33.3%
	30-34	Count	8	8	3	19
		% of Total	14.8%	14.8%	5.6%	35.2%
	40+	Count	3	7	4	14
		% of Total	5.6%	13.0%	7.4%	25.9%
Total		**Count**	**21**	**21**	**12**	**54**
		% of Total	**38.9%**	**38.9%**	**22.2%**	**100.0%**

Source: Research Findings, 2018

The study findings in the table 2 show that 19(35.18%) of the participants are of age between 30 to 34 years, which 8(14.8%) have tertiary and diploma certificates 3(5.56%) have bachelors. Fourteen 18(33.33%) are of age between 20 to 24 years, this category 13(12.96%) have tertiary certificate, 6(11.11%) have diplomas and 5(9.26%) have bachelors. 14(25.93%) are above 40 years and 7(12.96%) have diplomas, 3(5.56%) tertiary certificates and4(7.41%)have bachelors. 3(5.55%) of the participants are below 19 years all having tertiary education. Many residents in Goma town they are young people with age between 20 to 34 years 37(68.51%) and most of them have tertiary certificates and diplomas 42(77.78%)

Gender and education cross tabulation

The table shows the correspondence of gender of the participants and their level of education. The table 2 shows gender whether male or female and the level of academic qualification the participants have either tertiary, diploma, bachelors or other qualifications

Table 3: Gender and Education cross tabulation

Gender			Education			
			Tertiary	**Diploma**	**bachelors**	**Total**
gender	male	Count	15	13	7	35
		% of Total	27.8%	24.1%	13.0%	64.8%
	female	Count	6	8	5	19
		% of Total	11.1%	14.8%	9.3%	35.2%
Total		**Count**	**21**	**21**	**12**	**54**
		% of Total	**38.9%**	**38.9%**	**22.2%**	**100.0%**

Source: Research Findings, 2018

From the study findings in the cross tabulation 3, 35(64.81%) were female participants while 19(35.19%) were male. Out off 35(64.81%) female participants, 15(27.78%) have tertiary education, 13(24.07%) have diploma education and 7(12.96%) have bachelors. From 19(35.19%) male participants, 8(14.81%) have diplomas, 6(11.11%) have tertiary education and 5(9.26%) have bachelors. The study shows that there are many female 35(64.81%) in Goma municipality than male 19(35.19%). Besides, many of the residents have tertiary and diploma education although some have bachelors. Goma residents are literate, they know how to read and write and they can communicate

The table shows respondents gender and their marital status. The table 4.4 shows gender whether male or female and whether single, married, divorced or widow or widower.

Types of minerals in Goma municipality North Kivu DR Congo

The study aim at identifying mineral explored in Goma region, the findings show that the main minerals are tin and Colton. Other mineral resources include: copper, cobalt, columbite-tantalite, diamonds, gold, zinc, uranium, tin, silver, coal, manganese, tungsten, cadmium and crude oil.

The advantages of mineral exploitation in Goma municipality

From the findings, the study reveals that exploitation of mineral resources in Goma municipality has encouraged the acceleration of production, development of infrastructure and development of business activities. From one of the informant,

"in the construction sector, which accounts for 7% of GDP is recording average growth rates of 5% per year through the development of infrastructure".

He further continued to argue:- *"And it is also important to recognize the fact that even Congolese businessmen and the mining activities in the eastern part of the country also contribute a substantial amount of money that circulates within the economy of Goma," he added.*

Mineral exploitation and infrastructure in Goma municipality North Kivu

Mineral exploitation and infrastructure was the second objective of the study. Under this section the study identifies the impact of mineral exploitation on the infrastructure for instance roads and railway line in the area and other infrastructures. The section compares the situation before and after mineral exploitation in the area.

Condition of roads before and after mineral exploitation in Goma

The table 4 provided the findings on the conditions of roads in Goma before exploitation of minerals.

cross tabulation of road conditions before and after mineral exploitation in Goma

Table 4 condition before * conditions after Cross tabulation

Conditions			Conditions after			Total
			the same	improved	made worse	
condition before	good	Count	13	5	4	22
		% of Total	24.1%	9.3%	7.4%	40.7%
	bad	Count	10	13	7	30
		% of Total	18.5%	24.1%	13.0%	55.6%
	worse	Count	1	1	0	2
		% of Total	1.9%	1.9%	0.0%	3.7%
Total		**Count**	**24**	**19**	**11**	**54**
		% of Total	**44.4%**	**35.2%**	**20.4%**	**100.0%**

Source: Research Findings, 2018

From the findings in the table 4, 22(40.7%) of the participants show that the conditions of roads before mineral exploitation was good and after exploitation 13(24.1%) show that road condition remained the same, 4(7.4%) show that exploitation make them worse and 5(9.3%) show that road conditions have improved.

Fifty five percent of the participants show that conditions of the roads before expatiation was bad and after mineral exploitation, 10(18.9%) show that the condition remained the same, 13(24.1%) show that the conditions improved and 7(13.0%) show that road conditions moved to worst conditions. Another category of participants 3(3.7%) show that roads were worse before mineral exploitation, 1(1.9%) show that after exploitation the condition remained the same and same number show that the condition improved. The conditions of road in Goma before mineral exploitation was bad shown by 55.6% and the condition after mineral exploitation is the same 24(44.4%)

Infrastructures developed in Goma due to mineral exploitation

The aim study here was to find out whether there are infrastructures in Goma municipality being developed because of mineral exploitation in the area. From the findings of the study, mineral exploitation has led to the development of good housing, railways, and transport and communication facilities.

Informant 1:

"China has signed several such resources-for-infrastructure deals with African governments in the last decade as it seeks raw materials to fuel its economy. the Sinohydro Corp and China Railway Group Limited companies have pledged to build $3 billion worth of roads, railways and other infrastructure in Congo in return for a 68 percent stake in Sicomines, the joint venture in the southeast of the country, Africa's top copper producer, not without forgetting Goma because of tim.

Informant 2:

"here in Goma the real beneficiaries of economic prosperity brought about by aid organizations are the same people who have benefited from the extraction of minerals. They are the people with access to aid

executives and can build hotels and expensive restaurants. While roads in the central business district and the gentrified east of the city tend to be paved and well-lighted, this is not the case in most outlying areas of Goma, where most buildings are shanties".

Informant 3:"Some apartments near the town which used to cost $400 to rent now go for $1,000."

Infrastructures destroyed in Goma due to mining

Besides the development of mineral exploitation on infrastructure in Goma, the study wanted also to find the genitive side of exploitation on the infrastructure. The finding of the study reveals that some of the impact of mineral exploitation is on water transmission in the city, blockage of drainage system and corrosion.

From the findings, it was revealed that most of the effect of mineral exploitation is environmental
Informant 1:

Mining can be an intensive process and has affected some wilderness areas, including national parks and wildlife reserves which are world heritage sites. Mining in these areas is typically artisanal; a small-scale mining method that takes place in river beds and can, cumulatively, be very environmentally damaging. Artisanal mining degrades riparian zones, creating erosion and heavy silting of the water. The tailings are often dumped into the rivers and can be contaminated with mercury and cyanide degrading the health of the river systems and putting people and wildlife at risk.

1.10 Conclusions and Recommendations

The study identifying tin and Colton as the main mineral explored in Goma region, although there are other mineral resources like copper, cobalt, columbite-tantalite, diamonds, gold, zinc, uranium, tin, silver, coal, manganese, tungsten, cadmium and crude oil.

Mineral exploitation and infrastructure in Goma municipality, North Kivu

The study shows that the conditions of roads before mineral exploitation was good and after exploitation road condition remained the same. From those who showed conditions of the roads before expatiation was bad and after mineral exploitation, 18.9% 10 participants show that the condition remained the same, 24.1% 13 participants show that the conditions improved and 13.0% 7 participants show that road conditions moved to worst conditions. Another category of participants (3.7%) two participants show that roads were worse before mineral exploitation, 1.9% one participants show that after exploitation the condition remained the same and same number show that the condition improved.

From the findings of the study, mineral exploitation has led to the development of good housing, railways, and transport and communication facilities. This exploitation also causes distraction as the finding of the study reveals that some of the impact of mineral exploitation is on water transmission in the city, blockage of drainage system and corrosion. Although most of the time effect of mineral exploitation is environmental.

Mineral exploitation and infrastructure in Goma municipality North Kivu and New growth theory

From the New growth theory which posits humans' desires and unlimited wants foster ever-increasing productivity and economic growth, arguing that real GDP per person will perpetually increase because of people's pursuit of profits. As competition lowers the profit in one area, people have to constantly seek better ways to do things or invent new products in order to garner a higher profit. It also argues that innovation and new technologies do not occur simply by random chance. Rather, it depends on the number of people seeking out new innovations or technologies and how hard they are looking for them. In addition, people also have control over their knowledge capital**.** Under the new growth theory, nurturing innovation internally is one of the reasons for organizations to invest in human capital. By creating opportunities and making resources available within an organization that encourages individuals to develop new concepts and technology?

In line with mineral exploitation and infrastructure in North Kivu, the theory encourages use of innovation and creativity in mineral exploitation, there is needed to use technology and new ways of exploitation, to protect the environment and improve efficiency. from the study findings, The conditions of road in Goma before mineral exploitation ware bad (55.6%) and the condition after mineral exploitation remained the same (44.4%). same so situation with railway line. From the findings of the study, mineral exploitation has led to the development of good housing, railways, and transport and communication facilities. Beside development of infrastructure, mineral exploitation destroy water transmission in the city, blockaThe conditions of road in Goma before mineral exploitation ware bad and the condition after mineral exploitation remained the same, same so situation with railway line. Govrenmnet and other partners like Chinene government should develop infrastructures around Goma, they should practice (corporate social responsibility) CSR, do mining as they benefit the residents too. The government should make sure no company destroys available infrastructure if not improving them and also provide strict rules to protect the environment

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Companies to choose infrastructure routes that avoid or reduce habitat access and fragmentation and ensure that infrastructure development follows best practices on drainage system. In addition, all infrastructure development should be planned in the context of evaluating alternatives (including the “no-go” option) for providing the same service, and ensuring that transport and energy infrastructure is built according to best international practice, require companies to operate by international standards for resource extraction.

REFERENCES

Democratic Republic of Congo,” Extractive Industries Transparency Initiative, June 12, 2006.

Aroca, P. 2001.Impacts and development in local economies based on mining: The case of the Chilean II region. Resources Policy 27 (2001) 119-134.

Breaking New Ground: Mining, Minerals, and Sustainable Development, International Institute for Environmental Development and World Business Council for Sustainable Development (London: Earthscan Publications, Ltd., 2014).

Castillo, J. Sánchez, J.M. Kunze, V and Araya, R. 2017.Chile: Size Does Matter.

Combe, E., Monnier, C., Legal, R., (2008) Cartels: The probability of getting caught in the european union. BEER Paper 12.

Crandall, R. W., Winston, C., (2003). Does antitrust policy improve consumer welfare? assessing the evidence. Journal of Economic Perspectives 17 (4).

Davies, S., Ormosi, P., (2014). The deterrent effect of anti-cartel enforcement: A tale of two tails. CCP Working Paper 14 (6).