Resource nationalism and formalization of artisanal and small-scale mining in Tanzania: Evidence from the tanzanite sector

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1. Introduction

Resource nationalism in the mining sector has recently gained momentum in the Global South (Kinyondo and Huggins, 2019; Haslam and Heidrich, 2016; Lange and Kinyondo, 2016). Many governments have amended mining laws to increase taxes, royalties, levies and fees to maximize state revenues. Greater government intervention in mining through acquiring shares or conducting actual mining operations is another policy strategy. Due to the limited positive spillover effects from large scale mining (LSM) to other sectors, many governments have developed local content policies, so that LSM firms are required to buy and employ locally (Kragelund, 2017; Kinyondo and Villanger, 2017).

In ‘resource nationalist’-type reforms, many countries have focused on Large Scale Mining (LSM) while ignoring Artisanal and Small-scale Mining (ASM) (Kinyondo and Huggins, 2019). Indeed, there is limited discussion of ASM within academic or policy debates over resource nationalism (Perks, 2012). However, policies effecting LSM have indirect impacts on ASM, as the two usually work in adjacent areas and are connected through various relations of conflict and cooperation. Royalty and taxation schemes, and beneficiation policies, effect ASM. Furthermore, discourses around LSM can influence policy on ASM. This article makes a contribution to existing knowledge by examining how resource nationalism influences formalization of ASM in the Tanzanite sector, as resource nationalist policy goals and political narratives implicitly priorities particular aspects of formalization.

1.1. Formalization of ASM

Research into state efforts to regulate, tax, and intervene in the mining sector, should consider formalization of ASM, a key global policy dynamic (Hilson and Maconachie, 2017; Smith et al., 2017; Siegel and Veiga, 2009). Academic and policy debates over formalization revolve around various themes, including allocation of sub-soil mineral rights to ASM, whether to individuals and/or groups (Huggins, 2016; Spiegel, 2012). This property rights focus, is sometimes called the ‘narrow’ school of formalization (Siwale and Siwale, 2017). In some African countries (e.g. Democratic Republic of Congo or Ghana), strong customary land rights systems overlap with state-registered land rights, complicating state-managed ASM formalization.

In places where access to formal property rights for ASM is possible, research into formalization focuses on a broader ‘process of registering, organizing, and tracking mining activity in the field’ (Siegel and Veiga, 2009: 52), which also involves enforcement of laws (Spiegel, 2012). Some debates centre around whether formalization should have a primary objective of ‘professionalization’ of production (and how professionalization should be defined); capitalization of mining operations, including through access to credit (Siwale and Siwale, 2017); or better coordination of the sector for more sustainable management of mineral resources. Discussions also revolve around how formalization should be incentivized or imposed, such as through third-party certification schemes, enforcement of laws and regulations by state agencies, or self-regulation by ASM associations. Formalization has been challenging in many places, as ASM operations may gain legal permits but continue to operate without strong health and safety precautions, labour conditions, or environmental safeguards. Scholars argue that ‘effective formalization requires a holistic approach’ (Smith et al., 2017: 50), as well as strong institutional support. Without institutional support, formalization policies may actually be counter-productive (ibid.) While there are many approaches to formalization, we argue that efforts should focus on supporting livelihoods, increasing the incomes and other benefits available to ASM workers, and improving health and safety, while avoiding exclusion (e.g. of women and the very poor) through elite capture that can sometimes result from institutionalization.

1.2. Resource nationalism and formalization of ASM

There are very few discussions of the role of ASM within resource nationalist strategies. The following therefore represents a preliminary exploration. Kinyondo and Huggins contend that the ASM role depends on the particular aspects of resource nationalism in a particular place and time (2019). Nevertheless, broad categories of resource nationalism can be discerned from the literature. In order to conceptualize such a discussion, we will use the categorization by Wilson (2015) of resource
nationalist strategies into a) ‘regulations affecting ownership of resource industries’, b) policies that regulate ‘the operations of resource firms’; and c) ‘policies designed to capture economic rents for public purposes’ (pg. 400). To this we will add a fourth category, ‘the assertion of strategic state control (ability to set a political or strategic direction to the development of the sector)’ (Haslam and Heidrich, 2016: 1).

In terms of ownership of resources, governments often require greater ownership of foreign LSM companies by citizens of the ‘host country’, or by a state-owned mining firm. More rarely, they may delineate mineralized areas (including former LSM concessions) for ASM. If this is done effectively, ASM may therefore benefit; however, in practice, many areas reserved for ASM are only poorly mineralized; this is the case in the Democratic Republic of the Congo (DRC), for example. Permits for ASM may depend on institutionalization of mining activities. Perks, in one of few articles linking ASM to resource nationalism, defines the latter very broadly as involving ‘national participation [in mining economies] and benefit distribution’ (2012: 1), as well as a general intention to make the sector more economically productive. Using such a broad definition, policies to build ASM capacity, such as requiring that miners join cooperatives, could be seen as ‘nationalist’ because they increase the participation of citizens in the mining economy (Perks, 2012). However, such policies may restrict artisanal miners, particularly women, from legally accessing minerals due to financial and other obstacles to joining cooperatives (Bashwira et al., 2014).

Policies that regulate the operations of LSM may influence ASM. Kinyondo and Huggins (2019) argue that LSM-ASM collaboration is one potential element of resource nationalism (e.g. government may pressure LSM firms to fund ASM capacity-building programmes), however, documented cases are rare. There may also be unintended influences. Various forms of investment in local community capacities, due directly or indirectly to local content policies, may benefit artisanal miners. For example, electrification of local settlements might lead to changes in ASM operations (Bolay, 2014). In some cases, local entrepreneurs generating profits from supplying goods and services to LSM under local content policies may reinvest profits in ASM operations. In other cases, ASM will take advantage of any interdictions in LSM operations (e.g. as firms adapt to new resource nationalist policies) to benefit from market opportunities, and/or to ‘encroach’ on concessions.

Economic aspects of resource nationalism may have direct impacts on ASM. Beneficiation policies, which require local processing before export, may impact markets for both LSM and ASM if introduced before adequate local beneficiation capacity exists. In many countries, royalty rates for minerals and gemstones are the same for LSM and ASM. When governments increase royalty rates to increase government revenue from LSM, artisanal and small-scale actors are also affected. In other countries, such as the DRC, there are separate tax and royalty regimes for ASM. Depending on many factors, such as the relationship between ‘local’ and the ‘national’ ‘economic interests in resource nationalist policy-making, and the role that ASM plays within that debate, governments may monitor and enforce existing or new regulations in ASM to generate government revenue. In Tanzania, for example, government signalling on the minerals sector emphasizes clamping down on ‘cheating’, such as tax evasion and under-declaration of mineral production and profits. It is primarily LSM firms that are accused of this; however, actors in the ASM sector are also targets of criticism. Therefore, the main justification for resource nationalist policies, while primarily focused on LSM, has also resulted in intensified enforcement of laws in ASM.

Finally, the ‘assertion of strategic state control’ (Haslam and Heidrich, 2016: 1) can have implications across the mining sector. Institutional reforms, consultations with mining stakeholders, and dynamics of centralization or decentralization may all have impacts on ASM. In Tanzania, for example, the President has very publicly taken the lead on setting mining policy, and mining legislation has often been passed through parliament rapidly, through ‘certificates of urgency’. The pace of policy-making has changed; arguably the predictability of policymaking has reduced. Strategic state control may also involve controlling discourses around resource extraction, as we discuss below.

2. Resource nationalism in the mining sector in contemporary Tanzania

Recent resource nationalism in Tanzania dates from the 2010 Mining Act (Jacob and Pedersen, 2018), which mandated local content requirements, and facilitated greater direct state involvement. In 2017, in addition to amendments to the Mining Act of 2010, Tanzania introduced three pieces of legislation. These were largely aimed at LSM, in a context in which the President has stated that, ‘The country has been short-changed and continues to be cheated out of the much-needed revenue’ from large mines (Norbrook, 2019). These included the Natural Wealth and Resources (Permanent Sovereignty) Act 2017 which emphasizes that all natural resources are God-given to Tanzanians and they should thus be sole owners; and the Natural Wealth and Resources (Revenue and Re-Negotiation of Unconscionable Terms) Act 2017 which mandates parliament to renegotiate any mining contract that it deems unacceptable. Finally, the Written Laws (Miscellaneous Amendments) Act 2017 restructured mining sector governance by disbanding the Mining Advisory Board and Tanzania Mineral Audit Agency (TMAA) and establishing the Mining Commission; and increased royalty payments for gemstones from 5% to 6% of gross value, and those of metals from 4% to 5%. It also gives the government a carried interest of 16% in mining projects and requires all mining companies to deposit their proceeds in local banks and be listed in the Dar Es Salaam Stock Exchange (DSE) while ensuring that Tanzanians acquire 30% of the floated shares. Export of raw gemstones over one g in weight was banned in 2010; the 2017 legislation banned the export of all raw minerals.

Apart from local content aspects which may potentially benefit ASM, the reforms focus on increasing government revenues from LSM and restricting LSM from repatriating revenues abroad. Overall, economic concerns seem to dominate, which reflects the argument that, ‘for the ruling party, increased revenues are central in order to live up to the electorate’s demands for improved social services and economic development, and their own goal of re-election and becoming independent of donors’ (Lange and Kinyondo, 2016: 1103). Based on this review of recent laws, claims that the government prioritises ASM seem problematic. On the other hand, the government with the help of the World Bank is currently setting up centres of excellence, meant to train artisanal miners and provide mineral processing facilities (Jacob, 2017). However, some stakeholders have doubts about the sustainability of this project. Regional sales centres for metals have recently been opened, to discourage smuggling.

Kinyondo and Huggins (2019) demonstrate that objectives of the 2017 reforms are not completely clear to stakeholders. The government position towards both ASM and LSM seems ambivalent. This is partly because these reforms were conducted rapidly, without much stakeholder consultation. Furthermore, many stakeholders are concerned about over-centralization of mining sector governance. This is problematic in terms of accountability, but also because limited stakeholder buy-in to laws and policies reduces the effectiveness of enforcement of those laws (Kinyondo and Villanger, 2017).

While attention to resource nationalism has focused on LSM, this article considers how increased royalty rates and taxes on gemstones, the ban on export of raw gemstones, and state emphasis on revenue collection all affected formalization of the ASM tanzanite sector.

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1 Specific laws were more recently introduced for ASM, as mentioned in section ....

2 Interviews, Dodoma and Dar es Salaam, October and November 2018.
2.1. ASM in Tanzania

Tanzania is well-endowed with many types of minerals and ASM is widespread in many regions. In Tanzania, formalization of ASM dates from the Mining Act of 1979, which enabled citizens to apply for prospecting licenses and engage in artisanal mining. ASM operators can legally access minerals in Tanzania through Primary Mineral Licenses (PMLs). Formalization was supported by the 1983 Small-scale Mining Policy Paper, intended to attract Tanzanians into mining (Chachage, 1995). The government has delineated 46 areas designated for ASM covering 280,295 ha (Kariuki, 2018). As the state is the ultimate owner of all land, the Mining Commission is also able to issue PMLs outside of these designated zones. Lack of clear, enforceable property rights is not a major obstacle to ASM as it is in some other countries.3

ASM employs over a million people in Tanzania (Kinyondo and Huggins, 2019). ASM is fairly well developed and involves a small number of capitalized ‘mine-owners’ as well as a much larger, often low-income and casual, workforce (Verbrugge and Besmanos, 2016, citing Fisher, 2007). Some formalization has been initiated under World Bank funding though progress to implement this programme has been slow. Nevertheless, while various studies touch on it (e.g. Merket, 2019; Kinyondo and Huggins, 2019; Jacob, 2017; Schoneveld et al., 2018), the extent and potentials of formalization in Tanzania remain under-researched. It is in this context that this study seeks to examine efforts to formalize ASM production of tanzanite. The tanzanite sector has been selected for a case study because it is spatially contained in a small geographical area, which has been recently walled-in by the government. This provides an opportunity to study how the state regulates ASM when it doesn’t have the usual spatial-geographical constraints, such as the remoteness, transience and geographical dispersal of ASM sites. It is therefore presented as an ‘extreme’ case study, rather than a typical one (Flyvbjerg, 2006). In this article, we have opted for a case study which can tell us a lot about the government’s priorities in the ASM sector, because of the unusual intensity of state intervention.

3. Methods

Research involved semi-structured interviews with key stakeholders, and a review of available academic, commercial and unpublished literature. Forty-three different participants were interviewed in October and November 2018 in the following locations: Dar es Salaam, Arusha, Manyara, and Dodoma (Tanzania). Interviews used semi-structured question checklists and lasted 60–90 min. Of these, 14 belonged to civil society organizations including professional associations within the gemstone sector; 11 were civil servants or politicians; seven were large-scale mine operators or members of large private sector organizations; and 11 were former or current artisanal or small-scale miners (including managers, geologists and other ‘above-ground’ mining staff). Several participants occupy several roles in the mining sector: for example, several members of CSOs are also owners of small mines. Some participants were interviewed twice, making for a total of 45 interviews.

4. A brief history of tanzanite production

Tanzanite has been found only in one location, the Merelani hills in Simanjiro District.4 This is not the case for other gems or minerals which are geographically dispersed. Tanzanite represents a large proportion of Tanzanian gemstone value (59%) out of total value of gemstones exported in 2014 (see Yager, 2017).

The deposits were initially mined by artisanal miners and the state miner, STAMICO (Chachage, 1995; Schroeder, 2010). The area known for its tanzanite deposits was surveyed into four ‘blocks’, named alphabetically, A through D. Block C, a large and mineral-rich part of the area, was distributed to a private mining firm, Afgem, in 1996, though artisanal miners continued to exploit neighbouring mining blocks. In 2003 Afgem was restructured and renamed itself TanzaniteOne. The company, which was controlled by South Africans, established a non-profit arm, the Tanzanite Foundation, to engage in corporate social responsibility (CSR) activities for local communities. Its CSR activities were reportedly appreciated by local community members (Daley et al., 2018). Relationships between ASM operators and local communities were mixed; local people complained that they were not consulted before pits were opened, but ASM operators sometimes contributed to community projects (Daley et al., 2018).

TanzaniteOne also developed a traceability scheme which involved gems being inscribed by laser with the TanzaniteOne logo and a unique serial number (Schroeder, 2010). However, from the earliest years of production, much tanzanite production has been sold without official documentation, particularly through neighbouring Kenya. It is reported in the regional press that by value, India is the largest exporter of tanzanite stones followed by Kenya and then Tanzania (Kidanga and Olingo, 2018), which represents ‘value added’ through cutting rough stones abroad, as well as the smuggling of gemstones out of Tanzania. In addition to the scheme put in place by TanzaniteOne, tanzanite was also impacted by reports that it was a ‘conflict mineral’. American journalists reported, in the aftermath of the September 11, 2001 attack on New York, that tanzanite had been part of the financial networks of Al Qaeda (Block and Pearl, 2001). This accusation was particularly significant, as the US market represented the final destination for 80% all tanzanite production (Roskin, 2002). In response, the Tucson Tanzanite Protocol was agreed upon in 2002 by tanzanite dealers and miners associations, the Tanzanian Government, and other stakeholders. It put in place a second-party certification scheme intended largely to monitor and police the tanzanite commodity chain: a fence was erected around the mining area; miners were required to obtain official identity cards; and sales documentation was improved (Schroeder, 2010). Partly in response to the Tucson Protocol, the Tanzanian government passed the Merelani (Controlled Area) Regulations (2002). This made the Merelani Controlled Area (MCA) subject to particular regulations with the force of law.

However, the Tucson Protocol was only partially implemented. TanzaniteOne, due to its pre-existing traceability scheme tried to position itself as ‘conflict-free’, leading to tensions with ASM which had no traceability scheme. Simultaneously, as TanzaniteOne differentiated itself from ASM, it purchased and sold artisanally-mined tanzanite. The traceability scheme of TanzaniteOne has arguably failed to have a long-term impact on the industry, as buyers do not necessarily favour certified stones.

In 2010 the government banned export of rough tanzanite pieces heavier than one g (Helliesen, 2012). This was intended to stimulate local cutting of gemstones, to boost the economy. TanzaniteOne managed to delay implementation for a year while it constructed its own cutting facilities (Helliesen, 2012). There were disputes and violent conflicts between ASM actors and TanzaniteOne, in part because underground tunnels from the various blocks intersect, permitting artisanal miners to take minerals from block C (Helliesen, 2012).

In 2013, following promulgation of the Mining Act of 2010, the State-owned Mining Company (STAMICO) took a 50% share in TanzaniteOne. The company’s mining license was renewed, despite opposition from civil society groups (Ihucha, 2012). In 2014, TanzaniteOne was acquired by Sky Associates Group Limited, reportedly owned by two Tanzanian citizens in partnership with a non-Tanzanian gem trader (Nkwame, 2017). By mid-2016, 732 Primary Mining
Licenses (PMLs) had been granted in the MCA (Daley et al., 2018). The only large-scale operator in the Area is TanzaniteOne. There are many small-scale operators, though many of them have a legal status as ASM. The vast majority of mines in the MCA are artisanal.

By 2016, TanzaniteOne had laid off half its workforce (over 600 people) apparently because its Tanzanite production had halved from 2014 to 2015. During the 2015 election campaign, the Secretary General of the ruling party said that if victorious, Magufuli would confiscate ‘idle’ Tanzanian mining plots belonging to large-scale firms and redistribute them to artisanal miners (Lyimo, 2015). This is another indicator of potential implications of resource nationalism for ASM, though this has not yet happened in practice. TanzaniteOne was taken to court in 2018 by its employees for non-payment of salaries, and work in TanzaniteOne’s concession has reportedly been at a standstill.\(^6\)

Shared ownership of the mine by STAMICO does not seem to have guaranteed its success.

### 4.1. Artisanal operations in Merelali

Artisanal and small-scale operators in Merelani differ in the kinds of machinery and equipment used, and the number of mineshafts operating. However, there are some similarities in financial models and employment conditions. Whereas in previous decades ASM mineshafts tended to be limited to around 200–300 m depth, diminishing availability of Tanzanite has caused operators to go much deeper. Many ASM operations therefore require mechanized ventilation and other equipment.

In many cases, a single PML will involve multiple investors. Such cooperation is necessary because mines can go many months without striking a seam of Tanzanite. Most operations have a few paid positions, including geologist, electrical engineer, mine manager and explosive specialists.\(^7\) However, miners are typically hired on a casual basis. Instead of receiving a regular salary, artisanal miners receive only food and basic lodging as well as any medical expenses. Artisanal miners may work for months on this basis until a mine produces Tanzanite, at which time they receive a share of the production. According to multiple respondents, including artisanal miners, most miners prefer this arrangement to a salary, due to the chance of suddenly making lots of money. One respondent said, ‘people like that game … if I win big, I can start my own mining operation. You can go to sleep poor and wake up rich’.\(^8\) Tanzanite in the Tanzanite sector is therefore broadly similar to ASM in other countries (see e.g. Siegel and Veiga, 2009), however, due to the depth of mineshafts, and the level of mechanisation needed, the amount of financial investment and number of regular employees (e.g. manager, mechanic, geologist) are greater than in some other cases.

### 5. Recent government interventions in the Tanzanite sector

In 2017, a Parliamentary committee was established to investigate reports of corruption and smuggling in the Tanzanite sector. The committee reported that 80% of Tanzanite was irregularly sold to avoid taxation and recommended that a Tanzanite-specific law be promulgated, that a state-owned Tanzanite mining company be established, and that Tanzanite trading be centralized to eliminate smuggling (Masure, 2017). These recommendations have yet to be implemented, except for the latter as explained later.

In 2017 legislation banned the export of all raw minerals and gemstones, in order to capture more value in Tanzania through beneficiation. Using Wilson’s typology of resource nationalism, this is a means of ‘constraining the operations of resource firms – through industrial policy requirements … that encourage certain behaviours such as minerals processing’ (Wilson, 2015: 400). This policy was heavily criticized by almost all respondents, on the basis that, first, insufficient cutting and polishing capacity exists within Tanzania (see also Nyaungwa, 2017); second, there is almost no capacity to cut small gemstones (e.g. around a carat); and third, large, raw gemstones are often sought after by collectors. This ban made it difficult, according to interviewees, for Tanzania to compete with Kenya, which allows the export of raw gemstones. While the government has some training schemes, these are at an early stage. For example, the state-owned Tanzania Gemological Centre (TGC) has provided training in lapidary since 2014 and received significant investments of equipment from the World Bank. In October 2018, there were 18 TGC students being trained in lapidary. Industry experts caution that gem cutting takes many years to perfect; courses at TGC are only 7 months long. There are concerns that gemstones will lose value through suboptimal cutting.\(^9\) Perhaps recognizing these constraints, in early 2019 the government permitted exports of raw gemstones of up to 2 g.

In September 2017, President Magufuli ordered the military to build a wall around the entire Tanzanite mining area (Ng’wanakilala, 2017). The 24 km wall, which has a single entrance/exit, reportedly cost US $2.9 million – 3.5 million to build (Kidanka and Olingo, 2018) and was completed by February 2018, three months ahead of schedule. Entry and exit are tightly controlled. Vehicles are not allowed in and out – any mining operation using a vehicle has to keep it permanently within the walls. Those leaving the area are searched (frisked) by military personnel.

Several regulations and procedures in Merelani were changed during 2018. By August 2018, entry to the MCA was restricted to those with special identification documents provided by the Regional Mining Office in Mererani. According to informants, these documents are inexpensive but are only issued to those with contracts from a mining company, or members of a recognised organization.\(^9\)

Tanzanite brokers visiting Merelani must buy at an office next to the main entrance. A government-employed valuation specialist values the stones, and taxes and fees are paid on the spot. All sales are carefully documented.\(^10\) In addition to the searches at the gate, state authorities also attempt to prevent tax evasion by sealing newly-discovered Tanzanite at the mine shaft and transporting it directly to the offices at the main gate for valuation, storage and eventual sale. All of these measures are intended to improve government revenue collection, and in terms of resource nationalism, are ‘designed to capture economic rents for public purposes’ (Wilson, 2015: 400).

Merelani is situated in a relatively remote area in Simanjiro District. Infrastructure is limited. The commercial trade in Tanzanite has historically been carried out in Arusha, a large town about 90 min drive away, with extensive banking, hotel, and other services. The government has directed that Tanzanite be auctioned under its control, and in Mererani, rather than Arusha. This is, broadly, intended to distribute economic benefits at the site of production. An auction was held there in December 2017. It had been planned for Arusha, but the venue was changed on government orders on the day it was due to take place.\(^11\) Since that time, no large-scale auction to rival the Arusha Gem Fair has taken place.

### 5.1. Labour regulations

In mid-2018, the Manyara Regional Commissioner ordered mining operators in Merelani, including ASM operators, to issue contracts and pay workers regular salaries. According to multiple respondents, the

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\(^6\) Multiple interviews, Arusha and Dodoma, October 2018.

\(^7\) The regular use of explosives is central to Tanzanite mining.

\(^8\) Multiple interviews, Arusha and Dodoma, October 2018.

\(^9\) Visitors, such as researchers, may be granted a short-term entry permit at a cost of US $50.

\(^10\) Personal observation, Merelani Controlled Area, 2018.

\(^11\) Interview with civil servant, Arusha, October 2018.
vast majority of mining operations lack the necessary capital to pay all their employees regularly. This is clearly an effort to formalize ASM.

The results seem to be twofold. On the one hand, the numbers of miners working in the MCA has declined since mid-2018, probably because of the policy. On the other hand, some contracts may exist only on paper, and are not implemented. One small-medium scale mine manager said that 60–70% of his workers have a contract. In another small-medium scale mine, miners said that contracts would be forthcoming in the near future. In the meantime, miners continue to receive a share of any production, but may also have some benefits paid, such as health insurance.

Since the wall was built, some ASM mines have been visited by the Occupational Health and Safety Agency, which promotes the use of personal protective equipment, and requires maximum shifts of 8 h. However, there has reportedly been no follow-up since initial visits. One manager of a small-medium scale mine said that, ‘they came, but they just counted the machines and then applied a certain amount of taxes or fees based on the amount of equipment that we use. They never asked any questions about working conditions.’ Our small research sample is not statistically representative, but these comments fit with media coverage and government statements on Merelani, which tend to emphasize taxation and other financial aspects; and rarely mention health and safety, environmental conditions, or other concerns.

The government has also started to enforce several other regulations that were previously loosely enforced or interpreted, especially those relating to licenses for gemstone brokering. Brokers argue that these regulations impose financial costs are putting them out of business.

6. Impacts of the interventions

Many respondents, including some associated with ASM, commented that the wall has improved security in the MCA and allowed the government to collect more revenue. However, most interviewees added that the combination of policies and procedures around the MCA were problematic, as explained below.

According to the Minister of Minerals, in the first three months of 2018, the government was able to collect royalties amounting to more than 714.5 million Tshs, of which more than 614.5 million Tshs came from ASM. This is more than what the government collected in the past three consecutive years. However, this success was not sustained. The Chairman of the Mining Commission reported that monthly royalty collections had fallen to 40 Tshs million in mid-2018, due to smuggling.

However, many respondents deny that this was due to smuggling. Respondents said that three separate mines uncovered large amounts of tanzanite in early 2018, leading to the spike in royalties; however, since then, production has been minimal. The geology of tanzanite is challenging making production of the mineral unpredictable. Indeed, as noted above, TanzaniteOne blamed declining productivity for its decision to make many workers redundant in 2016; and several informants mentioned that it is increasingly difficult to find tanzanite deposits. One knowledgeable informant argued that comprehensive geological information on Merelani is lacking. The government invests in geological surveying through the Geological Survey of Tanzania (GST), but in reality, the GST has limited financial and human resource capacity that depends on intermittent project funding.

Another respondent argued that in early 2018, when royalty collections were high, entry into the MCA was still straightforward. The authorities later insisted on miners having contracts, which reduced the workforce and hence constrained production. Indeed, miners and mine managers interviewed all indicated that the workforce has diminished considerably since labour regulations have been enforced. At one small-medium scale mine, for example, prior to 2018, there were 200–300 workers. Currently, only 20–86 miners work regularly. In another small-medium scale mine, the total numbers have declined from around 120 to 90, though accounts differ slightly between employees. One artisanal pit owner with 40–45 miners previously, now has only 5–10 regular workers.

On the positive side, child labour in ASM has been curtailed. In addition to various poorly-paid roles in artisanal mines, children have previously been used to navigate small tunnels to connect with TanzaniteOne’s mine shafts and illegally collect tanzanite. The construction of the wall, and the associated controls on exit and entry, have ended child labour in Merelani, according to several informants.

Mine owners face further financial difficulties because prices of goods and services in the MCA have marginally increased, according to some participants. For example, mine operators purchasing goods could previously hire a motorbike-taxi for a return trip to the nearby Mererani town. Since mid-2018, motorcyclists cannot move back-and-forth through the gate, so mine operators have to organize separate transport arrangements inside and outside the wall, which is more expensive. Those with their own vehicles have to maintain one inside and one outside the wall.

The current slump in the tanzanite sector more generally may have many causes, and is not solely a result of recent government interventions. For example, miners have argued that overall economic conditions, such as a decline in agricultural commodity prices, have adversely impacted tanzanite production. The beneficiation policies, in a context in which gem cutting cannot meet demand, have negatively affected the tanzanite sector according to multiple respondents. One civil society member said simply that these policies ‘have killed ASM’, another said ‘they have paralysed the industry’. Indeed, according to news reports, a real estate slump in Arusha has been partially blamed on the diminishing business of tanzanite dealers. There are concerns from many stakeholders that there is insufficient infrastructure in Mererani to host successful large-scale tanzanite auctions. Miners, brokers and other respondents also reported that the personnel valuing tanzanite at the MCA were insufficiently knowledgeable. Many respondents argued that gemstone value had been exaggerated so that the government could claim more taxes. However, recently, more experienced valuation personnel have been brought in, and valuation is allegedly more

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12 Interview with management-level employee of a small-medium scale mine, Merelani, October 2018.
13 Interviews with miners, Merelani, October 2018.
14 Interviews with miners and members of CSOs, Merelani and Arusha, October 2018.
15 Interview with management-level employee of a small-medium scale mine, Merelani, October 2018.
16 Interviews with gem dealers and members of civil society organizations, Arusha, October 2018.
17 Multiple interviews with stakeholders from various sectors, Arusha, Dodoma, Merelani and Dar es Salaam, October and November 2018.
18 Almost 167 million Tshs were collected in 2015; almost 72 million Tshs in 2016 and 147 million Tshs in 2017 (URT, 2018).
19 Interview with civil society member, Arusha, October 2018.
20 Interviews with several CSO members and civil servants, Dodoma and Arusha, October 2018.
21 Interview with mine manager, small-medium sized mine, Merelani, October 2018.
22 Different employees gave slightly different figures, possibly because the definition of miners working there ‘regularly’ is ambiguous.
23 Interviews with mine manager, small-medium sized mine, Merelani; October 2018.
24 Interview with civil society organization leader/artisanal mine owner, Arusha, October 2018.
25 Interview with Tanzanite broker, Arusha, October 2018.
26 Mine-owners and investors argue that their operating expenses are often covered by the proceeds of their other businesses, such as farming.
accurate. The government has also started to train more civil servants in valuation (Kariuki, 2018).

The 2017 tax and royalty regime may have encouraged smuggling. Some smuggling persists. One respondent mentioned how easy it is to walk gemstones across the border to Kenya, outside of official crossing points.27 Nevertheless, it is very difficult to estimate to what extent the slump in official tanzanite sales was due to declining production, and to what extent it reflects smuggling. The reduction in royalties and fees for ASM announced in early 2019 may reduce smuggling but it is too soon to tell at the current time. From March 2019, only 7 per cent tax (and zero royalty) is levied on ASM tanzanite. By April 2019, the government reported that monthly royalties were back up to a healthy 300 million Tshs. Time will tell if royalty collection stabilizes or continues to oscillate.

6.1. Women in the mining sector

Given the risks of gender-based exclusion during processes of formalization, we briefly consider impacts on women. Women are involved in mining, and there at least two major Tanzanian associations of women miners. However, according to interviews, women have not typically been involved in underground mining operations, but have played other roles, such as owning mining operations, selling food and firewood, and sifting discarded material for pieces of tanzanite. This latter work has involved risks of robbery, ‘verbal abuse, violence and rape’ (Daley et al., 2018: 94). According to interviewees, the construction of the wall has improved security within the MCA, reducing these risks (see also Daley et al., 2018: 95). However, whereas previously women could access multiple livelihood opportunities, they now have to specialize in particular jobs, and be members of a specific association to get identification documents.28 These regulations may restrict livelihood options.

In addition, women miners, CSO members, and gemstone dealers interviewed indicated that they find the search procedure, which happens every time they exit the area, unpleasant. One respondent said that, ‘because of this, 90% of older women won’t go in, they will send their children instead’.29 There are recent reports that surveillance cameras and scanners are being installed in the MCA (Xinhua, 2019) to reduce the need for physical searches.

6.2. Implications of research findings

Recent events in Tanzania contribute to our understanding of formalization of ASM. Government support to the ASM gemstone sector has not been significant; some support was provided to the diamond sector, partly through LSM involvement. TanzaniteOne has not recently played such a role in the tanzanite sector. Even authorities at STAMICO admitted that their support largely targets the metals sector (especially gold), not gemstones. This is partly due to lack of funds and staffing but also because the country lacks capacity when it comes to mining and value addition in gemstones.

It is clear that recent policy changes have prioritized collection of royalties, taxes and fees by the government. Government personnel have repeatedly emphasized the importance of revenue collection, rather than issues such as health and safety. This tendency was seen also pre-2017, when researchers found that, ‘auditing activities are guided almost exclusively by TMAAs ability to collect royalties’ rather than over priorities related to health and safety, environmental degradation, and similar concerns’ (Schoneveld et al., 2018: 47). This is of course a common situation in other countries as well (Maconachie and Hilson, 2011). However, the link to the economically-focused resource nationalist policies and rhetoric of government is clear.

One respondent argued that initiatives in Merelani represent ‘legalization’ rather than ‘formalization’, because miners pay fees and file paperwork to maintain legal status, but have not experienced changes in working conditions. This is not unusual, as globally, ‘for most donors and host governments, formalization of ASM entails legalization and the steps required to put individuals in a position to secure the requisite permits’ (Maconachie and Hilson, 2011: 446), rather than substantive improvements. For example, in Zimbabwe, environmental regulations for mining became ‘perceived by small-scale miners as a strategy for generating revenue for state actors’ (Spiegel, 2017: 204).

The case study reflects some concerns of critical scholarship on ASM formalization, such as the gender dimensions (Carstens, 2018: 12; Huggins et al., 2017). In other countries such as the DRC, formalization has involved various costs which are unaffordable to many women, who have less access to credit than men (Bashwira et al., 2014). In Merelani, the requirement that women form associations and purchase official identification documents has imposed some extra costs. For women who specialize in picking through mining waste material, the lack of activity at TanzaniteOne may have denied them a source of income. Interviews suggest that women in Merelani often combine various livelihood strategies, which might be curtailed due to the emphasis on membership of a single association and performance of a single ‘role’. On the positive side, the wall and military presence has reportedly brought better physical security for women, in particular.

Scholars of ASM have argued that, ‘top-down policies do not work, formalization is a process and miners need incentives to join this process’ (Geenen, 2012: 329). While based partly on the Tucson Protocol, which was a product of some stakeholder consultation, recent state interventions at Merelani are very ‘top-down’. The decision to reduce taxes for ASM, in response to consultations with miners in early 2019, may reflect the government’s realization of a need for incentives. However, a broader range of incentives may be needed. The new regulations were introduced very rapidly. A phased approach, which includes government and/or donor support for mine operators to make incremental improvements in health and safety, labour standards (including pay), environmental sustainability and other issues, might be more successful in the long-term.

6.3. Institutional aspects

The 2017 reforms raise questions about governance of the mining sector. In a bid to improve ‘strategic control’ (Haslam and Heidrich, 2016) the Mining Commission, established in 2017, has been given a wide range of responsibilities including, on the one hand, ‘regulating and monitoring the mining industry’, by regulating disputes, carrying out health and safety inspections, etc.; and on the other hand, ensuring the ‘optimal utilization’ of mineral resources, conducting research and development in the mineral sector, and issuing mining licenses (URT, 2017). Some respondents contend that the combination of oversight responsibilities and operational mandates may generate conflicts of interest.30 More broadly, given the personal interventions by President Magufuli in the tanzanite sector, and the speed at which important decisions have been made, there are questions regarding the flow of information between the Minister of Minerals, the Commission, the President, and other key government agencies; in addition, of course, to other stakeholders such as local authorities. There is some data on LSM to inform resource nationalist policy-making targeting LSM; but ASM data is minimal.

STAMICO, a 50% shareholder of TanzaniteOne, is widely seen as severely limited in capacity. For example, a senior STAMICO official said that ASM associations have to contribute funds to receive training,

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27 Interview with broker, Arusha, October 2018.
28 Interview with member of civil society organization, Arusha, October 2018.
29 Interview with member of civil society organization, Arusha, October 2018.
30 Interview with member of CSO, Arusha, October 2018.
and that in addition to funds, lack of staff is also a constraint. STAMICO’s limitations are also a result of contradictory elements of its operational and legal mandate. For example, it has a responsibility to build the capacity of ASM; however, in the Tanzanian industry, as part-owner of a large-scale operator it is in direct conflict with neighbouring ASM operators. There is no evidence of STAMICO engaging long-standing ideas originating in the Tucson Protocol or advocacy by local CSOs and politicians. However, current interventions have been heavily ‘branded’ as part of President Magufuli’s broader strategies of economic nationalism. For example, in October 2018 the entrance to the MCA still featured a large poster of President Magufuli, advertising a Presidential visit dating from April 2018. The President has visited Merelani on several occasions and has addressed the tanzanite sector in several high-profile speeches and events. Tanzanite is a particularly important symbol of the Tanzanian mining sector because it is uniquely Tanzanian and yet has profited other countries to a greater degree than Tanzania. It therefore fits President Magufuli’s argument that Tanzania’s mineral sector has been the victim of foreign exploitation. Nevertheless, President Magufuli’s insistence that tanzanite should be auctioned at Merelani, while gold should be auctioned near a major goldmine at Geita (where an export processing zone will also be established) (Guardian Reporter, 2017), indicate that he is cognisant of the tensions between ideas of ‘national’ resources, and the importance of ‘local’ development at the sites of production. His variety of resource nationalism, which emphasizes the importance of patriotism (linking this to paying taxes and following laws), is vulnerable to criticisms of over-centralization and lack of transparency. Regional ‘centres’ are a way to counteract such criticism.

Perhaps the state’s ambiguity towards ASM is shifting to greater political support. The President has rhetorically supported ASM in various speeches and public comments (e.g. Anonymous, 2019a; Jacob and Pedersen, 2018: 291; Guardian Reporter, 2017). In January 2019, he directed that taxes be reduced for minerals and gems for the ASM sector. This instruction, significantly, was not framed in terms of ASM livelihoods, but rather in terms of reduced smuggling: “It is better to have low taxes that will provide room for collection of more taxes instead of imposing high taxes that do not facilitate revenue collection,” the President reportedly stated (Gerald, 2019). Clearly government policy prioritises revenue collection rather than, for example, miner health and safety.

6.4. Implications for resource nationalism in Tanzania

Many interventions in the tanzanite sector, such as the wall, and planned investment in Mererani’s infrastructure are long-standing ideas originating in the Tucson Protocol or advocacy by local CSOs and politicians. However, current interventions have been heavily ‘branded’ as part of President Magufuli’s broader strategies of economic nationalism. For example, in October 2018 the entrance to the MCA still featured a large poster of President Magufuli, advertising a Presidential visit dating from April 2018. The President has visited Merelani on several occasions and has addressed the tanzanite sector in several high-profile speeches and events. Tanzanite is a particularly important symbol of the Tanzanian mining sector because it is uniquely Tanzanian and yet has profited other countries to a greater degree than Tanzania. It therefore fits President Magufuli’s argument that Tanzania’s mineral sector has been the victim of foreign exploitation. Nevertheless, President Magufuli’s insistence that tanzanite should be auctioned at Mererani, while gold should be auctioned near a major goldmine at Geita (where an export processing zone will also be established) (Guardian Reporter, 2019), indicate that he is cognisant of the tensons between ideas of minerals and gems as ‘national’ resources, and the importance of ‘local’ development at the sites of production. His variety of resource nationalism, which emphasizes the importance of patriotism (linking this to paying taxes and following laws), is vulnerable to criticisms of over-centralization and lack of transparency. Regional ‘centres’ are a way to counteract such criticism.

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7. Conclusion

This case study has demonstrated how the Tanzanian government has attempted to formalize ASM in a context where spatialized forms of discipline are possible (e.g. searches, mine inspections, controls on movement). It has concluded that state emphasis is on maximizing government revenues, and on related bureaucratic forms of legalization. It has identified conceptual links to state strategies of resource nationalism, particularly through state narratives that the Tanzanian state has been ‘cheated’ of revenues in the mining sector, and through the political gains sought from personally identifying President Magufuli with interventions. Resource nationalism is not only about maximizing economic returns, but is also related to political legitimation through symbolic and material actions. The ‘great wall of Merelani’ is a symbol of President Magufuli’s ability to ‘get things done’.

Interventions in the tanzanite sector appear to have resulted in reductions in the ASM workforce and a related decline in official production, although continuing smuggling and geological factors could also be involved in this decline. TanzaniteOne, the only LSM operation in Merelani, is not operational, despite the direct involvement of STAMICO as part-owner. The new policies do not seem beneficial to the tanzanite sector. Spillover from the tanzanite sector to the local economy may have been restricted as well, due to reductions in production; though time will tell whether tanzanite auctions in Mererani can benefit local communities. Impacts of tanzanite sector policies at the national level depend, of course, on how royalties and taxes are used; the government has prioritized investment in various forms of infrastructure and has a ‘developmentalist’ outlook, but there are also concerns over financial transparency (Anonymous, 2019b).

The findings support the argument by Smith et al. (2017), that strong institutional support is necessary for formalization to be effective. In Tanzania, both STAMICO and the Mining Commission are considered to be not only lacking capacity to carry their mandates but also play conflicting roles of being custodians and regulators respectively while also being involved in the operational side of mining. The recommendation by Kinyondo and Huggins (2019) that a separate government agency be established to support ASM appears relevant here. Such an agency should take account of the gendered impacts of reforms as demonstrated in section 6.1. Moreover, a commitment to improved labour, environmental, health and safety standards could be used to add value to the tanzanite ‘brand’.

The findings from the tanzanite sector hold broader lessons for gemstone production, and mining more generally, in Tanzania. The 2017 mining laws did not help ASM, or dealers and brokers, as they banned export of all raw tanzanite, and increased both taxes and royalties making it even harder for ASM to operate. It is therefore not surprising perhaps that some smuggling continues. Nevertheless, legal changes in March 2019 to provide preferential tax rates for ASM may improve the situation.

The future of ASM in Tanzania may depend on the willingness of the government to consult more widely over mineral policies, and to introduce new regulations using longer timelines, to allow stakeholders to adapt.

This study suggests several key issues for future research. First, the long-term impacts of using the military to secure the MCA, including on relations between ASM and the state. Second, the sustainability of both the centres of excellence and trading centres for minerals, as anecdotal evidence is not promising. Third, the socio-economic impacts of changes to the broker system and the shift of the tanzanite economy away from Arusha towards Mererani. Fourthly, the real reason for the decline in official tanzanite sales since May 2018, especially the role of smuggling within the contemporary tanzanite sector and the geological aspects (the extent of remaining tanzanite deposits). Lastly, this article has sketched out connections between resource nationalism and ASM rather than LSM, a promising avenue of research.

Declarations of interest

None.

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