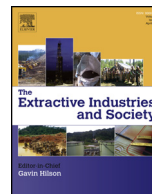




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Viewpoint

Formalization of artisanal miners: Stop the train, we need to get off!

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ABSTRACT

The formalization of artisanal miners, mainly gold miners, in developing countries continues unabated, although the results have not been fruitful. Due to the strong price of gold and increasing poverty, more and more rural workers are turning to artisanal mining to try and eke out a meager living. At the same time, many mining companies are buying up large concessions in top commodity-exporting countries. Invasions of company-owned concessions by “informal” and “illegal” miners are causing major conflicts in rural areas, leading to government-led military interventions in some cases. First, the legislation needs to be changed in order to directly correlate taxes with ore production and discard useless definitions of different types of miners. Secondly, formalization cannot exist without education. Uneducated gold miners, if formalized, will continue with their inefficient methods of mining and processing, which cause widespread atmospheric and fluvial pollution. Without training and the organization of artisanal miners into groups, cooperatives or associations, governments cannot expect that these rudimentary miners will be converted into educated, responsible miners, who are willing to adopt cleaner, more sustainable practices.

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1. Introduction

Overall, the economic performance of developing and emerging countries in 2015 was weaker in comparison with 2014, growing 4.3% and 4.9%, respectively; a result of lower commodity prices, reduced global trade and political instability (World Bank, 2016). Despite large differences among countries, the six most important commodity-exporting Latin American countries (e.g. Brazil, Argentina, Peru, Colombia, Chile and Venezuela) have suffered economically over the last few years, with 2016 unemployment rates hovering between 6% in Peru, 11.2% in Brazil and 18.1% in Venezuela, with a typical rate around 9% (IMF, 2016). Worse still is that the outlook for most of these countries in 2017 does not appear any better, as unemployment in Brazil, Venezuela and Chile is expected to worsen, reaching 11.5%, 21.4% and 7.6%, respectively, while Argentina, Colombia and Peru show little to no improvement.

In terms of commodity prices, gold has declined in the last 3 years, although with less intensity than the price of other base metals. The gold price, barely below US\$1100/oz at the beginning of 2016, increased to nearly US\$1300/oz in October, 2016. Although the demand for gold in the 3rd quarter of 2016 reduced 10% when

compared to the same quarter in the previous year, this did not have a large influence on primary gold production and recycling that increased 4% and 30%, respectively, related to the same period in 2015 (WGC, 2017). Gold has always been a preferred investment for those living in developing regions such as India, China and Middle Eastern countries, as gold has less investment vulnerability than paper currencies. Although there was a 7-year low in jewelry demand, especially in China and India, overall gold demand in 2016 gained 2% to reach a 3-year high of 4308.7 tonnes (World Gold Council, 2017). While recycling contributed to the demand for gold, production from conventional mines was expected to be above 3000 tonnes in 2016, with artisanal gold miners contributing an extra 400 tonnes (Veiga et al., 2015).

With the increasing unemployment rate in developing and emerging countries and the price of gold still hovering around US \$40/g, 16 million artisanal gold miners worldwide are encouraged to look for more deposits (Seccatore et al., 2014). However, the question is whether artisanal mining makes sense? It is already well understood that the poorest people in the world live in areas with the highest mineral potential. With little irrigation, no farming facilities nor appropriate agricultural training and low employment opportunities, rudimentary gold mining is a relevant source of income for rural communities who have already been forgotten by their governments (Hilson, 2009).

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Large contingents of artisanal miners end up causing significant environmental and social impacts, which are likely the main problems associated with the mining sector as a whole. Invasions of artisanal miners into the mining concessions of large-scale conventional companies have been increasing in recent years, as we have observed on the ground in mining areas in Colombia, Ecuador, Peru and Honduras. However, it is debatable if these can be considered real “invasions”, as many areas had a small number of artisanal gold miners before the mineral titles were granted to mining companies.

Although the governments of countries with artisanal gold miners insist that the solution for conflicts between companies or landowners and informal and illegal miners is formalization of the miners, the process is not clear to anyone. The criticisms of existing formalization policies in developing countries is overwhelming, with no sound alternatives given. It has even reached the point of absurdity in the DRC (Congo), whereby the Government in September 2010 imposed a ban on all artisanal mining activities, which represent 90% of the mineral production and exports in the Eastern part of the country (Geenen, 2012).

Why is it so important for governments to legalize artisanal gold miners? In general terms, it is clear that formalization is a way in which more control is exercised over artisanal mining activities and taxes are generated, while at the same time providing miners with a legal mining title for accessing credit and negotiating the area. Unfortunately, this is not important from the viewpoint of the miners, as the banks and governments are extremely bureaucratic in providing financial credit to individual miners (Hilson, 2011), whether they are legalized or not.

Informal employment is a chronic problem in developing countries, comprising 50–75% of the non-agricultural sectors (Chen, 2007). In this way, the construction of gold processing centers has increased in recent years to take advantage of the large flux of gold produced by artisanal miners, who do not have the knowledge or capital to process their own ores. The owners of processing centers typically use mercury to extract a small fraction of the gold (20–30%) to give to the miners, and then keep the tailings to leach the remaining residual gold (70–80%) using cyanide (Veiga et al., 2014a). This exploitation of artisanal miners generates large incomes for the owners of these centers, while at the same time causing massive pollution of water bodies with cyanide, mercury and other heavy metals. However, it is important to point out that these centers are often deemed legal in the large majority of countries where they operate.

The absence of police or any other type of authority in remote artisanal mining areas is also a relevant component of the problem (Hilson and Vieira, 2007). Although there is little to no enforcement, developing countries want to show progress and establish sound legislation to attract foreign investments. However, there is a large disparity between the perception of mining officials in the governments of developing countries and the reality found on the ground. As a result of enormous challenges in implementing well-meaning legislation in the field, governments basically leave it up to companies to resolve conflicts with artisanal miners, which is not fair and does not produce good results.

This article brings the viewpoints of the authors related to the formalization plans implemented by governments of developing countries affected by large contingents of artisanal miners. The authors stress that the current legislation and the highly bureaucratic process of formalization, together with disjointed coordination amongst different government agencies that oversee the implementation of policies, end up causing ineffective practical solutions. Therefore, based on observations in the field, the authors suggest ways in which formalization can offer real benefits to the actual artisanal miners, who should be the focus of the process. In turn, everyone, including large-scale mining companies and the

governments, could reap the rewards that come from more pragmatic actions. The sequence of initiatives the governments should implement include: (1) Revision of mining regulations to create more effective ways in legalizing artisanal miners, while at the same time reducing taxes and bureaucracy; (2) Create ways in which miners can be educated and organized; and (3) Provide long-term technical assistance. These points will be discussed in the following sections.

2. How to formalize when the legislation is ineffective

Although formalization is a term widely used to denote the legalization of artisanal miners, it is unclear if this translates into better management of the natural resources, which is directly associated with economic and environmental sustainability (Siegel and Veiga, 2009). In other words, the process of formalization currently practiced in many developing countries does not result in reduction of bad polluting practices or better benefits for the governments. Furthermore, the lack of success is also related to structural factors that retard the progress of formalization, including the vested interests of many powerful individuals or institutions that continue to benefit from informality (Labonne, 2014). This author also expressed her pessimism regarding the formalization of artisanal miners, stressing that the process needs to be part of an integrated plan of the governments to combat poverty, even in non-mining communities.

Currently, no country has clear regulations defining the activities that are classified as “artisanal mining”, with almost all of the policies only referring to the size of the operation. In Peru, Law 27651 established in 1992 (Peru, 1992) provides definitions based on production capacity, where a large-scale mine is one that exploits and processes more than 5000 tonnes of ore per day (tpd), while a medium-scale mine processes from 150 to 5000 tpd. Salo et al. (2016) highlighted the demanding requirements that Peruvian artisanal miners from Madre de Dios need in order to formalize, which include: a certificate of training; a certificate certifying the absence of archeological remains; authorization for the use of explosives; and accreditation as an artisanal mining enterprise.

In the Ecuadorian Mining Law that was enacted on Jan 29, 2009, three types of mining are defined: artisanal, small, and large-scale (Vergara, 2009). However, artisanal mining is characterized as a subsistence-based manual activity, with no indication regarding the allowable volume to be mined. In this law, a small-scale mine can extract up to 300 tpd, paying 5% tax, while everything above this capacity is considered large-scale and subject to taxes as high as 50%.

Although Colombia has established a progressive mining taxation system based on mining production, the law is fraught with miner definitions (“barequeros”, artisanal, traditional, “de facto”, small, medium, rudimentary, etc.), which are completely useless and confusing. The Mining Law of 1988 began to define miner types based on mine size, tonnage of material mined per day, extraction methods, type of equipment used, mining areas, etc. (Ministerio de Minas, 2014). According to the Ministry of Environment and Sustainable Development, there are currently 233 municipalities in Colombia that have artisanal gold miners. Echavarría (2014), in discussing the barriers impeding formalization of Colombian artisanal miners, concluded that the government does not differentiate between the needs of artisanal miners and large-scale miners and that the level of technical requirements to formalize a small-scale mine is very high. Furthermore, Santamaría and Salazar (2016) suggested that the formalization process would only bring temporary economic benefits, mainly in the form of taxes.

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