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Eswatini, Infrastructure

Eswatini: Targeting Issues in Infrastructure with Targeted Investment and Commercial Agriculture

We live in a wealthy society where most of us can always count on our next meal, but for many around the world, this is not the case. Plagued by stagnant economic growth, high unemployment, high HIV infection rates, and poor infrastructure, the Eswatini, in particular, suffer from extreme food insecurity and malnutrition. Many children face birth defects and developmental issues from a lack of nutrition. Through my research into Eswatini and my exposure to food insecurity in my city of Memphis, I have a deep desire to alleviate these issues in Eswatini.

Eswatini boasts a population of 1.121 million people with around 25% living in cities and 75% living in the nation's rural areas. They are a state landlocked by South Africa, which causes problems in trade. Eswatini is an absolute monarchy currently led by Mswati III. Of Eswatini's 17,364 sq km, 68.3% is currently agricultural while 31.7% of Eswatini's land is forested or urban (CIA, n.d.). Their main exports consist of scented mixtures, raw sugar, industrial oils, sawn wood, and men's suits (OEC, n.d.). The main crops of Eswatini are sugarcane, citrus, wood pulp, and cotton (CCARDESA, 2018). The average farm size in Eswatini is around 1.7 hectares (ha) per household (AFDB, 1995). This small average size is due largely to Eswatini's reliance on subsistence agriculture, which means that each household has its own farm. When compared to the United States, which has an average size farm of 178 ha, it is clear that Eswatini lacks major agricultural production (USDA, 2020). The climate of Eswatini is tropical to temperate, but the country suffers from severe shifts that further influence agricultural production. The terrain of Eswatini is largely mountainous and hilly (CIA, n.d.).

An average family in Eswatini consists of an average of 5.84 people who typically reside in beehive-style huts made of tree trunks and thatch, although permanent framed houses are readily found in the more urban regions of the country (GDL, n.d.). These families face a variety of issues with more than 29% facing food insecurity, 28% of adults living with HIV or AIDS, a rapidly deteriorating economy resulting in high unemployment, and high birth rates (IPC, 2021). The typical diet consists of grains and vegetables grown by the individual household for subsistence. Meat dishes are also eaten, but are reserved for special occasions. Jobs in Eswatini are commonly focused in the primary sector and are associated with natural resources like mining, timber, or agricultural jobs (TWR, n.d.). The average wage in Eswatini is around \$550 a month (Wage Center, n.d.). This is about 10% of the average salary in the U.S. This discrepancy in wages shows the magnitude of Eswatini's poor economic situation and illustrates the difficulties facing Eswatini families. Since this is average income which could be skewed by outliers, the truth is that many families earn significantly less.

Education is the foundation of a country's growth potential and future. In Eswatini, enrollment in education is consistently higher than in other countries of the region. 84% of both sexes are enrolled in primary school and 83% are enrolled in secondary school. However, the issues plaguing Eswatini's education system are more tied to completion rates and repeating grades. Only around 70% of children

will go on to graduate from primary school and a mere 32% will finish upper secondary school. The figures are even more dismal when looking at tertiary schools in which only 7% are enrolled (USAID, n.d.). While education is affordable, with primary schooling free to all citizens, fewer children are actually completing their schooling. Schooling is also not compulsory in Eswatini. Further problems hindering education are sexual violence in school, the high cost of secondary education, and teenage pregnancy (UNICEF, n.d.). Healthcare in Eswatini is also free, but the healthcare system is inadequately funded and fails to properly serve the Emaswati people. However, the biggest factor undermining the education and healthcare system is the economy and infrastructure. In primary education, which is provided by the government, students are often unable to travel long distances from their rural communities to school daily. The mountainous terrain and lack of established transportation makes the commute even more difficult. In secondary school, many students are driven out of the classroom to work to support their families as the high HIV and AIDS infection rates can result in students needing to make ends meet since their ill parents are unable to hold down jobs. Eswatini cannot better itself without more of its citizens being educated.

Poor infrastructure, and its resulting consequences, is the largest issue afflicting Eswatini. Eswatini has approximately 3,800 km of road and 300 km of railway. The roads are quite outdated with most last seeing renovation in 1997. Additionally, the roads are very unsafe with 4.3 fatalities per 31.9 inhabitants (World Data, n.d.). The lack of safe roads makes transportation and commutes to work or school difficult. The dearth of quality roads disproportionately afflicts the rural population, which makes up the majority of Eswatini's people. This is because as roads branch out from cities, there is less governmental organization to maintain and regulate the roads. Rural communities also typically lack funding for construction of new roads. The lapse in infrastructure not only affects education and jobs, but also healthcare. With hospitals being few in number and often in urban areas, rural populations frequently lack the transportation to actually access them. This further exacerbates the issues of the HIV and AIDS infections in Eswatini as rural people cannot get the care they need and urban people who can get to hospitals will receive subpar care due to a lack of funding. Not only are HIV infected people affected, but also women and children. Women cannot access contraceptives and maternity care which furthers the cycle of unsustainable population growth in Eswatini and leads to birth defects and developmental issues in Emaswati children. Poor infrastructure also causes hospitals to often run out of critical medical supplies and medicines (BTI, 2020).

Inadequate infrastructure not only influences education, jobs, and healthcare, but also affects the Emaswati's ability to meet their physiological needs like food, water, or sanitation. Families in Eswatini suffer from high food insecurity with 12% of children suffering from undernourishment and 29% of children experiencing stunting due to malnourishment (USAID, n.d.). Attempts to commercialize farming instead of relying on subsistence farming would be undermined by the lack of proper infrastructure. The distribution of foreign food aid is also hindered by the state of the roads. Another problem poor roads present is with internal aid. If one part of Eswatini experiences a poor harvest or a climate event, the roads make it difficult to move food, money, and resources to that part of the county. The next issue presented by poor infrastructure is clean drinking water. Only 69% of Emaswati households have access to proper drinking water (BTI, 2020). This is a result of a failure in infrastructure. Eswatini lacks the ability to properly collect, filter, and distribute water to its citizens. Again, many of the people who lack clean water are rural residents. This issue is also furthered by Eswatini being landlocked and lacking many

waterways. Water issues in Eswatini also extend to sanitation. Without access to clean water, handwashing and hygiene suffer. Infrastructure also hinders the ability for waste management. This waste can build up and cause illness in the population and can pollute the environment and the natural resources of Eswatini. Only 58% of Eswatini have access to sanitation services and only 28% of Eswatini households practice handwashing (BTI, 2020). Infrastructure is the root or an accelerant for many of the issues facing Eswatini.

Currently, Eswatini is working with the African Development Bank Group to resolve some of the issues facing the country. The two main ideas of this plan are to increase investment in infrastructure to diversify the economy and to improve economic policy and its implementation to attract investment (AFDB, 2022). I agree with these ideas laid out in the plan. Diversifying the economy will make the country resilient to its volatile weather and to unstable resource prices which have caused the country strife in the past when maize prices collapsed and when a series of alternating droughts and floods recently afflicted the country. Attracting investment could also aid the country in growing businesses and increasing trade. However, I believe the plan fails to recognize the more humanitarian problem in Eswatini. I think the solution to the issues in Eswatini is through targeting investment on transportation and commercial agriculture.

The main points made on infrastructure were an expansion of railways and a trade railway between Eswatini and South Africa. They also proposed a plan to improve the roads of Eswatini. However, there is no mention of building infrastructure for public transportation. A policy targeting investment into infrastructure for public transport could greatly improve the lives of rural Eswatini people. A bus system could be implemented. With the plan and funding already drafted by the AFDB, they could massively improve the state of the roads. Then they could use aid they already receive from organizations like USAID, which has given \$73.4M, or other organizations like UNICEF which already gives grants to Eswatini (USAID, n.d.). This bus system could greatly improve access to education and work opportunities and expand the range where people could work. By providing a reliable and affordable means of transportation, it allows for the rural citizens of Eswatini to get many of the things they need to succeed. Students could use the buses to access schooling. With a faster means of transportation, they could also extend the time they spend in school or doing related activities as they can be home more quickly. Workers could use the buses to get to their jobs or work in jobs that are further away which may pay more. This would create competition and could cause companies in Eswatini to increase wages to keep employees who would now have more options. With higher wages and access to jobs comes a higher ability to afford food which would reduce food insecurity. Additionally, the buses provide transport to the hospitals typically located in urban areas and provide access to healthcare for citizens. Families benefit because they could take the bus to markets and get a better selection or more food than would be possible with their subsistence gardens. Access to markets allows families to buy more food and more nutritious food which would reduce malnutrition and food insecurity in the country. This would open the gate to more commercial agriculture because there would be a bigger market and families would be less reliant on their home gardens. With less subsistence agriculture, there would be less of the slash and burn agriculture that has caused Eswatini to have issues with erosion and soil desertification. Eswatini is reportedly losing \$100M a year due to desertification which is around 3% of their annual GDP (UNCCD, n.d.). If public transportation could allow families to rely less on these harmful practices, it could help rebuild some of the lost biodiversity and desertified land in Eswatini. Further sustainability efforts for the bus system could be electric buses which have lower carbon emissions with the charging stations for

buses powered by renewable sources such as wind or solar. An example of this system working is in Kigali, Rwanda, where a bus system was implemented by the Rwandan government. Their government restructured the bus system making it one of the largest, most efficient public transit systems in Africa. It carries thousands of workers and students throughout the city, and created quality jobs for its bus drivers who started receiving excellent benefits and pay (Mimano, 2021). A similar public transit system in Eswatini could improve economic opportunity, economic mobility, and environmental conditions which would work to reduce food insecurity.

Another aspect in which the AFDB's plan falls short is that it does not discuss infrastructure in relation to commercializing agriculture. Infrastructure development is a heavy part of the AFDB's plan and I believe that it is crucial in establishing a stable food supply in addition to commercial agriculture. Commercial agriculture requires the people of Eswatini to relinquish some of their current farming land so companies could establish farms. This would require community leaders to get the people to support this plan as well as policies by the government allowing companies to acquire the required land. This would likely be difficult as subsistence agriculture has been the system in Eswatini for a long time and the inhabitants would need convincing. Commercial agriculture would mean that companies would gather large farm lands to grow a singular crop like maize or millet. Commercial farms are able to implement more mechanization and technology than subsistence farmers due to increased funding. This technology allows commercial farmers to dramatically increase yields and they typically grow food more reliably. Commercial farms create larger, more stable food supplies (Farming Base, 2022). This would help alleviate the issue of food insecurity by ensuring that there is a larger food supply. Additionally, commercial farming operations use less employees which would free up Eswatini workers to work in new or other industries. This would diversify the economy and make it more resilient as it would be less reliant on just agriculture. It would also fuel the growth of new industries. Commercial farming ties back to infrastructure as the companies have an interest in shipping their crops as efficiently as possible which means they will invest in the infrastructure. Additional tax income from the companies as well as more efficient trade due to the improvements in infrastructure can also increase the GDP of the nation and allow Eswatini to invest into its healthcare and education systems which would drastically improve conditions for the Eswatini. The project would be largely managed by the government of Eswatini in conjunction with the companies interested in starting operations. Funding could be provided from the companies themselves as they are reaping many of the benefits of this idea. Additional funding could come from USAID or UNICEF which already issue aid to Eswatini. With a more stable and larger food supply, families will more consistently be able to access proper nutrition. In terms of sustainability, commercial farming operations are held to high standards and have access to more funding and techniques. This means that commercial farms do not have to rely on the environmentally harmful techniques sometimes employed by subsistence farmers like slash and burn agriculture. These companies can also use sustainable application of fertilizers and pesticides that will not damage local ecosystems or waterways. Commercial agriculture's largest weakness is that the companies need to have oversight to ensure they follow environmental regulations and that they do not exploit the land. This is a task most suited for the United Nations which could provide independent reports of their practices to ensure their adherence to sustainable practices. Many countries have suffered from companies taking advantage of their resources and oversight is important in preventing this (PLAAS, 2014). Commercial agriculture's potential for growing Eswatini's food supply and economy make it worth the risk. Commercial agriculture

in Eswatini presents massive upsides like increasing the availability of workers, improving infrastructure for trade, and widening the availability of food which can reduce food insecurity.

Eswatini is a struggling country facing many issues on its path to food security. A steady food supply provides the necessary foundation for all growth. Through food, workers are able to work, students to learn, and families to grow. Investing in infrastructure, establishing transportation systems, and commercializing farming will increase stable food supplies and create sustainable economic growth. Not only can these solutions address food insecurity, but they can also address issues in volatile climates, HIV and AIDS, and sanitation. These proposals can allow Eswatini to achieve its full potential as a state and its residents can live happy, nourished lives.

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