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Abstract: The artisanal and small-scale mining (ASM) gold sector is reviled in Ghana for its devastating effects on the inhabitants and ecosystem of the communities in which it operates. This paper argues that the problems that have bedeviled this sector are not preordained. They are created by the Ghanaian state through its failure to play its regulatory role effectively. ASM has the potential of becoming a viable and sustainable part of the mining sector of the Ghanaian economy. With the cooperation of large-scale mining (LSM) companies, the Ghanaian state can reinvent ASM as a motor of development, both in terms of poverty reduction and industrialisation. Drawing on secondary sources, the paper proceeds in the following order: after the introduction, the paper describes ASM, highlighting the main characteristic and historical evolution from traditional artisanal mining (TAM) to modern artisanal and small-scale mining (ASM) often described in broad brushstrokes as galamsey in Ghana. This is followed by a discussion of current developments in ASM, particularly, the participation of foreigners and the media blitz that propelled the Ghanaian state to deploy the police and the military to fight what is widely known as the galamsey menace. In the penultimate section, the paper explains why and how the ASM gold sector can be made one of the central nodes of the intersectoral and value-chain linkages the Ghanaian state needs to forge to engender the structural transformation of the economy to an industrialised one. In conclusion, the main arguments of the paper are thus summarised.
1. Introduction

The Ghanaian economy is quintessentially a commodities-export-dependent economy, a common characteristic of the economies of most Sub-Saharan African countries endowed with natural resource wealth (Graham, 2013). The mining sector, led by gold, has since 1991 been the leading foreign exchange earner of Ghana, overtaking cocoa, the historical leading export earner; except in 2004 when the latter earned more foreign exchange than the former (Minerals Commission, Ghana [MinCom], 2015). In 2016, gold earned Ghana $4.43 billion as against $1.89 billion earned by cocoa (The Observatory of Economic Complexity [OEC], 2018). As Table 1 illustrates, the artisanal and small-scale mining (ASM) component of the Ghanaian gold mining sector contributed more than 30% of Ghana’s gold production between 2012 and 2016. Yet the sector is dominated by informal and ‘illegal’ mining and sale of gold popularly called galamsey, with an estimated 85 percent of small scale miners operating illegally in the country (University of Ghana Business School [UGBS], 2017, p. 1).

Table 1 Contribution of small-scale mining to gold production in Ghana, 2012 – 2016.

<table>
<thead>
<tr>
<th>Year</th>
<th>Large-scale mining (oz)</th>
<th>Small-scale mining (oz)</th>
<th>Total gold production (oz)</th>
<th>Contribution of small-scale mining to total production (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>2,848,409</td>
<td>1,464,781</td>
<td>4,313,190</td>
<td>33.96</td>
</tr>
<tr>
<td>2013</td>
<td>2,808,405</td>
<td>1,441,497</td>
<td>4,249,902</td>
<td>33.92</td>
</tr>
<tr>
<td>2014</td>
<td>2,851,885</td>
<td>1,489,722</td>
<td>4,341,607</td>
<td>34.31</td>
</tr>
<tr>
<td>2015</td>
<td>2,592,563</td>
<td>1,025,671</td>
<td>3,618,234</td>
<td>28.35</td>
</tr>
<tr>
<td>2016</td>
<td>2,620,033</td>
<td>1,134,635</td>
<td>3,754,668</td>
<td>30.22</td>
</tr>
</tbody>
</table>


Across the world and Africa, ASM plays a critical role in economic development generally, and specifically, in jobs-creation, income-generation and poverty-reduction in the countries endowed with mineral resources, especially gold, diamond and coltan. It is even viewed as not only ‘the most indispensable – if not the most important – rural nonfarm activity in the developing world’, but as well, ‘fundamental to achieving all 17 Sustainable Development Goals (SDGs)’ (World Bank 2019, p. vii, 1). As illustrated by Table 2, the sector ‘employs tens of millions of people directly and creates millions more jobs in the upstream and downstream industries it spawns; and has become a driver of economic development in numerous rural economies’ (Hilson and Maconachie 2017, p. 443). In sub-Saharan Africa alone, there are ‘at least 20 million people employed directly in the sector, and an additional 100 million individuals who depend upon its activities indirectly for their livelihoods’ (Hilson et al. 2017, p. 80). In Ghana, despite being largely informal and ‘illegal’, ASM contributes significantly to the creation of wealth and employment, and the overall economic growth of the country, making it one of Ghana’s most important
livelihood activities. It employs ‘an estimated one million people and supporting approximately 4.5 million more’ (McQuilken and Hilson, 2016, p. 16).

Logically, one would have taken for granted that such an important sector of a country’s economy would be embraced and promoted by the state as part of its broader development strategy, especially in a developing country like Ghana where most of the bulging youth population is unemployed due to its structurally stagnant and non-industrialised economy. This is not the case in Ghana. ASM, often described in broad brushstrokes as galamsey, has been a lightning rod in the Ghanaian media and public opinion. The ASM sector and its players are the most reviled in Ghana, viewed by many Ghanaians, especially the middle and political classes as a social and environmental menace, to be fought and ultimately uprooted (see Hilson 2017). A research that sought to know the attitudes of Ghanaians towards galamsey, through a survey design that interviewed 2,400 adult Ghanaians between September 9 and 25, 2017, found out that three-fourths (74%) of Ghanaians think that ‘no citizen should be permitted to engage in illegal small-scale mining or “galamsey” for any reason’ (Armah-Attoh 2017, p. 2; emphasis added). But this public outcry, even hatred, as correctly noted by Vande-Pallen (2017), forecloses any space for a critical understanding of the complexity of the problems associated with ASM, as well as, for discussing a holistic approach to tackling and addressing the problems.

Table 2: Employment estimates for artisanal and small-scale mining, and minerals extracted, in selected developing countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Directly working in artisanal and small-scale mining</th>
<th>Estimated number of dependents</th>
<th>Main minerals mined on a small and artisanal scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>150 000</td>
<td>900 000</td>
<td>Diamonds</td>
</tr>
<tr>
<td>Argentina</td>
<td>5800</td>
<td>34 800</td>
<td>Gold</td>
</tr>
<tr>
<td>Bolivia</td>
<td>72 000</td>
<td>432 000</td>
<td>Gold, diamonds, gemstones</td>
</tr>
<tr>
<td>Brazil</td>
<td>250 000</td>
<td>1 500 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>200 000</td>
<td>1 000 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Central African Republic</td>
<td>400 000</td>
<td>2 400 000</td>
<td>Gold, diamonds</td>
</tr>
<tr>
<td>Chad</td>
<td>100 000</td>
<td>600 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Chile</td>
<td>12 000</td>
<td>72 000</td>
<td>Gold, copper, silver</td>
</tr>
<tr>
<td>China</td>
<td>15 000 000</td>
<td>90 000 000</td>
<td>Gold, coal, construction materials (sand)</td>
</tr>
<tr>
<td>Colombia</td>
<td>200 000</td>
<td>1 200 000</td>
<td>Gold, gemstones</td>
</tr>
<tr>
<td>Cote d’Ivoire</td>
<td>100 000</td>
<td>600 000</td>
<td>Gold, diamonds</td>
</tr>
<tr>
<td></td>
<td>200 000</td>
<td>1 200 000</td>
<td>Diamonds, gold, coltan</td>
</tr>
<tr>
<td>Country</td>
<td>Population</td>
<td>GDP (in $)</td>
<td>Natural Resources</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------</td>
<td>------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Democratic Republic of Congo</td>
<td>92</td>
<td>552 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Ecuador</td>
<td>400 000</td>
<td>2 400 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Eritrea</td>
<td>500 000</td>
<td>1 500 000</td>
<td>Gold, diamonds</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>10 000</td>
<td>60 000</td>
<td>Gold</td>
</tr>
<tr>
<td>French Guiana</td>
<td>300 000</td>
<td>4 400 000</td>
<td>Gold, diamonds, sand</td>
</tr>
<tr>
<td>Ghana</td>
<td>20 000</td>
<td>120 000</td>
<td>Gold, diamonds</td>
</tr>
<tr>
<td>Guinea</td>
<td>500 000</td>
<td>3 000 000</td>
<td>Gold, tin, coal, gemstones</td>
</tr>
<tr>
<td>Guyana</td>
<td>109 000</td>
<td>654 000</td>
<td>Gold</td>
</tr>
<tr>
<td>India</td>
<td>100 000</td>
<td>600 000</td>
<td>Gold, diamonds</td>
</tr>
<tr>
<td>Indonesia</td>
<td>500 000</td>
<td>2 500 000</td>
<td>Coloured gemstones, gold</td>
</tr>
<tr>
<td>Liberia</td>
<td>54 000</td>
<td>320 000</td>
<td>Coloured gemstones, gold</td>
</tr>
<tr>
<td>Madagascar</td>
<td>40 000</td>
<td>240 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Malawi</td>
<td>120 000</td>
<td>720 000</td>
<td>Gold, fluor spar, coal</td>
</tr>
<tr>
<td>Mali</td>
<td>100 000</td>
<td>1 200 000</td>
<td>Coloured gemstones, gold</td>
</tr>
<tr>
<td>Mongolia</td>
<td>14 000</td>
<td>84 000</td>
<td>Gold, tin, jade, coloured gemstones</td>
</tr>
<tr>
<td>Mozambique</td>
<td>450 000</td>
<td>2 700 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Myanmar</td>
<td>500 000</td>
<td>2 500 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Niger</td>
<td>60 000</td>
<td>360 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Nigeria</td>
<td>30 000</td>
<td>180 000</td>
<td>Gold</td>
</tr>
<tr>
<td>PNG</td>
<td>300 000</td>
<td>1 800 000</td>
<td>Gold, diamonds, coltan</td>
</tr>
<tr>
<td>Peru</td>
<td>20 000</td>
<td>120 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Philippines</td>
<td>300 000</td>
<td>1 800 000</td>
<td>Gold, diamonds, coltan</td>
</tr>
<tr>
<td>South Africa</td>
<td>200 000</td>
<td>1 200 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Sierra</td>
<td>165 000</td>
<td>990 000</td>
<td>Gold, coloured gemstones</td>
</tr>
<tr>
<td>Leone</td>
<td>20 000</td>
<td>120 000</td>
<td>Gold</td>
</tr>
<tr>
<td>South Sudan</td>
<td>1 500 000</td>
<td>9 000 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>150 000</td>
<td>900 000</td>
<td>Coloured gemstones, gold, diamonds</td>
</tr>
</tbody>
</table>
This paper discusses the main issues, both factual and theoretical, which have shaped the ASM sector and the discourses surrounding its illegality, environmental/social menace, and the unsuccessful efforts by the state to solve these problems. Through this discussion, the paper seeks to pry open the space for a more informed, balanced, and constructive discussion on the challenges and opportunities of the ASM sector as a motor of development; specifically, poverty reduction and industrialization. Besides the problem of grinding poverty, particularly in the rural areas, Ghana is faced with many other development challenges, such as the continuous and spiralling depreciation of its currency because of its predominantly unindustrialized economy. As the country strives to fight poverty and industrialize through projects/programs like One District, One Factory (1D1F), Planting for Food and Jobs (PFFJ), Rearing for Food and Jobs (RJF), and Aquaculture for Food and Jobs (AFJ), this paper proposes that the ASM industry can be reinvented and integrated into the broader industrialisation and poverty reduction plans of the country. A lot of ink has been spilt on the role of ASM in the latter but not on the former, so towards the end of the discussion the paper will focus on the opportunities ASM offers for the industrialisation plan of the country. On this score, the state must take the ASM industry seriously as one of the central nodes of the inter- and intra-sectoral and value-chain linkages which are to be forged to engender the structural transformation of the Ghanaian economy to an industrialised economy of scale and scope.

The paper will illustrate that the problems bedeviling the ASM sector are not preordained. They are created and deepened by the Ghanaian state through its failure to play its regulatory role efficiently. Gavin Hilson and many other scholars have all along been at pains to argue that the formalisation of ASM is a signal failure of the state to act firmly, timely, and purposively to formalise the sector. The negative environmental impacts of ASM which have given it such a bad name is a clear case of the failure to implement regulations designed to check or minimise the problem. With an effective state, ASM can be formalized, made environmentally sound, socially responsible, be made to attract socially responsible investors and buyers, and to encourages ethical consumer behaviours (Artisanal Gold Council [AGC] 2018). Thus, the paper makes a case for the defence of ASM in general, and what it conceptualises as traditional artisanal mining (TAM) in particular.

Drawing on secondary sources, the paper proceeds in the following order: after the introduction, the paper describes ASM, highlighting the main characteristic and historical evolution from traditional artisanal mining (TAM) to modern artisanal and small-scale mining (ASM) often described in broad brushstrokes as galamsey in Ghana. This is followed by a discussion of current developments in ASM gold, particularly, the

<table>
<thead>
<tr>
<th>Country</th>
<th>Gold Value</th>
<th>Commodities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanzania</td>
<td>40 000</td>
<td>Gold</td>
</tr>
<tr>
<td>Uganda</td>
<td>500 000</td>
<td>Gold, coltan, diamonds, coloured gemstones</td>
</tr>
<tr>
<td>Venezuela</td>
<td>240 000</td>
<td></td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>3 000 000</td>
<td></td>
</tr>
</tbody>
</table>

Source: Hilson and Maconachie (2017, p. 444)
participation of foreigners and the media blitz that propelled the Ghanaian state to deploy the police and the military to fight what is widely known as the galamsey menace. In the penultimate section, the paper explains why and how the ASM sector can be made one of the central nodes of the intersectoral and value-chain linkages the Ghanaian state needs to forge to engender the structural transformation of the economy to an industrialised one. In conclusion, the main arguments of the paper are summarised.

2. Artisanal and small-scale Mining (ASM): What is it?

Even though ASM is a global industry, a generally accepted definition and specific features of the industry are difficult to agree on. In this paper, Hentschel et al. (2002) definition will suffice because it comes closer to what pertains in Ghana: ‘artisanal and small-scale mining refers to mining by individuals, groups, families or cooperatives with minimal or no mechanisation, often in the informal (illegal) sector of the market.’ Despite the difficulty of coming to a consensus on the definition and specific characteristics that distinguish ASM from large-scale mining (LSM), the paper, again, draws on Hentschel et al. (2002) distillation of the core characteristics of ASM across the world, captured in Text Box 1.

Because of the broad range of mining activities all considered as ASM in Ghana, a bit more nuance is needed to capture the variegated mining activities often subsumed under ASM. It is important, first, to draw a ‘distinction between “artisanal mining” that is purely manual and on a very small scale, and “small-scale mining” that is more mechanised and on a larger scale’ (Hentschel et al. 2002, p. 4). Based on the level of mechanisation of the mining involved, Hentschel et al. (2002) draw a distinction between various ASM: there is the traditional and most known artisanal small-scale mining, the semi-industrial small-scale mining, and industrial small-scale mining. Though they are all considered ASM, they are distinct from each other because of the technology used to mine; ranging from simple, low tech, human-energy intensive tools like pickaxe and shovels to mechanically-powered equipment such as excavators, wash plants and water pumps (associated with semi-industrial/industrial small-scale mining). In addition to the sophistication of the machinery used, the distinction is also based on the sophistication of the organisation of the mining activities and of course, the amount of capital investment and profits involved
Another notable distinction is the formal/legal and informal/illegal ASM. As the terms suggest, the former refers to ASM activities which are licensed under the relevant laws of the country and operating in accordance and in conformity with the regulations, policies and management practices of the sector (McQuilkin and Hilson 2016, p. 10). The definition offered by McQuilkin and Hilson (2016, p. 10) illustrates how complicated the informal/illegal ASM is: it denotes the ‘[o]perations that do not have the requisite licences and permits required by law but have a “social licence to operate” from the local community, or other local actors who do not have power vested by the state to award mineral rights and concessions.’ At issue here is not the paucity and non-existence of relevant laws and regulation, but non-compliance, disobedience, and non-enforcement of the laws. Usually there are laws and regulations which require that ASM operators do or not do certain things, but they often don’t comply with them; and worse so, the relevant state agencies do not enforce them for various reasons discussed later in this paper. As documented by Hentschel et al. (2002, p. 6-7), in most countries ASM operators are usually required to possess a mining title or a valid contract with a concession holder; to

**Source: Hentschel et al. (2002, p. 5)**

**TEXT BOX 1: SOME THE KEY CHARACTERISTICS OF ASM**

- Lack or very reduced degree of mechanization, great amount of physically demanding work;
- Low level of occupational safety and health care;
- Deficient qualification of the personnel on all level of the operation;
- Inefficiency in the exploitation and processing of the mineral production (low recovery of values);
- Exploitation of marginal and/or very small deposits, which are not economically exploitable by mechanized mining;
- Low level of productivity;
- Low level of salaries and income;
- Periodical operation by local peasants or according to the market price development;
- Lack of social security
- Insufficient consideration of environmental issues
- Chronic lack of working and investment capital
- Mostly working without legal mining titles.
comply with the relevant environmental legislation; to possess an environmental operation license; to register a company at the relevant mining authority or other fiscal authorities; to pay relevant taxes; to enrol and pay their staff social security insurance with the relevant agencies/department; and to follow laid-down procedure for selling and exporting the minerals mined. However, these laws and regulations are often disobeyed and are not enforced; a situation that has made the ASM industry predominantly informal/illegal across the world.

3. Distinction between Forms of ASM and their Operators

ASM has a long history in the Gold Coast (Ghana), spanning several centuries before the European explorers arrived. For example, before the arrival of the Portuguese in the Gold Coast in 1471, natives of the Gold Coast whose land was endowed with gold were mining and trading with gold (Ofosu-Mensah 2017). In fact, ‘gold mining in Ghana was one of the mainstays of the economies of Bonomanso, Adanse, Denkyira, Assin, Wassa, Akyem and many other Akan states’ (Ofosu-Mensah, 2011, p. 006). Even though the technology used by the Akan gold-miners was rudimentary, it was effective and sustainable; and ‘the gold diggers of Gyaman, Denkyira, Wassa, Asante and Akyem Abuakwa, among others, supplied Europe with enormous quantities of gold’ between the fifteenth and the nineteenth century (Ofosu-Mensah, 2011, p. 012). What is so often referred to as illegal mining or galamsey is a sweeping generalization and negative representation of this original and time-honoured traditional artisanal mining (TAM) of the natives of Ghana. Before modern ASM, TAM was a means of survival in gold-rich communities; existing side-by-side and supplementing farming as their modes of production and social reproduction. Viewed this way, it is not anymore naïve to say TAM is illegal in poverty-stricken rural communities – with gold buried in the belly of their lands – than it is to say farming and blacksmithing are illegal in these communities.

What is painted in broad brush as galamsey has changed profoundly, both in the modes of mining, the imperatives driving it, and the actors involved. One of the profound changes is the different groups of people engaged in galamsey. There is the poorest segment of people, ranging from ‘families and individuals trying to earn enough to survive, young students funding their school and university education, and farmers supplementing their income, to larger labour groups comprising men, women and children’ (McQuilken and Hilson 2016, p. 6). Primarily, this segment is engaged in galamsey purely for livelihood reasons. Thirty percent of Ghanaians live beneath the poverty line, and the most impoverished are unskilled and illiterate rural dwellers with very few employment options (Ofosu-Mensah, 2011). Figures 1, 2, and 3 show that this poor segment of the industry uses rudimentary technology in mining, felicitously conceptualised by Andrews (2015: 4) as digging for survival and digging for justice (my emphasis) and by Hilson and McQuilken (2016, p. 15) as ‘dig and wash.’ The mode of mining and tools used by subaltern groups may vary from place to place, depending mostly on the nature of the deposits of gold. Mostly, they involve labour-intensive methods of mining such as dive and scoop, chisel and hammer, underground “ghetto”, and dig and wash; methods involving the use of simple, rudimentary tools like pick-axes, shovels, barrels, head pans, sticks, sacks, sluice boards, and nets (Bansah et al. 2016; Mantey et al. 2016).
Figure 1: Pictures showing the drudgery and risk nature of galamsey

Source: Aubynn (nd)
Figure 2: Pictures showing the drudgery and risk nature of galamsey

Source: Aubynn (nd)
Subaltern groups digging for survival neither have the money nor the right political/social connections to ease the cumbersome and costly processes of acquiring licence to operate. They are, therefore, mostly located at the illegal end of the formalisation spectrum (McQuilken and Hilson 2016, p. 15). Digging for survival is a highly risky and drudgery undertaking, during which people sometimes lose their lives (Bansah et al., 2016; see Figure 1, 2 and 3). ASM engaged by subaltern groups is the most life-threatening, indecent and demeaning livelihood strategy that can only begin to make sense when one is struggling for survival; especially, with highly limited better alternatives for making a living. A situation that pertains in Ghana since implementing (and continuing to implement) neoliberal reforms in the last four decades, building an economy that grows nominally but does not create jobs. Smallholder farming also became far less lucrative and less economically viable because of some of these neoliberal reforms – for example, the loss of fertile farmlands to mining companies (Armah et al. 2013, p. 95; Ayelazuno 11; Andrews 2018) – making ASM the primary income-generating activity for many households (Hilson and Maconachie 2017).

Even as extremely risky as it is, women are marginalised in ASM as digging for survival. Yet by some estimations, women constitute about 50 per cent of the ASM workforce in sub-Saharan Africa, an estimation that may reflect the situation in Ghana (Yakovleva 2007). They usually ‘work as ore haulers and washers, and as service providers (supplying food, clothing, water and light mine supplies)’ (McQuilken 2019, p. 17). Relative to men, ‘women are largely confined to low-paid and labor-intensive roles, struggle to access bank loans without the signature of a male relative, and face gender-based discrimination in owning land, becoming license holders, and managing concessions’ (McQuilken 2019, p. 19). It is important for all stakeholders of the ASM industry to remain alert all the time to the gender dynamics of the industry, in order not to design intervention projects, policies, lumping actors in the industry together regardless
of whether they are men or women (and their children). Mainstreaming gender issues in such policies is important to promoting the wellbeing of women and their children in the ASM sector, as well as closing the inequality between men and women in the sector (Yakovleva 2007).

Apart from the poverty-driven ASM, there is a burgeoning elite class segment of the industry comprising the ‘well-educated and well-connected ‘opportunistic entrepreneurs’ who, due to their unique position and access to significant capital investment, are able to navigate the complex sociopolitical and bureaucratic landscape needed to obtain a licence’ (McQuilken and Hilson 2016, p. 6). This segment, unlike the poor one, is engaged in galamsey to make money. They are typically a capitalist class interested in investing to make profits; well-resourced, having the money to buy heavy mining equipment and to hire labourers to work for them. This capitalist class invest in ASM to make money and they do make a lot of it, especially during the global gold price hikes in 2008 and after. For example, Crawford et al. (2015, p. 36) study indicates that galamsey is a booming business to the capitalist class, particularly the Chinese, who are better resourced to engage in semi-industrial and industrial mining; likewise, their Ghanaian collaborators or conspirators. ‘We were informed by concession holders’, they write,

that a 15 percent stake can amount to an income of 15,000 to 25,000 Ghana cedis per week (approximately £3000 to £5000 per week). Although the Chinese miners bear the cost of production, it is also evident that they have made large amounts of money. One Chinese interviewee, who had Chinese miners as business clients, stated that “in 4 to 5 years, a lot of Chinese millionaires, even billionaires” were produced, adding that they “had worked very hard” (Crawford et al., 2015, p. 36-37).

This capitalist class cannot, by any stretch of imagination, be viewed as poor people seeking to make a living from galamsey, nor can the poverty-driven galamsey be lumped together with them as illegal small-scale miners or galamseymers because they don’t have licence to operate – a point to be returned to below.

The people engaged in capitalist ASM, both foreigners (especially Chinese) and wealthy Ghanaians, acquire large acres of land and mine with sophisticated equipment such excavators, trucks, dredging machines, and crushers. Unlike the digging for survival by the subaltern classes, the methods of mining used in capitalist ASM are partly mechanised: they include the ‘Changfa method’ which uses a Chinese made (changfa) diesel powered rock crusher; the “more blade” method’, involving the use of excavators to mine in pits; the ‘dredge method’, which involves the use changfa motors and suction hose; and the ‘alluvial washing plant’ method, which uses excavators and mini washing plants (Bansah et al., 2016, p. 12-13). All these methods, as Bansah et al have found out, involve hiring labourers who are paid various wages to work in the mining and processing of the gold. The “foreignization” of galamsey is the clearest example of the monetisation of ASM in Ghana, changing it dramatically as a poverty-driven and subsistence economy to a capitalist, profit-making enterprise. As correctly noted by Owusu-Nimo and his co-authors, “[galamsey used to be an artisanal, traditional, localized, rudimentary or a “hand-to-mouth” venture meant to gather some small pieces of gold to sell for daily upkeep. It is now a capital intensive, mechanically and politically driven cash generating venture with many players including local businessmen, politicians, security personnel, traditional
leaders and other foreign nationals’ (Owusu-Nimo et al. 2016, p. 13). Mantey et al. (2016) are on solid ground when they assert that ‘since the influx by the Chinese and other foreign nationals into the galamsey business… the operational dynamics of galamsey have completely changed from being the rudimentary, low-profile, localized, and a poverty-driven business (we used to know) to a more sophisticated, semi-mechanized (dozers, excavator, loaders, washing plants, Chan Fa, etc.) one.’

The Illegalization and Informalisation of ASM

ASM is often, and negatively so, associated with the informality and illegality, even criminality. However, informal and illegal economic activities do not mean the same thing and should not be used interchangeably. Like many other social phenomena, there is no universally accepted definition of the informal economy (IE), which is also known as the underground, shadow, and hidden economy. Broadly, it ‘covers any economic activity or source of income that is not subject to government regulation, taxation or observation’ (Schneider, cited in Chambwera et al., 2015, p. 5). Writing for the World Bank, Schneider et al. (2010, p. 5) specify in more detail the core elements of the IE. It ‘includes all market-based legal production of goods and services that are deliberately concealed from public authorities for any of the following reasons:

(1) to avoid payment of income, value added or other taxes,
(2) to avoid payment of social security contributions,
(3) to avoid having to meet certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc., and
(4) to avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms.’

Pointing to some of the above characteristics of the IE, another world Bank source identifies three main characteristics of the informal economy: a small size business or economic activity engaged by an individual or household; this business or activity is not registered with the relevant government agency; and does not keep regular accounts (Benjamin et al. 2014).

Though usually associated with negative stereotypes such as ‘evasion of the rule of law, underpayment or nonpayment of taxes, and work “underground” or in the shadows’ (Perry et al 2007, p. 21), economic activities in the informal economy are neither necessarily criminal nor illegal. Schneider et al. (2010) deliberately used the words ‘market-based legal production of goods and services’ to underscore this point, bringing into clear relief the difference between criminal economic activities such as money laundering, corruption, and drug dealings on one hand, and on the other, people operating legal but unregistered businesses or engaging in income generation activities without paying the requisite taxes. These may be immoral and unpatriotic, or even illegal; but by no stretch of interpretation can they be lumped together with such grave criminal activities like drug dealing as illegal/criminal.

Indeed, some economic activities may be informal in the sense that they are not registered, but may actually be recognised by the state which may be collecting taxes.
from them. The imperatives driving various informal economic activities are not the same, nor the factors causing them (Schneider et al. 2010). Some are driven by the struggle or the natural instinct of survival (Chambwera et al., 2015, p. 6), while others are driven by purely avarice and the quest to get rich ran wild. Informality also necessarily connotes a relationship between the state and citizens, with the former having authority to regulate the economic activities of the latter, both people and corporate citizens (Perry et al 2007, p. 22). Depending on the capacity, quality, effectiveness, and efficiency of the state to play this role, some economic activities may inescapably remain in the informal economy and others in the formal (see Schneider et al. 2010). Similarly, some informal economic activities may be selected and dealt with seriously, even brutally, by the state while others may be undertaken without any intervention at all.

So distinguished, the poor and the marginalised in developing countries such as women, rural dwellers, and the urban poor living in shanty suburbs make their living predominantly in the IE. It is known to employ far more people than the formal economy does. It also constitutes a huge proportion of the economies of developing countries; and even in developed countries, its contribution is not insignificant. It is estimated that ‘[t]he average size of the IE as a percentage of the Gross National Income (GNI) is 41 per cent in developing countries, 38 per cent in transition economies and 18 per cent in Organization for Economic Development (OECD) countries’ (Chambwera et al., 2015, p. 3; see also Schneider et al. 2010). Any intelligible discussion of the ASM sector of Ghana must necessarily be conscious of the preceding nuances of the informal economy that it is always associated, an alertness with which the rest of the discussion in this section on the illegality and informality of ASM in Ghana proceeds.

As a time-honoured livelihood strategy of the people of the Gold Coast, ASM, just as farming, was undertaken without any statutory regulation. This doesn’t mean no regulation at all. Similar to most rural livelihood activities, traditional ASM was governed by traditional institutions and customary rules, considered informal relative to the modern state and its administrative/regulatory powers (see Weng 2015). However, this changed with the coming to being of colonialism and the colonial state. According to Aryeetey et al. (2004, p. 14), the British colonial state put in place measures which subsequently and ultimately banned the activities of small-scale miners in 1905. These measures constricted the mining rights of the natives on one hand, and on the other, protected the profits of European companies. Understandably, the colonial state was interested in exploitation rather than supporting local people in their efforts to make a living from the gold found under the belly of their lands. Its action signaled the beginning of state control and the illegalization of artisanal and small-scale mining (ASM) in the Gold Coast; a development that effectively prevented Gold Coasters from participating in the gold mining industry except as labourers (Hilson 2005).

ASM remained illegal even after independence. But characteristic of most informal economic activities in Ghana – for example, the present-day operations of commercial motorcycle riders popularly called “okada” – it was common knowledge that people were actively engaged in the ASM business. ASM gained popularity among other informal artisanal mining activities – for example, salt and quarry mining – as an illegal enterprise, with a local name, galamsey, adapted to illuminate its illegality, even criminality. Paradoxically, galamsey originally refers to “gather them and sell”, the English words use
by the colonialists to describe the traditional mining methods of people in the Gold Coast who, as aforementioned, engaged in ASM as a legitimate livelihood strategy. Etymologically, galamsey originated from the inability of the Gold Coasters to pronounce “gather and sell” and pronounced it as “galamsey” because they could not read and write English (Aubynn 2009; Mantey et al. 2016), a word that had totally nothing to do with illegality and informality.

It is instructive that as one of the informal economic activities among many others in rural Ghana, ASM in gold (and diamonds) is mostly selected and amplified as illegal when operated without licence. The reason for this selective enforcement of the law on mining is the differential interests, both political and monetary, that the state and other powerful capitalist classes have in the mining of specific minerals. Gold and diamonds are not the only minerals in Ghana that are subject to the regulatory powers of the state. The Multilateral Mining Integrated Project (MMIP) Appraisal and Implementation Document (PAID), prepared by the Ministry of Lands and Natural Resources (MLNR) notes that ‘other minerals presently mined on small-scale include salt, limestone, kaolin, oyster shells, silica sands, and brown clays’ (MNLR 2017, p. 1). Industrial minerals which also subject to the mining laws of Ghana include basalt, clay, salt, granite, gypsum, laterite, limestone, marble, rock, sand, sandstone, slate talc, and salt (Tsikata and Quashigah 2019). It is common knowledge artisanal and small-scale quarrying and sand and gravel winning are operating in Ghana. However, these have not yet experienced the intervention of the state because they are of little or no significance to the Ghanaian state and capitalist classes, politically and monetarily; so they operate without the demonization and criminalization that ASM (as digging for survival) has been subjected – never mind that they also have negative effects on the environment.

Why and how did digging for survival become illegal between the 1980s and present? As gold mining became more and more important to the Ghanaian state and foreign mining companies, the Rawlings-led government, the Provisional National Defence Council (PNDC), passed a number of laws to regulate the sector. Three pieces of law were passed in 1989 to regulate and streamline all activities directly and indirectly related to ASM: PNDC Law 217, 218 and 219 (Tsikata, 1997, p. 12-13). The Small-Scale Gold Mining Law 1989 (PNDC 218) legalised ASM and introduced a licensing process; PNDC Law 217 regulated the use of mercury in ASM; and PNDC Law 219 created the Precious Minerals Marketing Corporation, authorised to buy gold, including gold produced from ASM. Over the years these laws have gone through a series of amendments to catch up with new developments in the sector. The Minerals and Mining Amendment Act 475 was subsequently amended and replaced with the Minerals and Mining Law of 2006 Act 703 (Aubynn 2017), which was also amended and updated by Act 900 of 2015. This law consolidated the procedures for the lawful operations of ASM, allowing ‘artisanal miners to apply for a concession of 25 acres maximum in designated areas through the Minerals Commission, and then to obtain a licence to mine’ (Crawford et al. 2015, p. 10-11). The defining elements of the law on ASM, as distinct from LSM, are: 1) the relatively small size of land permitted to be mined; 2) relatively rudimentary technology and small capital investment; 3) operators who are usually individuals or a cooperative involving a group of people; 4) a purely Ghanaian and local enterprise, as ASM is a privilege reserved for adult Ghanaians; 5) operators should have a valid licence, and are to observe health and
safety rules, as well operate in environmentally sound ways; and 6) specific penalties for both Ghanaians and foreigners found guilty by a competent court to have committed an offence under the law (See Minerals and Mining Act 2006 (Act 703), as amended by Act 900 of 2015; Textbox 3)

As noted earlier, these laws demonstrate the authority of the state to regulate the activities of the citizen, but depending on its capacity and effectiveness of doing this, it can actually create the informal economy. It may actually make things worse: it may actually criminalise and illegalise otherwise legitimate economic activities undertaken by subaltern groups for survival. As will be demonstrated below, this is what happened (and continue to happen) in the ASM sector of Ghana. The sector is dominated by illegal operators, with less than 30 percent of it licensed. As Textbox 2 illustrates, the ASM sector of Ghana doesn’t lack regulation. There are enough regulations and laws to make the industry environmentally sustainable and mutually beneficial to the poor and overall economy of the country. In addition, there are adequate relevant oversight state institutions to enforce these regulations and to take administrative measures to ensure sanity in the sector. Textbox 4 shows some of the relevant state agencies and departments which oversee and implement these regulations. Apart from the agencies and departments directly related to mining, there are other generic state institutions such as the Ghana Police Service and the Judicial Service of Ghana which enforce and adjudicate the laws of Ghana, including those related to mining. However, neither impressive laws and regulations nor a good array of institutions are in themselves enough to guarantee orderly behaviour for the general good of society.
TEXT BOX 2: LAWS AND REGULATION GOVERNING MINING AND MINERALS IN GHANA

**General Mining Laws**
- Minerals and Mining Law (PNDCL 153)
- Minerals Commission Act, 1993 (Act 450; formerly PNDCL 153)
- Small Scale Gold Mining Law, 1989 (PNDCL 218)
- Diamonds (Amendment) Law (PNDCL 217)
- Environmental Protection Council Decree, 1974 (NRCD 239)
- Precious Minerals Marketing Corporation Law, 1989 (PNDCL 219)
- Diamonds Decree, 1972 (NRCD 32)
- Additional Profit Tax Law, 1985
- Minerals and Mining Act, 2006 (Act 703)
- Minerals and Mining (Amendment) Act, 2015 (Act 900)

**Regulations**
- Mining Regulations, 1970 (LI 665)
- Explosives Regulations, 1970
- Minerals (Royalties) Regulations, 1987

**Small-scale Mining Enactments**
- Diamond Mining Concessions Ordinance, 1939 (c.136, Laws of G.C. 1951 Revision), s.38 and Form of Schedule
- Gold Mining Products Protection Ordinance (c.149, Laws of the Gold Coast, 1951 Revision)
- Mining Health Areas Ordinance (c. 150, Laws of the Gold Coast 1951 Revision)
- Minerals Regulation, 1962 (L.I. 231), especially regulation 1 and Form 5 of the first schedule
- Minerals Regulations, 1963 (L.I. 253)
- Mining Regulations, 1970 (L.I. 665), especially regulations 4,6,10 and 194–205
- Explosives Regulation, 1970 (L.I. 666)
- Diamonds Decree, 1972 (NRCD 32) (as amended by the PNDCL 216)
- Minerals and Mining Law, 1986 (PNDCL 153, especially Part X – s.73-76, and s.77)
- Mercury Law, 1989 (PNDCL 217)
- Small-Scale Gold Mining Law, 1989 (PNDCL 218)
- Precious Minerals Marketing Corporation Law, 1989 (PNDCL 219)
- Minerals Commission Act, 1993 (Act 450)
- Environmental Protection Agency Act, 1994 (Act 490)
- Water Resources Commission Act, 1996 (Act 552)

**The 1992 Constitution of Ghana: Relevant Codes of Practice**
- Code of Practice for Small-scale Gold-mining Operations
- Ghana’s Mining and Environmental Guidelines

Source: Sources: Hilson (2001); McQuilken and Hilson (2016)
A number of reasons may explain this, and mostly related to the quality of state institutions, their capacity and effectiveness in regulation and service-delivery. For example, if citizens find the laws to be unjust or do not recognise the legitimacy of the state to govern, they would defy them either overtly or covertly. This may be conceptualised as the citizens-side of the illegality of the ASM industry in Ghana. There is also the state-side of the illegality where institutions of state and their officials lack the capacity or the motivation to implement the laws or policies, making the state ineffective as the authoritative entity responsible and equipped to enforce law and order in society. Both the citizens- and the state-sides of the illegality of ASM come together to constitute the much reviled galamsey menace in Ghana.

On the part of the citizens, the law requires them to register with the Minerals Commission (MinCom) who would grant them licences to operate in specific areas designated for small-scale mining operations. Even though the licensing procedures, as captured by Text Box 3, are clearly spelt out, citizens are unable to follow them because of institutional stumbling blocks. For example, the licensing of ASM is decentralised to the designated MinCom district offices, but this is merely on paper. The registration and licensing of ASM is still very cumbersome, a situation viewed as one of major disincentives for ASM operators to go through the processes of formalisation (Aubynn, 2009, p. 66). This is how cumbersome the procedures are: first, fourteen processes are involved; requiring the filling multiple forms; the payment of various fees, formal/informal, which can total to as much as USD1000; multiple agencies are involved in the approval of an application; the Minister of Lands and Natural Resources must sign each application; and these processes must be repeated after three or five years to renew a licence (McQuilken 2019, p. 19).

This means local government institutions such as the district assemblies have no power to issue mining licences. This is done in Accra by the Minister of Lands and Natural Resources after he/she is satisfied that all procedures have been followed. So, besides the long time and procedures in processing the application, applicants also have to ‘chase’ their applications in Accra (McQuilken and Hilson, 2016, p. 21). Because the procedures for obtaining licenses are fraught with frustrations, many people opt to operate illegally. Another major problem is the lack of proper consultation between local stakeholders and MinCom and other relevant regulatory authorities. Local stakeholders such as ASM operators, associations representing the interests of ASM operators such as the Ghana National Association of Small-Scale Miners (GNASSM) and Women in Mining Ghana, and community opinion leaders such as assembly members and chiefs are often not consulted on the design and implementations of various laws and policies on ASM (McQuilken and Hilson, 2016, p. 30).

The state-side of the problem of illegality ASM has to do with the red tape mentioned above and other institutional deficiencies like corruption and politicisation of the procedures for legalising operations in the ASM industry, compelling operators to operate illegally, or what is often described as the informality of the ASM sector in Ghana. Massive evidence has been adduced showing that informalisation of the ASM sector can be blamed, in large part, on the Ghanaian state. There is a sense in which one can say the Ghanaian state is the chief cause of the so-called galamsey menace. ‘Over the past two decades’, Hilson (2017, p. 111) asserts,
Licence for small scale mining
• Despite a law to the contrary, a person shall not engage in or undertake a small-scale mining operation for a mineral unless there is in existence in respect of the mining operation a licence granted by the Minister for Mines or by an officer authorized by the Minister.
• An application for a licence shall be made in a form the Minister may direct to the office of the Mineral Commission in the designated area and shall be submitted with a fee the Minister may determine.
• Where a mineral licence has been granted over a parcel of land, another mineral licence of the same kind shall not be granted in respect of the same land.

Qualification of applicant for small scale mining licence
• A licence for small-scale mining operation shall not be granted to a person unless that person: is a citizen of Ghana; has attained the age of eighteen years, and is registered by District Office of the Mineral Commission in an area.

Establishment of District offices of the Commission
• The Mineral Commission may establish an area designated for mining operations, an Office to be known as the District Office of the Commission.
• There shall be appointed by the Commission a District Officer who shall be the head of the District Office.
• A District Office shall among other functions do the following: compile a register of the small-scale miners and prospective small scale miners specifying particulars that may be determined by the Minister; supervise and monitor the operation and activities of the small scale miners and prospective small scale miners; advise and provide training facilities and assistance necessary for effective and efficient small scale mining operations; submit to the Commission in a form and at intervals directed by the Commission, reports or other documents and information on small scale mining activities within the District; and facilitate the formation of Small Scale Miners Association.

Registration of prospective ASM Operators
• A person engaged in or wishing to undertake a type of small-scale mining operation shall register with the District Office of the designated area where the person operates or intends to operate.
• A person shall not be granted a licence under section unless the person is registered.

Sustainable and Healthy Operations of small-scale miners
• A person licensed under section 82 may win, mine and produce minerals by an effective and efficient method and shall observe good mining practices, health and safety rules and pay due regard to the protection of the environment during mining operations.

Small Scale Mining Committees
• There is established in every designated area a Small-Scale Mining Committee. The Committee consists of the following members: The District Chief Executive or the representative of the District Chief Executive who shall be the chairperson of the Committee; the District Officer appointed under section; one person nominated by the relevant District Assembly; one person nominated by the relevant Traditional Council; an officer from the Inspectorate Division of the Commission; and an officer from the Environmental Protection Agency.
• The Committee shall assist the District Office to effectively monitor, promote and develop mining operations in the designated area.
• The members of the Committee shall be appointed by the Minister and shall hold office for a period and on terms and conditions determined by the Minister.

Source: Minerals and Mining Act, 2006 (Act 703)
a wealth of research has been carried out …which has shown that exorbitant registration fees, an impenetrable bureaucracy, delays on permit-related decisions, a shortage of available mineralized land and a lack of finance have, in combination, prevented tens of thousands of Ghanaians from obtaining a small-scale gold mining license. Policy, it can therefore be argued, is heavily responsible for ‘creating’ the one million-strong galamsey population found scattered throughout Ghana today.

Ghana, as Hilson (2017, p. 111) again correctly noted, ‘has in place some of the most comprehensive and dynamic ASM laws in the world.’

This observation is true across most facets of life, from sanitation, traffic, building/construction, births and deaths to procurement and financial accountability. Ghana is comparable to any of the developed countries in the comprehensiveness, elaborateness, coherence, and cogency of the laws and regulations governing various aspect of life of the society. Ghana also has an array of institutions responsible for designing and implementing policies in various sectors of the economy and society, but mostly they do not have the capacity and culture to serve the public efficiently and effectively. Many public servants are not concerned about value for money, successful delivery of service, predictability (certainty of the service one would get), and neutrality (regarding gender, ethnicity, status, political colouring, etc). Nor do they have the right attitude to public service; namely to be accountable and serviceable to the public in transparency and humility. Public servants turn themselves to public masters; and public offices meant to serve the public turn to avenues for amassing wealth and lording it over the public at will.

In such bad governance context, institutions exist mostly not to regulate and formalize the relationship between the state and citizens, and between citizens; nor do they mostly act as checks and balances on the exercise of power and authority in public/political offices. On paper, public service institutions are organised on formal, impersonal, meritocratic, hierarchical, and documentary rules of administration and management; informed mainly by the principles of transparency, honesty, and accountability in the delivery of services to citizens; irrespective of their status, gender, ethnicity, and colour of their political party. In practice, these ideals of the ideal Weberian state and bureaucracy are not respected or enforced. The management or administrative systems of Ghanaian public institutions are mostly organised on neo-patrimonial, paternalistic, and personalistic values; informed by service to “whom you know” or better still, “who knows you”; or who has money or other valuable non-cash resources to pay or bribe a public servant or politician. In reality, institutions are formal informalisation of what appear on the surface as formal sectors and policies. Little wonder, therefore, that some Ghanaians seeking access to public services in Ghana, such as the registration of land or a vehicle, would try to avoid the formal procedures and rather pass through the informal channels.
Text Box 4: Relevant Government Agencies and Departments responsible for Mining and Minerals

- **Minerals Commission** - formulating regulations in the sector; amending and modifying existing legislation; developing guidelines and standards for monitoring the environmental aspects of mining; making recommendations on minerals policy; advising government on mineral matters; reviewing and promoting minerals development; linking the government and all the actors in the industry.

- **Ministry of Mines and Energy** – in charge of all issues in the minerals sector including the granting of mineral exploration and mining licenses and leases.

- **Geological Survey Department** - conducting geological studies and documenting all its findings.

- **Mines Department**: responsible for safety and health issues as well as resolving other technical issues in the mines.

- **Ghana Chamber of Mines** - private association of operating mines which promotes mining interest, exchanges information with government on mining, helps in reviewing mining legislation, negotiates miner's compensation and benefits with Miners Union.

- **Lands Commission** – maintain legal records of exploration licenses and mining leases, examines new license applicants, and initiate policies relating to stool and state lands.

- **Land Valuation Board** - evaluate property to be affected by mining and provide rates for compensation.

- **Environmental Protection Agency** - ensures environmentally sound resource exploitation through the promotion of research to improve the environment and ensure sustainable development of resources.

- **Forestry Commission** – responsible for the management of the countries forest and works with MC to ensure a balance resource exploitation and forest conservation.

- **Water Resources Commission**: responsible for the management of all water resources and work with MC to ensure balanced resource exploitation.

Source: Aryee et al. (2004, p. 8)
This is the sort of political leadership and public service characteristic of the presidency, ministries, departments and agencies responsible for regulating the extractive industry sector of Ghana. Thus, the processes and procedures for formalising ASM in Ghana may appear clear on paper, but in practice, they are fraught with many challenges. The first challenge is the elitist nature of the legal and regulatory processes of ASM. It is only well-educated people who understand the law and the legal system who can actually go through the processes in order to acquire a license. For those who have what it takes to understand and follow through the various processes involved to apply for a license, they are immediately hit with the issue of delay in the system. For instance, a lot of people that have applied for license for ASM have complained bitterly about the delays involved in the process (Hilson, 2012a). In order to navigate this, some people have resorted to the payment of some monies at different stages of the process (Hilson and Potter, 2005). But those well-connected politically (party-favourites, friends, and cronies), easily get licences to operate through their political patrons who interfere with the procedures to leverage their acquisition of these licences (Armah et al., 2013). Those considered not as party supporters have to either buy their way through the bureaucratic process or go ahead with their mining activities without a licence. In the majority of cases people just go ahead and mine while they try to get a licence. A policy brief by the University of Ghana’s Business School puts a percentage figure of 80 percent on the total number of people involved in ASM without licence (UGBS 2017).

The partisan-politicisation of ASM, and the complicity and collusion of the political elites and other influential Ghanaians in capitalist ASM are, perhaps, the key drivers of informality and illegality of the sector. Electoral democracy in Ghana has led to the partisan-policitation of everything that can win votes in the next election, including even ethnic/chieftaincy conflicts. Enforcement of mining laws, especially on ASM, has become an issue of political football between the two major political parties: The National Democratic Congress (NDC) party and the New Patriotic Party (NPP). Each of them, while forming the government of the day, try to make political capital out of the informality of the ASM sector by their actions and inactions (UGBS 2017; Abdulai 2017; Bebbington et al. 2018, p. 190). Rather than designing effective strategies to regulate the sector, governments of the two parties have, in turns, used the illegality and informality of the sector to campaign for votes, vacillating between sympathy for galamseyers when in opposition and tough rhetoric and strongarm measures when in power. Though contradictory, the common denominator in both posturing is votes and winning the next elections, and are, therefore connected. The strongarm measures by the party in power – military-cum-police swoops on ASM – are a goldmine of votes (excuse the pun) to the party in opposition to exploit to win the next election because, in the keenly contested elections of Ghana, every single vote is important.

We should bear in mind that galamseyers number in tens of thousands in Ghana and can either contribute to a party winning or losing an election in which the results tightly close (Bebbington et al. 2018, p. 191). This reality was not lost on President Akufo-Addo when

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he declared war on galamsey, adding that he was ready to put his presidency on line to stop galamsey (Kwawukumi 2017). But just how can the strongarm measures by the government in power also be about votes? Both parties, as discussed further below, have taken militarised and violent measures against ASM operators. Often ad hoc, these measures verge on knee-jerk reaction to the bad press the sector often gets, with calls on the government to act on the galamsey menace (more on this below). Also bear in mind that the middle class and the press, often the leading campaigners against galamsey, can make a party win or lose an election. Apart from the power they wield through the mass media to influence public opinion about the image of a party, they are a significant voting bloc, often swing voters who are not permanently aligned to either of the two parties. The party in power cannot afford to ignore such an influential voting bloc.

The complicity of the political class in galamsey is another cause of the informality and illegality of ASM by the Ghanaian state. Some members of the political class and other Ghanaian elites such as chiefs, top local government officials are accused of participating, directly or indirectly, in illegal ASM (Armah et al. 2013, p. 99; Bebbington et al. 2018, p. 190). A report of the Bureau of National Investigation (BNI’s) made adverse findings about the participation of politicians, chiefs and some district assemblies in galamsey activities. The BNI report details how some chiefs and district assemblies take monies from people and give them mining concessions without approval from the appropriate authorities (myjoyonline.com 2017). Crawford and Botchwey (2018, 321-322) capture succinctly the complicity of the political class in galamsey and the way in which it shapes and deepens the illegality of the sector; and more so, the way in which the Ghanaian state is deeply contradicted in its so-called war against galamsey. They argue, and correctly so, that the Ghanaian state has a deeply contradictory and hypocritical relationship with illicit ASM. On the one hand, the state tolerates and colludes with widespread illegal mining: state officials themselves extract private benefits from ASM operations through corrupt practices; while politicians rely on ‘kingpin’ galamsey operators for political support and finance for their electoral campaigns. On the other hand, when media and societal pressure intensifies on government to act against the adverse effects of illicit mining, then the state responds in an excessive and militarised manner in an attempt to conceal its erstwhile collusion in illegality, while low-income Ghanaians suffer the consequences (Crawford and Botchwey (2018, p. 321-322)).

Clearly, the causes of the illegality and informality of ASM blameable on the Ghanaian state are so deep-rooted any strategy to regularise the sector seems bound for failure. For the regulatory agencies of gold-mining to begin to work effectively and efficiently, a total overhaul and reorientation of the mindsets of the political and bureaucratic elites are needed. These are the lead decision-makers and enforcers/implementers of the laws/policies on ASM, yet, through their actions and inactions, they create, nature, and nourish informality and illegality in the sector. Little wonder that technocratic and violent, militarised measures by the Ghanaian state have failed to solve the galamsey menace, an issue that the paper turns to below.
4. Militarised Clampdowns on ASM and the Contradicted Ghanaian State

As aforementioned, military clampdowns have been mounted by the Ghanaian state to stop galamsey; and not just galamsey, but legal ASM as the recent military clampdown – *Operation Vanguard* – and the ban on ASM illustrate. Interestingly, we have something close to absolute silence on the ravages large-scale mining (LSM) causes on the environment of mining communities; because LSM is undertaken mainly by foreign mining companies, whom the state sees as a source of foreign direct investment (FDI). The Ghanaian is aware that mining of all shades and forms is inherently a polluting and environmentally damaging industry, but it has deliberately decided to be tough on ASM and to treat LSM with kid gloves (Ayetazuno and Mawuko-Yevugah, forthcoming).

The strongarm posturing of fighting galamsey by the Ghanaian state cuts across all Ghanaian governments and leaders in the last 30 years, spanning across governments led by Jerry John Rawlings, John Kufuor, John Atta Mills, John Mahama, and Nana Akufo-Addo. As one authoritative research report correctly notes,

> Since 1989 governments have engaged periodically in exercises involving the police and/or army to weed-out and close illegal ASM operations. For example, in 2006, the national government carried out operation “Fight against Illegal Mining”, financed by large mining companies under the auspices of the Ghana Chamber of Mines. The National Security Council organized the operation, using the army to sweep unlicensed miners, destroying equipment and arresting ASM operators (Hira and Busumtwi-Sam 2018, p. 40).

In 2013, another police-cum-military operation, Operation flushing out was mounted against ASM. Following reports of Chinese involvement in galamsey, the National Democratic Congress (NDC) government, led by Mr John Mahama, formed a high-level Inter-Ministerial Task Force in May of that year to combat illegal small-scale mining. The taskforce was charged with the responsibility to flush out Ghanaians and foreigners engaged in illegal mining in the country and was asked to ‘work in a coordinated manner with the military and the police to arrest and prosecute Ghanaians and foreigners engaged in illegal mining’ (Daily Graphic, cited in Asamoah and Osei-Kojo 2016, p. 6). Operation flushing out led to the arrest of 1,568 foreigners and 51 Ghanaians, the deportation of 3,877 foreigners, the seizure of forty (40) vehicles, 85 earth moving equipment and forty-nine (49) weapons (Crawford et al. 2015, p. 32).

Most recently, in 2017, the Akufo-Addo-led New Patriotic Party (NPP) government again mounted a similar operation – *Operation Vanguard* – against ASM for similar environmental concerns as those of 2006 and 2013 operations. Preceding the operation, a sustained media campaign and political rhetoric, demonizing ASM as the cause of a looming environmental disaster, prepared the polemical background for Operation Vanguard. The Ghanaian president, Mr. Nana Akufo-Addo, lent the media campaign political support. He vowed to put his presidency on the line to fight the galamsey menace. He also upped the ante in the war against environmental degradation by illegal mining. He continuously referred to galamsey as a 'menace', and in his public speeches, he often
talks about the ‘fight against illegal mining’, the ‘war against galamsey’ and ‘the fight against galamsey’ (Hilson 2017, p. 111). President Akufo-Addo took a number of drastic actions aimed at stopping the so-called menace: on the 1st of April 2017, his government placed a ban on artisanal and small-scale mining operations for a period of six months; it suspended the issuance of new licenses for small-scale mining for a year; established an inter-Ministerial Committee on illegal mining (IMCIM) in April 2017, charged with the responsibility to address illegal mining; and on 31 July 2017, launched Operation Vanguard made up of four hundred (400) men drawn from the military and police service, and deployed to mining areas mainly in the Eastern, Central, Ashanti and Western Regions to enforce the ban. The ban on ASM was extended a number of times and lasted approximately two years, only lifted on 17th December 2018 for the miners who have been vetted and approved by IMCIM.

Operation Vanguard is credited with some successes. As of February 2018, it has made 1,031 arrests in Ashanti, Eastern and Western regions. In addition to the arrests are the confiscation of mining equipment and arms and ammunitions, 173 excavators, 60 vehicles, 274 water pumps, eighty-seven assorted arms, and 1,382 ammunitions (Graphic Online/Yeboah, 21 February 2018). Ninety-five of those arrested have been successfully prosecuted and convicted, but most of them are on bail, pending trials which have been adjourned many times (Citifmonline.com, 31 January 2018). There have been reports of human rights abuses by Operation Vanguard. They include ‘army officials setting 10 excavators ablaze, unlawfully, because they were ‘taunted’; the destruction of over 2000 Chinese-fabricated ‘Chang Fa’ machines in Atwima Mponua, Amansie West, Amansie East, Konongo and other districts in the Ashanti Region; the alleged shooting and killing of a galamsey operator in Wawasi, also in the Ashanti Region; and hundreds of arrests’ (Hilson 2017: 111).

The IMCIM has also chalked some successes: It has formed and inaugurated a total of 72 District Committees on Illegal Mining (DCIMs) across the Country to support the IMCIM to fight against galamsey at the district level. Its members toured the country to sensitize people about illegal mining, and it produced TV documentary on illegal mining as part of the sensitization project. In addition, it acquired drones and started a remote sensing pilot, both of which are to enhance the monitoring of illegal mining activities. Galamsey operators are being organised into community mining cooperatives, to be provided with concessions to work on legitimately under the supervision of the District Committees. Three thousand (3000) miners were trained in sustainable mining at the University of Mines and Technology Tarkwa (UMaT) at the cost of the government. Similarly, training in alternative livelihood strategies was also offered to some people in 18 selected districts in the five regions adversely affected by illegal mining. It has also developed a software, GalamSTOP, that enables the sharing of information/data/reports on ASM between stakeholder organisations like Environmental Protection Agency, the Minerals Commission, Water Resources Commission and the District Assemblies. The IMCIM claims it has vetted 1,350 small-scale mining companies, based on a list provided by the Minerals Commission, and approved about 900 of them.

Yet Operation Vanguard – just like the other operations before it – is burdened with the state-side causes of the informality and illegality of ASM discussed earlier. There are developments which illustrate the deep-rootedness of the negative characteristics of the
Ghanaian state and politics that have made it the main causal agent of the informality and illegality of ASM. These are some of the signals. First, and in no particular order of priority, A Chinese woman, Aisha Huang, also known as the ‘galamsey queen’ in Ghana was arrested with four other Chinese for illegal mining. They were charged with the relevant offences and arraigned before court on May 9, 2017. In December 2018, the state attorney asked the court to discontinue the trial because the state was no longer interested in the case. No reasons were given for the state’s action, but Aisha and her colleagues were discharged. Subsequently they were deported back to China. Note that Act 900 of 2015 amended the Minerals and Mining Act, 2006 (Act 703) seek to impose tough penalties on foreigners who commit offences against the law by participating in ASM. For example, the act states among other things that, if convicted, the person is liable to not more than 25 years imprisonment and a fine not less thirty thousand penalty units, in addition to the forfeiture of any equipment and products seized from the person. This bizarre action of the state directly contradicts the so-called war the Ghanaian state has declared against galamsey, following which it has taken the drastic measures against ASM; not just galamsey, but even licensed ASM. But the present Ghanaian government does not see the same picture; at least, not with the lens Mr. Yaw Osafo-Maafo wears. As the the Senior Minister of the Akufo-Addo government, Mr. Osafo-Maafo justified the discontinuation of the case against Aisha Huang. His reason is simple: Aisha Huang is Chinese, and China gives a lot of development aid to Ghana. Prosecuting her will be bad, diplomatically, for Ghana (Ghanaweb.com 2019). This is illustrative of the power dynamics and politics surrounding the enforcement of environmental protection laws in the mining sector of Ghana. Some galamseyers are more powerful than others, and are given VIP treatment when they commit offences against the mining laws of the country.

Second, Julian Owusu-Abedi reporting for the New Crusading Guide, one of the credible newspapers in Ghana, claims that Mr Peter John Amewu, then the Minister of Lands and Natural Resources – the “General” in charge of the war against galamsey – had given approval to Shaanxi, a Chinese company engaged in small-scale mining in the Upper East Region, to continue its business. If this claim is true, that means some ASM companies had the blessings of the political classes to operate during the ban. The minister has since not disputed the story; and unless Shaanxi was among the companies vetted and approved by IMCIM to operate after the ban was lifted on 17th December 2018, a mining accident at the company’s mine in January 2019 demonstrates that the company was mining. Sixteen workers of the company died from the accident (Myjoyonline.com, January 24, 2019; Abdul-Hamid, January 28, 2019).

Third, there are allegations that people connected to the higher echelons of power were facilitating and protecting some galamsey companies to continue mining without the disturbance of Operation Vanguard. To date, no smoking gun has surfaced but something closer to it was recently provided by the renowned investigative journalist, Anas Aremeyaw Anas, in his undercover documentary, Galamsey Fraud. In the documentary, Charles Cromwell Nanabanyin Onuawonto Bissue, an official of the government of Ghana and secretary to the Inter-Ministerial Committee on Illegal Mining (IMCIM), was seen collecting bundles of money from an undercover journalist to ease the processes for a company to get clearance for its mining operations during the ban (Frimpong 2019). Mr Bissue has denied any involvement in corruption; however, Anas has petitioned the
Special Prosecutor to investigate his allegation against Mr Bissue. Though not a conclusive case of corruption against the IMCIM, the allegation itself is not a wild and unfounded one in the ASM industry in Ghana. The Chief Executive Officer of the Forestry Commission (FC), Mr Kwadwo Owusu Afriyie, an appointee of the government, lent credence to these allegations when he claimed galamsey was still happening in the forest reserves despite the crackdown on the operators by Operation Vanguard. He claimed that ‘some persons arrested for engaging in illegal mining [galamsey] in the country’s forest reserves are back to business thanks to some people controlling the system’ (Myjoyonline 2019). Mr Kwadwo Owusu Afriyie – once accused for engaging in galamsey under the cover of his position, something he denied – is an appointee of President Akufo-Addo. For him to claim that someone higher in authority has authorised people to mine illegally in forest reserves is breathtakingly a bold allegation against members of his party’s government, an allegation that may not just be baseless or out of mischief.

Little wonder that leading figures of the campaign against galamsey are beginning to voice their disappointment with Operation Vanguard and the incumbent government because of these developments. The Convener of the Media Coalition against Galamsey, Kenneth Ashigbey, was compelled to admit that foreigners, mostly Chinese, who are the “conveyor belts of galamsey” are ‘still trooping into the country to engage in the activity’ (Ghanaweb.com 2018). The Managing Editor of the New Crusading Guide newspaper, Kweku Baako Jnr – who supports the war against galamsey and is one of the stalwart defenders of the incumbent NPP government on various highly rated media programmes – said that despite some successes, Operation Vanguard is inflicted with some negatives, which, ‘if not checked can collapse the entire campaign. The potential for the spectacular failure is there; the seeds are there’ (Ghanaweb.com 2019). The seeds for the failure of any measures to enforce the laws on ASM have always been there, as pointed out above, since the state intervened to regulate the sector. They will continue to be there because they are baked into the specific form of the Ghanaian state and the political processes for taking possession of it; namely the neo-patrimonial democratic state and zero-sum partisan, competitive electoral politics.

The negative implication of all these may be summarised into two main thematic areas: the inherent failures of technocratic measures to address the galamsey menace and the deeply contradicted nature of the Ghanaian state.

On the first thematic issue, most often, scholars and experts proffer solutions to the informality and illegality of the ASM sector which depend on the expertise of technocrats to succeed. For example, solutions such as access to land and geo-data; alternative livelihood strategies, participation in decision making by ASM operators, access to finance by ASM operators, simplification of licensing procedures to cut down the bureaucratic red tape (McQuilken and Hilson 2016). As highlighted above, the IMCIM came up with similar technocratic solutions to the galamsey menace. However, inherent to these technocratic solutions are their imminent failure because of the specific form of state and politics described above in Ghana. Technocratic or bureaucratic competence and expertise are important, but they are not enough – indeed, are useless – unless there is dramatic transformation in the neo-patrimonial democratic state and the zero-sum partisan, competitive electoral politics the political class engage to win possession of it. As correctly noted by Abdulai (2017), ‘galamsey has continued to flourish in Ghana.
because policymakers are yet to fully appreciate the inherently political nature of the problem. Relying on purely technocratic approaches to curb an inherently political problem would at best continue to yield sub-optimal results (see also Bebbington et al. 2018, p. 191).

Closely related to inherent failures of technocratic solutions is a Ghanaian state that is deeply contradicted. There is a sense in which contradiction is inevitable in the actions and inactions of this form of state. The state has all the outward appearance of developed Weberian state, with all the institutions and bureaucratic virtues of such a state in place. But the perverted political virtues and interests of the political elites, as well as the zero-sum nature of electoral politics in Ghana, lead the state on the path of contradictions. A few of these contradictions will illustrate this assertion.

A case in point is the purchase of galamsey gold by the Ghanaian state. In 1989, Ghana established the Precious Minerals Marketing Company (PMMC) as the legal state agency that can buy precious minerals like gold and diamonds. However, the organization does not buy from legal small-scale miners only. It also buys gold from galamseyers; and even from Chinese galamseyers. ‘Small-scale miners, including galamsey operators’, write Crawford and Botchwey (2016), 2 ‘sell gold to licensed gold buyers, who in turn, and by law, sell the gold to PMMC. Interestingly, in buying gold, PMMC does not differentiate in sales from legal or illegal miners, a policy driven by the reality of illicit mining, but also indicating a degree of state tolerance of galamsey activities.’ Rather than state tolerance of galamsey, it is more accurate to describe this behaviour as a signal evidence of a contradicted state.

Another source of the contradiction of the Ghanaian state relates to the Artisanal and Small-Scale Mining (ASM) Framework of the government of Ghana (GoG). The document underlines the GoG’s acknowledgement of the important role ASM plays in the economy; ‘Government recognises that small-scale mining operations undertaken by Ghanaians offer opportunities to support rural livelihoods develop entrepreneurship and provide a source of industrial raw materials’ (Minerals Commission 2015, 6). So the GoG will do some of the following ‘to enhance the growth and opportunities in the small-scale mining sector’: develop ‘measures to improve access to finance for small-scale miners’; simplify the procedures for applying for a licence to do ASM, a privilege reserved for only Ghanaians; ‘designate further areas to be reserved for small-scale mining activity based on technical and financial viability of the areas for small-scale mining activities’; ‘encourage the use of appropriate, affordable and safe technology’; ‘provide advice and support to small-scale miners on forming representative associations’; ‘encourage [LSM] mining companies to collaborate and give support to small-scale miners where it can be established that this will be in the mutual interests of the parties’; and ‘to mitigate the negative impacts of small-scale mining’ by ‘disseminating information to raise awareness of health, safety and environmental risks, and will periodically revise and disseminate occupational health and safety guidelines for small-scale mining’ (Minerals Commission 2015, p. 6-8). As discussed above, and in direct contradiction to its own plans for the ASM sector and its players, the government rather mounted militarised and

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2 Crawford, G and Botchwey, G (2016). Foreign involvement in small-scale gold mining in Ghana and its impact on ‘resource fairness’
violent clampdown on ASM operators, including even legal/licensed operators. Note that the ASM Framework was designed in 2015 and Operation Vanguard was mounted in 2017.

The other contradictory behaviour of the Ghanaian state is related to its membership of the African Union, committed to implementing policies and treaties of the continental body. The African mining vision (AMV) is one such continental policy. As will be illustrated below, the AMV demands of member-states to establish well-governed mining sectors which will 'harness the potential of artisanal and small-scale mining to stimulate local/national entrepreneurship, improve livelihoods and advance integrated rural social and economic development' (UNDP Ghana 2015, p. 13). Take note that the AMV was designed in 2009 and Operation Flushing-out and Operation Vanguard were mounted in 2013 and 2017 respectively – as if the AMV did not exist.

5. Defending ASM: Going Beyond the Discourses of Poverty

Conventionally, ASM has been defended by both scholars and activists alike because of its huge potential for reducing poverty in developing countries. As illustrated in Table 2, ASM provides employment and income to the poor, making it one of the greatest African-based opportunities for fighting the continent's chronic and intractable poverty. The poverty-reduction case for the defence of ASM is made convincingly by the Executive Director of Artisanal Gold Council (AGC), Dr. Kevin Telmer, in The Money Stone film. He observes felicitously that small-scale mining is not engaged by people in poverty; it is rather engaged by people taking the first step to escaping poverty. He believes that ASM is a wonderful source of income for a lot of impoverished people, and this is the main reason why it persists. ASM is an effective agent of delivering wealth to poor people directly. According to him, in most cases the people mining in the middle of the jungle gets 70%, or even 80% in some cases, of the international price for the minerals they get. ASM is a vehicle for delivering or transferring wealth from the rich to the poor or from rich countries to poor countries. It is hard to find any other industry, enterprise or policy intervention that can deliver or redistribute wealth directly to the poor as ASM does (O’Neill and Telmer 2017, p. 27). Most poverty interventions, according to Telmer, require huge sums of money that is always hard to come by, and are often donor-dependent. In contrast, ASM has the potential of becoming a viable, self-sustaining, independent, enterprise-based economy that doesn’t need hand-out from donor-countries.

The poverty-reduction case is unassailable. However, there is an additional and new basis for the defence of ASM; namely the emerging new development thinking in the 21st century supporting state-guided, if not state-led, industrialisation through industrial policies (see Stiglitz and Lin 2013; Bush et al. 2018; Bebbington et al. 2018). In practice, this new thinking seeks to transform the commodities-export-dependent economies of African states to industrialised economies of scale and scope. It is a thinking that supports industrial policies by African states to diversify their economies away from commodities-production to manufacturing, concerned to capture and retain the high end of the value-chain of these commodities within Africa (Stiglitz et al., 2013; Newman et al. 2016; ECA and AU 2011; ECA 2016); and this includes the value chain of natural resources such as
minerals and petroleum (African Development Bank 2007; ECA and AU 2011; ECA 2013; Jordan 2013; Ramdoo 2015). At the regional level, this new development thinking is articulated in a number of continental development blueprints. The Africa mining vision (AMV), designed by the Africa Union (AU), is a case in point. The main objective of the AMV is to achieve ‘transparent, equitable and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socio-economic development in the continent’ (AMV, 2009). As one of the ways to accomplish this objective, and as illustrated by Text Box 4, the AMV also seeks to harness the upstream, downstream, and side-stream value-chain activities of mining as the pathway to the overall structural transformation of the continent’s economy, by linking them to its other core (non-EI) sectors (Bush 2010; ECA/AU 2011; Graham 2013; ECA/AU 2013; UNDP Ghana, 2015).

The huge demand for African natural resources in the world market and the rush by transnational corporation to exploit them can be harnessed to catalyse the industrialisation plans of these countries (AMV 2009; see also African Development Bank 2007; Jordan 2013; Ramdoo 2015). The West Africa sub-regional body, The Economic Organization of West African States (ECOWAS), has designed a policy framework in sync with the AMV. One of the objectives captures the resource-based industrialisation vision of the West African sub-region: to ‘Optimize the value chain, especially through processing/value addition of the extracted minerals, to derive the maximum benefit within the context of a clearly defined Local Content Policy’ (ECOWAS Mineral Development Policy [EMDP], 2011). The report on Africa’s mineral regimes of the International Study Group’s (ISG), commissioned by the AU and UN Economic Commission for Africa (ECA), backs this objective. Its central plank is that Africa’s minerals can be one of the major drivers of the industrialisation agenda of the continent if states of minerals-rich countries design and implement mining regimes and policies that aim to foster strategic linkages between mining and the broader economic and social wellbeing of these countries (ECA and AU 2011).

The Ghanaian state has embraced this new development vision. The Ghana Shared Growth and Development Agenda (GSGDA) II – the flagship development plan for the country between 2014 and 2017 – envisaged the acceleration of ‘technology-based industrialisation with strong linkages to agriculture and natural resource endowments’ (National Development Planning Commission [NDPC] 2016: 41). In his maiden State of the Nation Address (SONA), President Akufo-Addo outlined an ambitious industrial transformation of the country’s “Guggisberg” colonial economy. Besides the ‘One District, One Factory’ and ‘Planting for Food and Jobs’ policies underlined in the SONA, he also outlined an ambitious industrialisation plan, of which some of the strategies include the establishment of a multi-purpose industrial park in each of the ten regions; implementation of a comprehensive programme for SME development, and establishment of an industrial sub-contracting exchange to link large scale companies with SMEs (Graphic.com.gh 2017).
The AMV seeks to promote a knowledge-driven African mining sector that catalyses and contributes to the broad-based growth & development of, and is fully integrated into, a single African market through:

- Down-stream linkages into mineral beneficiation and manufacturing;
- Up-stream linkages into mining capital goods, consumables and services industries;
- Side-stream linkages into infrastructure (power, logistics; communications, water) and skills and technology development (HRD and R&D);
- Mutually beneficial partnerships between the state, the private sector, civil society, local communities and other stakeholders;
- A comprehensive knowledge of its mineral endowment;
- A sustainable and well-governed mining sector that effectively garners and deploys resource rents and that is safe, healthy, gender & ethnically inclusive, environmentally friendly, socially responsible and appreciated by surrounding communities;
- A mining sector that has become a key component of a diversified, vibrant and globally competitive industrialising African economy;
- A mining sector that has helped establish a competitive African infrastructure platform, through the maximisation of its propulsive local & regional economic linkages;
- A mining sector that optimises and husbands Africa’s finite mineral resource endowments and that is diversified, incorporating both high value metals and lower value industrial minerals at both commercial and small-scale levels;
- A mining sector that harnesses the potential of artisanal and small-scale mining to stimulate local/national entrepreneurship, improve livelihoods and advance integrated rural social and economic development; and
- A mining sector that is a major player in vibrant and competitive national, continental and international capital and commodity markets.

Source: ECA/AU (2011)
Creating and retaining value in gold-rich countries through mining are at the centre of all the preceding development plans. The ASM sector comes in as an important factor. It is not just an opportunity for addressing rural poverty, but for creating and retaining value in the country; and in particular, in the mining communities often located in the countryside. One of the huge challenges facing developing countries like Ghana is shortage of capital (as in money) to invest to turn their economies around. Yet, paradoxically, there is a problem of capital flight of tens of billions of dollars from Africa, a capital-scarce region to the advanced industrialised countries, capital-abundant region. Extractive companies play a major role in capital flight from Africa. Foreign mining and oil companies’ expatriate huge sums of money back to their home countries, legally, because of the generous terms and conditions of the contracts they sign with these countries, which allow them to do so. However, some of them do this illicitly through dubious ways of tax evasion such as under-invoicing, tax havens, and transfer pricing, etc. (AUC/ECA n.d; Ajayi and Ndikumana 2014; Ndikumana 2016). If undertaken by Ghanaians, as the law requires, ASM will create value, reinvest it and recreate more value, leading to a virtuous cycle that addresses the problem of capital scarcity and capital flight simultaneously.

6. Ideas on the Role of ASM in the Industrialisation of Ghana: The Linkages Approach

The linkages approach is arguably the most influential approach in the new thinking on mining and minerals and their potential to leverage the structural transformation of African economies. A situation where the development of extractive industries leads to other developments in other sectors of the economy. In the oft-cited formulation of Hirschman, development is ‘essentially the record of how one thing leads to another’ (Morris et al., 2012, p. 414); in the specific case of mining, a booming mining sector leads to a booming industrial sector. The approach identifies and provides a solution to the main challenge of extractive industries as drivers of development in Africa: by their nature, particularly the business sense driving them, they constitute a classic enclave economy (The United Nations Conference on Trade and Development [UNCTAD] 2007; Africa Progress Panel 2013). As noted by UNTAD (2005, p. 11), ‘Africa’s particular combination of geographical, historical and structural features have traditionally attracted FDI in to enclaves of export-oriented primary production using a good deal of imported technology and with limited linkages to the rest of the economy’. This is a familiar story that runs through various reports on Africa. For example, the 2013 African Progress Report argued that weak linkages between extractive industries and other sectors of the economy constitute the biggest challenge equitable and sustainable development of resource-rich African countries (see also ECA 2013, p. 6). It then asserted that '[s]trengthening linkages and

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adding value are critical if the benefits of resource extraction are to be spread more widely’ (Africa Progress Panel 2013, p. 78).

Extractive industries are essentially ‘enclaves’ of booming foreign businesses which are not integrated into the broader local economy of the host countries. Of course, one is not saying there are no linkages at all; how naïve can that be? There are some sorts of linkages – for example, financial, procurement, and supplies linkages (Bloch and Owusu 2012) – but these are not the sort of forward-, mid-, and backward linkages that will transform the economies of these countries to industrial economies of scale and scope. Mostly, it is only the upstream activities of the value chain which take place in the host countries; mainly, the extraction of the raw material with disastrous environmental and social consequences. For example, the gamut of mining activities that produce dirty bars or nuggets of gold, of low value at this stage until they are refined through beneficiation and other high-value-addition processes. So, upstream activities are essentially at the low-end of the value chain, with very few opportunities for capturing more value – aside of rents in the form royalties and taxes. These activities are usually capital- and technology-intensive, with few opportunities for local small and medium scale business enterprises (SME) to participate; and most often create few decent jobs. By their nature – being technology- and capital-intensive – downstream activities do not require any significant amounts of logistics and goods from the host countries/communities to be undertaken. The mid-stream and downstream activities of the extractive industries – the middle and high end of the value chain, with many of the positive multiplier effects on the economy as those mentioned above – are mostly concentrated outside the host countries and communities. They are often based in the home countries of the foreign mining and oil companies in the core capitalist, and recently in China, India, and Russia.

However, extractive industries need not naturally be enclave economies. Examples abound of resource-rich countries where states such as Canada, USA, Australia, and Norway, have been able to devise strategies which created ‘a positive and interactive symbiosis in which industrial growth was stimulated by linkages from the commodities sectors’ (Morris et al. 2012, p. 409). Of course, resource-rich African states face many context-specific challenges because of their low industrial capacity and because they are weak actors in the global economy and international politics. Yet these historical cases of well-integrated and mutually-enforcing extractive sectors – rather than enclave economies – demonstrate the possibilities of industrialisation on the back of natural resources. Therefore, the history these resource-rich industrialised countries lends credence to the resource-based industrialisation aspect of the AMV.

The linkages and value-chain approach provide ideational and theoretical foundation to the AMV (see Text Box 4). It provides a framework for African countries to capture and retain more and higher value of their raw materials by upgrading their extractive industries up the middle and higher end of the value chain through forging and nurturing backward, mid, side, horizontal, forward, and other linkages in the whole gamut of activities involved in producing, supplying, and consumption of extractive goods. In the original formulation of the linkages approach, Hirschman (1958) conceived of three major linkages: fiscal, consumption, and production linkages. Besides the three classic linkages, other linkages have since been developed such as horizontal, technological, knowledge, and spatial linkages (see The Collaborative Africa Budget Reform Initiative [CABRI], 2016; Ramdoo,
As will be demonstrated below, the ASM industry of the mining sector of Ghana creates is a huge opportunity for the structural transformation of the economy of the country.

7. Reinventing ASM in Ghana with the Linkages Approach

In the rest of the pages, the paper demonstrates that mining policies based on the linkages approach can create a vibrant and socially/environmentally sustainable ASM sub-sector, with positive feedback loops into the broader industrialisation vision of Ghana. This approach is consistent with continental and national policy documents and discourses analyzing and offering solutions to the problems of ASM. Either explicitly or implicitly, the discussion below will be connected to suggestions for reinventing ASM as a force for development already present in documents such as the multilateral mining integrated project (MMIP) and the Appraisal and Implementation Document (PAID) designed by The Ministry of Lands and Naturals Resources ‘to help curb the illegal mining menace (galamsey)’ in the country (MLNR 2017, p. vi). The discussion will also draw on the draft Minerals and Mining Policy of Ghana, the Africa Mining Vision (AMV), and various mining reports and action plans designed by the ECA and AU on the AMV (already cited above).

Though not stated explicitly, these reports and action plans drawn on the insights of the linkages approach reviewed above. For example, the Draft Action Plan for Implementing the AMV minted at the AU Conference of Ministers Responsible for Mineral Resources Development Second Ordinary Session, sought to build a sustainable future for Africa’s extractive industry by putting into action the AMV (AU et al., 2011). As Text Box 5 illustrates, the actions laid out to make ASM play a major role in the accomplishment of this continental development agenda are closely linked to the insights of the linkages approach summarised above.

The argument in defence of ASM a force for development in Ghana should, first, be based on what may be termed as the ASM development consensus in Africa. As an important member of the AU, Ghana endorses and is committed to realising the various components of the AMV. Indeed, the draft Minerals and Mining Policy of Ghana makes reference to the AMV’s understanding of the development problems of mining in Africa and how to address them. One of the ways Africa can develop from its minerals-wealth, according to the AMV, is through ASM. The AMV seeks to establish a ‘mining sector that harnesses the potential of artisanal and small-scale mining to stimulate local/national entrepreneurship, improve livelihoods and advance integrated rural social and economic development’ (see Text Box 4). Similarly, the Action Plan on the AMV seeks to create a viable and sustainable ASM sector that contributes to growth and development of the continent (AU et al. 2011, p. 20). As Text Boxes 4 and 5 illustrate, the AMV and the Action Plan on its implementation contain the linkages and CSV insights for the industrialisation of Africa through mining and minerals. Similarly, the Appraisal and Implementation Document on the MMIP and the draft Minerals and Mining Policy of Ghana envisage a key role for ASM in the development of Ghana. Similar to the AMV and the action plan on it, the actions that the Ghanaian state has taken, according to the MMIP, over the years to deal with the problem – and contemplates for dealing with them.
To create a viable and sustainable artisanal and small-scale mining sector that contributes to growth and development of member-states, the Action Plan on AMV will do the following concrete things at the national level:

- Regularise and mainstream ASM into broad stream rural economic activities;
- Develop policies to encourage technical assistance for artisanal miners to upgrade them to small and medium scale mining enterprises and promote local service providers in the sub-sector;
- Develop programmes to upgrade knowledge, skills and technology in the ASM sector;
- Develop models for partnership with government and large-scale mines to facilitate access to technology, skills, knowledge and markets;
- Develop a financing and marketing strategy appropriate to the needs of ASM;
- Determine geologically suitable areas for ASM;
- Develop methodologies or templates for distinguishing potentially viable ASM operations for targeted support.
- Develop and strengthen ASM associations.

*Source: AU, ECA, and AfDB (2011, p. 20)*
are closely linked to the insights of the linkages approach summarised above (see MLNR 2017, p. 4-6, 10-11). The use of crude and rudimentary technology by operators of ASM is one of the reasons why majority of Ghanaians view it as a menace. Crude methods of mining have led to many disastrous environmental consequences in the country (see, MLNR 2017, p. 10). Technology and knowledge linkages between foreign large-scale mining companies (LSMC) – lead players of the industry – and galamsey mining enterprises can solve this problem if the foreign mining companies are willing to transfer knowledge and technology to their local and low-tech “counterparts”. This is akin to the provision of technical extension services to smallholder- or peasant-farmers by the government of Ghana (GoG) and non-governmental organizations (NGOs), aimed at improving productivity and sustainability of small-scale farming. LSMC and the GoG need to render similar services to ASM by using the insights of the linkages and CSV approaches discussed above. The government of Tanzania renders a wide range of extension services to the ASM sector of that country (see Masanja 2013), a policy that may serve as a model for the GoG and the foreign LSMC to replicate.

Text Boxes 6 and 7 illustrate the Tanzanian government and a mining company’s actions to forge knowledge/technology linkages in that country. Some of the advanced and relatively environmentally-friendly technology LSMC are using can be lent to galamsey miners, who would also be trained to use it. Apart from the core activities of mining and processing, knowledge transfer could be in the form of technical assistance in other areas such techniques to improve health, safety and environmental practices; facilitation of access to processing plants or markets; and business development assistance (The World Bank Group, n.d, p. 39). As Text Box 5 illustrates, one of the actions to actualize the ASM aspects of the AMV is to ‘Develop programmes to upgrade knowledge, skills and technology in the ASM sector’, a strategy that can be implemented through intra-industry knowledge linkages. Ghana is not doing this, an inaction that has created a gap between its commitment to AMV on paper and the implementation of the ASM aspect of the AMV (UNDP, Ghana 2015). This gap can be breached through knowledge and technology linkages between ASM and LSMC to upgrade the knowledge and skills of small-scale and artisanal miners to engage in sustainable and productive mining. And if other linkages are forged by the GoG, as outlined below, this will be one of the ways of capturing and retaining the higher end of the value chain of mining in the country.
Various Tanzanian government institutions offer small-scale miners with extension services on:

- Legal and regulatory requirements;
- Techniques on exploration, mining and mineral processing;
- Techniques on mineral beneficiation and value addition, mineral markets;
- Acquisition of loans; financial accounting; record keeping and reporting;
- Developed training manuals on ASM and Code of Practices on ASM;
- Developed Transportable Demonstration Units (12 units);
- Establishment of Demonstration Centers on exploration, mining and mineral processing. So far, there is one Center; target is to have 8 Centers countrywide.
- Developed brochures on ASM;
- Facilitation on availability of appropriate and affordable mining and mineral processing technologies.

Tanzania recognized the importance of artisanal mining as a means of poverty alleviation in 1997 through the Tanzanian Government Mineral Policy. This has provided the framework for Barrick Tanzania to partner with the government in embarking on an initiative to assist and facilitate the transformation of the artisanal mining activities around its operations in Tanzania into regulated, productive and sustainable small-scale mining operations. Although the initiative is not yet sufficiently mature to demonstrate long-term results, it provides an interesting model for engagement.

**APPROACH**

Seven key work streams were identified: stakeholder engagement, mobilization, access, technology, funding, implementation and gold marketing. Stakeholder engagement and mobilization programs were intended to build a “common sense of purpose” among the ASM miners, Barrick employees and the relevant government authorities. The access programme focused on transferring access to land and mineral rights to ASM miners, while the technology aspects were dedicated to identifying health, safety and environmental practices that could improve ASM operations. It was necessary to identify funding sources to develop sustainable ASM operations, and the combination of these work streams culminated in the development of a “model mine” concept. The gold marketing work stream has been identifying fair trade gold purchasing schemes that could buy the ASM miners’ production in the future.

**RESULTS**

The North Mara site was selected to pilot the “model mine” initiative. An ASM committee has been established and a baseline socio-economic survey of the ASM activity around North Mara was conducted, as well as a detailed technical site investigation. From the latter it was realized that the value of mineralization, as mined by the ASM, including salary withdrawals, etc., would exceed US$2 million. Within the North Mara ASM co-operatives, 1,513 miners were employed, of whom 540 were women. Barrick Tanzania and the Government authorities, in co-operation with the North Mara ASM cooperatives, set about facilitating the “model mine” project. Using the findings from the baseline study and technical investigations, the following principles were agreed:

- No use of mercury.
- One model mine per co-operative.
- No exploitation of women or children.
- Legal compliance.

For the model mine to be developed, a number of health and safety risks first need to be reduced, and environmental practices need to be improved. To achieve this, an investment of US$1.7 million will be required, including a shared gold recovery plant, support for mining logistics, infrastructure, safety and security support. To manage the project implementation, a third party will be engaged to make sure that the technical as well as the legal aspects are addressed appropriately and to ensure transfer of knowledge. It is expected that the model mine would pay back this investment within two years, and the monies returned could be added to a revolving fund available to the next co-operative seeking to develop a model mine.

The business case why LSMC such as Barrick Tanzania (Text Box 7) should be motivated, indeed, should take the lead to initiate such knowledge transfers. Creating shared value (CSV), as distinct from corporate social responsibility (CSR), may be described as the business case for ASM to be made a profitable and sustainable business through the assistance of large-scale mining companies. Conventionally, business is about making profits, if even that would be to the detriment of the broader society (Porter and Kramer, 2011). However, corporations have moved past this mean-spirited business logic. By the thinking of CSV, businesses would be more competitive and profitable if they promote the wellbeing of the communities, they operate in. By doing this, the foreign mining companies would not only be promoting their image as good corporate citizens of the community. They would also be increasing their productivity if arrangements are put in place – as part of the knowledge transfer agreements – for these foreign companies to buy the gold produced through ASM at slightly reduced prices. With knowledge and technology transfers, we may have a win-win situation for various stakeholders: for all Ghanaians and particularly, inhabitants of the mining communities, who would be living in a cleaner and sustainable ecosystem; for the foreign mining companies, who would be promoting their corporate image while at the same time increasing productivity; for galamsey miners who would be capturing more value from their mining activities while enhancing their image as environmentally friendly actors in the industry; and a win for the Ghanaian government which has failed to promote a sustainable and formal ASM sector. By forging knowledge linkages between LSMC and ASM, the Ghanaian government will be meeting its country-mining vision patterned on the AMV and the action plan of AMV on ASM. One of the toughest challenges to the Ghanaian government’s efforts to improve the operations of ASM is the supply of appropriate and effective technology for sustainable small-scale mining. If the government, with the support of foreign mining companies, is able to forge intra-industry knowledge linkages, this challenge would be addressed effectively.

The Abosso Goldfields Limited’s (AGL’s) ‘Live and Let Live’ project in the Tarkwa and Huni-Valley illustrates is an example of how goodwill gestures can create a peaceful business atmosphere of coexistence between LSMC and galamsey operators (Aubynn 2009). AGL initially adopted a confrontational strategy of dealing with galamsey-miners who trespassed on their concession. It failed, so it decided to adopt a more diplomatic and peaceful strategy: it ‘demarcated an alternative site on an active mining lease area for the short-term relocation of the ASM groups, which were close to areas earmarked for active mining by the company’ (Aubynn 2009, p. 67). To reduce the perennial health and safety risk, as well increase high recovery of gold, AGL also supported the galamsey-miners with technical assistance in mining and processing of gold. Despite its short lifespan, the AGL’s ‘Live and Let Live’ yielded substantial dividends. It established a peaceful business environment in which galamsey-operators and AGL operated side-by-side peacefully. It also led to improved efficiency in the operations, safety and environmental management of ASM operations (Aubynn 2009, p. 69).

Demarcating and allocating part of geologically-proven minerals-rich land, which may be part of the concession of LSMC or not, to galamsey operators will be a way of enabling local cluster development of the mining industry – one of the ways Porter and Cramer proposed to create shared value. Local clusters of mining industries comprising
ASM and LSMC existing side-by-side will not only make it easier for intra-industry linkages as those discussed above between LSMC and ASM. It will also enable flourishing and mutually-reinforcing backward linkages with suppliers of goods and services needed by the mining companies on one hand, and on the other, forward linkages between the mining companies and non-mining companies needing the outputs of the former to do business. To drive the structural transformation of the Ghanaian economy through capturing the upper end of the value chain of mining, the GoG needs to establish mining clusters in the minerals-rich districts through facilitating the co-existence between galamsey operators and ASM in the way that AGL tried doing in the 1990s. To deal with the problem of the enclave mining economy discussed above, the GoG will need to follow up with the designing and implementation of policies which will create, build, and enhance the capacity of local companies to serve the backward, mid, and forward linkages the government seeks to establish between mining and other sectors of the economy in its industrialisation agenda.

The argument here is that the GoG needs to establish flourishing mining industrial clusters in all the minerals-rich districts, comprising LSMC and ASM, to serve as the starting point for mining and minerals-driven industrialisation as envisaged by the AMV. It cannot do this by relying on the good judgement and good will of LSMC to create shared value by allocating parts of their mining concessions to galamsey miners and supporting them with technology as tried by AGL in the Tarkwa and Huni-Valley areas in the 1990s. As pointed out by Aubynn (2009), the AGL project was short-lived, partly because government, as a key stakeholder, was not involved in it. In the present era that the GoG is determined to promote industrialisation through mining and minerals, it must spearhead in establishing these mining clusters by demarcating geologically-proven gold-rich lands for galamsey operators to mine, possibly, closer to the mines of LSMC. The Tanzanian government is, again, a good example of this strategy. It is ‘assisting ASM by identifying mineral rich areas and demarcating such areas exclusively for small scale mining. Currently, there are over 23,000 Primary Mining Licences issued to small scale miners within and outside demarcated areas. Total demarcated for ASM as of June, 2013 was 265,396 Ha.’ (Masanja 2013).

Addressing the vexed question of how to deal with the informalisation of the ASM sector in Ghana is important now than ever before, because of the GoG’s commitment to implement the AMV and its own vision of rapid industrialisation through forging linkages between its mining and non-mining sectors of the economy. Some of the insights teased out from the linkages and CSV approaches can help to address this problem fully and, perhaps, permanently. On the part of the LSMC, the formalisation of ASM is the first step to creating shared value in the communities in which they operate. For example, without formalisation it would be impossible for them to transfer knowledge/technology to ASM as a way of creating shared value; nor would it be possible for LSMC to establish local clusters of ASM as another way of creating shared value. As creating shared value is core to their business models, at least, in the assumption of the CSV approach, LSMC can use their financial and political power to leverage the registration and licensing of galamsey operators as their partners in the industry. For example, they can influence the GoG of Ghana to make the licensing processes less-costly, less-cumbersome, and more and truly decentralised. They may also provide financial and technical support to
The actions and inactions of the GoG of Ghana, as discussed above, are the causes of the informalisation of the ASM sector in the country. Yet it is the GoG that has the powers and resources to plan and implement the formalisation of the sector. The linkages approach shows why and how it should do that. Indeed, from the MMIP, it is clear that the GoG already knows why it should do this, and how it should do it. There is no need, therefore, to belabor this issue here except point to the insights the linkages approach offers to make sense of it. Similar to the way formalization is key to CSV by LSMC, formalisation is key to the linkages approach the GoG is seeking to apply to accomplish its industrialisation vision. Any application of the linkages approach presumes a formal economy in all the linkages the development actor envisages as crucial to the industrialisation of an economy as the GoG seeks to do with respect to the Ghanaian economy. If the GoG is serious about transforming and diversifying the Guggisberg structure of its economy, it must first of all formalise the core sectors of this economy, of which the ASM sector is a major component. The knowledge and techniques for formalising the ASM sector, as captured in the MMIP, are abundant. The government only needs to gather the requisite and adequate political will to do it.

However, the fiscal linkage needs to be mentioned here because it supports funding of the formalisation of the ASM sector by the GoG from the revenues it receives from LSMC. To forge intra- and inter-sectoral linkages between LSMC and ASM – and to forge the necessary linkages between the ASM sector and non-mining sectors of the economy – the government should use part of these revenues to support galamsey operators to get licenses to operate legally. As part the fiscal linkages, the GoG may use some of this revenue to provide extension services to galamsey operators as the Tanzania government has been doing (see Text Box 6). For example, it can use part of the revenues collected from LSMC to provide financial support to galamsey operators to acquire appropriate and environmentally friendly technologies of mining and processing gold. If the other suggestions laid out above are implemented, such financial support will yield many positive multiplier effects and spillovers on the economy. This has the potentials to generate higher revenues in the mining sector than the amount of money used to provide this support.

**Concluding Remarks:**

This position paper has tried throughout to illustrate that ASM (used interchangeable with galamsey) is not ordained to be a menace; it can be reinvented as a motor of development in Ghana, specifically industrialisation. The paper does this in the most inhospitable, indeed, hostile circumstances in which galamsey is viewed across the country as a menace to be fought and uprooted by any means. Despite the huge contribution the ASM sector (both its legal and illegal components) makes to the health and prosperity of the Ghanaian economy, it has been bedeviled by environmental, social, economic, health, and political problems. The disastrous environmental impacts of galamsey, especially the pollution of streams, rivers, and other waterbodies, have given
the sector such a bad name it is widely perceived as a looming disaster in the country. Lumped together as galamsey or illegal mining, the wide spectrum of activities undertaken in the ASM sector in Ghana – driven by various imperatives and undertaken by various classes of people – are presented in such apocalyptic images in the mass media the government of Ghana (GoG) recently declared a military war against it. Code-named *Operation Vanguard*, this military war which began in August 2017 is credited with many successes. However, it has also been criticised for alleged and proven brutalities and human rights abuses. Similar to operation *flushing out* – and based on the history of the use of brute force in Ghana and other African countries against illegal ASM – the paper predicts that *Operation Vanguard* would fail.

Indeed, the paper demonstrates some signals of the imminent failure of this operation, as well as the inherent failures of some the technocratic measures recommended by IMCIM to fight the galamsey menace. Technocratic solutions as those spelled out above are important, the paper argues; but they are not enough – indeed, are useless – unless there is dramatic transformation in the neo-patrimonial democratic state and the zero-sum partisan, competitive electoral politics the political class engage to win possession of it. With a few examples, the paper then illustrates that a key characteristic of this form of Ghanaian state and politics is contradictions in the actions and inactions of the GOG on the ASM sector.

Yet the paper defends ASM because of its bright prospects of contributing to the realisation of both the new continental and national development visions on mining and other natural resources: natural resources-based industrialisation as captured in the Africa Mining Vision (AMV). There is voluminous body of literature on the negative impacts of galamsey in Ghana and across Africa, so this paper did not attempt another narrative on this – something that is pretty well-known. What it rather did – which, hopefully, provides more ammunition for advocacy groups of ASM to engage with the GoG, LSMC, and the media – is to provide solid theoretical and policy grounds for the defence of galamsey as a force for good. At issue in this paper is not to deny the disastrous environmental, social, health and other effects of ASM; or to rationalize them for any payoffs in development. Cognizant of these disastrous effects, the paper offers theoretically-grounded reasons for reinventing ASM as a development opportunity rather than a menace which the military is needed to fight. Based on the development theory of linkages and the business school theory of creating shared value (CSV), the paper illustrates clearly and concretely why and how the ASM sector of Ghana opens additional opportunities in the extractive sector of the country for accomplishing its industrialisation vision.
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