

Innovation and sustainability: a new challenge for Malagasy SMEs

Inovação e sustentabilidade: um novo desafio para as PME malgaxes

Vazoly Fiadanampo Manarinjara

University of Technology Mauritius (UTM), Mauritius. ORCID: <https://orcid.org/0009-0004-3909-0178>. E-mail: vazoly.manarinjara@umail.utm.ac.mu

Pierre Olivier St Flour

University of Technology Mauritius (UTM), Mauritius. ORCID: <https://orcid.org/0000-0001-8309-410X>. E-mail: ostflour@umail.utm.ac.mu

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Abstract: *This research emphasises the challenges confronting Small and Medium-sized Enterprises (SMEs) in finding ways to reconcile sustainability and innovation. There are many obstacles to overcome in African countries such as Madagascar. The methodology used in conducting this research is the review of literature and the study of Malagasy SMEs case. The result of the research show that Malagasy entrepreneurs operating in the SMEs are determined to bring innovation. However, the Malagasy SMEs are confronted with the political and economic situation of the country which are putting them in an awkward position. Moreover, the scarcity of financial resources and expertise is not in favour of sustainable innovation. Innovation and sustainability require a conducive environment for their development and implementation. The diversity of resources in Madagascar constitutes a potential that should be the leverage for economic growth, which in turn offers an opportunity for Malagasy SMEs to diversify their activities. Therefore, solving these issues that prevent innovation and sustainability is fundamental so that the Malagasy SMEs' lifecycle can be sustained in the long-term, and contribute to the economic growth of the country.*

Keywords: *Innovation; Sustainability; Challenges; Malagasy SMEs.*

Resumo: *Esta pesquisa enfatiza os desafios enfrentados pelas Pequenas e Médias Empresas (PMEs) na busca de formas de conciliar sustentabilidade e inovação. Há muitos obstáculos a superar em países africanos como Madagáscar. A metodologia utilizada na realização desta investigação é a revisão da literatura e o estudo do caso das PME malgaxes. O resultado da investigação mostra que os empresários malgaxes que operam nas PME estão determinados a trazer inovação. No entanto,*

as PME malgaxes são confrontadas com a situação política e económica do país que as coloca numa posição difícil. Além disso, a escassez de recursos financeiros e de conhecimentos especializados não favorece a inovação sustentável. A inovação e a sustentabilidade requerem um ambiente propício ao seu desenvolvimento e implementação. A diversidade de recursos em Madagáscar constitui um potencial que deve ser a alavanca para o crescimento económico, que por sua vez oferece uma oportunidade para as PME malgaxes diversificarem as suas atividades. Portanto, resolver estas questões que impedem a inovação e a sustentabilidade é fundamental para que o ciclo de vida das PME malgaxes possa ser sustentado a longo prazo e contribuir para o crescimento económico do país.

Palavras-chave: *Inovação; Sustentabilidade; Desafios; PME malgaxes.*

1. Introduction

The world is bound to change, and every era of history has been marked by various discoveries and inventions, all driven by the desire to satisfy human needs and come up with an option for the betterment of quality of life. Economic growth could certainly be due to the increase in production, the improvement in the quality of life involving the ability to afford certain products, as well as the development of research leading to various innovations. Innovation is of crucial significance to economic growth since competitiveness in the business world depends on the company's ability to bring an innovative product to the market.

Regarding the concept of innovation, many authors have given definitions to this concept. Schumpeter (1928) considered innovation as an important aspect to be considered for economic growth as this will contribute to economic development (Lazzarotti, Samir and Emil, 2011). Another research mentioned Schumpeter's (1939) view of innovation as the cause of the business cycle (Godin, 2008). Meanwhile, Peter Drucker (1985), emphasises that business people can use innovation as an instrument to launch a different product or service (Carayannis, Samara, and Bakouros, 2015). In the past, the main objective of a business has been to make as much profit as possible. Nowadays, businesses have to do more than just maximise profits, by considering the social and environmental impacts of their activities. This is how an organisation could make

“a significant contribution to sustainable development” (Danciu, 2013).

In the past ten years, the concept of “sustainable innovation” has gained a lot of interest. Sustainable innovation could be considered as an:

“innovation that improves sustainability performance” (Boons et al., 2013).

The improvement of sustainability performance makes reconciling innovation and sustainability a difficult task for enterprises to achieve. In Madagascar's context, the words “sustainable development”, and “sustainability” appear in most cases in various government policies and frameworks. Nevertheless, these words are widely mentioned in the environment sector, particularly in the Malagasy updated Charter of the Environment of 2015. As a result, it is difficult for Madagascar to reconcile the three pillars of sustainable development and sustainability, given that these concepts have broadly been developed in the environmental dimension. This is to say that the literature related to sustainable innovation is limited in Madagascar, as sustainability is mainly considered in the environmental dimension. SMEs play a crucial role and contribute significantly to the economies of developing countries. The data shows that in 2017, SMEs is creating 90% of employment in Madagascar (INSTAT, 2017). According to the United Nations System in Madagascar (2022), most Malagasy SMEs are in the non-formal sector, generating 26 to 29% of

Madagascar's Gross Domestic Product (GDP). This being the case, it highlights the importance of SMEs in the Malagasy economy. However, the innovation capability is limited for SMEs. There is a lack of innovation in the Malagasy SMEs, whether in their production techniques or their products, which implies that Malagasy SMEs are outstripped by imported products, which compromises their sustainability. This research goes beyond the environmental aspect, which is predominant in Madagascar, by looking at other aspects of the two concepts to determine the Malagasy SMEs' challenges which are mainly related to the economic and social dimension of sustainability, without forgetting the technological aspect as the research is also concerning innovation.

The awareness about global issues has risen and adopting innovative approaches while implementing sustainability, could be a way to remain competitive in the market. Global issues urge businesses of all sizes to integrate innovation and sustainability into their priorities. This is also the case for SMEs. As a matter of fact, the adoption of environmentally conscious practices help SMEs reduce various negative environmental impacts (Khan, 2022). Innovation expenses can be significant, particularly for SMEs which, in general, have limited resources (Zhang, 2022). However, SMEs cannot even afford to invest in research and development, or even in technology that could make a difference in the business. Given the various existing problems, innovation and sustainability represent a new challenge for Malagasy SMEs. The fact is that markets have steadily grown more competitive, and the stakeholders' consciousness of the threat related to the inability to satisfy human needs if the planet runs out of resources has risen. This is why companies of all sizes are required to embrace innovation and sustainability for their business operations. Nations around the world are assigned a ranking by the Global Innovation Index (GII) based on their capacity for innovation, and this tool acknowledges innovation as a significant driver of economic progress. In 2022, Madagascar was 106th of the 132 economies listed in GII (Dutta et al., 2022). This means that innovation exists, although the use of knowledge and diverse technologies is limited, and so is innovation and sustainable innovation.

The synergy between innovation and sustainability is a challenge for companies of all sizes.

“The existence of Small and Medium-sized Enterprises (SMEs) is essential to local economic development as they contribute to job creation, poverty reduction, and enhancing the quality of life” (Hu, 2010).

Giving a clear definition of SMEs is complicated as it differs from one country to another. SMEs are defined by the use of various criteria that are different in each country. The important point to focus on is the fact that SMEs have been recognised as a significant contributor to economic growth especially in Africa (Murithi, 2017). Even if SMEs are qualified as “development agents” (Duarte, 2017), they are facing a range of challenges, especially those located in Africa. The uncertainty of an enterprise's future is limiting sustainable innovation in African countries. The purpose of this research is to analyse the overall situation of Malagasy SMEs, to identify the various challenges that prevent Malagasy SMEs from reconciling innovation and sustainability in the management of their production activities, to explain the extent to which innovation and sustainability represent a new challenge for those SMEs, and to put forward possible solutions or prospects that could help Malagasy SMEs overcome the obstacles encountered in innovation and sustainability. The following questions are therefore addressed:

1. What are the factors preventing Malagasy SMEs from innovating in their production and management methods and ensuring the sustainability of their activities?
2. What are the possible solutions for helping SMEs to innovate while ensuring their sustainability? The hypothesis put forward to be investigated throughout this research is whether political and institutional factors, socio-economic factors, and technological factors constitute challenges that Malagasy SMEs are unable to overcome to ensure innovation and sustainability.

2. Literature review

2.1. Key Concepts

The SMEs definition varies from a country to another. Liberto defined SMEs as:

“businesses that have revenues, assets, or a number of employees below a certain threshold” (2023).

The same author gathered diverse definitions from different countries. For European Union (EU), SMEs have 50 to 250 employees and almost all businesses are classified within this category, which means that it contributes to enhancing the EU economies. In developing countries this category includes enterprises from micro to medium-sized enterprises (Liberto, 2023). Those types of enterprises contribute not only in job creation, but also in GDP and the economies of African countries (Bell et al., 2017). In Malagasy context, two criteria are used to identify SMEs regardless of its sector of activity. The first criteria is the permanent workforce within the enterprise comprised between 5 and 100; the second is the overall balance sheet of the enterprise is between 60 and 600 million Ariary (Raharinjatovo, 2017). SMEs are playing an increasingly important part in the development of both local and international markets. The long-lasting effect they have on the commerce, industry, and service sectors is attracting investments (Gherghina et al., 2020). By the inventive entrepreneurship and job opportunities they offer, developing nations have widely acknowledged that SMEs can be the key driver of economic growth in their country (Hu, 2010). Research demonstrated that in Sub-Saharan Africa, SMEs have made a substantial growth contribution to African nations (Murithi, 2017; Matsongoni and Mutambara, 2018; Abisuga-Oyekunle, Patra and Muchie, 2020). As for the Malagasy case, statistics showed that in 2017, 90% of jobs in Madagascar were provided by SMEs (INSTAT, 2017), although the country's economic environment is not conducive to their growth (UNCDF, 2017).

Regarding the innovation concept, Urabe (1988) defined it as:

“the generation of a new idea and its implementation into a new product, process or service, leading to the dynamic growth of the national economy and the increase of employment as well as to a creation of pure profit for the innovative business enterprise” (Kogabayev and Maziliauskas, 2017, p.62).

Innovation is therefore starting from an idea to be turned into a reality, which cannot be overnight as it encompasses research and development to concretise the idea. Any business wishing to expand its activities over the long term has to embrace innovation to remain profitable and competitive in the business world. In the past, the only factor that determined the company's success was related to its financial performance. However, the occurrence of many issues on a global scale has brought sustainability to the heart of the concerns of various stakeholders.

The concept of sustainable development was defined by the Brundtland in the report named “Our Common Future” (1987) as:

“the development that meets the needs of the present generations without compromising the ability of the future generations to meet their own needs” (Brundtland, 1987).

Sustainability is understood to be the long-term expected result, whereas sustainable development refers to many approaches to sustainability. With the growing awareness of the importance of shifting towards environmentally friendly practices and socially responsible production, sustainability has been emphasised in the past decades. With the former conception of financial performance, adopting sustainability is quite difficult, especially in terms of balancing its competing and sometimes paradoxical interests and the purpose of a company's existence (Frederick, 2018). However, sustainability is a way for an organisation to make a significant

“contribution to sustainable development” (Danciu, 2013,p.8).

An increasing number of companies are taking steps to meet the sustainability challenges they are facing (Danciu, 2013) while striving to innovate in their business operations. With the concept of sustainability, attention has shifted to adopting a more sustainable approach. The three lines of the triple bottom line which are “*people, planet, and profit*” clearly describe those concerns (Elkington, 1998). The stakeholders have shifted their focus and priorities, the evolution and changes in the world urge businesses to consider environmental and social issues in the same way as the financial success of their business.

The sustainability importance in the business world has increased over time, and the adoption of such strategies in companies is necessary to ensure the continuity of the enterprise's activities. Business sustainability could be defined as the management of income-generating activities based on the triple bottom line (Mahajan and Bose, 2018). Businesses are facing challenges regarding the implementation of sustainability, and so is the case for SMEs. Admittedly, the Triple Bottom Line highlights three areas to take into consideration, nevertheless, sustainability for business refers to more than just acknowledging the significance of the operations' impacts on the environment and society. Therefore, there is a synergy between innovation and sustainability. A sustainable innovation could be defined as:

“the creation of something new that improves performance in the three dimensions of sustainable development: social, environmental and economic” (Kneipp et al., 2019, p.95).

In other words, a business implementing sustainability and innovation is more focused on the company's values, going beyond financial performance and aiming to impact positively on the planet and the people (Adams et al., 2016). Within this category of innovation, technology serves the three pillars of sustainable development, and this helps to ensure the continuity of the company's operations as the outcome would be noticed and last over time. For Aguilera-Caracuel and Ortiz-de-Mandojana (2013), sustainable innovation is considered as a factor which improves enterprise's sustainability as it helps enhancing the three dimensions of sustainability, and is a key promoter of sustainable development (Dzhunushalieva and Teuber, 2024).

2.2. Literature gap

To remain competitive in the market, innovation is imperative for SMEs. Zhang raised the question of the effectiveness of combining different types of innovation, given that SMEs have this tendency (2022). This author's study focuses on the combination of product, process, and organisational innovation. This research on the case of Malagasy SMEs looks more closely at innovation in terms of sustainability.

Researchers consider sustainable innovation as a feature which enhances an enterprise's sustainability through the three dimensions of the triple bottom line, which in turn promotes sustainable development (Aguilera-Caracuel and Ortiz-de-Mandojana,2013; Dzhunushalieva and Teuber, 2024). Others stated that adopting an environmentally responsible approach decreases negative environmental impacts (Khan et al., 2022).

Regarding the Malagasy case, several authors conducted research on the importance of innovation for commercial strategies in Malagasy SMEs for the reason that the performance of an enterprise depends on its ability to sharpen sales performance (Rabemananjara et al., 2023). Indeed, innovation enables costs to be reduced and profitability to be increased, which in turn allows newly improved products to be placed on the market in the right way. This aligns with the aim of sustainable innovation, which is to make higher profits with less impact on the environment by using fewer resources. Those authors address the impact of innovation on SMEs, only on the economic dimension,

without deepening the reasons why Malagasy SMEs cannot implement sustainable innovation in all the aspects of sustainability in their businesses. This research intends to address diverse factors preventing Malagasy SMEs from innovation and sustainability.

Research has demonstrated many challenges that SMEs are facing in Africa. Studies have shown that the majority of SMEs are forced to cease their activities a few years after their launch, but others are failing at an earlier phase (Matsongoni and Mutambara, 2018). There are common reasons for the challenges faced by SMEs in Africa, especially in Madagascar. The political crisis and economic instability in Madagascar are unfavourable factors to SMEs development. Each political crisis in Madagascar has turned the country's economy upside down (Andrianirina, 2015) and these crisis did not benefit the SMEs. This situation does not attract investors at all. Political crisis which in most cases lead to economic crises, have hampered the country's economic development. Therefore, the future of SMEs in a country such as Madagascar is uncertain. This is how innovating and making sustainability an integral part of SMEs' business operations represents a challenge.

Also, it should be highlighted, nonetheless, that neither existing legal frameworks nor policies truly consider SMEs to support their expansion. In some countries like Mauritius and South Africa, policies are well-determined which is favourable to SME expansion (Kauffmann, 2005), while this is not the case in some countries like Madagascar. The laws and policies are not clear enough for the SMEs to know where they stand in the business world. SMEs are mostly subjected to the standard legal framework. This confusion combined with the complexity of the procedures involved in setting up a business is the reason why most of the SMEs are informal in African countries (Kauffmann, 2005; Matsongoni and Mutambara, 2018).

Besides, adopting innovation and putting sustainability into practice imply financial resources. However, it has to be found that SMEs in their infancy do not have the necessary resources preventing them from sustainable innovation. According to the OECD access to finance varies from one country to another in Africa (OECD, 2005). Furthermore, there are any financial services designed for the innovation requirements, which would be supportive of SMEs' success in African countries (UNCDF, 2017). Another challenge facing SMEs is the cumbersome administrative procedures involved in formalising a company. This is preventing SMEs from formalising their activities, which constitutes the reason why most of the SMEs in African countries are in the informal sector (Matsongoni and Mutambara, 2018), and so is the case in Madagascar. Muriithi stated that there is a significant number of unregistered SMEs in Africa, although, despite the absence of formalisation, those categories of SMEs are significantly boosting the GDP of many countries (Muriithi, 2017).

The availability of financial resources for SMEs is essential not only to ensure that innovation is carried out properly but also to ensure its sustainability. For Malagasy case, the contribution of financial institutions to company operations and development is still limited (RANDRIALAHAMADY et al., 2023). Limited access to financial support for SMEs is an obstacle to their development. Throughout this research, the economic and financial factors are also examined. Meanwhile, it deepens those factors to demonstrate that Madagascar's political and economic environment hampers the implementation of sustainable innovation as the success or failure of Malagasy SMEs is uncertain given these factors of instability. All those previously mentioned research papers have proven that the majority of SMEs are contributing to African economic growth despite the various challenges they are facing. This research is intended to complete the existing literature by getting to the root of the matter, for a better understanding of the case of Malagasy SMEs. That is to put forward solutions and recommendations on how to overcome those challenges.

3. Research Methodology

Throughout this research, the methodology used is the review of the literature which allows to get familiar with the background regarding the topic. Within the literature review, the research started with an overview of the case of SMEs throughout the African continent in terms of implementing sustainable innovation. In this part, a case study of Malagasy SMEs will outline the various challenges they face in the adoption of sustainable innovation. Statistics and facts are used to demonstrate the situation in Madagascar driving Malagasy SMEs into tricky situations when it comes to the process and implementation of innovation that meets the sustainability requirements.

The word “Malagasy SMEs” is chosen throughout this research instead of choosing “Madagascar’s SMEs”. The fact is that there are two categories of SMEs operating in Madagascar: small and medium-sized foreign businesses headquartered in Madagascar, and local enterprises founded by Malagasy entrepreneurs. The Malagasy SMEs are those founded by local entrepreneurs, and this is the case that the research is focussed on. Categories of enterprises that can be classified as Malagasy SMEs are tailoring and screen printing workshops, law firms, medical centres, cosmetic manufacturers, hairdressers, craftsmen, and agri-businesses.

4. Findings

The Malagasy SMEs case is chosen for this research. To put Malagasy SMEs in context, the National Institute of Statistics Madagascar commonly known as ‘Institut National de la Statistiques or INSTAT, showed that in 2017 SMEs contributed to the reduction of unemployment in Madagascar as 90% of jobs were provided by SMEs (INSTAT, 2017). The Common Country Analysis of the United Nations System in Madagascar stated that the non-formal sector generated 26 to 29% of Madagascar’s GDP (United Nations System Madagascar, 2022). The non-formal sector is predominant in Africa, and so is the case in Madagascar. Despite the informal sector’s low contribution to GDP, it has helped to reduce the unemployment rate in Madagascar as 71% of jobs were given by them in 2022 (United Nations System Madagascar, 2022). To explain to what extent innovation and sustainability are challenging in the Malagasy context, it is necessary to analyse the different factors limiting innovation and sustainability in Malagasy SMEs. Knowing the limitations would allow the determination of the solutions and prospects for Malagasy SMEs to be innovative and meet the sustainability requirements.

4.1. Different factors limiting innovation and sustainability in Malagasy SMEs

The political instability, the limited access to finance, and the survival mode of enterprises are all factors of uncertainty for the future of SMEs. Most SMEs depend on a particular raw materials, however, with the pressure on the resources, the exhaustion of the raw materials will lead to the end of the business cycle. All of these factors are affecting not only the success of SMEs but are also major stumbling blocks to sustainable innovation in Malagasy SMEs. In order to make the research easier to understand, four factors were identified to explain the challenges Malagasy SMEs are facing in terms of innovation and sustainability: political and institutional, economic, social, and technological factors. These factors were determined according to the Malagasy context.

4.1.1 Political and institutional factors

Generally, the political environment in Madagascar is characterised by instability. Over successive political regimes, Madagascar has faced several political crises. Political crises go hand in hand with unstable economic conditions. And even last year, demonstrators protested the elections for many reasons (Resnick, 2023). Within those political contexts, businesses are stopping as any protest might lead to robbery or destruction of property, which is detrimental to Malagasy SMEs.

The second challenge is related to the policies. The existing industrial policy in Madagascar is not clear. This blurred vision entails a policy which is not promoting Malagasy SMEs. Meanwhile, enterprises are generally subjected to the standard legal framework. Being governed by a common

legal framework implies that taxes and fiscal charges are also generalised. SMEs are therefore obliged to pay high charges, even when they are just starting up. SMEs are also subject to a tax rate that is not favourable to their development. The income tax rate is 25% for the majority of enterprises (Article 01.01.01 and the following ones of the General Tax Code), synthetic tax rate is 6% for individual enterprises (Article 01.02.01 of the General Tax Code and the following ones). These set-out tax rates are not adequate, particularly for SMEs that are still in their infancy. As a result, Malagasy SMEs are concentrating more on the financial success and economic aspect of their activities, as in most cases they are in survival mode. SMEs that are coming up against a range of financial burdens and bureaucracy of their activities, fail to take into account the environmental and social aspects that need to be considered with the current requirements of the stakeholders. The survival mode of SMEs prevents them from adopting sustainable innovation as well.

Besides, safeguarding intellectual property in Madagascar is blocked by the procedures entailed in formalising the trademark and the company. Preparing the documents required for the registration of a company requires time, and the delay is also long. So preparing the administrative paperwork to benefit from legal protection is time-consuming. Although, the purpose of the registration is to provide legal proof of a company's existence and to benefit from the protection of the company laws in force in Madagascar (Law n°2003-036; Decree n°2004-453), on the one hand. On the other hand, the Malagasy Industrial Property Office (OMAPI) is in charge of protecting trademarks and trade names in Madagascar. For a trademark to be registered it takes 8 months for the registration and 3 months for a trade name (OMAPI, 2023). It is only after this period that a trademark or a trade name can benefit from intellectual property protection. An unclear legal and regulatory framework, and a less supportive government policy towards SMEs restrict the ability of informal SMEs to exploit their full potential. That is also the case in Nigeria, Zimbabwe and Tanzania (Matsongoni and Mutambara, 2018).

All those challenges demonstrate why the majority of enterprises in Madagascar prefer to operate in the informal sector, and such a situation encourages tax evasion. A low turnover is accompanied by a high rate of tax. The instability of the political situation in Madagascar are the causes of the reluctance of SMEs to formalise, and this proves why SMEs activities are not sustainable in the Malagasy context. Given this situation, instead of focusing on research and development to offer products or services that meet current sustainability requirements which are innovative, Malagasy SMEs are merely earning their reputation with products or services for which they are known. However, it has to be found that sustainable innovation could contribute to a better situation for Malagasy SMEs financially, environmentally and socially.

4.1.2. Economic and financial factors

Generally, access to finance is restricted for SMEs in African countries (Lefilleur, 2008), and so is the case in Madagascar. Financial institutions are mostly not providing financing to small and medium-sized businesses and this is impeding the growth of Malagasy SMEs. According to Lefilleur (2008), in Sub-Saharan Africa financial access is limited, and generally, large foreign companies are benefiting from it. Malagasy SMEs do not have the necessary resources, whether in terms of finance or time, to engage in research and development. This limited access could be explained by the high interest rate for loans and the unavailability of funds or assets for the security of the SMEs' deposits in financial institutions. Furthermore, there are rarely any financial services designed, or budget set aside for the innovation requirements, which would be supportive to Malagasy SMEs in terms of sustainable innovation (UNCDF, 2017). Also, sustainable innovation is limited by the uncertainty of the economic conditions in Madagascar. Malagasy SMEs are concerned about whether their activities will fail or succeed. Through these doubtful outcomes, Malagasy SMEs have the tendency to minimise their expenditures, which implies that the budget for research and development, training, and call on expertise are neglected. As a result, the transition to sustainable innovation is being hampered for the local SMEs.

Meanwhile, the hurdles of introducing new products and services on the market are linked to a fairly low purchasing power in Madagascar. It is difficult for Malagasy SMEs to sell on the market as the low purchasing power of consumers does not allow them to afford the goods and services. Also, Malagasy customers settle for the satisfaction of their basic needs. Moreover, industrial competition is remarkable with the high rate of product importation, for cleaning products for instance (L'Express Madagascar, 2018). In fact, imported products are cheaper and easier to find, but the risk of stock-outs is minimal. Therefore, Malagasy SMEs are struggling to introduce new goods on the local market, as generally, they are targeting local markets more interested in affordable foreign products. Then, no matter how innovative a local product is, Malagasy consumers' option would always be the cheapest one which most of the time is imported. Besides, adopting innovation and putting sustainability into practice imply financial resources. Without financial resources and with all the difficulties, innovation and sustainability are challenging for SMEs.

4.1.3. Social factors

Given all the uncertainties in Madagascar, social factors are compromising the expansion of Malagasy SMEs and constitute a stumbling block to the integration of innovation and sustainability through the production processes and practices of Malagasy SMEs, and so is the case for the population as a whole. The lack of awareness about the importance of sustainability is a barrier to the implementation of sustainable innovation. There is a widespread failure to appreciate the importance of innovation and sustainability, both internally, within Malagasy SMEs, and externally among the Malagasy population in general. Apart from that there is resistance to change, hence, stakeholders are not collaborating and so is the case of the whole population in general. So, even if Malagasy SMEs are keen to integrate products that respect environmental requirements, contribute to social well-being, and are a source of economic growth and profits, purchasing power and the mindset that resists change mean that Malagasy entrepreneurs find it hard to get their new products or services onto the market. Malagasy people prefer cheaper products and services to innovative products that contribute to achieving sustainable development objectives, which are more expensive in most cases. This is not a favourable prerequisite for encouraging innovation and sustainable initiatives in Madagascar. Also, with the insecurity and unpunished thefts and crimes (Gardini, 2021), the future of the Malagasy SMEs is compromised with uncertainty, as any move they make could attract the attention of wrongdoers. And this is an issue the government cannot manage to fix (Isbell, 2018). It has to be said that despite the social factors, entrepreneurial talent drives innovation in the Malagasy context. In 2019, there are opportunities for innovation, and 55.5% think they are perceived as being very innovative (GEM, 2019). However, such innovation does not last because of all the factors previously mentioned especially.

4.1.4. Technological factors

Most Malagasy SMEs are created by people who do not have entrepreneurial skills and struggle to hire the right people for their businesses to flourish and be well-managed. Malagasy SMEs also opt for activities and operations that do not require the use of technology. This is related to the financial factors which is a barrier in a developing country such as Madagascar. According to Ratsimbazafy (2019), the contribution of information and communication technologies, finance and personal services is virtually non-existent. This is holding back the integration of sustainable innovation, as this option is somehow cost-saving in the long-term while the investment requires finance and the will to adopt them. Despite the existence of people with a background in the development of various technologies, technological progress is limited in Madagascar, and it is difficult to incorporate them into Malagasy SMEs. Existing innovative technologies and processes in the business world are being implemented progressively by Malagasy enterprises. However, their use is still in its infancy, yet these are means to accelerate the development and growth of SMEs and companies of any size.

4.2. Solutions and prospects for Malagasy SMEs to be innovative and sustainable

Notwithstanding the challenges confronting Malagasy SMEs, resources are abundant in Madagascar and this differs from one region to another. The diversity of resources represents an opportunity to choose and embark on diversified activities, enabling economic growth in Madagascar. This abundance of resources in Madagascar means that the risk of disruption to the supply chain is reduced, which should be the driver of the rational use, sustainable management of existing resources, and the implementation of sustainable innovation to reduce the pressure on the planet. Given these potential and opportunities, some alternatives are recommended to Malagasy SMEs, to overcome the challenge of sustainable innovation. Given the institutional and administrative issues, Malagasy SMEs should have a special status that will determine their specifications, such as annual turnover, and number of employees. This should also be the case for applicable regulations. A clear policy, status and regulations would encourage formalisation. Also, policies that are not conducive to the expansion of Malagasy SMEs must encourage the government to carry out reforms, for a supportive framework at the service of the development and the promotion of local SMEs. They are expected to facilitate access to inputs such as finance, energy and production equipment. Taxation of SMEs should also be reviewed so that it does not constitute a significant burden during the SMEs' infancy. Given the cumbersome administrative procedures involved in the formalisation, certification and labelling of innovative products, the Malagasy government should facilitate the procedures in order to ensure that intellectual property is effectively protected.

Also to encourage innovative ideas from Malagasy entrepreneurs, the government and financial institutions should consider rewarding the leading Malagasy SMEs that have successfully implemented sustainability initiatives through their processes and business operations. This could be done through project competitions or annual assessments of the most meritorious SMEs. Regarding the limited access to finance, financial institutions in Madagascar need to consider proposing a suitable option for SMEs, thereby facilitating their access to financial resources which enables them to adopt sustainable innovation, speeding up the growth both in the economy and within the SMEs. Considering the social factors limiting innovation and sustainability in Malagasy SMEs, awareness-raising and education of citizens is needed so that they understand the existing problems, and the actions to overcome such obstacles.

5. Discussion

The fact that innovation and sustainability represent a new challenge is not only reserved for SMEs but these are challenges for all the businesses to some extent. According to Aguilar-Fernández and Otegi-Olaso (2018), the business size and category influence how a business model for sustainable innovation is developed. Therefore, innovation and sustainability differ from SMEs to another business category or size. Innovation and sustainability are a common challenge to be met by all categories of companies, as the problem concerns every individual, including companies of all sizes whose business operations are threatened by the depletion of resources. A range of stakeholders have been conscious of this global issue. Actually, both natural resources and human capital are finite resources. This is why each business of all sizes has to embrace sustainability and ensure that innovation brought into the company is not causing any type of harm to the environment, society, and the financial success of the business. In addition to that, sustainability is not a new challenge since the growing awareness has been started from the appearance of the Millennium Development Goals (MDGs), succeeded by the Sustainable Development Goals (SDGs) from their adoption in 2015. Stakeholders have been prompted to take action to meet the sustainability goals and requirements, and so are businesses.

Also, the need for innovation is not new for a world which is destined to evolve and change. Therefore, innovation is a necessity for any business that wants to ensure the continuity of its activities. Staying in the market requires innovative strategies and products due to the fierce competition in the business world. The process simplification, the ease offered by disruptive

technology and disruptive innovation encourage entrepreneurs to open their minds in order to innovate. Thus, it has been observed that it is not the concepts of innovation and sustainability themselves that are new, but rather the conciliation of innovation and sustainability in the activities of companies, SMEs in particular, that represents a new challenge.

Among the findings, the technological factor was mentioned. Even though Madagascar has major higher institutes of technology and polytechnics and a Ministry in charge of scientific research, a study on the reasons of the lack of will and commitment to technological and scientific research, source of innovation, has not been conducted throughout this research. The existence of unfavourable conditions (economic, social, political and institutional) could be an explanation to the brain drain in Madagascar. A study on ways to limit brain drain needs to be carried out, to ensure that the contribution of information and communication technologies, finance and personal services that are virtually non-existent, as mentioned by Ratsimbazafy (2019), could be tackled.

This study also highlights the social factors such as the lack of awareness about the importance of sustainability, the resistance to change linked to the low purchasing power in Madagascar. The research is limited in scope and does not mention the various innovation processes that can help overcome this resistance among Malagasy consumers. Further investigation on the strategies that are customer-oriented proper to Malagasy case has to be conducted.

The methodology adopted through our research is limited to analysing the factors preventing innovation and sustainability in Malagasy SMEs. Admittedly, these factors have an impact on the implementation of innovation and sustainability. However, this is not exhaustive, as other factors that hinder innovation and sustainability have not been investigated. That is the case of risk and disaster management (Skouloudis et al., 2020), given that Madagascar is an island prone to various risks and disasters which could constitute a factor of vulnerability that undermine innovation and sustainability and the resilience of Malagasy SMEs. This study has been conducted for other islands like Mauritius (Utami et al., 2021) and Caribbean region (Balkaran & Smith, 2021), but not in Madagascar.

6. Recommendations and further research

The research highlights the main factors preventing sustainable innovation in SMEs. For Malagasy SMEs to overcome those challenges linked to innovation and sustainability, what should be done are:

- Establish a clear status for SMEs using legal and regulatory frameworks to encourage the formalisation;
- Carry out reforms for a government policy that is conducive to SMEs' development and the promotion of local SMEs;
- Facilitate access to finance by a low percentage of taxation to allow SMEs expansion and the implementation of sustainable innovation;
- Encourage innovation through various project competitions and reward leading SMEs that have successfully implemented sustainability initiatives;
- Support SMEs in terms of finance and training.

Those recommendations could, to some extent, address the challenges facing Malagasy SMEs. However, our research is limited, since the factors mentioned are not the only ones to be taken into account. A factor that has not been mentioned is the risk and disaster management as Madagascar is an island highly exposed to various natural disasters which constitutes the vulnerability reasons. A study on how resilient are Malagasy SMEs to risks and disasters could complete this research. The social factors were mentioned in the findings, although the solutions proposed did not focus particularly on means of mending resistance to change. Hence, future research could investigate on how to remedy Malagasy people's resistance to change for SMEs' local products to dominate the market. Technological factors were identified, although the brain drain was not analysed.

Investigating on ways to reverse this brain drain situation is a topic to be considered for future research.

7. Conclusion

To conclude, the research has shown that Malagasy SMEs face several challenges due to different factors related to economics, politics, society and technology within the country. Hence, these various factors undermine the sustainability of investments and innovation in Madagascar. As a result, despite the strong desire of Malagasy entrepreneurs to innovate, bringing sustainable innovation to market runs a fairly high risk of failure and this could happen at the very start of the project.

It was also found that innovation and sustainability in SMEs and all types of organisations require an environment conducive to their development and implementation. Hence, policies and frameworks accompanied by technology development and uses are needed to meet the sustainability requirements that are in harmony with the innovations introduced.

Also, innovation and sustainability are a challenge not only for SMEs but also for businesses of all sizes. As innovation is related to risk-taking, future research could take a closer look at how to implement innovations and make them sustainable in developing countries where the situation is not always advantageous to local entrepreneurs who are supposed to be problem solvers.

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