

## Reflections on the life stories of gemstone professionals in Madagascar.

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The beneficiation of gemstones in their country of origin is a great challenge facing countries across Africa. Tanzania has successfully created a gemstone cutting and jewellery making hub in the Arusha area and the Ethiopian opal sector has had some promising developments in cutting and polishing. In Madagascar, a large proportion of its precious stones continue to be exported rough and are cut in specialist cutting factories in South and South East Asia and then exported onto show rooms and auction houses in centres such as Hong Kong<sup>1</sup>. The economic opportunities which could flow into the country from value addition remain elusive.

In the face of such challenges, this paper looks for inspiration to the stories of successful graduates of the Gemmology Institute of Madagascar (IGM), those local Malagasy craftsmen and women who have established their own businesses or who are working in responsible positions in their trade in Madagascar. Using a work life course methodology<sup>2</sup> which looks at precipitating factors and 'turning points' in an individual's career, this paper will synthesise learnings from a three of a series of detailed life histories recorded across Madagascar in 2014 and 2015.

### Context

Madagascar is a country rich in mineral resources with ilmenite, nickel and cobalt extracted on a large scale<sup>3</sup>. It has also become one of the world's largest producers of fine sapphires ranging from the best blues to yellows, pinks, oranges and purple<sup>4</sup> as well as rubies emeralds, spinel and tourmaline to name just a few. Yet Madagascar is one of the poorest countries on earth with 88% of the population living on \$1.25 a day with marked increases in poverty following the political crisis of 2009<sup>5</sup>. Artisanal and Small Scale Mining (ASM) of gold and gemstones has provided a lifeline to many hundreds of thousands of largely, but not exclusively, rural people. Institutional voids and the price and complexity of obtaining a permit for mostly illiterate workers, mean that most miners and traders remain trapped in

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<sup>1</sup> Laurent Cartier, "Livelihoods and Production Cycles in the Malagasy artisanal Ruby–Sapphire trade: A Critical Examination," *Resources Policy* 34 (2009): 80-86.

<sup>2</sup> Glen Elder, "Time, Human Agency, and Social Change: Perspectives on the Life Course," *Social Psychology Quarterly*, 57 (1994): 4-15.

<sup>3</sup> T. Yager, *The Minerals Industry of Madagascar* (2010: US Geological Survey) <http://minerals.usgs.gov/minerals/pubs/country/2012/myb3-2012-ma.pdf>

<sup>4</sup> J. Shigley et al., "Gem Localities of the 2000s," *Gems and Gemmology*, 46 (2010): 188-216.

<sup>5</sup> World Bank, *Poverty and Equity Country Indicators* (Washington: World Bank, 2014) <http://povertydata.worldbank.org/poverty/country/MDG>

informal working arrangements. Thus very little in revenue has returned to the State or worse, has been misappropriated.

Between 2003 and 2012 the World Bank through its Sustainable Energy Oil Gas and Mining Unit financed the Madagascar Mineral Resources Governance Project (PGRM) for a total investment of US\$ 40 million. In its early stages the PGRM worked to improve the governance and technical capacity in the ASM regions and had some success. In 2008 as part of the PGRM, the Gemmology Institute of Madagascar (IGM) was created with the aim of building capacity among Malagasy people to add value to their precious stones through identification, cutting and polishing and ultimately through jewellery making. Madagascar is today “recognized worldwide as a quality gem producer – an accomplishment, which is attributable to the PGRM supported creation of the IGM”<sup>6</sup>. The IGM is fully accredited by Gem A, the Gemmological Institute of Great Britain, and has trained hundreds of local and foreign students. Unfortunately course fees are beyond the reach of most Malagasy people. Prior to the political crisis of 2009, business and NGOs provided scholarships for some needy students, however today such scholarships are rarely available. The final report on the PGRM found that some 6% of graduates (100) had started their own jewellery businesses but no tracer studies or interviews were completed<sup>7</sup>. The most recent data from the Ministry of Mines and Petroleum in Figure 1 shows that only a small percentage of precious stones exported have been cut in Madagascar. According to these figures the return in dollar value on polished sapphires is almost 100% more than that on rough stones.

**Figure 1 Exports Statistics for Sapphires 2015**

Mineral	Quantity (g)	Value (US \$)	Price per gram
<i>Rough Sapphires</i>	3 056 763.07	1 576 811.71	51.58 c
<i>Polished Sapphires</i>	2 147.53	117 433.33	\$54.69

*Source:* Ministry of Mines and Petroleum, Republic of Madagascar  
*Note:* 1 USD = approx. 3 022 MGA (15 August 2016)

This paper seeks to analyse the stories of graduates from this program. It is part of a more comprehensive study which forms part of the principal author’s doctoral research

To frame and analyse their experience, this paper draws theoretical insights from Mair & Martí <sup>8</sup>, Marti & Mair <sup>9</sup> and Smith et al.’s <sup>10</sup> work on poverty and institutional voids, institutional work and the venture scripts used by successful entrepreneurs.

<sup>6</sup> World Bank, *Implementation Completion and Results Report on Republic of Madagascar Minerals Resources Governance Project* (Washington: World Bank, 2014).

<sup>7</sup> World Bank, *Implementation Completion and Results Report*.

<sup>8</sup> Johanna Mair and Ignasi Martí, “Entrepreneurship in and around institutional voids; a case study from Bangladesh,” *Journal of Business Venturing*, 24 (2009): 419.

<sup>9</sup> Ignasi Martí and Johanna Mair (2009). “Bringing change into the lives of the poor: entrepreneurship outside traditional boundaries”. In *Institutional work: actors, agency in institutional studies of organisation*, edited by . Thomas Lawrence, Roy Suddaby, and Bernard Leica, 92-106. Cambridge: Cambridge University Press, 2009)

<sup>10</sup> Adam Smith, William Judge, Amir Pezekhan and Anil Nair, “Institutionalizing entrepreneurial expertise in subsistence economies,” *Journal of World Business* in press (2016).

## Institutional voids

Institutions are defined as “multi-faceted durable social structures made up of symbolic social activities and material resources resistant to change and transmitted across generations”<sup>11</sup>. An institutional void is a gap or weakness in an institution, for example in a developing country, those living in poverty may be unable to enter a market due to weak or absent institutional arrangements to support markets. One area of particular pertinence to this research concerns the institutional infrastructure and rules that support market formation and economic development. The absence of these creates voids inhibiting the establishment of markets and their transparency and efficiency<sup>12</sup>. Attempts by development agencies to build inclusive markets often fail because they do not take into account the role institutions and institutional voids play, for example, in women’s economic activity. Mair et al.<sup>13</sup> investigated the way in which institutional voids prevented market access in a detailed case study of the Bangladeshi NGO, BRAC (Building Resources Across Communities) and its campaign to build a solid economic, social and human base for ultra-poor women. They found that two sets of activities: redefining market architecture and legitimating new actors are essential to building new markets.

## Institutional work

A related notion is that of institutional work: “the purposive action of individual and organisations aimed at creating, maintaining and disrupting institutions”<sup>14</sup>. Marti and Mair<sup>15</sup> point out that research has often emphasised the “aggressive style” of those doing institutional work; they argue that the emphasis should rather be on the experimental and developmental nature of institutional work and suggest researchers consider more closely “the institutional work of those we normally assume are powerless”<sup>16</sup> in order to better understand institutional change. They encourage researchers to provide better analyses of the tools and strategies used by those with limited resources to effect change but who are never the less successful. One particularly pertinent strategy highlighted is the experimental nature of the strategies they use and the “favouring (of) small steps and reversibility”. This is not simply the result of limited resources but is a deliberate strategy to “minimise negative unintended consequences”<sup>17</sup>. They argue for a “resolute but gradual” approach to poverty alleviation and research that gives voice to “neglected actors and ignored contexts”<sup>18</sup>.

## Methodology

3 cases have been chosen for discussion, all are from very different backgrounds, all are graduates of the IGM and all are working successfully with local people to add value to Malagasy stones in Madagascar. A complete work life history was conducted along with a follow up interview 8 months later.

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<sup>11</sup> Scott in Mair and Martí, “Entrepreneurship in and Around Institutional Voids; a case study from Bangladesh,” 419.

<sup>12</sup> Johanna Mair, Ignasi Martí and Marc Ventresca, “Building Inclusive Markets in Rural Bangladesh,” *Academy of Management Journal* 55 (2012): 819-850.

<sup>13</sup> Mair et al. Building Inclusive Markets in Rural Bangladesh.

<sup>14</sup> Thomas Lawrence and Roy Suddaby, in Marti & Mair “Bringing change into the lives of the poor.” 120.

<sup>15</sup> Marti & Mair, “Bringing change into the lives of the poor,” 103.

<sup>16</sup> Marti & Mair, “Bringing change into the lives of the poor,” 96.

<sup>17</sup> Marti & Mair, “Bringing change into the lives of the poor,” 103.

<sup>18</sup> Marti & Mair, “Bringing change into the lives of the poor,” 113.

The methodology used to elicit and analyse each case is based on the Life Course Research approach widely used across a range of disciplines and first elaborated by Glen Elder<sup>19</sup>. Four central themes that determine the shape of the life course are identified: location in time and cultural background, linked lives (social integration), human agency (individual goal orientation) and timing of lives (strategic adaptation). Heuristics which emerge are: life transitions or turning points, trajectories, sequences and life events. This multi-faceted data is collected primarily in the form life histories through interviews and instruments such as life event calendars or diaries may be used. In this study, a time line was used as a stimulus to ask participants to reflect on turning points, sequences and life events particularly in relation to their studies at IGM. One of the participants kept a diary of events related to his profession between the interviews. The life histories are then thematically analysed and the impact of transitions, sequences and life events are explored.

## The IGM graduates

### Tah's story

*I have been able to do something in my life, like this house and many things, I can earn a living, I can't see the bad side!*

Tah<sup>20</sup> was born at the military hospital of Antananarivo; his father was a Senegalese soldier in the French army, his mother a Malagasy woman. He was born with a disability that limits his mobility. He trained as an electrical engineer and specialised in maintenance of industrial equipment for the State owned Electricity and Water Company. However with his disability no one was prepared to offer him a full time job despite his mental ability and qualifications.

A turning point in his life came when Handicap International (HI) provided him with an IGM scholarship to study practical gemmology and American and Thai faceting. HI also provided funds for him to buy lapidary equipment and English lessons. The impact of the training has been huge, it would have been impossible for him to have paid his own way to go to the IGM, but immediately after the training he was able to sell some stones and things started to go well for him. The IGM also recognised his technical background and taught him how to maintain lapidary machines; this, along with his lapidary skills, enabled him to work for over four years in various workshops around the country both as a cutter and workshop foreman. In 2014 he decided to launch out on his own and he bought a small house which he raised, renting out the area underneath and setting up a lapidary station in one room with his small family. Tah kept a diary of sales he made during the next six months following our first interview. He had started using simple gemmological tools like tweezers and a scoop, this impacted on way he approached sales, and he felt more confident and professional. An important achievement came when he bought and sold a parcel of uncut emeralds for a very good sum. Being able to diversify his income in this way and generate a revenue stream that did not come from spending ten hours a day faceting, was clearly a turning point in his professional life. These funds had an immediate impact; he built a small dedicated workroom (previously he had been working in the corner of his bedroom with his wife and child), a new lounge suite and a computer. He has created his own Facebook page where he posts his work.

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<sup>19</sup> Jean Giele and Glen Elder, *Methods of Life Course Research*. (Thousand Oaks, California: Sage Publications, 1998)

<sup>20</sup> Fictional names have been use to preserve the participant's privacy

### **Key Factors in his success**

*The most difficult thing is the first cut you need to be patient and you gradually improve.*

Tah sees the faceting training he received from the IGM as crucial to his success as learning to identify stone does not in itself add value. He found the American cutting style was the most valuable for his market of local and Asian buyers. He is motivated to learn more and keeps up to date by reading and going out to meet new customers. He understood early on the importance of establishing a good reputation for quality and reliable work.

*You should respect and enjoy your job. You need to work quickly and be open to the market and take time to look for new gems.*

He also maintains strict ethical practice and pricing and maintains

*You have to work well; if you do something wrong, bad news spreads very quickly. You should do the right thing and not throw dust in people's eyes, not take too much profit and not be too selfish.*

### **Challenges**

Tah's greatest challenge is a lack of financial resources; this means he cannot go down to the quarries to source stones directly and this limits his capacity to buy the best material and to be able to participate in international trade fairs. He also lacks contacts and finance to enter the formal sector.

A second challenge is that of most Malagasy working in the sector, the lack of market information. This Tah attributes to the fact that he has no overseas partners and no reference point for the price of his stones and he states that gemstones are often sold for a fraction (10 to 20 times less) of their real worth.

### **The future**

He currently operates in the informal sector he would love to operate in the formal sector but it seems impossible for him to afford and navigate. In the next 5 years he hopes to develop his trademark and have his own shop and personal website. He hopes to be able to move from making his living from cutting stones and, if he can get more capital, to make money from selling stones.

## Ju's story

### *It's a lovely work*

Ju was born in Ambositra in the centre of Madagascar and working with gems is her "inheritance", both parents work with ornamental stones and in her region there are many gem resources, there are many leases and the region is famous for its beryl and tourmaline.

Initially she worked with her husband in a family quartz mine, and they also mined hematite in a remote area near their village near Ambositra. They made good money and invested in equipment with a small loan available to miners but the repayments were hard to meet and when their earnings dropped after the political crisis, Ju was forced to leave her husband in the mines while she found paid work in the capital. They had to sell their equipment.

### *Self-employment has its ups and downs.*

In the capital Ju studied a gemmology course at university and then went to the IGM where she did beginners and advanced American style lapidary (she paid for this herself) and a jewellery making course (with an IGM scholarship). She now works as a gemmologist at a large local factory which cuts local sapphires for export to Mauritius and the USA. Her job is to identify the material and the cut required and supervise the quality of work of a team of eight male cutters. In the eight months between our interviews, she had been promoted and her salary increased significantly. She had also encountered even more resistance from older male workers she was supervising but she says she is managing this well with support from her manager.

## Women in the sector opportunities and challenges

Ju was able to give unique insights into women in the sector both as miner and as a technician. For women miners, personal safety is a major issue as most of the mining area is in remote villages and jungle. Also she found it very difficult to walk for many days to reach these mining areas. As a woman, she found it impossible to get a loan from the bank to buy equipment.

However she argued strongly for women's contributions.

*I honestly think there is a place for women in mining. I even think women are better in some roles because they know more about fashion and are meticulous. When I became the head of the lab here in Antananarivo, it was quite hard at the beginning to impose my authority as a women leader but after we spoke about the issues and clearly outlined my roles and responsibilities, I am now able to manage the situation.*

## Challenges in mining work:

Ju mentions the challenges of finding funds to make the large investments in materials and skills needed to succeed in mining. She also underlined the need for courage, management and marketing skills.

In her second interview Ju spoke of personal challenges she was facing, the level of crime and armed robbery on their mine site had increased. She is only able to see her husband every month even though she has two children now with her in the capital.

## The Future

She wants to be able to afford materials for herself and work on her own in her own workshops and to export abroad but she needs support to buy equipment which is both very expensive and hard to find.

## Ti's Story

*Outside buyers had a huge budget I only had my contacts ..my very good contacts in the country side.*

Ti has a well-established business with lapidary, and jewellery workshop and stone cutting facilities. He supplies precious stones to top European gem houses and high quality decorative stone lamps and tables for elite interior designers. His workshop in down town Antananarivo is decorated with beautiful Malagasy artefacts

*We were brought up to work we have to work .. Those who succeed see things through to the end.*

Ti comes from one of Madagascar's leading entrepreneurial families who have run well respected, successful companies exporting lychees, vanilla and chocolate for the past 50 years. He completed studies in commerce at HEC, France's best business school and it was French friends who introduced him to the coloured gem stone and also the ornamental stone sector. They were exporting stones from Madagascar for a gem fair in Bangkok; seeing his excellent English skills and capacity to work well with Thai gem traders, the French friends asked him to work with them. It was while he was at these trade fairs that he experienced a turning point in his career. He was surrounded by traders from Sri Lanka, Thailand and Africa selling stones from Madagascar but he was the only Malagasy in the room; he underlined to me that that the situation had not changed.

*I discovered that a big part of Malagasy stones are supplying the entire world and there are no Malagasy working on it. From that moment I said to myself- I was lucky in that I had friends working in the profession- that's when I said to myself I am going to do it little by little, step by step.*

He knew that he did not have enough technical knowledge about stones and on his return he enrolled immediately courses at the IGM. At the next show in Bangkok he bought two lapidary stations and then employed two trained cutters from the IGM. Although it took him over 2 years, he registered his business and obtained all the paper work he needed to export and set up his own stand at the Bangkok show. He quickly realised that this was a profession he knew very little about.

*"all this was unexpected to me I have discovered and am discovering that the stones of Madagascar are a huge variety of colours and values and there are many buyers and export destination and many uses."*

Ti began to realise the extent of producers from Africa and South America and after about a year he decided he "had to reinvent and re orient his business". Madagascar can still supply beautiful stones and has some good workers but what was needed was a great attention to detail and quality; "the better the work done, the closer it came to becoming a luxury item".

He found there was a market for high quality ornamental stone such as quartz crystal, finished to the highest level of craftsmanship. He bought, imported and air freighted the best equipment and materials that he could and concentrated on small quantities but at the highest quality, in the hope that this would assure him of a steady cash flow. He worked a second job and invested everything he had in the right people, the right tools and the best stone he could. It was very, very difficult. Yet despite all this there was another element – the *savoir faire* of South West France, Northern Italy and Southern Germany to add value to the best stones in the world to create luxury products. This knowledge is closely guarded and it took time for him to be trusted enough for them to share this with him.

*Eventually I established an exchange with them, I brought them samples of raw materials and they began sharing technical things and I managed to gain access to technical knowledge that took my business to another level.*

He now has customers such as interior designers who come from Europe to buy his ornamental stone and his quartz crystal panels are used to make tables which are found in the French Ministry and in London.

He also sells precious stones such as sapphires, rubies, emeralds and tourmaline. He now has buyers come from luxury jewellers across Europe. Again he listened to advice he was given by European customers, the cutting style they recommended was an elaboration on the older classic style from Jaipur and Thailand rather than the more angular “American style”. Instead of showing individual stones to customers, he learned to display a tray of his best stones in beautiful colours: designers sat with modelling wax for two hours drawing inspiration to design individual pieces

*I knew I had a good idea when I saw Malagasy stones set in gold.*

He long dreamed of creating a jewellery line that would be made in Madagascar with all Malagasy precious metals and stones that would appeal to the modern buyer and not be too expensive.

He now employs a designer and is continuing to experiment with designs that are appealing and affordable. He has also started to take high quality photographs of his products and has created a website.

### **Key Factors in his success**

Ti clearly had capital, position and education which enabled him to access key resources. However he has used this capital and position wisely. This is seen in the way he paid for his own education and for the best equipment he could find on the market. He has also persevered for over two years and registered his business.

*When I approach the authorities I say I am Malagasy like you and I want to do what is best for the country.*

He can now export with relative ease and this has facilitated his sales to the highest level of European buyer. His education in Europe and language skills have also enabled him to develop deep networks and trust with key Europeans and to meet their requests.

Also striking is his capacity to think strategically and reflect on his experience and to change his business strategy for example his move to high end luxury interior design products and now into lesser known coloured stones,

### Challenges

Despite his privileged position, Ti has found it almost impossible to break into the monopoly that the Thai and Sri Lankan networks have over the valuable trade in Malagasy sapphires.

*I used to be friends with them, but when I said I wanted to do like them, they cut me off.*

### The Future

Ti has now begun to turn away from sapphires because of the monopoly held on the business at every point in the supply chain by Asian buyers. Guided by his instinct that the European market is looking for stones of exceptional colour and purity, he has begun to make long trips into the field forming new relationships and discovering aspects his own country he had never known before. He has returned with stones which are less well known, but stunningly vivid such as red garnets and blue agates and he has found a real commercial interest in these. This along with his jewellery business are strong prospects for Ti's future activity.

### Discussion

These three stories of “neglected actors and ignored contexts”<sup>21</sup> present many starting points for analysis and discussion, we shall consider just some of the insights these stories provide into the impact of institutions and institutional voids on their professional life history and their institutional work. Far from being powerless the three have brought about significant institutional change in their own way. In each case we see these professionals using Marti and Mair's “experimental strategies” which favour “small steps and reversibility... to “minimise negative unintended consequences”<sup>22</sup>. For example Tah is moving into selling stones, Ti is making jewellery and exploring new materials “little by little”.

### Disability and Gender

Tah with a significant physical disability and Ju as a woman in a strongly male dominated world of ASM and a male dominated workplace, have both faced significant institutional constraints with no protection from effective anti-discrimination legislation. Their life histories reveal how they have both promoted institutional change with a determined, pragmatic approach. A turning point in Tah's life came when he found a scholarship which has enabled him to work in a field where his disability is less of a handicap and he has now become a trainer of others who are handicapped. A turning point for Ju came when she could no longer work alongside her husband in the mine and had to invest her own money and study hard to develop her professional competence to a level where she is trusted with a high level of quality control by one of the leading firms in her fields. Although not aggressive in her approach, she has a strong belief that women bring unique skills to this business. This conviction coupled with her professionalism and knowledge are the basis of her on going institutional work in effecting change for other women who may have been excluded from this area.

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<sup>21</sup> Marti & Mair, “Bringing change into the lives of the poor,” 103.

<sup>22</sup> Marti & Mair, “Bringing change into the lives of the poor,” 103.

Ti's story illustrates many aspects of effective institutional work and also what Smith et al. have called his possession of an "expert venture script", that careful understanding of entrepreneurship processes that enables him to make sound and timely judgements<sup>23</sup>. His decision to set up a business to work with Malagasy stones brought him face to face with deepest institutional challenge facing local gem stone entrepreneurs, the total domination of the industry by Asian and European buyers. He challenged this by learning all he could professionally from the IGM, by building relationships of trust with his suppliers and through patiently experimenting with approaches to win the trust of European buyers. He displayed a "venture willingness script"<sup>24</sup> experimenting, assessing and reassessing opportunities realising, for example, that he had to capture the luxury end of the ornamental stone market if he was to survive. He has been prepared to look beyond the traditional sapphire and ruby market to new stones for new markets. Through his work he has generated work for over twenty employees, including a group of young homeless men.

Madagascar continues to struggle to put in place effective institutional infrastructure and rules to support market formation and economic development. This void has inhibited the establishment of markets and their transparency and efficiency. The system does not easily legitimate new actors<sup>25</sup> (Mair et al., 2012) like the three cases discussed in this paper. The biggest challenge facing Ju and Tah is the transition to operating their own business in the formal sector; Ti succeeded in doing this but it took him two years. Government and development agencies would do well to consider how to foster the efforts of such committed professionals and how to legitimate their actions.

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<sup>23</sup> Smith et al. "Institutionalizing entrepreneurial expertise in subsistence economies," 13.

<sup>24</sup> Smith et al. "Institutionalizing entrepreneurial expertise in subsistence economies," 13.

<sup>25</sup> Mair et al. *Building Inclusive Markets in Rural Bangladesh*

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