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Guatemala, Factor 19: Foreign Aid

Guatemala: How Biofortification and Microlending Can Offer Lasting Relief

Guatemala, officially known as the Republic of Guatemala, offers a contradiction in nearly all circumstances. During the latter part of the 20th century, it underwent a 36-year guerrilla war which left over 200,000 people dead and created roughly 1 million refugees ("The World Factbook: Guatemala"). After the war's denouement in 1996, Guatemala has witnessed economic growth and successful democratic elections, yet continually to struggles with high rates of crime, poverty, and recurring political corruption. Furthermore, the country is known for its abundance of biologically unique ecosystems and large numbers of endemic species which designate it as Latin America's biodiversity hotspot ("Mesoamerica"). Despite these lush lands, Guatemala has a semi-arid zone with periods of droughts, degraded soils and low agricultural yields, known as the "dry corridor" in which most residents are victim to a hunger crisis ("Guatemala: Overview").

Guatemala's hunger crisis is no exception to its trend of paradoxes; it has the highest GDP in Latin America, a staggering 53.8 billion USD in 2013, yet 53% of the population lives in poverty and 13% in extreme poverty ("Data: Guatemala"; "Guatemala: Overview"). The country is also the most populous in Latin America, with a total population of 14.7 million, and ranked 133 out of 187 in the United Nations Human Development Index ("Guatemala: Overview"). That being said, the population ranges between both extremities on the income spectrum; with a Gini Index of 53.7 (Robbins 259), Guatemala suffers from one of the starkest income inequalities in the world.

Additionally, it also has one of the highest rates of chronic malnutrition, 49.8% for children under 5, the highest in Latin America and the fourth highest in the world ("Guatemala: Overview"). This offers another contradiction, one which makes the country's elite blind to its immense hunger problem since the chronically malnourished are still fed (Loewenberg). The problem isn't that the low-income population doesn't eat or have access to food, but that the diet is low quality and lacking essential nutrients. It is excessively high in calories, particularly those derived from sugar and other simple carbohydrates, and mainly entails the consumption of beans and tortillas (Arthur). Those staple foods are so low in vitamins and minerals that the ratio of stunted children is nearly 7 in 10 in the heavily Mayan western highlands, where poverty rates top 80% ("Guatemala: Hungry for Change").

The most vulnerable victims of Guatemala's adverse imbalance are residents of the "dry corridor" and the Guatemalan highlands which are heavily populated by indigenous Mayan families ("Guatemala: Hunger among Poor Farmers"). Since the Spanish Colonization of Central America, indigenous Mayan people have been involuntarily relocated off the productive farmlands to arid areas and steep hillsides. Illustrated in the 1980s, the community who originally resided in the Chixoy River valley was systematically moved to the hillside in order to make way for a hydroelectric dam ("Guatemala: Hunger among Poor Farmers"). The hills above the river are gray and dry during harvest time and the other lands have very low agricultural yields. Most of the ideal, fertile land is used for export crops like coffee, sugar cane, and more recently, biofuels ("Guatemala: Hunger among Poor Farmers"). The remaining drought-prone areas such as the "dry corridor" pose considerable challenges for the families who need to farm. It experiences frequent natural hazards such as droughts, floods, tropical storms, earthquakes, and volcanoes. Even further, the area undergoes a multitude of other misfortunes; illiteracy among indigenous women reaches 59%, chronic undernutrition is 69.5% and the poverty rate is nearly 70% ("Guatemala").

The hunger crisis is occurring in a country of luxurious green that exports millions in pineapples, bananas, coffee, and sugar cane. This abundance is prevalent in market areas as well, but those suffering cannot

afford it; however, poverty is not what mainly needs to be combatted in order to eradicate hunger in Guatemala ("Guatemala: Hunger among Poor Farmers"). Luis Enrique Monterroso, Minister of Food Security and Nutrition in Guatemala, contends "Guatemala focused many years on poverty, thinking that, if there was work on that area, it would reduce malnutrition. And it didn't work. What we are doing here is logical interventions that are proven to reduce malnutrition. In that way, we can reduce poverty in the long run." ("Widespread Childhood Malnutrition").

Concomitantly tackling the main causes of hunger in Guatemala- poverty and malnutrition- can lead to attenuating other shortcomings that aggravate the hunger crisis. By utilizing foreign aid, Guatemala's low income population can employ the practices of biofortification and microlending, which will not only provide temporary relief from malnutrition and poverty, but a stable framework to efface them immutably.

Whether its tortillas or pasta, staple foods provide the millions of Guatemala's rural poor with a source of basic sustenance. Since they contain excessive calories and insufficient amounts of nutrients (specifically Vitamin A, iodine, iron, zinc, folic acid and Vitamin B12), children experience a short stature, reduced intellectual capacity, and a greater inclination to contract diseases into adulthood (Arthur; "Plan for the Zero Hunger Pact"). The ideal solution would be providing a more diverse diet, however, it would be beyond the reach of the indignant families living in often remote areas. Ultimately, the solution lies in manipulating the foods that the diet already consists of. Through the process of biofortification, staple foods can contain the micronutrients necessary for proper development (Islam).

Scientists can breed new varieties of staple food crops by scouring seed banks to find those with the desired nutrients and then breed them using conventional methods. In Uganda and Mozambique, HarvestPlus, a global agricultural research program, successfully released an orange sweet potato that was far richer in vitamin A than its yellow or white counterparts. As a result, the population most susceptible to vitamin-A deficiency is now consuming considerably greater amounts of it (Islam). In natural disaster-prone Guatemala, conventionally bred varieties that exhibit improved drought, disease and pest resistance will be especially helpful ("Guatemala FY 2011-2015 Strategy").

Working with its global partners, HarvestPlus tested the iron-rich bean varieties through field trials with the intent of offering them to Rwanda. Following the testing, a feeding trial was conducted to demonstrate that the new iron-rich beans reduce iron deficiency, and soon the beans were released to smallholder farming communities throughout the country. "First, we want to confirm that these varieties perform well in the field," said Eliab Simpungwe, HarvestPlus Country Manager. The product is planned to extend to the Democratic Republic of Congo and other neighboring African countries while a similar trial with maize is being conducted in Zambia (Islam).

The trial also evaluated the responses of its beneficiaries; it found that people were willing to include the foods in their diet when they were told the nutritional benefits of them (Islam). Similarly, the malnourished families of Guatemala would not only benefit greatly from biofortification, but would surely be disposed to implementing the nutrient-rich foods into their diet, mainly because they are aware of their unfortunate state. A community leader among the indigenous rural poor stated, "We've always eaten frijol and tortillas, and drunk coffee. Babies get sick and mothers die in childbirth—it has always been this way." ("Our Neighbors, Ourselves").

Typical rural Guatemalan families lack access to healthcare and education and are sized at five or six children ("Widespread Childhood Malnutrition"). The Save the Children center in Guatemala often provides counseling to mothers by advising them what foods to feed their children and offering healthcare services during the 1,000 day window after birth. In some cases, the advice is rendered impossible considering the lack of nutritious food in reach and the healthcare services are ineffective to those children who are already malnourished and developmentally stunted ("Widespread Childhood

Malnutrition"). There are many humanitarian groups which possess similar intentions but often times only provide temporary assistance after the damage is done. Nevertheless, these services are undoubtedly helpful and much-needed considering Guatemala's current state. More importantly, such efforts have the impact of spreading awareness not only to the victims, but also the food-secure and financially sound population of Guatemala. Particularly the Zero Hunger Pact, a government-implemented plan aiming to reduce chronic malnutrition in children below 5 by 10% by 2016, focuses on spreading awareness across the country. Through the pact, the country's influential public sector, who arguably live in a different world, have also backed the plan and formed a business alliance against malnutrition ("Guatemala: Hungry for Change"). Roger Thurow, a reporter with the Pulitzer Center on Crisis Reporting, commented "the zero hunger program and this awareness of the malnutrition, this — this frontal attack on malnutrition and hunger, it's bringing these two worlds together." ("Widespread Childhood Malnutrition").

The spread of awareness is one of the key results of the pact that needs to extend to other organizations and countries, primarily to extract funds and further augment foreign aid. Guatemala's economy is not financially stable enough to single-handedly subsidize the Zero Hunger Pact and successfully unleash its full potential. Wayne Nilsetuen, the head of USAID's Guatemala office, perhaps said it in the simplest terms, "There's not enough money for the state to perform its functions." (Loewenberg).

As noted by Samuel Loewenberg, many argue that the United States involvement in Guatemala's prior instability, which has accentuated the hunger crisis, is a reason to insist their aid. In 1954, the U.S. supported the overthrow of Guatemala's democratically elected government on behalf of the United Fruit Company and later supported the right-wing military during the 30-year civil war. Yet, Guatemala failed to qualify as a candidate for the Millennium Challenge Corporation, the largest U.S. foreign aid agency, due to its governmental corruption and low degree of government effort in supporting the impoverished (Loewenberg).

However, the Guatemalan government is doing all they can given their budget. The global economic crisis has reduced exports, remittances, and much more, while consequently heightening the government's budget deficit and unemployment ("Guatemala: Overview"). Given the country's economic state, certain facets of the Zero Hunger Pact, such as the provision of vitamin supplements, cannot be fully financed. Moreover, in light of the recent corruption scandal occupying Guatemala's attention, the country needs to witness good governance before it can properly enforce its hunger pact.

The International Commission Against Impunity in Guatemala, known by its Spanish acronym CICIG, is the United Nations panel implemented to assist Guatemalan judges and prosecutors to devise a justice system in order to prevent and abolish corruption (Malkin). It was created after a request for assistance from the government of Guatemala and may offer their best chance at political stability ("CICIG"). The continuation of exterior assistance alongside the Guatemalan government's cooperation, in addition to the spread of awareness, will most likely encourage foreign entities to provide funding and aid. More specifically, a stable government and better implementation of the Zero Hunger Pact will qualify Guatemala for the Millennium Challenge Corporation and will naturally lead to a better economy.

Guatemala's food insecurity will perpetuate unless both correlative pretexts, malnutrition and poverty, are addressed. Ideally, chronic malnutrition in Guatemala will be minimized through biofortification and the Zero Hunger Pact fulfilling its preeminent potential. However, these executions can only target malnutrition; in other words, Guatemala's rural population may be nourished, but will still be in poverty. Financial aid, whether from the government or foreign entities, only has the capacity to provide temporary relief. Through the application of microlending, the country's smallholder farmers will have the opportunity to escape poverty.

Microlending entails the provision of small loans to those in poverty in order to support individual entrepreneurship efforts ("The Issue"). Business leaders Phil Smith and Eric Thurman argue that microlending is the world's best anti-poverty tool:

The fundamental premise of microcredit is that people can improve their incomes through hard work if given small loans to strengthen their businesses. This premise has been proven true by millions of borrowers who are now building their tiny businesses, supporting their families, and repaying their microloans so that others can have a chance at the one break they too need to succeed. These borrowers are actively changing the futures of their families instead of begging or waiting for the next installment of charity aid, which may never come. ("Where Credit's Due").

Microlending also provides expertise to farmers to improve farming practices and their ability to sell their goods in markets ("The Issue"). The One Acre Fund presents one of the best examples of this; besides small loans, they also dispense financing for farm inputs, distribution of seed and fertilizer, training on agricultural techniques, and market facilitation to maximize profits from harvest sales ("Program Model").

In Guatemala specifically, microlending will offer subsistence farm families more options. Most of them suffer from increased food insecurity due to natural disasters which commonly occur in their area. In 2012, the plague of Coffee rust transpired in the dry corridor and affected small producers and daily laborers. This pattern of adversity continued in 2014, where the longest prolonged drought in two decades occurred, according to regional meteorological services (Fion). Although these disasters cannot be averted, microlending can assist families to be better positioned to survive the next one.

The men from families with significant crop losses have to migrate to distant coffee and sugar cane plantations, work for a few months, and return occasionally to bring money for their families ("Guatemala: Hunger among Poor Farmers"). If the situation is severe, many families are forced to relocate permanently; in view of their financial state, relocation does not materialize seamlessly. If smallholder farm families were to be participants of the microfinancing system, migration would not have to be their only recourse in times of economic quandary. Farmers would be educated in business ownership practices, ushering them to embrace a new sense of dignity, potential, and opportunity. In light of their new entrepreneurial efforts, they would improve their harvests and eventually escape poverty ("Program Model"). If Guatemalan families were to be more financially sound and food-secure through microlending, they would have more options to choose from when faced with predicaments.

The system of microlending is not entirely foreign in Guatemala. Although it is not a listed course of action in Guatemala's Zero Hunger Pact, there are many Guatemala-based organizations and NGO's effectuating the system. The Guatemalan Project utilizes the microfinancing not only by providing interest-free loans to sponsor the initiation of small businesses, but also funding educational scholarships linked to community building activities (Guatemalan Project).

The Guatemalan Project has six main types of loans: milpa loans, start-up business loans, improvement loans, emergency loans, educational loans, and personal loans. Milpa loans are the largest among the six and target families who do not own land to grow their own food; 200 USD allows a family to manage a one-block corn farm. After start-business loans, improvement loans are the third largest; they range from 250 to 1,000 USD and finance renovations for improved living conditions. Offered sporadically, emergency loans are mostly distributed in times of crisis to cover the cost of purchasing medicine or health operations. The largest loans, arguably the most important, are educational loans which range from 500 to 2,000 USD per year, many times to fund high school education in various locations. Personal loans range in pricing and are distributed for a variety of reasons, popularly court costs, legal costs, license costs, etc (Guatemalan Project).

The model of the Guatemalan Project shows that microlending not only has the ability to empower families out of poverty, but also strengthens the community in various aspects. In coexistence with biofortification, the predicaments that occupy the latent potential of Guatemala's impoverished residents can be progressively mitigated. Yet, even with programs to operate these advances, Guatemala's current state is only improving minimally. As of 2015, Guatemala's government is engrossed in political scandals and the "dry corridor" illuminates poverty and malnutrition to some of the highest rates in the world. To attend to these issues, foreign aid must also be directed to another objective. Investments must focus on strengthening the capacity of government institutions to counter fraud and corruption within Guatemala's ministries and societies (Silberman). If the government is better-suited, local organizations and aid programs can be implemented much more successfully. However, the programs' effectiveness and ability to expand are inhibited by a deficient budget (Loewenberg).

In spite of a reasonably potent economy, the revenue of the state is undersized owing to the fact that it has one of the lowest tax rates in Latin America (Loewenberg). Moreover, the government cannot collect tax from the body of citizens who operate in the "informal economy," meaning their jobs or businesses aren't registered with tax authorities. Hence, the problem may not be the low tax rate, but that the government is unable to properly accumulate taxes where they are owed ("Guatemala's Poor Getting Poorer"). Claire Kumar, author of the Christian Aid report *Undermining the Poor*, stated "Tax is the most sustainable source of finance for development, but the amount that poor countries are able to collect is often derisory - much less than their true entitlement." ("Derisory Tax Rates failing the World's Poor").

Tax rates not only affect government revenues, but also economic efficiency and growth. Certain government spending (e.g. infrastructure, aid policies) have the ability to improve a country's economic efficiency and stimulate growth (Scully). Adequate public infrastructure and services are preconditions for enabling private business activity, shown in the positive correlative between the percentage of GDP through government spending and a country's standard of living ("Guatemala's Poor Getting Poorer").

In order for the Guatemalan economy to improve, the citizenry must be equipped into the "formal economy" in order for the tax revenue to reach its unabridged capacity. Through microlending, a larger mass of the rural poor will be empowered to commence their own businesses and begin a pattern of tax-paying that will continuously benefit the economy. Once the government is incorrupt and financially stable, local programs focused on aiding the poverty-stricken and malnourished population can be satisfactorily accomplished.

According to Amartya Sen, the 1998 Nobel Memorial Prize in Economic Science winner, functional democracies are the best tool against famine. As written in *Democracy as Freedom*, Sen states "No famine has ever taken place in the history of the world in a functioning democracy" (Massing). Likewise, Guatemala is unquestionably in need of governmental stability and incorruption in order to tackle their hunger crisis. Sen continued on the topic in a phone interview asserting, "it would be a misapprehension to believe that democracy solves the problem of hunger" (Massing). Hence, the three main courses of action, tackling government corruption, malnutrition, and poverty, are interrelated; all three must be addressed in order to gradually diminish the hunger crisis and are best addressed through foreign aid.

These steps are conducive to improving the hunger crisis in Guatemala and advancing the country in its entirety. When outsiders hear the term "Guatemala," they normally associate it with the popular vidual exports, corruption, malnutrition, and poverty. Although these conflicts may be prevalent in current Guatemala, there is undoubtedly a great opportunity for improvement. Embracing the opportunity must be a methodical, collective effort amongst the government, non-governmental organizations, foreign entities, and the rural families themselves. Through the wholehearted and efficient involvement from the following parties, Guatemala will see the success of biofortification and microlending that other currently advancing countries already have.

As of now, Guatemala's best chance at betterment is through foreign aid specifically gravitated toward improving the government and funding efforts to end poverty and malnutrition. Through this approach, the country receives the means to improve itself just as microlending and biofortification offer that same opportunity to the rural poor. These solutions do not provide charity; rather, they maintain the dignity of the Guatemalan people while providing a prolongation of economic stability and food security.

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