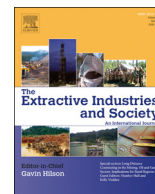




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Original article

## Women sapphire traders in Madagascar: Challenges and opportunities for empowerment

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## ABSTRACT

Recent literature has seen a growing appreciation of livelihoods based on informal artisanal and small-scale mining (ASM) that supplements women's primary reproductive roles, leaving a gap in the parts women play at the trading end of the value chain of ASM. This paper fills that void by adding to the growing body of research on gendered trade in ASM. It focuses on women traders and the complex challenges and opportunities they face while carrying out this informal trade. The paper is based on extensive field research, interviews, and focus group discussions of women sapphire traders in southwest Madagascar, colloquially known as "ladies in hats," who work in clan-based associations described as nascent proto-institutions. It draws upon institutional and entrepreneurial theory to understand their position in the sapphire value chain, and illuminates how women's status could be strengthened to create the foundation for a vibrant entrepreneurial ecosystem. The paper also asks how women traders can be empowered in view of the current opportunities and challenges, and suggests that the proto-institutions could form the basis of a cooperative or a small company if regulatory and financial settings for these women can be improved and if there is an opportunity for them to formalize their trade.

## 1. Women in the marketplace in African ASM

Women's labor contribution in artisanal mining is recognized in the production and processing of minerals, metals, and gemstones as well as in a range of ancillary activities. Currently, there is a growing appreciation and understanding of livelihoods based on informal artisanal and small-scale mining (ASM) that supplement women's primary reproductive roles of ensuring household food security and caring for children and the elderly. In ASM communities throughout the world, women and men have different social roles, rights, and opportunities, play different roles in production and labor organizations, and are also differently affected by environmental changes. Women and men also have different access to land and non-land inputs, and technical training (Huesca, 2013; Lahiri-Dutt, 2008; Moretti, 2006; Perks, 2011). Women are represented more heavily in lower value industrial minerals. They suffer from gender inequities in access to land and other productive resources, have little or no control over the incomes earned, and are subject to gender-based violence (Bashwira et al., 2014; Collins and Lawson, 2014; Huggins et al., 2017; Lahiri-Dutt, 2007; Rustad et al., 2016; Tallichet et al., 2003).

The growing body of research on gender roles in ASM has so far been surprisingly silent on the roles women play at the trading end of

the value chain of this kind of mining, irrespective of the commodity or context. This paper fills the glaring omission of women in ASM, focusing on the complex challenges and opportunities for the empowerment of women, with particular focus on women working across the Malagasy sapphire value chain in southwest Madagascar (Lawson, 2018). It analyzes some of the most disadvantaged actors in the early part of the sapphire value chain—the women sapphire traders.

The barely legitimate informal sapphire trade exists on the margins of mines and mining towns. It is a relief from the exhausting work of mining and sieving, and is a vital source of income for women and their families. Examining the role of women with very few resources, from institutional and entrepreneurial research perspectives, working as gemstone traders in one of the world's least developed countries, offers an opportunity to question whether these women can be seen as "proto-entrepreneurs" in a "proto-entrepreneurial" context. It also provides an opportunity to critique what Jenkins (2014: 32) describes as the "gendered dynamics and power relations at work" in the extractive industries, and brings to the fore how the process of feminization operates on the ground (Lahiri-Dutt, 2015).

To analyze this situation and the achievement of sapphire trading women, we draw upon the study by Martí and Mair (2009) that challenges scholars to focus on the work done by actors with limited power

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and resources in the developing world. It bridges institutional and entrepreneurship theory (Mair and Martí, 2009), allowing us to analyze the gendered trade in ASM. Scholars and experts have noted the “female face” of much of the African trade (Gitonga, n.d.), with female informal cross-border traders as key economic actors, who suffer from invisibility, stigmatization, violence, harassment, poor working conditions, and lack of recognition of their economic contribution. These happen because their involvement in trade is concentrated in the informal economy (Brentan, n.d.). Kiteme (1992: 136) notes the role played by women traders in the African economy thus:

[T]he female traders not only supplement the food supply ... they also provide assistance and financial benefits for numerous community causes such as education of children, family clothing, salaried household and farm employment, acquisition of cattle, improvement of family housing, development projects, community health, adult education, direct and indirect payment of government taxes, and improvements in transportation and general infrastructures.

In the 1990s, around 80% of the female working-age population was employed in trading (Clark, 2010). Since then, women’s participation in informal trade has intensified in African countries. In Ghana, for example, Kwami (2016: 149) observes that “[a]lthough men are present in the Ghanaian market place, women have historically dominated this space.... Ghanaian market women continue to dominate the informal sector today.” Notably, as much as 70% of cross-border trade in Sub-Saharan Africa is carried out by women (UNCTAD, 2013).

Following these observations, attitudes to the informal sector in general and to informal trade in particular have altered in recent years. Sparks and Barnett (2010) argue that informal sector in Africa is no longer a marginalized, “survival” sector that absorbs the excess labor, but is a vibrant, entrepreneurial part of the economy that creates new jobs, stimulates economic growth, and offers better opportunities for equity. The marketplace that women enter is not only informal, but is also characterized by extraordinary gender inequities. Indeed, as Seligman (2001: 21, 23) notes, “market women experience remarkable stress trying to juggle their multiple roles and relationships as economic, political and cultural mediators” of radical social–economic–political changes that are sweeping through the African continent. “In this brave world, market women are among the ‘managers of contradiction’, a fact that has not been lost on government and international lending agencies.” Not all women, however, are treated at par by lawmakers. Bowles (2013) explains the incredible success of hypermobilized Ghanaian women with affluent economic status and social ties stabilized by educational experiences abroad. They have done exceedingly well within the overall scenario, raising question as to whether such examples remain unparalleled among their peers elsewhere in Africa and for women without such social status and connections.

## 2. Sapphire trade and women

Within the growing global production and trade in gemstones, Madagascar plays a significant but undervalued role; it is in fact the world’s leading producer of sapphire (Shigley et al., 2010). This position is noteworthy for colored gemstones, the trade name for precious stones such as sapphire, ruby, and emeralds, which have been the main growth area within the global gemstone production and trade. The gemstone industry is truly global: the stones, originating in one place, cover significant distances to reach places where they are cut, polished, and set into jewelry, and finally sold around the world. For example, Colombia and Zambia are the major source of emerald, Myanmar and Mozambique for ruby, whereas Sri Lanka, Australia, East Africa, and Madagascar are the primary sources for sapphire. Sometimes, the gemstones change hands many times to reach countries such as Thailand and India, where they are cut and polished for the consumers

across the world.

The primary centers for processed gemstones are located in Bangkok, Hong Kong, Europe, and the USA, and are used by jewelry and the watch industries. Shortell and Irwin (2017) observe that this global industry is characterized by widespread illegal activity, low revenue collection, minimal value addition, and weak oversight in the countries where the gemstones originate. Gemstones are mined in areas that are remote, have weak state presence, and poor infrastructure, and the inability of the state to exercise law and order makes it almost impossible to control the actors, adding an element of “ungovernability” to the local context (Lahiri-Dutt and Brown, 2017). An anthropological perspective on tanzanite by Donahue (2018) shows that the “value” created in this complex and extended chain is as much a product of modern consumerism and related brand-making as the natural value of these commodities. Roy Chowdhury and Lahiri-Dutt (2016) have argued that the *khonds*, the indigenous people of Kalandhandi in the Indian state of Odisha who mine colored gemstones, have not benefitted substantially from the rapid expansion of mining in the region, although the rate of outmigration has slackened temporarily. Interestingly, Madagascar does not have institutions, either private or public, that can robustly control and administer the trade in sapphire. Therefore, much of the gemstones trade remains in the informal sector where effective regulation of the industry is loose and the collection of revenue through taxes and royalties is poor (Randriaarson, 2017). The informality is evident in the length and breadth of the industry, starting from the way production relations in mining are organized to the way the gemstones are traded. Most mining of gemstones occurs in the informal ASM sector with many stones being shipped out of the country with no value addition. This poses a serious problem for Madagascar. Some experts believe that institutions as “the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction” (North, 1990: 3) are crucial for resource extraction to generate capital for its actors to benefit from. In the context of resource extraction, formal institutions could be legal frameworks governing regulation, landownership, and leases, whereas informal institutions “do the thinking” by shaping the local norms and behaviors and customs defining not only the rules of the game, but also its players (Mair et al., 2012).

The first major deposits of fine sapphire to be mined and exported from Madagascar were from Andranondambo in the southeast in 1992. This sparked an influx of foreign buyers and led to the setting up of sapphire towns in Ambondromifehy in the north (in 1993) and Ilakaka, now the most celebrated of Madagascar’s sapphire rush towns, and Sakaraha in the southwest (in 1998). In a matter of a few months, with the arrival of 100,000 miners Ilakaka transformed from a sleepy agropastoral town to a thriving one. Sakaraha, an established rural town 81 km to the south, saw a similar transformation with the arrival of miners and foreign traders. Miners came from all over the country, principally from Androy in the extreme south, where sapphire had been mined in the past and where changing climate, drought, food insecurity, and cattle theft created a strong impetus for migration (Lawson, 2018). While both men and women participated in the great rush, Canavesio (2013) argues that women seemed more motivated because, apart from financial gain, they also found opportunities where their roles were no longer restricted by a deeply patriarchal culture.

Vatomandry and Andilamena in the east saw sapphire rushes in 2000 and 2001, respectively (Cartier, 2009). In 2016 the discovery of large, highly saturated blue and pinkish orange sapphire in Bemainty, a rainforest area in the Northeast, attracted miners from across the country in large numbers and traders, mostly from Sri Lanka, thereby raising concerns about forest incursion (Pardieu et al., 2017). Towns like Ilakaka and Sakaraha are now established hubs in their region and women traders find their place selling the smaller stones either directly in the market or through middlemen. While there is some mechanized mining in the formal sector, the majority of sapphire mining and trading conducted by the Malagasy remains artisanal and well within

the informal sector. To date the government has failed to put in place a system that will enable miners and traders to work in the formal sector. Donors have paid for Bureau Administratif des Mines (mines offices designed to issue permits and create pathways to formalization) to be built in both Ilakaka and more recently Sakaraha; however, neither have ever functioned due to a lack of professional staff willing to work there or perhaps political will or capacity to effectively regulate the sector. The best stones continue to leave the country without formal paperwork and are cut and polished in centers in Sri Lanka and Bangkok (the Gem and Jewelry Institute of Thailand, Bangkok, interview, 2018).

The status of women in Madagascar is not good despite the country scoring better than its Sub-Saharan neighbors (ranking 84 out of 149 on Global Gender Gap Index). The reality of women, particularly in the rural areas under study, is severe. The estimation of social risk for Malagasy women, as per the Organisation for Economic Co-operation and Development's (OECD) Social Institutions and Gender Index (SIGI), moved from medium to high in 2019. While national laws seem to protect women's rights, in practice poor levels of education among women and traditional law mean they have no hope of reclaiming their rights. The law only protects the rights of women, for example, the right to alimony and rights to children, in "legal" not traditional marriages, yet these "legal" unions represent only 4 out of 10 unions. Only the husband can head the household even though there are many female-headed households and single mothers (at least 20% of homes according to Rabenoro, 2005). Inheritance laws, both legal and traditional, tend to disinherit women and exclude them from equally accessing, owning, and managing land in the country (SIGI, 2019). Abortion remains illegal despite horrifying levels of death of women from illegal procedures. Gender-based and domestic violence are not well defined by law leading to an under-reporting of these crimes as well as a level of social acceptance. Despite the legal age of marriage being raised to eighteen in 2007 child marriage is widespread, including forced marriages of girls as young as ten. Sexual and domestic servitude can be associated with such practices and levels of child prostitution in Madagascar are high. Workplace discrimination persists with high levels of female unemployment, a gender–wage gap, and a large concentration of women in the informal sector (SIGI, 2019).

Madagascar's pre-eminence in sapphire production and trade needs to be considered within the informal nature of the country's economy. Levels of informal work are very high across the board at 89%, but for women the levels are even higher at 93% (WIEGO, 2012). These two facts explain why sapphire trade is informal and why there are more women within this informal trade. The question, therefore, is whether women's involvement in trade itself can empower them. Dana et al. (2018) argue that female entrepreneurship in Africa offers an interesting and vital opportunity to consider women's autonomy and empowerment. However, African women entrepreneurs are currently concentrated in the informal sector, where they are driven by necessity and reasons of poverty alleviation, and in the case of Madagascar drought and climate change (Canavesio, 2013; Lawson, 2018), rather than opportunity or economic empowerment (Spring and Rutashobya, 2009). To be of value, more nuanced information is needed about the barriers and enablers to African women's entrepreneurship. For example, women also face significant barriers institutionally with unequal rules for women and men in taxation, employment, and property use found in 28 nations in Sub-Saharan Africa (*Africa Development Report* cited in Hilson et al., 2018). Two recent reviews of gender and enterprise development in Sub-Saharan Africa by the World Bank provide further valuable facts (Campos and Gassier, 2017; Chakravarty et al., 2017), but with little theoretical framing. They found that although female participation in entrepreneurial activity is higher in Sub-Saharan Africa than in any other region, women's businesses, unlike men's, significantly underperform and a higher proportion of women employees, especially the younger ones, work in vulnerable conditions. Campos and Gassier (2017) found that just two interventions

consistently impacted the business outcomes of female-owned firms: providing access to savings accounts and in-kind/large grants; there was no consistent impact from microfinance, cash grants for small-scale entrepreneurs, and traditional managerial training. By contrast a significant study in Togo found that psychology-based training in entrepreneurship that emphasized personal initiative, entrepreneurial self-efficacy, and passion had a positive impact on female entrepreneurs' business success. Campos et al. (2017: 1) define personal initiative as "a self-starting, future-oriented, and persistent proactive mind set because it involves looking for ways to differentiate one's business from others, anticipate problems, better overcome setbacks, and foster better planning for opportunities and long-term preparation."

Women entrepreneurs generally experience the impact of institutional barriers, both formal (such as lack of education and resources that make it difficult for them to obtain mining and commercial permits and collateral for finance) and informal (such as cultural and religious constraints), to successful participation in the markets. Mair and Martí (2009), in the context of their research with an NGO in Bangladesh, note that the lack of property rights and autonomy were the most significant factors impeding women's capacity to participate in markets. Gender is thus a decisive factor in formal and informal institutions, and in the creation and control of institutional voids. These voids are situations where institutional arrangements that support markets are weak, absent, underdeveloped, or ineffective in doing their job, and can be of three specific categories: voids that cripple market development, voids that hinder market functioning, and voids that impede market participation (Mair and Martí, 2009: 422). For some women, these voids provide opportunities for entrepreneurship to succeed within these constraints by adapting and using strategies such as bricolage, "making do with what is to hand" (Baker and Nelson, 2005: 329). In the context of sapphire mining and the trade industry of Madagascar, these voids have indeed offered some space to innovatively maneuver the various gender-based restrictions and handicaps.

For example, in the artisanal mining communities, different kinds of marriage institutions shape women's behavior and opportunities. Sometimes single women may have to enter into temporary transactional "gold marriages" in Tanzania (Bryceson et al., 2014). In Madagascar, "sapphire marriages"—hooking up with a male miner and trading sexual favors to gain access to mining opportunities—reflect similar strategies adopted by women. Those women who are in "traditional marriages" do not fare better in their efforts to make them last longer or gain stability; the married women often must give all their finds to their husbands or fathers-in-law, who decide how the proceeds should be spent (Lawson, 2018). Informal institutions control access to resources, for example, in Madagascar it is rare to find women underground where the best stones are found, instead they are relegated to sieving the tailings aptly called "pooh mining" in Malagasy. Women are said to be too weak to go underground, yet they find themselves in water the whole day with heavy-framed sieves.

Women across Africa have also negotiated such governance gaps by creating mining-related proto-institutions that facilitate their participation in the benefits of resource extraction as, for example, in the proud tradition of the Tanzanian Women Miners' Association and the Association of Zambian Women in Mining (see Lawrence et al., 2002 for a definition of proto-institutions). Within the trading sector, an example of the potential of such proto-institutions is that of the *shashulere* women, who act as buying agents for gold dealers. Lacking official recognition, these women created the Association de Mamans Chercheuses de la Vie (Association of Mothers Looking for Life), registered it provincially, and have been able to lobby the governor to enable three women to share a mining permit, thus reducing the significant start-up costs (Bashwira et al., 2014). Unfortunately, these associations do not always demonstrate high levels of collaboration and involvement in the institutional field that Lawrence et al. (2009) note are characteristic of successful proto-institutions (Mercy Zulu, personal communication,

2017).

### 3. Value-laden sapphire in poverty-ridden Madagascar

Despite its considerable mineral wealth (Yager, 2013), Madagascar is one of the poorest countries in the world with 88% of the population living on \$1.25 a day with marked increases in poverty following the political crisis of 2009 (World Bank, 2014). It is one of the world's lowest ranking nations in terms of women's economic opportunity (The Economist Intelligence Unit, 2012). In the absence of broader gender equality principles, land tenure reform seems to have reinforced the primary ownership of land by male household heads, at the expense of women's land rights (Widman, 2014). Women in the southwest, the study region, are particularly disadvantaged. Literacy levels for women are low and very few girls finish high school due to very early pregnancy, typically when they are in early to mid-teens (CREAM, 2013). Women work extensively in the informal sector and prostitution of very young women is widespread.

In the southwest, notably around the mining towns of Sakaraha and Ilakaka, small-scale mining of gemstones, especially sapphire, has provided a lifeline to many rural women. Previous research focused on the life histories of Malagasy women who mine and sieve sapphire along the rivers and streams next to the mines (Lawson, 2018). This research seeks to move up the supply chain to understand the lives of women who have found a way out of the rivers to become traders. Mining work is heavily gendered with few women going underground and few gaining access to the valuable first pickings in the gravel (Lawson, 2018). Some women work for sustenance, others sell their stones to buyers—large stones to Sri Lankan or Thai male buyers, and the smaller ones to local men or women. These local women traders are seen in stalls near the mines or moving around the mine sites or towns. They are known as “ladies in hats” (Cushman in Shortell and Irwin, 2017), because they have been able to buy a hat and a shoulder bag to keep their stock in with the little wealth they have acquired.

Our research investigated how and why women miners move up the sapphire supply chain to become traders as well as the nature of the opportunities for women in this activity. Questions were derived both from available literature and from previous research with women miners (Lawson, 2018). Specifically, we asked how and why do women gemstone miners become gemstone traders, what opportunities do women have to participate in the sapphire value chain activity beyond extraction, and what role do institutional factors play.

To answer these questions, we present the work life history of eight women gemstone traders, aged between twenty-five and forty, and were responsible for children and grandchildren at home, as narrated by them. The methodology draws on two research approaches: the Panos Oral Testimony Project, 2014, and its detailed method for collecting stories outlined in Listening for Change and Giving Voice (Slim and Thomson, 1993), and Life Course Research (Giele and Elder, 1998), which is widely used across a range of disciplines, medical and social sciences in particular, and elaborated by Glen Elder. From the life course histories, central themes that determine the shape of the life course, for example, location in time and place (cultural background), and heuristics, such as life transitions, are then determined. Data collection relied on individual interviews with the eight women traders, six from the mining towns of Sakaraha and two from Ilakaka. The interviews were conducted in Malagasy during the day with the aid of a local research assistant. Evenings were spent transcribing the findings to enable further probing the following day if an issue of interest emerged. In Ilakaka we spent several days in the town observing the women make their sales and gaining their trust to speak with us. In Sakaraha we observed women working in their stalls at the edge of the town; we were introduced to the traders through a local teacher who had been working with the group as part of a stakeholder engagement process being conducted by an international donor. Women in both study regions were interviewed for an hour each about an hour, they

were asked about a typical day's activity and how they fitted into the town's gemstone trade, their work life history (for example, why had they had taken up trading and where had come from), whether they worked alone or in a group, and the impacts of their activity on their finances, health, and family.

The focus group method was used in Sakaraha with the women respondents and four other women members of their work group. In these discussions, the same themes were explored along with questions about the impacts of mining in the town and also the function of their working group. Dynamics of the group were observed to delve more into topics such as the clan-based nature of the group and its function in assisting each other with family expenses.

Finally, these methods were supplemented by extensive observations in the field, watching women at work, during the meetings, and while engaged in trading activities in the town. Such observations more generally took place in public spaces, for example, in the streets, trading areas, and in hotels where a room would be booked for an hour if there was a very large cash transaction for a stone.

The data was transcribed, translated, analyzed, and re-analyzed over a period of time. The data was further examined using a thematic analysis approach (Flick, 2014) with categories used to analyze the data being both inductively derived, that is, allowed to emerge from the data in relation to the research questions and scoping visits, and deductively and iteratively determined based on insights from institutional and entrepreneurial theory and literature.

### 4. Women gemstone trader's life histories

In line with Canavesio's (2013) work on female migration and Lawson's (2018) research on women miners, all but one of the women respondents had moved to Sakaraha from the Androy region, which has experienced extreme climate change, drought, crop failure, and starvation. Five out of the eight respondents lived in female-headed households and stayed in the sapphire region from six to seventeen years indicating that they were settled there. Two traders in Ilakaka, Vetasoa and Vivienne, said, “We want to stay here to the end. We have an area for our house and we shall buy it if Jesus helps us in saving money.” Interestingly, these two women had also worked in one of the first sapphire regions in south Andranondambo. Vivienne explained, “It was there when I was a little girl that I first tried to find sapphire. We were in our villages and everyone was talking about sapphire in Ilakaka.” She went to Ilakaka just after the beginning of the rush in 1999 and has not moved since. Forty-year-old Dety was the only one in the group who was not from the south; she came from a mining background in the garnet-bearing region of Ampanihy in south west where she had been taught about stones by her family. As is common in Madagascar, women in families pass knowledge about stones and mining onto the next generation.

Reasons which prompted women to take up trading were uniquely personal. One woman had become a second wife and had to find a way to support herself and her grandchildren. Another woman related her story with determination: “I started selling in 2007 and learned how to do it from my sister because I wanted to make money. Before this I was a farmer. I was then living in Androy and was pregnant with my second child. One day I want to be the boss of a mine site.” Mining and sieving of gemstones is grueling work and can cause permanent injury (Lawson, 2018). One woman we interviewed was fortunate to be able to become a trader and is now quarry manager; her miner husband, however, was injured while working in the mine.

Pathways for women miners to becoming a trader are often complicated. Those who succeeded showed courage, tenacity, and ingenuity in “trading up” the resources they have to handle to make a living for themselves (Hinton, 2016). For example, Vivi noted, “I bought a 2 g blue sapphire from a quarry miner and sold it for roughly four times the price. I bought stock to set up my business.” This tenacity displays high levels of personal initiative, and shows they are future-oriented and

proactive (to use Campos et al.'s 2017 descriptors). Women traders use their social resources of industry knowledge shared with them by family and they leverage relationships in their networks of other women traders, local miners, and African traders. They learn from other successful traders about how to measure by hand, the names of the different colored stones, and which ones are prized. They even borrow scales from each other.

Women trade their stones, sort them, classify them, and package and sell them to create financial resources to support their families and buy more stones. Women traders have learned from living in poverty or close to poverty (Baker and Nelson, 2005). Dety said to us in her spirited voice, “When the sapphire sales are down I sell Coke.” Women can adeptly move between different income-generating streams and even maintain a second income stream, such as by selling aerated drinks or jewelry. They do so within a cultural landscape of deep-seated gender norms that continue to restrict the access of women to required resources. Another woman trader laughed after mentioning this, and added, “My stones are less than a gram. I buy a little pack and sell a little pack. I keep some from each week. I sort them out based on quality and color. I buy the stones one by one, but sell them as a packet.” This shows that women consider the options carefully and choose one, as evident from one response we received: “We can have sometimes 50,000 ariary [25AUD] and we don’t work for many days before we earn 20,000 to 30,000 per day. Now it is 50,000 for two weeks.” Women leverage social networks and relationships: “I buy from Sakaraha miners and they use us to sell their stones. It is better to sell to other Malagasy or Africans, but sometimes they face discrimination.” Such discrimination could manifest as buyers preferring to buy from Sri Lankans or Thais. Younger women use their boundless energy and hard work to create value from existing networks and find new ones as well as take up domestic and family duties. As Vetasoa observes, “The good thing is we are not exhausted!”

Most of the women interviewed had “stepped up” from back-breaking, small-scale mining. All but one came from a farming or mining background, carrying with themselves vital knowledge, in the south of Madagascar to take up sapphire work because the mines were depleting and persistent drought led to crop failure. One woman remarked, “We are here because we are poor and we try to find something to do.” Entrepreneurial theorists (Fuentelsaz et al., 2015) suggest that women are necessity-driven rather than opportunity-driven entrepreneurs, but the catalyst for trading up is often the opportunity provided by the discovery of a large stone which can be used to buy stock and start trading. To explain this apparent contradiction, following Williams (2014), we suggest that the distinction between the two types of entrepreneurship is not always clear cut or particularly useful.

In southwest Madagascar, opportunities for women to participate in the sapphire value chain activity beyond extraction are currently limited by a range of formal and informal institutional voids. There has been a systemic failure to integrate a regulatory framework which enables miners, traders, and the local community to capture their fair share of revenue generated from these non-renewable resources. Systems regulating the mining sector continue to stagnate in Madagascar with reforms to the Mining Code and permitting arrangements on hold since 2009 (Ministry of Mines, personal communication, 2018). In regional areas, the central government has failed to enforce the existing code and almost all aspects of the rough stone market are tightly held by Sri Lankan and Thai traders with only a handful of local Malagasy with access to the most valuable stones (Randriaarson, 2017). Local traders have no recourse to any benchmarking of prices. Unlike gold, which has a standard international spot price, understanding the price of precious stones requires skill and experience. Almost all transactions are in cash. As a result, money laundering and international criminal activity is widely reported (Duffy, 2007). A number of women traders wanted to become mine managers or business women, but no one expressed any interest in or knowledge about how to become

a licensed trader. The current system of formalization is too costly and complex, and the offices are located too far away for the majority of women miners and traders to access. As informal traders, there is little hope that they will be able to access assistance and finance, even if it were available.

Each morning in the sapphire towns when the light is bright, the miners come in to try to sell their stones to foreign buyers. The trading houses, the cars, the equipment, and the access to funds are largely in the hands of foreign buyers and those who support them. The situation is unjust for all local people, with an added layer of difficulty for women who are often kept in a powerless position by informal institutions of deep-seated, culturally biased gender norms. Such norms constrain women’s access and capacity to talk to key players, such as the buyers, unless they are in a formal or de-facto relationship; norms also permit male partners to demand a share of any financial gain the woman trader might have. Women are systematically excluded from access to the bigger stones at source, as they are rarely permitted to go underground and are relegated to sieving the male miner’s tailings. In sales there is a tradition that only men can have access to large stones and only they sell these to rich men. As one trader told, “The market that men can do women can’t do, the small stones are for women, it’s ordained by God.”

Current business practice and lack of equipment also marginalize women. Price fixing is common for women trying to sell their stones. If a woman trader complains about a price offered by a foreign buyer, he will telephone his network of traders and tell them not to give her a better price. The trader’s husband may also collude with the buyer to get his share. Women traders have no access to finance or business support. They do not know how to use the Internet and have limited access to mobile phones despite these facilities being available. They lack even the most basic tools, such as a reliable pair of scales or a loupe, and basic financial and linguistic literacy levels are low. Only one woman expressed an interest in value addition, cutting, or creating jewelry. This is despite the fact that even the simplest form of cutting can at least double the value of the stone (gemmologist, personal communication, 2018).

In all this, a strong positive factor for women traders is their capacity to support each other; they rarely operate alone. In the streets they may sell from individual booths, but they are more commonly seen sitting together on the street corner. In Sakaraha, 30 women traders belong to an informal association called Zafiminondro, their Androy clan name. The function of this group is not strictly commercial: “We take care of each other as women far from home. For example, we help each other when there is a death in the family.” In Ilakaka, the group has a more commercial aim: “We divide the profits among the group. If we are ten, we divide in ten. If we don’t have enough money to buy, we share.”

## 5. Concluding insights

Our research shows how the activities of women traders have enabled them to make some progress in closing institutional gaps and creating new institutions in Madagascar’s sapphire trade. Women traders challenge institutions, both informal, such as traditions about women not being able to deal in large stones, and formal, such as legal constraints, which keep them in poverty. They do this through their involvement in the trade, making experiments with the minimal resources they have in their command. Women lack essential knowledge about broader market trends to be able to make judgments about the future and to distinguish themselves from other vendors. Lacking the power to advocate for themselves, women traders have changed the status quo with small steps using the money gained from the sale of a large stone to set themselves up and then trying a number of activities, including specializing in colored or cat’s eye sapphire, selling packages of stones to certain buyers, and stocking stones to sell in bulk. This way, they create something new with whatever they have and make careful,

step by step business decisions. Three women traders from the eight we interviewed built on these strategies and are now successful quarry managers. This is a step up again to gain direct access to stones that were previously available only to men. In undertaking these activities, women traders have challenged many myths and traditions which keep women away from the better stones and discourage them from working with men and foreign traders. Most women know exactly the size of the large stones they had found and how much they had sold them for. They have learned not to give all their big stones to the men and they manage quarries themselves; a far cry from the male control implicit in a local proverb: “Women are like a thread passed through the eye of a needle.” In providing services to such women it is vital to understand the pull of such traditions and the skills required to navigate them.

Since 2016, in Sakaraha, there has been support from a small but diverse range of actors; for example, a series of basic field gemmology workshops sponsored by Tiffany and Co. Foundation trained over 100 women in gemstone recognition and the use of tools. A recent evaluation found that this training was particularly appreciated. The women participants felt more confident by learning new knowledge and skills and this enabled them to earn more money for their stones; on average they reported a nine-time increase on their original price before training. In 2018, Australian and German Aid funded the establishment of a small women’s lapidary center which has been creating jewelry from local stones. They have received some training in small business, but more is needed for them to be able to develop and market their products efficiently.

Women traders are not as yet part of the lapidary workshop. They currently work together as a clan group and careful ground work will be needed for them to broaden this to include other actors in the gemstone value chain and for their group to become an effective proto-institution. Such nascent proto-institutions could form the basis of a cooperative or small company if the regulatory and financial settings for these women improve and if there is an opportunity for them to formalize their trade. Future work with these women needs to find ways to build capacity in their gemmological knowledge and their negotiation and marketing skills. In the longer term fostering the development of these early proto-institutions will be vital as it is only when these women can operate as small registered companies that they will be able to access finance and secure their business. There is a market for responsibly sourced small precious stones such as sapphire, particularly stones with a story such as those of these women traders. With mentoring, product development, and appropriate networks, women traders could vastly increase their revenue on the stones (Lawson Gems, personal communication, 2019).

In southwest Madagascar, the most striking feature of the sapphire business is the absence of institutional support for local people, in particular women, who seek to make a living with this trade, a trade in a precious luxury commodity which should have the potential to be transformative for these communities. Despite this, women gemstone traders have found a way to exploit a gap in the sapphire market by working with the small stones overlooked by the larger, more powerful buyers. They work on the edges of the sapphire boom and their personal and financial situation is far from easy. Future studies will consider how best to draw together research findings and experience on the ground to provide a basis for a viable entrepreneurial ecosystem for women working in the sapphire trade.

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