PROJECT MUSE®

"Creating" Rural Informality: The Case of Artisanal Gold Mining in Sub-Saharan Africa

Gavin Hilson

SAIS Review, Volume 33, Number 1, Winter-Spring 2013, pp. 51-64 (Article)

Published by The Johns Hopkins University Press

DOI: 10.1353/sais.2013.0014

➔ For additional information about this article

<http://muse.jhu.edu/journals/sais/summary/v033/33.1.hilson.html>

“Creating” Rural Informality: The Case of Artisanal Gold Mining in Sub-Saharan Africa

Gavin Hilson

This paper offers a new perspective on the origin of informal artisanal and small-scale mining (ASM)—the low-tech, labor-intensive extraction and processing of mainly near-surface hard rock and alluvial gold deposits—in rural sub-Saharan Africa. It argues that the conditions that have fueled the sector’s recent rapid growth were brought about by policy changes made by host governments, multilateral organizations, and bilateral agencies. Over the past three decades, these actors have worked in partnership to promote industrial large-scale mineral exploration and excavation activity through increased foreign direct investment, and have simultaneously implemented regulatory frameworks for ASM industries. Previous scholarship has focused on the ASM sector’s sizable environmental footprint, including extensive land degradation and mercury pollution; the sector’s appalling health and safety record; and the many social ills commonly associated with communities where production takes place, such as prostitution and narcotics consumption. This paper will broaden understanding of the sector’s origins through a case study of Ghana’s informal mining economy.

The terms “informal sector” and “informal economy,” along with allied concepts such as the “underground economy” and “shadow economy,” were initially used as classifications for the collection of trades and services that had surfaced outside of taxation systems and broader regulatory frameworks in cities. The emphasis on urban areas is reflected in the earliest literature . . . on the informal economy focused on the towns and cities of Africa.¹ Keith Hart’s typology of urban income opportunities was conceived from work conducted in Northern Ghana, where it was observed that the local Frafra people migrate to Accra, the capital.² Hart discovered that “the unskilled and illiterate majority of Frafra migrants” were drawn into the “low-income section of the labour force in Accra,”³ the dynamics of which were used to inform the design of the urban income opportunities typology. Most of the research that would be undertaken on the informal sector in sub-Saharan

Gavin Hilson is Chair of Sustainability in Business at the University of Surrey Business School, UK. For the past fifteen years, he has carried out research on the social and interrelated environmental aspects of small-scale mining in West Africa, publishing over one hundred journal articles, book chapters, and reports on the subject. Professor Hilson received his PhD from the Imperial College of Science, Technology, and Medicine.

Africa in the 1980s and 1990s followed a similar course, providing detailed insight on the characteristics of the low-income areas of the region's larger cities. By comparison, the region's *rural* economy, which also underwent rapid change and expansion over the same period, attracted very little scholarly attention.

One logical explanation for this oversight, and scholars' fixation on urban informality in sub-Saharan Africa in general, was the increased "visibility" of the informal sector in cities during the 1980s and 1990s. In addition to attracting rural migrants searching for better opportunities, many of the region's large urban centers would absorb a steady stream of people left unemployed following scores of factory closures, privatization of state-owned enterprises, and dismantling of public sector bodies that took place under the auspices of structural adjustment programs (SAPs).⁴

In Ghana, for example, during the early years of adjustment, 80,000 jobs were lost on the Cocoa Board and 45,000 civil servants were immediately redeployed. In Tanzania, more than 50,000 civil servants were immediately retrenched following implementation of its first SAP in 1986.⁵ Sub-Saharan Africa has been the principal recipient of adjustment loans, receiving 162 of the 288 packages awarded by the World Bank and the International Monetary Fund before 1981. Investment lending intensified in the 1980s and 1990s, when thirty-seven countries in the region implemented a total of 162 SAPs (twenty-two countries are still engaged in such lending), thirty-six more than the number adopted elsewhere in the developing world over the same period. Overall, adjustment lending in sub-Saharan Africa now exceeds US\$ 15 billion.⁶

With few job prospects, masses of unemployed converged on slums, where many not only found refuge but also thrived by engaging in a range of informal trades. Their immediate success was a result of quick recognition of the high demand for particular goods and services, which—as Sethuraman observed over three decades ago—"range from ready-to-eat foods to light industrial products, and from simple personal and household services to the repair of vehicles and consumer durables."⁷ Consumer demand for these goods and services in urban African society has increased over the years. A second reason why changes in the region's rural economy were overlooked was the sudden preoccupation with the "illegality" of the urban informal sector. Scores of analyses would emerge which pointed out that swelling urban informal economies were operating *outside* of regulations and therefore not paying taxes and royalties, the insinuation being that governments were losing significant revenues because these activities were unregistered.

During this period of protracted structural adjustment, rural sub-Saharan Africa also experienced significant transformation, the most notable change being the growth of numerous informal sector activities. While some analysis of the region's rural informal economy surfaced in the 1970s and 1980s, scholars such as King fault this body of literature for "concentrat[ing] on the non-farm productive activities of rural dwellers rather than on subsistence cash-crop agriculture."⁸ The lack of focus on agriculture, however, was justifiable because under SAPs smallholder agriculture rapidly lost its

economic and trading position. Its diminished viability forced tens of thousands of rural African families to turn to the non-farm economy for their incomes. Bryceson highlights why:

“SAP and economic liberalization policies resulted in a plethora of changes in rural productive and marketing infrastructure that often increased rather than reduced uncertainty. Many remote peasant farming areas experienced a decline in marketing services and the removal of subsidies on agricultural inputs, especially fertilizers, made the production of several peasant crops unviable...This environment induced a large-scale search for new, more remunerative activities outside agriculture.”⁹

With smallholder farming no longer able to stand on its own in many corners of rural sub-Saharan Africa, families have turned their sights to a series of informal non-farm activities for much-needed income.

By far, the most important activity to grow under reform has been informal (unlicensed) artisanal and small-scale mining (ASM): low-tech mineral extraction and processing. Over the past two decades, this largely poverty-driven activity has expanded rapidly. Today, it provides employment to more than 10 million Africans directly: at least one million people in Tanzania; another one million people in Ghana;

Recent research shows that informal ASM has become a rooted and integral economic strand of numerous rural communities across sub-Saharan Africa.

and at least 200,000 women in Mali.¹⁰ The sector has also created several opportunities in the downstream industries it has spawned: the World Bank estimates that for every individual employed, six additional jobs are created in ancillary industries. Recent research shows that informal ASM has become a rooted and integral economic strand of numerous rural communities across sub-Saharan Africa.¹¹

The revenues earned from ASM activities have put families in a position to acquire crucial farm inputs to sustain their plots, pay their children's school fees, and secure better quality housing. The importance of ASM in rural sub-Saharan Africa, however, has not been fully recognized by the donor and policymaking communities, whose elements continue to promote support for smallholder activity as the core solution to the region's growing rural poverty problem,¹² despite farming's obvious limitations in generating sufficient disposable income for families in a liberalized market. Moreover, most share an extremely negative opinion of informal ASM activity, condemning operators for not securing a license and evading the law. The significant environmental damage the sector has caused in many corners of the region, including widespread land degradation and mercury contamination, combined with prostitution and consumption of alcohol and narcotics that take place in so many mineral-producing communities, have further reinforced these views.¹³ Coverage of the sector's negative at-

tributes has mobilized local and international media outlets, which have portrayed the growth of ASM activities as a problem and heavily influenced public perception.

This paper brings a new perspective to the debate on informal ASM in rural sub-Saharan Africa, arguing that the sector is the “creation” of donors and host governments. Most countries in the region have reformed their mining economies, implementing rigid regulatory frameworks in an attempt to catalyze growth. The stated intent has been to promote both foreign investment to develop large-scale projects *and* formalized ASM. But host governments and donors have prioritized the former, at the same time making it extremely difficult for individuals to secure the necessary paperwork and licenses to participate in the latter. A case study of the “making” of Ghana’s informal gold mining economy is used to illustrate these points.

“Creating” Informality in Rural Sub-Saharan Africa: The Case of Artisanal and Small-Scale Gold Mining

New literature on the informal sector provides context for how several non-farm activities such as ASM have surfaced in remote areas. It examines the financial implications of informality, a discussion that applies to rural environs as well. Informal sector activities occur outside regulatory frameworks. As Mead and Morrison explain, “from the beginning, legality has been a central aspect of the concept,”¹⁴ the main debates centering on unregistered enterprises, non-payment of taxes, poor working conditions, and avoidance of a host of other institutional regulations.

By the turn of the century, the focus of the literature on urban informality had changed. The burgeoning body of scholarship produced in the 1980s and 1990s, which provided detailed insight on the composition of the sector and factors fueling its expansion in depressed regions of the world such as sub-Saharan Africa, had been shelved in favor of analysis that

But there is now broad agreement that many of those engaged in informal sector activities in urban stretches of the developing world are not necessarily doing so to avoid regulation, as was initially perceived.

questioned the proliferation of urban informality. More scholars began to speculate on why those immersed in such work chose “not [to] comply with [the] legal or administrative requirements” of formalization.¹⁵ The view had long been that the pursuit of an informal sector existence was linked to a desire to avoid taxation and regulation. Schneider and Enste, for example, concluded in their global survey of the phenomenon that “an increasing burden of taxation and social

security payments, combined with rising regulatory activities, are the major forces behind the size and growth of the shadow economy.”¹⁶ Dabla-Norris

and Feltenstein corroborated this finding, arguing that “heavy tax burdens and excessive regulation imposed by governments that lack the capability to enforce compliance drives firms into the underground economy.”¹⁷ But there is now broad agreement that many of those engaged in informal sector activities in urban stretches of the developing world are not necessarily doing so to avoid regulation, as was initially perceived.

In fact, there is reason to believe that many aspire to be a part of formalized systems, a position which, as Joshi and Ayee explain, is shaped by two interrelated factors:

“First, the informal sector already pays significantly to stay in business but to corrupt public officials. Many would rather pay these sums legitimately to governments rather than [these individuals]...whose actions can be arbitrary and uncertain. Second it is also clear that contrary to popular belief, many within the informal sector are not in marginal occupations. They choose to remain informal not to avoid taxes, but rather because of other considerations, such as the high transaction costs of being formal and the lack of accessible legal alternatives.”¹⁸

In many urbanized sections of sub-Saharan Africa, these barriers to entry, manifested as “[a] lack of access to development policies, in particular to [micro] credit programs, [vocational] training, and the marketplace,”¹⁹ can be quite significant. There have been numerous calls from the donor and NGO communities for governments to reduce tax burdens and to simplify regulatory systems to *encourage* formalization, a position which Sepulveda and Syrett refer to as the “legalist deterrent-centred” school.²⁰ Advocates believe that by fixing these regulatory imperfections, those operating informally would be encouraged to enter the formal economy.

Although the circumstances and context are certainly different, when it comes to explaining the rapid expansion of the informal ASM sector—particularly, gold extraction and processing, which is by far its largest

branch—that has occurred in rural sub-Saharan Africa over the past two decades, the narrative is very similar. Much like its burgeoning urban informal trades, the region’s informal artisanal gold mining economy has absorbed millions of rural farm families no longer able to subsist off of their crops alone. As explained, the dismantling of support services, removal of subsidies

The typical ASM community in sub-Saharan Africa is therefore made up of a highly eclectic group, and is one of few settings in the region where illiterate farmers can be found working alongside former schoolteachers or public sector workers.

on crucial farm inputs such as fertilizers, and the stiff competition posed by multinational firms in a liberalized agricultural market have fueled a

frantic search for viable non-agricultural income-earning alternatives in rural sub-Saharan Africa.

However, while the vast majority of people found in the region's artisanal gold mining communities are indeed farmers, a significant contingent originates from urban areas—mainly people made redundant following the implementation of SAPs. The typical ASM community in sub-Saharan Africa is therefore made up of a highly eclectic group, and is one of few settings in the region where illiterate farmers can be found working alongside former schoolteachers or public sector workers.²¹ Tax burdens and bureaucratic regulations have also fueled the rapid growth of the region's informal gold mining sector. But unlike its urban informal economy, there are few sympathizers—or a virtually non-existent “legalist deterrent-centered” school—when it comes to explaining the growth of such gold mining activity.

The key difference between the informal urban economy and the unlicensed artisanal gold mining sector in sub-Saharan Africa is that while the former is a product of a mixture of sweeping policy changes, the latter is more of an intentional construct on the part of policymakers and donors. The deliberate development of the artisanal gold mining sector, however, has been lost amid burgeoning discussion about the sector's adverse social and environmental impacts. In the 1980s, alongside ambitious SAPs, many floundering economies in sub-Saharan Africa committed to reforming their mineral economies. Under the guidance of the World Bank, the governments of countries such as Ghana, Tanzania, Guinea, and Mali overhauled mining legislation, implementing a series of fiscal incentives that would attract considerable investment in large-scale gold exploration and mining. The World Bank-prescribed blueprints for mining sector reform in sub-Saharan Africa are contained in its landmark document, “A Strategy for African Mining,” published in 1992.²²

During the initial years of mining sector reform, however, few of the region's small-scale miners had managed to secure licenses and legitimize themselves in the eyes of new laws. But rather than attempting to understand why this was the case, most of the early studies and policy analyses of ASM highlighted the importance of new regulations, casting them in a positive light while simultaneously condemning individuals who chose to continue submitting to an informal sector existence. This view was expressed at the February 1993 UN-hosted international seminar, “Guidelines for Development of Small- and Medium-Scale Mining” in Harare, Zimbabwe, which attracted more than 150 delegates from thirty countries. As Labonne explains, “participants agreed that small- and medium-scale mining made an important contribution to national and regional rural economies, and that in order to realize its full potential, this sector, which is amenable to some upscaling, should be supported and better regulated.”²³

Many attendees would subsequently formulate even stronger views. One of the more vocal critics was Noetstaller, who argued that the “unlicensed and unrecorded conduct of business is the rule rather than the exception,” and that “an indispensable initial step in replacing [this] informal wildcat mining is the legalization of the activity through recording and

licensing.”²⁴ Early on in donor and policymaking circles, there seemed to be very little recognition that the growth of informal gold mining in rural sub-Saharan Africa was, in fact, a product of wider lifestyle changes that had engulfed the region.

The shortsighted approach to ASM regularization, and its gold extraction and processing activities in particular, in sub-Saharan Africa is fairly reminiscent of most efforts made to align informal economies within newly implemented sector-specific regulatory frameworks. Policymakers and donors have long failed to

Early on in donor and policymaking circles, there seemed to be very little recognition that the growth of informal gold mining in rural sub-Saharan Africa was, in fact, a product of wider lifestyle changes that had engulfed the region.

recognize that “most property in the informal sector cannot be documented and permanently inserted into the legal and global market economy by traditional titling, registration, surveying, mapping, and privatization approaches.”²⁵ In a report published by the International Labour Organization (ILO) in 1999, it was argued that the policy treatment of ASM in sub-Saharan Africa was problematic—specifically that the sector was being viewed as a subset within large-scale mining.²⁶ Although experts conceded at the time that both segments of the industry were very different, (a notion perhaps best captured by Noestaller’s “Small- vs. Large-Scale Mining Comparative Profiles”²⁷) for the most part all activities would be regulated by the same collection of laws. A survey of twenty-six countries undertaken by Bugnosen confirmed that this was indeed the case, concluding that across the developing world and in sub-Saharan Africa in particular, “the information available shows that small-scale mining legislation is usually introduced as part of the provisions of the general mining laws of a country.”²⁸

There seemed to be so little appreciation for the livelihoods dimension of the region’s informal gold mining economy that discussions rapidly turned to examine the possibility of its operators working as pathfinders for its rapidly expanding large-scale sector, kick-starting industrial complexes and potentially nourishing their growth.²⁹ Time, however, would reveal how inappropriate such suggestions were and underscore even further the poor level of policy treatment ASM was receiving. Many working in the sector were disgruntled skilled and semi-skilled workers who were the victims of the region’s large-scale mining sector reform exercise, during which scores of state-owned operations were privatized and tens of thousands of people made jobless. These individuals would likely have scoffed at the idea of collaborating with their former employers.

The aim of “A Strategy for African Mining” was to establish two vibrant and regulated branches of mining—mainly gold—which could coexist and function side by side: a foreign-financed, large-scale sector on the one hand, and an indigenous, small-scale economy on the other.³⁰ The problem,

however, was that implementation was very poor, casting doubts about the true intentions of mining sector reform. Research has confirmed that throughout the region, under reform, priority has been given to developing large-scale gold mining and mineral exploration activities. In Uganda, for example, by the end of 2000, there were 221 outstanding exploration licenses (136 Exclusive Prospecting Licenses, 95 Location Licenses, and 15 Mining Leases), more than four times the number of licenses in 1990.³¹ In Tanzania, mining companies are granted areas as large as 150 square kilometers for reconnaissance and prospecting.³² From 1990 to 2001, Africa's global share of mining investment increased from 12 to 28 percent, due in large part to overhauled legislation and taxation policies.³³

Attention only turns to formalizing ASM once large-scale mining has been established (or re-established), by which time very little land is available for titling. A shortage of land for registered operators, in combination with the industry being "bedevilled with too many regulations that are mostly designed to constrain it and too few inspectors to ensure that they do,"³⁴ has discouraged individuals from securing the requisite permits, in effect "creating" the conditions conducive to the growth of the region's informal gold mining. Policymakers and donors failed to heed initial commentary made by experts such as Davidson, who mused that "without reasonable opportunities to mine, artisanal miners will feel compelled to disregard the law and pre-existing rights in order to secure their own livelihoods, even in countries where artisanal mining has been legalized," which means that "governments must be prepared to move beyond the establishment of legal frameworks to identify deposits and areas amendable to small-scale development."³⁵ The result has been the emergence of two branches of ASM, analogous to the dichotomized "firm-centered" and "bazaar-type" economies now prevalent in urban centers of the developing world: formalized activity and informal (unlicensed) operations.

Livelihoods within the ASM sector and the growth in the region's rural economy were not fully recognized in policy until 1995 at the World Bank's "International Roundtable on Informal Mining," where the links between the sector's growth and poverty were articulated by experts for the first time.³⁶ Having built considerable momentum over the years, these ideas continue to resonate, although donors and host governments continue to fixate heavily on the negative attributes of informal gold mining throughout sub-Saharan Africa. At the same time, these actors fail to recognize how the sector is largely a product of their own decisions, and how the industry's many problems are inevitable outcomes of its informal existence.

The Case of Ghana

Ghana is one of many countries in sub-Saharan Africa where an informal gold mining economy has been intentionally created. The first country in the region to reform its mining sector, Ghana has become the poster child for such change in the developing world. In an attempt to attract foreign investors, the government passed a revised mining act in 1986, *The Minerals*

and Mining Law (PNDCL 153), the outcome of numerous deliberations and policy amendments made shortly after the implementation of the country's 1983 Economic Recovery Program backed by the World Bank and the IMF. These moves would help to stimulate a 700 percent increase in gold production over the next two decades.³⁷ They also helped to transform the country into one of world's leading gold producers. The Ghana experience influenced heavily "A Strategy for African Mining," in which it is portrayed as a success story.

The first country in the region to reform its mining sector, Ghana has become the poster child for such change in the developing world.

A rapidly expanding informal gold mining economy also took root in the country during this period. Today, more than one million people are employed directly in the sector, working in a range of settings, including on mining companies' concessions, in forest reserves, and along roadsides.³⁸ Views of informal gold mining, however, are very different from those of large-scale activity. Not one day passes without an international or domestic media channel condemning the activities of this sector's operators, who are popularly referred to as *galamsey* miners.

Most media coverage has focused on the sector's appalling environmental record and numerous significant safety concerns, although recently attention has turned to the country's traditional leaders and even politicians, who are accused of financing illegal activities. They are also accused of encouraging participation from the Chinese, who have managed to enter communities under false pretenses, typically armed. Some of the more recent articles that convey these messages include: "Inusah Fuseini pledges to stop Chinese illegal miners," "Tackling destruction of the environment caused by illegal mining," and "National security clamps down on illegal small scale mining activities."³⁹

Ghana's policymakers portray licensed small-scale gold mining very differently from *galamsey* activity. While praising the former, they generally view the latter very negatively and remain unreceptive to any sympathetic views. They regularly claim, often without any facts, that the sector's main participants are armed robbers, rapists, and other societal outcasts, and have even resorted to using the media to pin unrelated criminal acts—petty theft, racketeering, and prostitution—on *galamsey* operators.⁴⁰ The government has launched an assault on all fronts against *galamsey* activities, determined to tackle what its senior officials see as "a menace" and believe to be the main source of destruction to the country's bodies of water.⁴¹

What these policymakers fail to recognize, however, is that the so-called *galamsey* "menace" and its associated problems are largely their own doing. Following recommendations prescribed by multinational and bilateral agencies, the Ghanaian government did not formalize ASM until a full three years *after* the implementation of the aforementioned Minerals and

Mining Law of 1986. The sector was not fully legalized until the passing of the Small-Scale Gold Mining Law (PNDCL 218) in 1989. By this time, however, significant portions of land had already been demarcated to foreign multinational gold mining and mineral exploration companies, many of which were hundreds of square kilometers in size, a situation that persists to the present day. There are now more than 380 active large-scale mining and mineral exploration concessions in Ghana, and although estimates vary, it is believed that in combination these leases cover at least 25 percent of the country's land area.⁴² This has made identifying viable plots for individuals who wish to become *licensed* small-scale gold miners exceedingly challenging. With so much mineralized land now in the hands of foreign multinationals, the process has deterred rather than encouraged individuals from formalizing their activities.

A more significant aspect of the “creating informality” equation concerns the exceedingly bureaucratic process of obtaining a license. In line with views initially put forward by Davidson,⁴³ and reinforced by the ILO,⁴⁴ and Hentschel, Hruschka, and Priester,⁴⁵ the regulatory framework for small-scale gold mining in Ghana is excessively bureaucratic.⁴⁶ A small-scale mining license—which lasts three to five years and can be renewed subject to government review and approval—covers an area of up to twenty-five acres. Only Ghanaian nationals aged eighteen years or older are eligible to apply for small-scale mining licenses. Applicants are required to first submit ten copies of a completed Small-Scale Mining Application Form. In addition, site plans of the area of interest must be forwarded to one of nine mining district centers—each based in areas with high concentrations of ASM activity—under the control of the Minerals Commission, the government body responsible for mining policy and regulation. The public has been informed that these units are empowered to screen and appraise applications before forwarding them to the Minerals Commission's head office in Accra. Applicants must also complete an environmental impact assessment implemented specifically for ASM, which, despite being little more than a checklist, further complicates the process. Only after the requisite fees are paid can the applicant proceed to take his or her documentation to the Minister responsible for mines.

The entire licensing process is both costly and cumbersome, which further discourages registration. The preparation of site plans by a professional can cost an applicant up to 1,000 Ghana cedis (GHS) or US\$ 512.⁴⁷ A payment of GHS 100 (US\$ 51) must also be made for the application form, as well as a GHS 250 (US\$ 128) processing fee, a GHS 550 (US\$ 282) “consideration” fee, GHS 750 (US\$ 384) to the Environmental Protection Agency for the environmental impact assessment, and payment of a number of other fees, including stamp duty, court duties, and stool land registration. Applicants also end up paying an assortment of bribes and making several informal payments to various landowners, which can amount to tens of thousands of cedis. Although the government claims decisions on licenses are made in a matter of weeks, the entire process has been known to take several months and even years. In the town of Japa in the country's

Western Region, for example, applicants have waited upwards of three years for a decision on an application for a license, delayed by the government's flirtation with large-scale mining and mineral exploration interests.

By making the licensing process extremely costly and complicated, the Ghanaian government has helped to "create" what the sector is today: a burgeoning informal gold mining economy. Much of the same is taking place in other early reformed mining economies in sub-Saharan Africa, such as Tanzania.⁴⁸ The near-identical policy changes being made in the region's most recent reformers, including Mozambique and Uganda, promise to yield similar outcomes.

By making the licensing process extremely costly and complicated, the Ghanaian government has helped to "create" what the sector is today: a burgeoning informal gold mining economy.

Conclusion

This paper has provided a new perspective on informal gold mining in rural sub-Saharan Africa. It has sought to refocus a debate that has largely highlighted the negative aspects of unlicensed activities: significant environmental impacts, health and safety concerns, and numerous social ills. The paper does not challenge the severity of these impacts, but rather contests that a more productive exercise would be to act on the source of these problems—specifically, bureaucratic regulations and policies.

It has been argued that the informality now ubiquitous in the ASM sector in sub-Saharan Africa is a product of policy, the consequences of which were potentially not well considered. The Ghanaian case has illuminated the nuances of sub-Saharan Africa's mining sector reform, the dynamics of which provide very little consideration for small-scale operators. The resulting informality is, therefore, the government's "creation."

If it is the intention of African governments to encourage formalization in the ASM sector, then the "simple awarding of titles and licences and a need for making them transferable, renewable and long-lasting are the bedrock of viable legal small-scale mining activity."⁴⁹ A necessary starting point is to put this important sector of industry at the heart of development efforts. This requires adopting a more bottom-up approach to formalization. Siegel⁵⁰ highlighted the merits of using de Soto's approach,⁵¹ which drew attention to the benefits of studying the dynamics of informal mining activities, and applying this information to policy design. De Soto's argument was based on what unfolded during the 1840s gold rush in the United States. As Siegel explains, in the absence of a government, miners formed hundreds of "extralegal" local and regional claim associations with elaborate regulations for marking territories, which would eventually inform the country's Mining Act, passed in 1872.

The informal gold-mining communities found across sub-Saharan Africa today are very organized and complex. Regulations that are in greater

tune with the demands of the individuals employed in the sector could, therefore, go a long way toward making the vision of “A Strategy for African Mining” a reality: a vibrant industrial large-scale mining community on the one hand, and a *formalized* ASM economy on the other. Officers at the ILO have repeatedly argued that “if small-scale mining is to be encouraged to operate legally, legislation must be (at least) even-handed in allowing small-scale miners access to suitable land for prospecting and mining activities.”⁵² But as the case of Ghana has shown, this has proved elusive in sub-Saharan Africa thus far, largely because of the prevailing policy mindset.

Notes

¹ Kenneth King, “Africa’s Informal Economies: Thirty Years On,” *SAIS Review* 21, no. 1 (2001), pp. 97–108, <http://dx.doi.org/10.1353/sais.2001.0018>.

² The three-pronged typology comprises: 1) formal income opportunities; 2) legitimate informal income opportunities; and 3) illegitimate informal income. Keith Hart, “Informal Income Opportunities and Urban Employment in Ghana,” *Journal of Modern African Studies* 11, no. 1 (1973), pp. 68, <http://dx.doi.org/10.1017/S0022278X00008089>.

³ Hart, “Informal Income Opportunities,” pp. 61–89.

⁴ Structural adjustment became a mainstream economic term during the late 1970s and early 1980s. Brian F. Crisp and Michael J. Kelly, “The Socioeconomic Impacts of Structural Adjustment,” *International Studies Quarterly* 43, no. 3 (1999), pp. 533–552, <http://dx.doi.org/10.1111/0020-8833.00134>.

⁵ Eboe Hutchful, *Ghana’s Adjustment Experience: The Paradox of Reform*, (Oxford: Oxford University Press, Oxford (2002); S.R. Wiessman, “Structural Adjustment in Africa: Insights from the Experiences of Ghana and Senegal,” *World Development* 18, no.12 (1990), pp 1621–34.

⁶ B. Campbell, “Better Resource Governance in Africa: On What Development Agenda?” *Minerals and Energy* 21, no. 3–4 (2001), pp. 3–18; R. Noorbakhsh, R. and A. Paloni, “Structural Adjustment and Growth in sub-Saharan Africa: The Importance of Complying with Conditionality,” *Economic Development and Cultural Change* 49, no. 3 (2001), pp. 479–509.

⁷ S. V. Sethuraman, “The Urban Informal Sector in Africa,” *International Labour Review* 116, no. 3 (1977), pp. 343–352; Victor E. Tokman, “Exploration into Nature of Informal-Formal Sector Relationships,” *World Development* 6, no. 9–10 (1978), pp. 1065–1070, [http://dx.doi.org/10.1016/0305-750X\(78\)90063-3](http://dx.doi.org/10.1016/0305-750X(78)90063-3).

⁸ King, “Africa’s Informal Economies,” pp. 98.

⁹ Deborah F. Bryceson, “African Rural Labour, Income Diversification, and Livelihood Approaches: A Long-Term Development Perspective,” *Review of African Political Economy* 26, no. 80 (1999), pp. 171–189, <http://dx.doi.org/10.1080/03056249908704377>.

¹⁰ Sadia Mohammed Banchirigah, “How Have Reforms Fuelled the Expansion of Artisanal Mining? Evidence from Sub-Saharan Africa,” *Resources Policy* 31, no 3 (2006), pp. 165–171; Eleanor Fisher, “Occupying the Margins: Labour Integration and Social Exclusion in Artisanal Mining in Tanzania,” *Development and Change* 38, no. 4 (2007), pp. 735–760; Seydou Keita, “Study on Artisanal and Small-Scale Mining in Mali,” (Working Paper 80, Mining, Minerals and Sustainable Development (MMSD), International Institute for Environment and Development (IIED), London).

¹¹ For example, Sadia Mohammed Banchirigah, “Challenges with Eradicating Illegal Mining in Ghana: A Perspective from the Grassroots,” *Resources Policy* 33, no. 1 (2008), pp. 29–38, <http://dx.doi.org/10.1016/j.resourpol.2007.11.001>; Petra Tschakert, “Recognizing and Nurturing Artisanal Mining as a Viable Livelihood,” *Resources Policy* 34, no. 1–2 (2009), pp. 24–31, <http://dx.doi.org/10.1016/j.resourpol.2008.05.007>.

¹² Sadia Mohammed Banchirigah and Gavin Hilson, “De-agrarianization, Re-agrarianization, and Local Economic Development: Re-orientating Livelihoods in African Artisanal Mining Communities,” *Policy Sciences* 43, no. 2 (2010), pp. 157–180, <http://dx.doi.org/10.1007/s11077-009-9091-5>.

¹³ Thomas Hentschel, Felix Hruschka, and Michael Priester, "Global Report on Artisanal and Small-Scale Mining," (Working Paper 70, Mining, Minerals, and Sustainable Development Project, International Institute for Environment and Development, London, 2002), <http://pubs.iied.org/pdfs/G00723.pdf>.

¹⁴ Donald C. Mead and Christian Morrisson, "The Informal Sector Elephant," *World Development* 24, no. 10 (1996), pp. 1611–1619, [http://dx.doi.org/10.1016/0305-750X\(96\)00065-4](http://dx.doi.org/10.1016/0305-750X(96)00065-4).

¹⁵ Victor E. Tokman, "Integrating the Informal Sector in the Modernization Process," *SAIS Review* 21, no. 1 (2001), pp. 45–60, <http://dx.doi.org/doi:10.1353/sais.2001.0027>.

¹⁶ Friedrich Schneider and Dominik Enste, "Shadow Economies Around The World: Size, Causes, and Consequences" (Working Paper, Fiscal Affairs Department, International Monetary Fund, Washington, D.C., 2000), <http://www.imf.org/external/pubs/ft/wp/2000/wp0026.pdf>.

¹⁷ Era Dabla-Norris and Andrew Feltenstein, "An Analysis of the Underground Economy and Its Macroeconomic Consequences" (Working Paper, International Monetary Fund, Washington, D.C., 2003), <http://www.imf.org/external/pubs/ft/wp/2003/wp0323.pdf>.

¹⁸ Anuradha Joshi and Joseph Ayee, "Taxing for the State? Politics, Revenue, and the Informal Sector in Ghana," *IDS Bulletin* 33, no. 3 (2002), pp. 90, <http://dx.doi.org/10.1111/j.1759-5436.2002.tb00030.x>.

¹⁹ Tokman, "Integrating the Informal Sector," pp. 50.

²⁰ Leandro Sepulveda and Stephen Syrett, "Out of the Shadows? Formalisation Approaches to Informal Economic Activity," *Polity & Politics* 34, no. 1 (2007), pp. 87–104, <http://dx.doi.org/10.1032/03055730779657739>.

²¹ Sadia Mohammed Banchirigah, "How Have Reforms Fuelled the Expansion of Artisanal Mining? Evidence from Sub-Saharan Africa," *Resources Policy* 31, no. 3 (2006), pp. 165–171, <http://dx.doi.org/10.1016/j.resourpol.2006.12.001>.

²² World Bank, "Strategy for African Mining" (Technical Paper No. 181, Mining Unit, Industry and Energy Division, World Bank, Washington, D.C., 1992), http://www-wds.worldbank.org/servlet/WDSCContentServer/WDSP/IB/1999/10/21/000178830_98101904142281/Rendered/PDF/multi_page.pdf.

²³ Beatrice Labonne, "Small- and Medium-Scale Mining: The Harare Seminar and Guidelines," *Natural Resources Forum* 18, no. 1 (1994), pp. 13–16, <http://dx.doi.org/10.1111/j.1477-8947.1994.tb00868.x>.

²⁴ Richard Noetstaller, "Small-Scale Mining: Practices, Policies, and Perspectives," in *Small-Scale Mining: A Global Overview*, ed. Ajoy K. Ghose (Rotterdam: A.A. Balkema, 1994).

²⁵ Hernando de Soto, "Dead Capital and the Poor," *SAIS Review* 21, no. 1 (2001), pp. 13–43, <http://dx.doi.org/10.1353/sais.2001.0011>.

²⁶ ILO, "Social and Labour Issues."

²⁷ Noetstaller, "Small-Scale Mining Practices, Policies, and Perspectives."

²⁸ Edmund Bugnosen, "A Preliminary Assessment of Small-Scale Mining Legislation and Regulatory Frameworks" (Working Paper, Intermediate Technology Development Group, Department for International Development, London, 1998).

²⁹ John Hollaway, "Role of Small-Scale Mining in Africa: Building the Informal Sector," in *Alluvial Mining '91*, Institution of Mining and Metallurgy, Elsevier Science, London.

³⁰ World Bank, "Strategy."

³¹ Government of Uganda. *Investing in Uganda's Mineral Sector*. Government of Uganda, Kampala (2005).

³² Siri Lange, "Benefit Streams from Mining in Tanzania: Case Studies from Geita and Mererani," CMI Report 11, Bergen: Chr. Michelsen Institute (2006).

³³ Gavin Bridge, "Mapping the Bonanza: Geographies of Mining Investment in an Era of Neoliberal Reform," *The Professional Geographer* 56, no. 3 (2004), pp. 406–421.

³⁴ International Labour Organization (ILO), "Social and Labour Issues in Small-Scale Mines" (Geneva: International Labour Organization, 1999), report presented at the Tripartite Meeting on Social and Labour Issues in Small-Scale Mines, Geneva, Switzerland, May 17–21, 1999, pp. 86, <http://www.globalmercuryproject.org/database/Upload/Global%201999I%20ILO-Social%20and%20labour%20in%20small-scale%20mines.pdf>.

³⁵ Jeffrey Davidson, "The Transformation and Successful Development of Small-Scale Mining Enterprises in Developing Countries," *Natural Resources Forum* 17, no. 4 (1993), pp. 315–326, <http://dx.doi.org/10.1111/j.1477-8947.1993.tb00192.x>.

³⁶ Mamadou Barry, ed., “Regularizing Informal Mining: A Summary of the Proceedings of the International Roundtable on Artisanal Mining” (World Bank, Industry and Energy Department, Occasional Paper No. 6, Washington, D.C., 1996), http://www.commdev.org/userfiles/files/823_file_regularizing_informal_mining_a_summary.pdf.

³⁷ Benjamin N.A. Aryee, “Ghana’s Mining Sector: Its Contribution to the National Economy,” *Resources Policy* 27, no. 2 (2001), pp. 61–75, [http://dx.doi.org/10.1016/S0301-4207\(00\)00042-8](http://dx.doi.org/10.1016/S0301-4207(00)00042-8).

³⁸ Banchirigah, “Challenges with Illegal Mining.”

³⁹ See, for example, Masahudu Ankiilu Kunateh, “Inusah Fuseini Pledges to Stop Chinese Illegal Miners” *The Ghanaian Chronicle*, March 14, 2013, <http://thechronicle.com.gh/?p=52718>; Bruce Misbahu Bulmuo, “Tackling Destruction of the Environment Caused by Illegal Mining,” *Spy Ghana*, March 12, 2013, www.spyghana.com/tackling-destruction-of-the-environment-caused-by-illegal-mining/; and “National Security Clamps Down on Illegal Small-Scale Mining Activities,” *Ghana Broadcasting Corporation*, March 20, 2013, www.gbcghana.com/index.php?id=1.1310359.

⁴⁰ See, for example, “Court Jails Teenager for Stealing,” *Ghana Web*, March 20, 2013, www.ghanaweb.com/GhanaHomePage/crime/artikel.php?ID=268305; Kofi Adu Domfeh, “Illegal Groups Join Forces to Uproot Illegal Mining,” *Joy Online*, February 25, 2013, <http://edition.myjoyonline.com/pages/news/201302/101908.php>.

⁴¹ See, for example, Justice Mingle, “The Galamsey Menace,” *Ghana Broadcasting Corporation*, June 24, 2012, www.gbcghana.com/index.php?id=1.938675; “Galamsey in Wassa West District and Its Attendant Problems,” *Ghanaian Chronicle*, September 18, 2009, www.modernghana.com/news/239504/1/galamsey-in-wassa-west-district-and-its-attendant.html.

⁴² Gavin Hilson, “A Conflict of Interest? A Critical Examination of Artisanal/Large-Scale Miner Relations in Sub-Saharan Africa,” in *Natural Resource Investment and Africa’s Development*, ed. Francis N. Botchway (London: Edward Elgar, 2011), pp. 134–158, <http://dx.doi.org/10.4337/9781848446793.00014>.

⁴³ Davidson, “Transformation and Successful Development.”

⁴⁴ ILO, “Social and Labour Issues.”

⁴⁵ Hentschel, Hruschka, and Priester, “Global Report.”

⁴⁶ Benjamin N.A. Aryee, Bernard K. Ntibery, and Evans Atorkui, “Trends in the Small-Scale Mining of Precious Minerals in Ghana: A Perspective on Its Environmental Impact,” *Journal of Cleaner Production* 11, no. 2 (2003), pp. 131–140, [http://dx.doi.org/10.1016/S0959-6526\(02\)00043-4](http://dx.doi.org/10.1016/S0959-6526(02)00043-4).

⁴⁷ At the time of writing, there were 1.93 U.S. dollars in one cedi.

⁴⁸ Fisher, “Occupying the Margins.”

⁴⁹ ILO, “Social and Labour Issues.”

⁵⁰ Shefa Siegel and Marcello M. Veiga, “Artisanal and Small-Scale Mining as an Extralegal Economy: de Soto’s Redefinition of ‘Formalization,’” *Resources Policy* 34, no. 1–2 (2009), pp. 51–56, <http://dx.doi.org/10.1016/j.resourpol.2008.02.001>.

⁵¹ Hernando de Soto, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (New York: Basic Books, 1999).

⁵² ILO, “Social and Labour Issues.”