

The Effects Of Illegal Gold Mining On The Education Of Children: A Case Study Of Aniamoah Community In The Atwima Mponua District, Ashante Region-Ghana

Dr. Frances Duffie Azumah

Nachinaab John Onzaberigu

Department of Sociology,
Kwame Nkrumah University of Science and Technology KNUST

Abstract: The issue of children engaging in illegal gold mining (galamsey) activity in Ghana specifically attracts attention both locally and internationally. The study critically examined the effects of illegal gold mining activity on the education of children involved in such practice. The study employed simple random and snowballing sampling techniques to select. Consequently, questionnaires containing close ended and open ended questions were used to elicit information from 140 respondents. Findings from the study indicated that children involvement in gold mines significantly affect their education. Specifically, the most glaring effect was on their basic education. Results from the study indicated that the root causes of children involvement in mining activity were poverty, inadequate educational and recreational facilities, broken homes and pressure from parents. It was recommended that the stakeholders of the community should channel more efforts towards tackling children involvement in illegal gold mining.

Keywords: Illegal Gold Mining, Academic performance, Children, Livelihood, Poverty, School Drop-out

I. INTRODUCTION

The issue concerning children involvement in the burgeoning artisanal and small-scale mining (ASM) economy of Ghana continues to get the maximum attention both locally and internationally (Hilson, 2008). This has prompted Sociologists as well as other social scientists to seek to unravel the root causes of this social phenomenon. Also, sociologists are interested and concerned about the effects this practice has on the total development of children involved and how children involvement in such practices could be averted. The incident of children involvement in illegal gold mining activity is most prevalent in sub-Saharan Africa, followed by Asia and the Pacific. The prevalence of children involvement in illegal gold mining activity is on an increase in sub-Saharan Africa especially in Ghana. Children involvement in illegal gold mining activity is a social problem associated with the rise of industrial production and capitalism. It appeared in

earlier ages in agricultural societies, but has become widespread during the Industrial (Bass, 2004).

The International Labour Organization (ILO, 2013) estimated that there are Two-hundred (215) million children between the ages of five (5) to fourteen (14) who works worldwide. These children are mostly maltreated and work for lengthy hours, in very bad conditions. This can in one way or the other affect their health physically, mentally and emotionally. Also, these children do not have access to their basic rights such as access to school or health care.

Consequently, as this study focused on the effects of illegal gold mining on the education of children, a brief insight of what constitutes and the concept of galamsey was addressed. ‘Galamsey’ is the corrupt version of the phrase ‘gather and sell’ which is a form of small-scale mining that takes place without official approval or permission. The vocation was formalized in 1859 through the promulgation of the mineral and mining law PNDCL 153, and the small-scale mining law 218 was also enacted to cater for small-scale

mining. The large number of illegal miners is just a result of the scale of unemployment in the whole country. Within these, "fortune hunters" are also armed robbers and pure criminals, who are not really interested in gold but in human parts use the illegal mining activities as a mask to track some of the young people who are into it and the ladies especially are normally trapped. The increasing number of people engaging in illegal mining is causing worry, fear, anxiety and the trial of environment destruction left behind by this practice, as well as the issue concerning children involvement in these artisanal mining sites has assumed a position of national concern and interest. (Darbi, 2011). It is estimated that, of the 30,000-50,000 galamsey mines in Ghana, 10,000 are children working in hazardous conditions that put their health and survival at risk (Keehn, 2010). Aniamoah Community is about 27 miles away from Kumasi. The area is severely engaged by the activities of illegal mining. Many are the people who have died and were maimed as a result of accidents involved in illegal gold mining, yet people still do it. People of all areas and levels are engaged in this dreadful occupation, including school children, adults (males/females), and even the aged. Also, prominent people like students from tertiary institutions, self-employed people and others are all involved in illegal gold mining.

II. STATEMENT OF THE PROBLEM

It is widely accepted that education leads to sustainable development. This is evidenced in developed countries like Japan, America, England, France etc. where the literacy rate is high. These countries are highly developed because of their high literacy rate. Education brings skills to discover and create things that are needed. The situation in the third world countries of which Ghana is one, is different. Even though our educational policy suggests that all children of school going age must be in school. However, in reality about 20% of children of school going age are still at home engaging themselves in menial jobs which constitute child labour (UNICEF 2000).

The situation of children doing menial jobs has been worsened by the perception of our societies. Children at Aniamoah Community have after all seen that the wealthiest persons in the area had very little education. In fact, all the financially capable people in the area are private business men, some of whom do not have any formal education. The presence of illegal gold mining in the area has brought about excessively high prices of food stuffs. This is because children who are supposed to be in school are all engaged in illegal gold mining. The very fertile lands conducive for farming are thus being used for mining activities. However, children at Aniamoah community do not attend school due to their involvement and participation in illegal gold mining activities in the area. This problem is very serious in the sense that it has led a decrease of performance of students in the Basic Education Certificate Examination (B.E.C.E). In recent years, almost all the Junior High Schools in the area failed in the Basic Education Certificate Examination. In light of the above issues this study sought to examine the effects of illegal gold mining activities on children's education. In order to address

it, there is the need to have a clear understanding of the nature, causes and trends of children involvement in illegal gold mining activities.

III. OBJECTIVES OF THE STUDY

The main purpose of this study was to examine the effects of illegal mining (galamsey) on the education of children in such practice of Aniamoah. This study specifically aimed at:

- ✓ Examining the perception of the people of Aniamoah about children involvement in galamsey activities.
- ✓ Finding out the causes of children involvement in galamsey mines in Aniamoah,
- ✓ Accessing the effect galamsey activities on children's education in the Aniamoah community.

IV. LITERATURE REVIEW

A. REASON FOR CHILDREN ENGAGE IN ILLEGAL GOLD MINING ACTIVITIES

Illegal mining has been on the headlines of most newspapers and televisions for their destructive nature of the environment and the dangers associated with it, but still, people are found engaging themselves in the act irrespective of the dangers associated with it. Little investigation has been done to unravel the reason why people engage themselves in galamsey activity in spite of its dangers.

First of all, gold mines or activity is regarded as very enticing, especially for those hoping for a lucky break (Ofosu-Mensah & Ababio, 2011). This has resulted in the unemployed people, the young people from communities near mine sites to move to the mining sites to work in order to increase their standard of living. According to Akabzaa (2000), the reason behind why the majority of young people engage themselves in galamsey work is that they are unable to secure jobs due to their low educational qualifications and background. This has played a crucial role in the number of migrants who engage in illegal gold mining activities because of the benefits you get in the trade.

Secondly, another reason worth mentioning is prestige and high lifestyle. Ofosu-Mensah and Ababio (2011) assert that the rationale behind why the majority of young people are trooping into the mining activity is due to the prestige and high lifestyle those miners exhibit and enjoy. Prestige connotes the idea of reputation, or influence arising from success, achievement, rank or other favorable attributes. On the average, it is been suggested that the gold miners earn about US\$100 per day and since they seem to be getting this money each and every day the go to work, they have money to spend on luxurious things. So with this, a person can eventually venture into illegal gold mining.

Promise of wealth is another reason young people engage themselves in galamsey activity. It is been asserted that people who normally mine the gold themselves are more likely to make fortunes quickly than other professions. Ofosu-Mensah (1999) asserts that the socio-cultural significance of gold in traditional rich areas in Ghana, combined with the difficulty in

enforcement and monitoring, may have accounted for the non-compliance with the Law banning illegal gold mining.

Poverty is regarded as the most important reason why children of school-going age quit school and work. Families in the rural setting find means to raise their revenue by taking up mining activities (Bloeman, 2009; Boas and Hatloy, 2006; Hilson, 2010). And also, families with poor background are those with more children, so it becomes very difficult for them to survive on the income of only one family member which is also quite less. So they make their children their source of income. According to Acheampong (2000), children as young as eight years involve themselves in gold business. It was examined that some of these young children even work to feed their unemployed parents and spend the rest of the income to feed and clothe themselves. Some also give themselves a break from school in order to get money, especially when their parents are unable to provide for them. This has resulted in most of these children becoming school dropouts because they get so much from the gold business that they no longer consider education as an important venture. Also, some parents are so irresponsible that they expect their children to work for their own upkeep (Bloeman, 2009).

B. EFFECTS OF ILLEGAL GOLD MINING ACTIVITY ON THE EDUCATION OF CHILDREN

One cannot just look at child labour without taking a look at education and the effect child labour has on education. Thus how child labour has affected the education of children. Has it affected the education of children positively or negatively? Thus the question we ask. A look at the children's Act reveals this connection, as the minimum age for child labour is also the same age at which a child is expected to finish junior high school. Although, we cannot vividly say that education guarantees socio economic mobility or even financial stability, it offers a child the opportunity of having a better life than his parents had. Ghana recognized the importance of education with the Education Act of 1961 and the Constitution of 1992, both of which assert for free compulsory primary education (UNICEF, 2000). But according to UNICEF, working has such negative effects on schooling that one must question how important school is to the working child. Too much time is being spent by most children, which later results in making school attendance impossible.

Mining affected the education of children in many fronts. Children devoted much of their time and energy on mining than focusing and concentrating on lessons taught in class. This has resulted in the poor participation of children in class sessions due to the much time devoted on mining, and this leads to tiredness resulting to a number of them sleeping in class hours.

C. PERCEPTION OF PEOPLE ON CHILDREN INVOLVEMENT GALAMSEY MINES

Many child labour practices are rooted in tradition, resulting in making the elimination very difficult. According to UNICEF, "bringing about a change in the ethical climate in which such opinions thrive was, and in many instances still is, the most difficult part of the long struggle for a more just

society" (UNICEF, 1991). Changing today's societal attitudes to fit modern ethical standards is a difficult task, in that people are reluctant to change, especially when the root of what is being changed is unchangeable or the change in that is deep (Bloeman, 2009).

One perception is the preparation of future roles. Traditional African beliefs support the persistence of child work, according to one Mr. Aryee, Principal Labour Office in charge of legal and international relation, in an interview with Bruscano (2001), argues that parents see child work as preparation for their future occupations. Even though, legally children aren't supposed to go to the sea until they are 18 years of age, the fishermen are with this belief that boys to start their training before adulthood, preparing their minds and bodies for fishing (Bloeman, 2009).

Also, some people are of the view that the employment of children in gold mines is a mechanism of instilling in children the spirit of hard work. African children have worked in farms and at home over a long period of time. This is not something special to Africa, as large numbers of children have worked in agriculture and domestic situations in Europe, America and other human societies, throughout history, prior to 1950's (Bass, 2004). Child labour in Africa, as in other parts of the world, was also seen as a way to instill a sense of responsibility and a way of life in children particularly in rural, subsistence agricultural communities. Paraphrasing an article, "pros and cons of child labour" by Waybill (2009), some people assert that child labour instills a sense of hard work and discipline in young people.

D. THEORETICAL PERSPECTIVE

The study adopted market failure and multiple equilibrium theory by Parsons and Goldin (1989) in explaining children involvement in gold mining activities. With regards to market failure and multiple equilibrium theory, it assumes that parents are being regarded as carrying about the needs and happiness of other people and give much attention on the interaction between market characteristics and child labour that point to certain market manipulations as a solution. For instance, Basu (1999) assessed the case in which rigidities in the market for adult labour results in driving child labour. He perceives from the angle where a market in which the adult wage is downward rigid, resulting in a rise to adult unemployment. With regards to those children with an unemployed adult, the probability for children to work is high.

Parsons and Goldin (1989) examined child labour and school attendance as results of actions on the human capital market and on the physical capital market. The parents can however in one way or another invest in human capital (the education of their children) and also can invest on the physical capital. The investment of human capital comprises of direct and indirect costs of schooling. Grootaert and Kanbur (1995) focused their attention mainly on the external benefit of an educated child on the general population. For this reason, an education subsidy will aid in internalizing the externality and may have some benefits of eliminating child labour. Basu and Van (1998) examined the situation in which most friendly parents withdraw their children from the labour market once the adult wage reaches a critical level. The changing

consequences of capital market failure have been examined by Ranjan (2001), with similar conclusions reached by Basu (1999). Ranjan (2001) considers the situation in families with very poor background who would wish to choose to educate their children if only and if they had access to a capital market, but they fail to do so due to capital market failure. Such families are noted of producing poor, uneducated children who repeat the cycle for the next generation. In this model, a concerted attempt to educate one generation of such children will result in pulling the family away from the income level at which they depend on the labour of their children for survival.

V. RESEARCH METHODS

A. RESEARCH SETTING AND DESIGN

Aniamoah is a very small village located in the Atwima Mponua District in the Ashanti Region. It is about 27 miles away from Kumasi. This community is underlying by rocks of Birimian (known to be gold bearing rocks and also have a high potential for Manganese and Bauxite). The population of Aniamoah is about 21,755 people in 2010, and the population growth rate is estimated as 2.4 % (National Population and Housing Survey, 2010). In Aniamoah community, when it comes to employment, the informal sector dominates. Jobs in the informal sector include farming, which is estimated to engage about 90% of the labour force. Farming was the primarily occupation of the people of Aniamoah before the existence of the illegal gold mining activity. Others are engaged in petty trading, agro-processing and irrigation as a source of income. Apart from agro-processing activities where women dominate, male and female are involved in the rest of the income generating activities which include firewood harvesting, charcoal production, gold mining, trading, stone crushing, etc.

Education wise, the Aniamoah Community in the Atwima Mponua District has a total of five schools most of which are in deplorable state. Apart from being in poor condition, many are deprived in terms of sanitation facilities, inadequate teaching and learning materials and inaccessibility by road network. Because of the nature of school infrastructure and distribution, many pupils cover over 5 km (beyond the standard distance to be covered to school) to attend schools, which affects enrollment, retention, and performance in schools.

With regards to the research design, the researcher adopted the cross-sectional/social survey design. The researchers adopted the cross-sectional/social survey design because this design relates to how data were collected predominantly by questionnaire at a single point in time.

B. SAMPLE SELECTION

For the purpose of this study, the researchers adopted the simple random sampling and snowballing. With regards to simple random sampling, it was considered the best technique of selecting a representative sample and also every member stood an equal chance of being selected and excluded from the sample. Also, on the side of the snowballing, the researchers

adopted it because it helped in locating exactly where to find people who actively engage and participate in illegal gold mining activities without going through the whole town in search of them. For this study, a sample size of 140 respondents was selected.

C. DATA COLLECTION

The method that was used for this study, thus the collection of data, was questionnaire. The researchers adopted a questionnaire containing close ended as well as open ended questions. The researchers adopt this method over the other data collection method because it keeps the researchers very focused on the subject under study.

D. ANALYZING THE DATA

Data were analyzed with the use descriptive statistics tools such as percentages. Based on the nature of the data collected for this study, a combination of data analysis techniques were employed in the analysis. Also, quantitative method was the dominant style employed in the analysis of the data.

VI. DATA ANALYSIS AND DISCUSSION OF RESULTS

This part entails the analysis of the field data. The first part of this chapter describes the socio-demographic background of respondents. The second part is the perception of people about child labour in illegal gold mining activity, the third part is the effects of illegal gold mining activity on the education of children and the last part is the measures put in place to deal with the issue.

The respondents were divided into two (2) sections. The first part of the respondents was the adults who actively engaged in the illegal gold mining activity. The second part was the children who engage themselves in the illegal gold mining activity. Analysis and interpretation was done on both the respondents. 60 questionnaires were given to the respondents who were adult, while 80 questionnaires were given to the respondents who were children.

A. SOCIO-DEMOGRAPHIC CHARACTERISTIC OF RESPONDENTS

With regards to the first respondents, those adults actively engaged in illegal gold mining activity, 76% respondents were male, while 24% respondents were female. A higher percentage of respondents were male which indicates that more males availed themselves for the purpose of the study. It also shows that the findings of this study may be skewed towards the male gender of the population with regards to their views on children engaging themselves in illegal gold mining activity and its effect on their education. On the side of the children, 68% respondents were male, while 32% respondents were female. Majority of the respondents were male indicating that most males made themselves available for the purpose of this study. It may also influence their responses on the issue of children engaging themselves in illegal gold

mining activity. With regards to Boas and Hatloy (2006), gender specific patterns of work vary from place to place. It may influence how children justify their work in mining sites and how they see themselves benefit from this work in the future.

With reference to the family size of respondents, on the side of the adults, it was deduced that 19.5% of total respondents lived in families that have more than 10 members. The same percentage happens to respondents who lived in families of range 7 to 9 people. Also 34.1% of total respondents had family size between 4 to 6 people: with 26.8% of respondents living in families between the sizes of 1 to 3 people. This implies that a larger family size may influence respondents view on child labour in illegal gold mining mines of Aniamoah. For that of the children, it was deduced that 47.5% of total respondents lived in families that have more than 10 members; 22.5% of them also lived in families of range 4 to 6 people: with a further 17.5% of them who had family size of 1 to 3 people. Finally, 12.5% of them also lived with families between the ranges of 7 to 9 people. This indicates that a large family size could influence the children engagement in illegal gold mining. According to Becker and Lewis (1973), in the quality-quantity tradeoff, parents who choose a large number of children are less likely to invest in quality schooling. That is, the number of children and investment in the human capital are substitutes. Concerning the level of education, on the side of the adults, our findings indicated that 43.9% of respondents were basic school leavers. Also, 29.3% respondents were high school graduates, with a further 17.1% of respondents being illiterate (never been to school). However, 9.7% of total respondents were tertiary level graduates. Since the majority of total respondents were basic school leavers, it provides an avenue for them to engage themselves in the illegal gold mining activity since they do not have any requisite skills, knowledge and formal training to get formal sector jobs, so in effect find themselves in working at the illegal gold mining mines. On the children side, 57.5% of the total respondents were in JHS1-3; with a further 12.5% of them reporting that they were in class range of 1-3. Also, those who reported to be in the class range of 4-6 and those who also reported of not have even step their foot in classroom all recorded 15.0.

B. PERCEPTION OF PEOPLE ABOUT CHILDREN INVOLVEMENT IN ILLEGAL GOLD MINING ACTIVITY

This section elicits information from respondents on their perception of child labour in the illegal gold mining activity of Aniamoah. The study examined whether child labour in illegal gold mining activity was a healthy practice or something good and therefore should be encouraged or whether child labour in illegal gold mining is a threat to the well-being of the children and their education as well, and therefore mechanisms should be put in place to deal with the issue. Our findings indicated that 39.0% were of the view that illegal gold mining activity instills in children the spirit of hard work. Also, 29.3% were of the view that education and mining were both effective and efficient means of economic liberation. 14.6% stated that illegal gold mining kept children away from social vices.

Finally, 17.1% respondents perceived child labour in illegal gold mining activity as an initiation into adult roles. According to Bloeman (2009), people perceive mining activities as a means to further education or to move into economic activities with many returns and less hardship. In all, perception that the people of Aniamoah hold on child labour in illegal gold mining, based on the sample population is that illegal gold mining instill in children the spirit of hard work. With regards to the way forward in changing the perception of the rural folk of Aniamoah on the issue of children involvement in illegal gold mining activities, we suggested for public education of the people of Aniamoah on the adverse effects this practice had on the total development of children involved and their education as well. We also suggested that a change in cultural practices and values could help change the perception of child labour in illegal gold mining activity. Also, there should be restriction from illegal gold mining activity and strict policies and laws against children involvement in illegal gold mining should strengthen accordingly in order to curb the phenomenon.

C. CAUSES OF CHILDREN INVOLVEMENT IN ILLEGAL GOLD MINING ACTIVITY

This section of data analysis looked into the factors that cause or engender or motivate children to engage themselves in illegal gold mining in Aniamoah. The study found that that poverty was a leading cause for children to engage in illegal gold mining. Poverty as cited by 36.6% of total valid responses was of the views that it cause children in engage in illegal gold mining. Also, 26.8% were of the view that broken home is the result that causes child labour in gold mines. Additionally, 26.8% of them were also of the view that illegal gold mining activity was seen as an avenue to further their education and hence represented an attractive place or destination for young boys and girls to acquire the necessary resources needed to pursue or further their education. 9.8% of them having indicated that children worked at gold mines as a result of peer pressure. The findings of this study in conjunction with (Bloeman, 2009; Boas and Hatloy, 2006; Hilson, 2010), argue that poverty is the most crucial reason for children of school going age to seek employment. In suggesting ways to reduce children involvement in mining activity, the researchers suggested that the stakeholders of Aniamoah (Government, District Assembly, Chief, Assembly man and opinion leaders), should be doing massively well to tackle the issue of children involvement in mining activity and hence more efforts should be channeled towards tackling children involvement in gold mines. In so doing there should be the provision of learning materials to these children so that they could also have a desire to attend school rather than involving themselves in mining activity.

D. EFFECTS OF ILLEGAL GOLD MINING ACTIVITY ON THE EDUCATION OF CHILDREN

This section of data analysis expresses the effects of child labour in mining activity on the education of children. It looks at both the negative effects and positive effects, how mining activity affects the children's school attendance rate, the

common health problems the children encounter at gold mines. On the effects of mining activity on the education of children, the researchers made a declarative statement for the respondents to decide on their level of agreement that involving themselves affects their school attendance rate. Based on the findings, it was revealed that, an overwhelming 55.4% of total respondents strongly agreed to the view that mining activity affected the school attendance rate of children. An additional 19.5% also agreed to the assertion. On the other hand, 17.1% of the respondents disagreed to the assertion: with a further 8.0% of the total respondents strongly disagreed that mining activity affected the school attendance rate of children. This findings shows the same relationship in conjunction with a study conducted by the Kongo Community Association (KoCDA), which argued that the academic performance in the Talensi-Nabdam District (KoCDA Report, 2010). It was found that children devoted much of their time and energy in mining than concentrating on lessons taught in class. In view of finding ways that could curb the issue of children involvement in mining activity, the researchers suggested that parents of these children should be sanctioned if they found their children in gold mines. This will make the parents take full responsibility of monitoring their children.

E. EFFECT OF ILLEGAL GOLD MINING ACTIVITY ON THE HEALTH LIFE OF THE RESPONDENTS

This section sought to examine the common health problems the people who engaged in mining activity are likely to encounter. Our findings indicated that majority of the people who engaged in mining activity encountered body pains as their health problems. Thus, 39.0% of the total respondents argued that body pains are the most common health problems they are likely to encounter at the gold mines: with a further 24.4% of respondents also held the view that eye defects is what they face at illegal gold mining. Also, 19.5% of them reporting also that respiratory disease are the most common health problems at gold mines. Finally, 17.1% reporting that skin rashes is also one of the common health problems they encounter when they engage themselves in gold activity. With regards to this objective, the researchers suggested that public education on health implications concerning mining activity should be tackled. This could reduce children involvement in mining activity, after getting to know the common and severe health implication that one could get when involved in mining activity.

VII. RECOMMENDATIONS

It has emerged from the research that stopping illegal gold mining at the moment is the only a viable solution. Children are being forced into the activity mainly by lack of employment opportunities, and general poverty affecting the whole country, thus illegal gold mining activity seems to be the only reliable source of income to many children, youth and adults alike. The study therefore recommends the following factors as strategies to curb children involvement in illegal gold mining activities:

- ✓ There should be, as a matter of urgency, a consistent review and strengthening of National as well as District Assembly laws and policies on children involvement in mining activities in the community.
- ✓ Also, much effort should be made available to address the current deplorable state of educational and social service facilities in the community. This could at least keep the children in school instead of taking up work or engaging themselves in gold mines of Aniamoah.
- ✓ The media should be urged to pursue a vigorous campaign against the issue of child labour in gold mines of the community, generally highlighting the negative effects such a practice may have on their total development and their education as well.
- ✓ There should be a provision of mining license at affordable fees since it is one of the major sources of income for survival.
- ✓ The study also revealed the need for a change in perception about gold mining in Aniamoah in order to halt such a practice.

VIII. CONCLUSION

The effect of illegal gold mining activity on the education of children involved is a dynamic and interesting subject because it deals with children in the labour force, the educational institution and family and societal organizational structures. Different authors have given varying perspectives from researches on the topic. The study revealed that child labour in illegal gold mining significantly affects the educational development of children. Specifically, its most glaring effect was on the formal basic education. The study identified factors that pushed children of Aniamoah into working at the gold mines in the community. Factors such as poverty, broken homes, inadequate educational and recreational facilities, pressure from parents etc were identified by respondents as being the major and leading causal factors of children involvement in illegal gold mining activities. This study also indicated the need for a change in perception about child labour in illegal gold mining in order to halt such a practice. The stakeholders of Aniamoah (Government, District Assembly, Chief, Assembly man and opinion leaders), according to respondents, were not doing massively well to tackle the issue of child labour in mining activity and hence more efforts should be channeled towards tackling child labour in gold mines.

REFERENCES

- [1] Ababio, O.-M. (1999). Traditional Gold Mining in Adanse. *Nordic Journal of African Studies*, vol. 19(2). 124-147.
- [2] Afrikids, Ghana. (2007). Operation Sunlight Feedback Report. London.
- [3] Akabzaa, TM. (2000). Boom and Dislocation. The Environmental and Social Impacts of Mining in the Wassa West District of Ghana. Accra.

- [4] Ballnd, J.M and Robinson, J.A. (2000). Is Child Labour inefficient? *Journal of Political Economy*, 108(4), 663-79.
- [5] Bass, L.E. (2004). *Child Labour in Sub-Saharan Africa* Boulder. CO: Lynne Rienne Publishers.
- [6] Basu, K. (1999). *Child Labour. Cause, Consequence and Core*, with remarks on International Labour Standards. *Journal of Economic Literature*, 37(3), 1083-1119.
- [7] Bloeman, S. (2009). Pounding rock and Crushing potential. Efforts, endurance and patience as UNICEF tackles child labour in the DRC. *The Sunday Independent (South Africa)*, p.8.
- [8] Boas, M and Hatloy, A. (2006). *Living in a material world. Children and youth in alluvial diamond mining in Kono District, Sierra Leone*. Kono: Fafo report.
- [9] Boas, M and Hatloy, A. (2006). *Living in a mineral world. Children and youth in alluvial diamond mining in Kano District*. Kano: Fafo report No: 515, Oslo: Fafo Institute for Applied Studies Supplied by UNICEF.
- [10] Bonnet, M. (2006). *Child Labour in Africa*. *International Labour Review*, 132, pp 371-389.
- [11] Bruscano. (2001). *Child labour in Ghana. An analysis of perceptions and practices*, Ghana. Ghana: African Diaspora ISPS paper.
- [12] Cobbina, S. J.-D. (2012). *Assessment of Non-cancerous Health Risk from expoure to Hg, As and Cd by Recent Children and Adults in Nangodi in the Upper East Region*. *Ghana Water Qual, Expo Health*, 3(3): 225-232. DC. the World Bank) pp.281-302.
- [13] Darbi, S. (2011). *Galamsey: A look through another lens*.
- [14] Grootaert, C and Kanbur, R. (1995). *Child Labour: An economic perspective*. *International*
- [15] KoCDA. (2010). *Kongo Community Development Association. Labour Review*, Vol 134(1995). No 2. Pp.187-203.
- [16] Hilson, G. (2010). *Child Labour in A frica artisanal mining communities. Experiences from Northern Ghana*. *Development and Change*, 41(3), 445-473.
- [17] Hilson, G. (2008). *A load too heavy. A critical examination of the child labour problem in A frican Artisanal Mining Communities Children and Youth Services Review*.
- [18] Manaf, M.H. (1999). *The Environmental Impact of small scale mining in Indonesia. A paper presented during the third environmental co-operation workshop for sustainable development on mining activities*. Cairns.
- [19] Mthembu-Salter, G. (2009). *Social and economic dynamics of mining in Kalima Democratic Republic of Congo*. Pretoria: ISS paper No. 185, April, 2009. Institute for security studies.
- [20] Nardinelli, Clark. (1990). *Child Labour and the Industrial Revolution*. Bloomington: Indiana U.
- [21] Ofosu- Mensah and Ababio. (2011). *Historical overview of traditional and modern gold mining in Ghana*. Accra: Department of History, University of Ghana, P.O.Box 12, Legon.
- [22] Ranjan, P. (2001). *Credit Constraints and the phenomenon of Child Labour*. California Irvine- School of Social Sciences: Papers 98-99-12.
- [23] Whitehead, A. (2002). *Tracking livelihood change: Theoretical, Methodological and Empirical Perspectives from North-East Ghana*. 2(3): 575-598.