

Article

# Youth in artisanal gold mining: Risks and opportunities; the case of Asgede Tsimbla Woreda<sup>i</sup>, Northwestern Tigray National Regional State, Ethiopia

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Artisanal gold mining employs a significant number of people in Asgede Tsimbla Woreda, though the number is not actually documented. The sector serves as both temporal and permanent source of revenue for the youth gold miners. But the main worry is: Is artisanal gold mining a worthy employment area for the youth? In what kind of stuff do the youth gold miners yield the rites acquired through gold mining? Hence, this paper made a contextual analysis on the emergent risks and opportunities of the youth artisanal gold miners related to livelihoods and education. In doing this, secondary and primary data were gathered from youths, businessmen and teachers from September 2014 to August 2016 through interview and observation. In one hand, artisanal gold mining serves as a source of livelihood to the youth. On the other hand, youth engage in artisanal gold mining because agriculture's productivity turns out to be disparaging and is uneasy to hastily acquire money in pressing situations. In the future, however, the amassed gold may perhaps run away and artisanal gold extractors unquestionably would mislay the basis of their livelihood.

**Key words:** Artisanal gold mining, youth, Asgede Tsimbla Woreda.

## INTRODUCTION

Artisanal mining is a non-mechanized mining operation carried out manually in less than 15 m vertical depth by citizens or cooperation. To run such an operation, one has to be licensed irrespective of the financial resources, technical competence, professional skills and experience of the claimant (Ethiopian Ministry of Mines, 2012; Ethiopian Mining Operation Proclamation, 2010). Artisanal mining is an activity largely practiced in rural areas by those who lack the requisite education, skills and modern equipment necessary for mining (Mihaye, 2013). Youth are among the sections of society engaged in artisanal

mining in Asgede Tsimbla Woreda. Hence, this study discovered the opportunities and risks of the youth (aged 15 to 29 years) artisanal gold miners in Asgede Tsimbla Woreda.

It is not easy to define the term youth, given the socio-economic and political realities that vary across time, space and within and among societies (African Union, 2011). The United Nations (UN here after) and the International Labour Organization (ILO here after) characterize youth as those people comprising children with limited decision-making power and autonomous

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adults with independent livelihoods primarily aged 15 to 24 (ILO, 2015; Marcus and Gavrilovic, 2010). Yet, for a number of purposes, many countries and organizations expand and deflate the age bracket to reflect their developmental needs (United States Agency for International Development, 2012). According to the African Youth Charter, youth or young people are those found in the age bracket of 15 and 35 years (African Union, 2006). Unlike the institutions mentioned above, the Ethiopian Youth Policy lay down a distinct age category for the youth group. It determines youth as those people aged 15 to 29 years (Ethiopian Ministry of Youth, Sport and Culture, 2004), which is the target population of this study. People aged 15 to 30 constitute on average 30% of African countries (African Youth Report, 2011). By the same token, 73.3% of the Ethiopian population is below the age of 30, in which 28.3% of the proportion is found to be between 15 and 29 years (Central Statistical Agency, 2008).

Though, the youth shares large size of the human population, it remains underutilized source in the process of global development efforts (Goldin et al., 2014). Of the youth world, 88 million are unemployed (UN, 2005), although the number dropped to an estimated 73.4 million in 2015 (ILO, 2015). The ever-growing young population remained unemployed because of strained capacities in guaranteeing jobs and livelihoods. To express things in a different mood, up to 60% of young people do not go to school and their access to decent employment opportunities is depressing in developing regions (United Nations population Fund, 2014). Consequently, the youth hardly earns enough money and their economic power remains lowest to lift up themselves and their families out of poverty (ILO and Economic Commission for Africa, 2009). Starkly, while the youth got employed, at least three in four young workers engaged in irregular employment either in contributing family work, casual paid employment or temporary labour (ILO, 2015). In Ethiopia, notwithstanding some improvements, unemployment is a profound problem given the rapid growth of working labour force and limited employment generation capacity (National Employment Policy and Strategy of Ethiopia, 2009).

Particularly, rural youth mug with copious barricades in pursuing livelihoods instigated with scarce arable land and the seasonality of agricultural work. For that reason, the jobs youth can find to make a living are largely informal (USAID, 2012). For instance, in 2010, 33.3% of the Ethiopian working population was engaged in the informal economic sector, and in Tigray Regional State, it was 32.2% (Ethiopian Ministry of Labour and Social Affairs, 2013). However, many of them perform hazardous and dangerous jobs in the informal sector (United Nations population Fund, 2014) where meager job security, underemployment, and too little earnings are the defining features (Federal Democratic Republic of Ethiopia, 2009; United States Agency for International

Development, 2012).

Artisanal gold mining is among the informal economic sectors intensively executed in Asgede Tsimbla Woreda. Artisanal mining is done haphazardly with severe consequences to the environment (Hagos et al., 2016) and the miners themselves (D'Souza, 2002; Mihaye, 2013). A time-being concern one could raise at this stage is, therefore, what are the effects that the artisanal gold mining brings upon the miners? This paper thus has delved the extent to which the youth are benefiting from artisanal gold mining and their potential risks.

### Justification

The availability of large size of the youth population is either a liability or an asset to a particular society. But that situation depends largely on how well governments entertain the needs and engages fully and meaningfully the young people in economic affairs (United Nations population Fund, 2014). The best way to ensure that young people can realize their aspirations and actively participate in the economy is by scaling up investments in decent jobs for the youth (ILO, 2015). At best, the formal economic sector has the quality of creating permanent employment and secured income for the working labour force than the informal sector.

In line with this, the Ethiopian government has been formulating policies and programs to engage the youth labour force in productive careers. However, it is hard-hitting to entirely engage the youth labour force in the formal sector. It is for this reason that the informal sectors, including the artisanal gold mining, are engrossing considerable labour force. That is, artisanal mining has proved to be an alternative source of employment for job seekers who are relatively disadvantaged in the formal labour market (Ethiopia Ministry of Mines, 2012) particularly to the poor rural communities (Eshun, 2005; Mihaye, 2013).

Approximately, 13 to 20 million people worldwide are directly engaged in small-scale mining which affects, in general, the livelihoods of about 80 to 100 million people (World Bank, 2005; Mihaye, 2013). Ethiopia Ministry of Mines (2012) has also conveyed that about one million people are directly engaged in the artisanal mining throughout Ethiopia while the indirect beneficiaries of the sector are more than four million people.

Nevertheless, artisanal gold mining is essentially unregistered and operates outside the regulated formal economy in the selected Woreda which poses a challenge to discern the number of youth betrothed in the sector. Yet, the sector serves as a source of income and employment for the youth group in Asgede Tsimbla Woreda. Hagos et al. (2016), for instance, in their study stated that majority of the traditional gold miners in Asgede Tsimbla Woreda were people below 35 years old. The concern we can raise here is to what extent the

sector is a secured and best area of employment for the youth. Are the benefits it brings to the youth miners noteworthy? Are the youth economical in utilizing the money gotten through mining to change their life for the better? These questions were the prime causes that motivated the writer to note down the opportunities and risks of the youths' engagement in the sector just to contribute knowledge to the world literature.

In developing countries, millions of youth are taking up employment at early ages. Early labour participation also goes hand in hand with early school leaving and low level of educational attainment. There are 200 million young people (ages 15 to 24) who have not completed primary school. In turn, under-education has an adverse impact not only on the labour productivity of countries but also on the wage of the young workers (ILO, 215; United Nations Development Program, 2014).

Likewise, Asgeda Tsimbla Woreda is among the Woredas of Tigray Regional State experiencing higher enrollment of over-aged students and low gross enrollment rate (GER) in schools. For instance, according to the Tigray Regional State Education Bureau (TRSEB here after) (2015), in 2014, the number of youths aged 15 to 18 in the study Woreda was 14,332. However, the GER and NER of the Woreda through grade 9 to 12 were 21.99 and 19.67%, respectively. These made the Woreda among the low performers in Tigray Regional State. It might have arisen out of the all-embracing artisanal gold mining practices in the Woreda. This paper, thus, inspects the interface between artisanal gold mining and the problems mentioned above. It also made a contextual analysis on the artisanal gold mining and its implication in youth livelihoods and education. Hopefully, this paper will be of interest and use to researchers, policy makers and concerned bodies of the study area.

## METHODOLOGY

Asgeda Tsimbla Woreda is situated in Northwestern Zone of Tigray Regional State, Ethiopia. The Woreda is bounded on the East by Medebay Zana; in the Northeast by Tahtay Koraro; in the South by Tselemti; in the West by Wolkait; and in the North by Tahtay Adyabo and Laelay Adyabo. According to the Federal Democratic Republic of Ethiopia Population and Housing Census of 2007, the population size of the study area is 135,561. The 2016 estimated population size of the Woreda is about 166,062, considering the 2.5 average annual population growth rate of Tigray region. With an area of 2815.05 sq.km, there are about 21, 495 farmers in the district who held an average of 1.27 ha of land. The district is also very popular in traditional gold mining operations and becoming an important source of gold for the National Bank of the country, Ethiopia (Hagos et al., 2016). The Woreda is also characterized by stumpy GER and NER in schools (TRSEB, 2015) because many youths are out of school either permanently or temporarily.

Interview and observation are the instruments of data collection implemented to gather primary data from 25 youths (aged 17 to 26) engaged in gold mining and local residents indirectly affected by mining exploration. The writer has collected data since September 2014 from youth miners selected through snowball sampling technique. Also, judgmental sampling was implemented to approach

persons indirectly influenced by the mining activities namely restaurant, bar and café owners (three in number), and 3 teachers. Besides, secondary data were organized from reports of the Tigray Education Bureau, journals, legal documents and research outputs. The primary data are qualitatively manipulated and triangulated with the data gathered from secondary sources.

## RESULTS AND DISCUSSION

### Artisanal gold mining and youth livelihoods

Artisanal gold mining is serving as a source of livelihood, area of employment and proliferates business activities in Asgeda Tsimbla Woreda. Evidently, there are youths who have constructively changed their life through the money attained from artisanal gold mining. Since mining serves as an instrument of getting money quickly for survival (Mihaye, 2013), artisanal gold miners of the study Woreda have been slackening their family bountiful problems. All the 25 interviewed miners affirmed that they have been supporting their families through gold mining. There are also youths persistently serving their basic necessities, and to a larger extent, who have purchased luxurious products such as vehicles and houses. For instance, among the interviewed miners, 5 of them have purchased a house in towns while other 8 gold miners stated that they remake their families domicile. Therefore, artisanal gold mining has the role of diversifying rural livelihoods in sub-Saharan Africa (Hilson and Garforth, 2012, 2013; Bakia, 2013), and in Asgeda Tsimbla Woreda.

However, there are considerable youths that spend their most active years' not in engagements that are useful for their human development but in activities that expose them to various risks (Ethiopian Ministry of Youth, Sports and Culture, 2004). There are youths that spend their money on temporal joyance just like what Aristippus' philosophy, Cyrenaics, contemplates. Cyrenaicists maintained that individuals may die in the upcoming jiffy, and, thus, persons should carry out stuff (that is, eat, drink and make sexual intercourse with someone) to maximize immediate and sensual pleasures for the moment (O'Keefe, 2001).

Similarly, in the study area, youth artisanal miners spend lots of money for temporal satisfaction. Among the interviewees, 12 miners having more than 5 years mining experience which confirmed that they invest their money on time-being consumption. In most cases, these miners stay in the gold mining centers averagely from one to two months. Then after, they return back to towns and stay there till they cease their money acquired throughout the mining months. The interview made with local residents also revealed that the youth miners are devoting resources to fulfill desires which are not as such vital for life. In the first place, miners mislay their resources in activities that do not bring sustained contentment in their short- and long-term life. Above and beyond, youths wrangle with others in inebriation aura after unduly

drinking alcohols. Such kind of thought and proceed is perilous and would muddle the future life of the youths.

Though creating favorable conditions to reduce and eventually eliminate the use of alcohols that bring striking damages to youth is the major focus of the Ethiopian Youth Policy, on the ground, however, the implementers are unable to stop alcohol advertising targeting youth and lowering young people's access to alcohol (Ethiopian Ministry of Youth, Sports and Culture, 2004). This calls for successful intervention from the government and concerned bodies. Training could be helpful if it is given to gold miners on how to invest their earning in economically profiting business activities.

Furthermore, artisanal gold mining boosts business activities such as restaurants, cafés and bars. Youths investing in these business activities affirmed that they changed their livelihoods following the intense investments made in the artisanal gold mining. There is clear indication that profits of the owners of these ventures plummeted when the degree of gold extraction and remunerations by miners diminishes. In their study, Hoadley and Limpitlaw (2004) and Bakia (2013) also accredited the undeniable contribution of artisanal and small-scale mining in stimulating local economic development.

One could not be excited that artisanal gold miners profit is very dependent on chance, while some individuals got surplus gold others did not. This means, those miners who do not acquire adequate cremation during excavation would experience unpleasant livelihoods. Likewise, many youths made a long walk to mining areas and sometimes stay there for an extended time ranging from one to three months. But, in the mining areas, there are no health centers that can provide medical services to sick individuals. When mineworkers got sick, they have to make a long walk on foot, averagely not less than 20 km, to reach healthcare centers which could adversely affect their life. This means the sector is dangerous for the life of the youth miners.

Broussard and Tsegay (2012) asserted that, in developing countries, youth face the challenge of obtaining safe and acceptable work. Hence, it is the responsibility of the government to make sure that the health of the miners is protected. On one hand, the government is in charge of building health centers in the nearby mining areas and on the other constructing roads to connect the mining centers with rural towns to ease the means of transport which is indispensable. Also, artisanal mining makes them feel insecure because at one point in time, they may lose their life as a result of a flash flood or tunnel crushing calling that there are miners who have died as a result of these two causes. According to the interviewees, 12 miners from Tabiya<sup>1</sup> Mizan died because of tunnel crash since 2006. In July 2016, seven

gold miners died in one tunnel collapse in the gold mining center of Weldeba.

The writer had a discussion with youth gold miners on the possibility of engaging in jobs other than artisanal gold mining. The obtainable field of employment itemized by all the miners is agriculture, but with reservation. What the respondents aggressively described was that, on one hand, agriculture performed in a degraded land becomes tiresome activity, inept and awkward to acquire quick money in a time of emergency. On the other hand, typically youth are afraid of picking agriculture as a permanent source of livelihood for the reason that the size of arable land available to them is and would be too small to satisfy their family necessities due to the increasing population in their household and locality. According to the World Bank (2012), in Ethiopia, the rural land has become scarce and the average rural landholding has fallen from 0.5 hectares in the 1960's to 0.21 hectares in 2005. This is one reason why youths are compelled to look for non-farm careers within and outside the rural areas, particularly artisanal gold mining in Asgede Tsimbla Woreda.

### **Artisanal gold mining and education**

As it is specified in the Ethiopian legal documents, an artisanal mining license shall be given to claimants (citizens only) interested in artisanal mining (Ethiopian Ministry of Mines, 2012). Nonetheless, individual gold miners in Asgede Tsimbla Woreda are not legally registered and licensed. Since there is no restriction imposed on potential miners, anyone can excavate gold at any time irrespective of his/her age and domicile. It is for this reason that many school age youth march to the mining centers to extract gold which exacerbates school dropout, over-age enrollment and lower completion rates in Asgede Tsimbla Woreda. For instance, among the 25 interviewed gold miners, 10 of them are primary and high school dropouts, 8 of them are illiterate and 3 of them completed grade 10, while the remaining 4 are high school students but temporarily engaged in gold mining.

One can also comprehend the condition owing to the GER and NER through primary to preparatory schools of the Woreda. In 2014, for instance, the number of youth aged 17 and 18 were 6,748 in the study Woreda, but only 170 of them were enrolled in grade 11 and 12, that is, the NER is 3.93%. In the same year, the total number of students that enrolled in grades 11 and 12 were 356, that is, the GER is 5.28% (TRSEB, 2015). Teachers are in charge of bringing back absentee and dropout students to school, consulting with the students themselves and their parents. However, teachers face difficulty of bringing those students who went to mining centers because the

<sup>1</sup>Tabiya is the lowest administrative skeleton in the vertical government arrangement in Tigray Regional State. The vertical government arrangement in

Tigray Regional State from top to bottom is: Regional Government – Zonal Government – Woreda government – Tabiya Administration

mining areas are not easily reachable to teachers and sometimes school students walk to extracting areas without telling their parents which make searching for them very difficult. Moreover, the interviewed teachers affirmed that those students that went to gold mining are not as such interested to return back to school because they got uncontrolled money through mining.

To make things worse, young artisanal gold miners were asked why they prefer to go to gold mining more than school. What the participants vigorously uttered is very shocking. Amongst the interviewed artisanal miners, eighteen of them claimed that the civil servants in their locality acquire lower wage per month, at least temporarily, as compared to the profit collected by artisanal gold miners. Also, they said that there are individuals engaged in artisanal gold mining who were previously civil servants. The miners feel that these individuals leave their previous job because they earn low. As a result, the youths turn out to be dispassionate in investing their time in education. Various studies, however, divulged the everlasting value literacy deliver to an individual's life and its foundational worth to continued progress and achievement (United States Agency for International Development, 2012). Having youths favoring gold mining than education means we would lose their labour in case the mining happen to be running at a loss.

Though, it varies across personal incomes, for instance, literate people earn 30 to 42% greater than their illiterate counterparts (Martinez and Fernandez, 2010). Also, the income of a person with poor literacy relatively remains the same throughout their working life, whereas individuals with good literacy and numeracy skills increase at least two to three times. And young people who did not complete primary schooling are less likely to obtain jobs good enough to avoid poverty (The Economist, 2008; World Literacy Foundation, 2015). Therefore, since many of the youth miners are illiterate, if not school dropout, who have not the required skills to perform professional employment, the paramount choice available to them is employment largely of unskilled labour.

According to the findings, from the 25 interviewees, 21 of them are school dropout and illiterate. It means they do not have the requisite skill and expertise to participate in other occupations. To mention, in a study conducted by Hagos et al. (2015) on "Participation on Traditional Gold Mining and its Impact on Natural Resources in Asgede Tsimbla Woreda," greater than 85% of the study respondents did not complete elementary school, that is, grade eight. Also, a study conducted by Birhane (2011) in the same Woreda also revealed that artisanal gold mining significantly affects students' primary school completion and dropout rate. Again, majority of the artisanal miners in East Cameroon tend to stop formal education to concentrate on artisanal and small-scale mining though primary education is compulsory in the country (Bakia, 2013).

Illiterate miners might not be well-versed on how to invest and utilize the money acquired through mining to diversify and improve their earning capacity. In recent time, for instance, obtaining driving licenses, joining the police force, and the like were reserved for graduates of grade ten and above. In this vein, if illiterate youth miners lost their career, in any circumstance, they would lose everything and become a burden and reliant on others. In the future, the amassed gold perhaps may finish and full-time workers of artisanal gold mining unquestionably would mislay their basis of livelihood. The Economist (2008; cited in World Literacy Foundation, 2015) described that young people who do not complete primary schooling are less likely to obtain jobs good enough to avoid poverty.

Poor literacy also limits a person's ability to engage in activities that require either critical thinking or a solid base of literacy and numeracy skills such as understanding government policies, communicate with others via email or social networking sites, and analyzing sophisticated media and advertising messages (World Literacy Foundation, 2015). The surprising issue, however, is that the study participants are not interested in going to school because they claimed that the public servants in their locality are getting petite monthly salary when compared with the profit acquired by artisanal miners. A 23 years old artisanal miner described that:

*To be a teacher, agricultural extension expert or related professional person, the person must spend ten to fifteen years in school. Education incurs a cost to learners during the school and even after graduation, they acquire not enough wages. In addition, those who fail in grades 10 and 12 simply perform similar activities like the illiterates. For this reason, many youths are not interested in going to school in our locality.*

## Conclusion

Artisanal gold mining is serving as a source of livelihood because there are youths who have been slackening their personal and family bountiful problems, persistently serving their basic necessities, and it, further, boosts business activities in the Woreda. In contrast, there are youths that spend their earnings on engagements that are not useful to their personal development such as alcohols. On one hand, miners mislay their resources in an activity that do not bring sustained contentment in their short- and long-term life, and on the other hand, after they are drunk, they enter into conflict with others, sometimes leading to human death. In this case, interventions are needed for the betterment of the miners and the locality. Creating awareness for the youth miners on how to invest their money could be one area of intervention but further study is required.

Artisanal gold mining, particularly at an individual level,

is not performed through legal licenses. Since there is no restriction imposed upon potential miners, many school age youth march to the mining centers to extract gold which exacerbates school dropout, over-age enrollment and lower completion rates in schools of Asgede Tsimbla Woreda. Legalizing the artisanal gold mining sector shall be the focus of policy discussion for the local government to make it a potential source of revenue and tackle the mentioned problems. Scholars here can play an undeniable role in devising evidence-based alternative policies and strategies to address the issue. Moreover, artisanal gold extractors mine gold manually with traditional tools. Though a study is needed on the kind of equipment needed for the extraction of gold, performing it through modern equipment is indispensable to capitalize the benefits of the miners in particular and to modernize the sector in general.

## CONFLICT OF INTERESTS

The author has not declared any conflict of interest.

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## Abbreviations

**Abbreviations:** ILO, International Labour Organization; UN, United Nations; TRSEB, Tigray Regional State Education Bureau.

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<sup>1</sup>Woreda Government is an administrative skeleton in Tigray National Regional State, Ethiopia, situated next to Zonal Administration (the Tigray National Regional State is vertically arranged from higher to lower: Regional Government – Zonal Administration – Woreda Administration – and Kebele Administration).