

Infrastructure and Human Capital Investment in Madagascar

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Abstract: Madagascar, an island country that separated from mainland Africa 80 million years ago, has inherent advantages that potentially allow it to develop a tourism industry that could lead the country out of poverty. However, due to reasons such as political instability or difficulty during implementation, Madagascar has yet to improve its economic conditions. This work puts forth an implementable set of actions, mainly composed of investment in infrastructure and human capital around Andasibe-Mantadia National Park, that may improve Madagascar's current economic situation. Although many difficulties during implementation can be predicted, it is believed that Madagascar's unique biodiversity, especially in Andasibe, could create significant changes. By comparing Andasibe's situation with other East African countries' national parks, this work attempts to prove how this investment may lead Madagascar to develop a strong tourism industry, leading the whole country to take another step towards industrialization.

Keywords: Madagascar, tourism, poverty, human capital, infrastructure, Andasibe-Mantadia

1. Introduction

Madagascar is an island off the East coast of Africa, with a per capita GDP of 500 USD in 2021 [1]. Separated from the main continent over 80 million years ago [2], Madagascar is home to thousands of species not seen anywhere else in the world [3]. This natural advantage could make Madagascar a tourist hotspot, which could be its first step out of poverty. This work attempts to prove that the investment plan, consisting of infrastructure and human capital specialized in tourism, could assist Madagascar's economy in getting out of poverty.

Research Question: How can Madagascar improve its economic situation by developing its tourism industry?

Hypothesis: Through investing in infrastructure and human capital that primarily focuses on developing the tourism industry, Madagascar can improve its current economic situation.

2. Argument

Madagascar has unique advantages regarding natural resources that are not utilized effectively compared to its East African neighbors, Ethiopia, Tanzania, or Kenya. Ethiopia, Tanzania, and Kenya all attract from the African plains, where one could witness the wildebeest migration. Unlike its neighbors, however, Madagascar has not developed its tourism industry as successfully. According

to the [4], in 2019, Madagascar earned just short of \$1 billion from international tourism, while its three neighbors earned \$3.53 billion, \$2.62 billion, and \$1.76 billion, respectively. In addition, Madagascar's efforts are inadequate in protecting its wildlife for sustainable development. Overexploitation and unsustainable agricultural practices affect around 60% of vertebrate species and 90% of all plant species [2], which leads to an urgent need for sustainable development.

Due to COVID, Madagascar's tourism income has reduced by more than 75% [4] while struggling to fight its financial problems. It has 10.9% (year-on-year) inflation [1], exacerbating poverty issues. In addition, political tensions are significant due to constant food insecurity, inflation, perceived corruption, and increasing poverty rates [1].

Two possible policies that, combined, may reduce the problem of poverty consist of improving the infrastructure and environmental protection of one area, recommended to be Andasibe (short for Andasibe-Mantadia National Park) and its surroundings. These policies attempt to increase foreign direct investment and income from tourism.

It is very important for the Malagasy government to focus its investments on one specific area or national park because it is more cost-efficient. Madagascar is facing financial problems that limit the government's ability to invest, so it is important to keep the budget under control. Focusing on one region is the most cost-efficient way of developing sufficient infrastructure that can attract foreign investment and tourists. Utilizing existing infrastructure to its maximum potential, it is believed that this investment would not be too costly to implement by the government. Despite adopting a new anti-corruption strategy in September 2015, Madagascar suffers from sizable corruption due to a failure to implement anti-corruption policies and a lack of government transparency [5]. It will cost less for supervision if the work is concentrated in one area. Finally, advertising for one single destination would decrease promotion costs, which is important under an extremely limited budget.

It is recommended that the focus of investment be Andasibe and its surroundings due to its geographic location and biodiversity. Located just a five-hour car ride outside Antananarivo, the capital, Andasibe is the closest national park to Madagascar's predominant (and only) international airport. The convenience offered by this park is essential not only to tourists' experience but also to managing government expenditure when considering upgrading highways and airports. Most famous for its lemur population, a unique species seen only in Madagascar, Andasibe has the potential to attract more tourists than before.

Despite its unique biodiversity, Andasibe has no luxury hotels to attract tourists. In contrast, Maasai Mara, a national park in Kenya, has over twenty luxury hotels. Despite Maasai Mara being roughly ten times larger than Andasibe, the disproportionate amount of luxury hotels contributes to the difference in tourism income their respective countries generate. Andasibe fails to attract tourists who are used to living conditions in high- or middle-income countries, which Andasibe fails to provide. Furthermore, it has not reached its potential in protecting its biodiversity, as agriculture, which leads to deforestation, and overexploitation, which includes illegal harvest of plants, remain threatening to numerous native species [2]. Therefore, protecting biodiversity for sustainable development and developing infrastructure are policies recommended to the Madagascar government.

To attract foreign investment, the government must first invest in infrastructure that allows foreign companies to be involved in direct investment, such as building luxury hotels and creating peripheral services. Historically, heavy investments in infrastructure have succeeded in creating strong economic growth. Ethiopia invested in infrastructure on a massive scale, using money mostly aided by China [6], which has generated rapid economic growth. It maintained double digits of annual GDP growth from 2004 to 2015, except for 2009 (+8.8%) and 2012 (+8.6%) [7]. Utilizing its natural advantage to develop the tourism industry while investing in infrastructure with international aid and revenue generated, it produced a period of rapid growth that can be used as an experience for other African countries, such as Madagascar [8,9]. Therefore, it is advised that Madagascar focuses its

investment on infrastructure also. Infrastructure investment includes electrification, sanitation, education, and transportation, which are all considered crucial for the success of this policy. In addition, digital infrastructure, such as broadband networks, can help promote customer satisfaction. When demands for sustainable electricity, accessibility, and human capital are fulfilled, Madagascar will be able to attract more foreign private investment. Increased foreign investment, such as building luxury hotels, can attract more tourists and will be able to pull economic growth.

Another policy recommended is to increase investment in providing human capital, such as police and tour guides, that can help enhance tourists' experience. Not only can the police help ensure the safety of tourists, but they will also protect the Andasibe biodiversity from illegal acts such as deforestation and illegal harvest, both popular in Madagascar [2]. Tour guides can help tourists understand the uniqueness and wonders of the Andasibe biodiversity, which will not only increase their environmental awareness but also increase the chances of repeated visits. Kenya, with a similar situation as Madagascar, has a positive correlation between tourism employment and GDP growth [10]. This implies the importance of developing human capital for employment, leading to further economic growth. Therefore, the investment in human capital will help Madagascar increase its tourism income and whole economy by building a positive reputation and help sustainable development by protecting biodiversity [11].

After Andasibe and its surroundings have undergone this development, it will be able to attract numerous foreign customers. Madagascar will then be able to develop its whole economy around tourism, which gives a mature path for further improvement in its current economic situation.

However, the implementation of these policies may face difficulties under current circumstances. The risks of increasing government spending include but are not limited to, further inflation and political instability. In the post-COVID era, the Madagascar government must deal with skyrocketing inflation levels, such as a staggering 43% increase in fuel prices in July 2022. Although efforts exist by the central bank to control price levels, increasing government spending may reverse the situation. Although uncontrollable hyperinflation is unlikely, there is a substantial risk of increasing inflation. This high inflation, added to political tensions, may create significant political instability, considering the upcoming 2023 election. The current situation for Madagascar implies low foreign investment due to high internal instability, which will need to be monitored throughout the implementation of the suggested policy [12].

Even if the policies stated above succeeded in improving Madagascar's economic situation, some unintended consequences may surface. For example, it may be difficult for Madagascar to fully industrialize and further increase its per-capita GDP due to its dependency on tourism. Despite being substantially richer than Madagascar, Ethiopia has a below-African average share of manufacturing in GDP. Due to weak private investment, which stems from dependence on tourism, Ethiopia has struggled to industrialize, which is crucial for completing its final steps towards becoming a middle-income country. Furthermore, inequality is already a serious question concerning the development and conservation projects in Madagascar. Mitigating inequality issues under current circumstances is difficult due to fundamental challenges such as "access to firewood demanded by villagers with low education and income levels" [13]. Low funding of the state towards areas like inequality will result in the problem exacerbating while the economy is developing. Despite the influence of these potential consequences, currently, the main goal is reducing poverty and growing the economy. Therefore, the implementation of the policies stated above is necessary and urgent.

3. Conclusion

In conclusion, although getting out of poverty is a difficult problem, there can be potential policies to advance the situation. In the case of Madagascar, it can utilize its unique biodiversity to create a strong tourism industry to improve its economy. It will reach the goal of attracting more foreign direct

investment by implementing two policies: investment in infrastructure and human capital. Potentially, these policies may create substantial economic growth despite difficulties such as political instability and high inflation.

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