ARGUMENT FOR BUILDING VILLAGE MINI-CHOCOLATE FACTORIES

ABSTRACT

West Africa produces over 70% of the world's cocoa. Because it is sold as a commodity to the West, cocoa barely supplies enough money for farmers to raise and educate children. Furthermore, because of the low price, West African governments are hard-pressed to earn the foreign exchange required to construct roads that lead to an increase in the standard of living. This article proposes changing the formula for development—from top-down, necessarily corrupt and wasteful schemes to a bottom-up approach where villagers produce chocolate that can be sold locally and nationally, thereby bringing money from the city into the town and internationally, thereby increasing foreign exchange and an increase in national standards of living.

I. INTRODUCTION

West Africa produces more than 70% of the world's cocoa beans. Grown, fermented and dried in thousands of small villages, few of which have electricity, many lacking educational facilities, sewage, or access to health facilities, the beans account for one of several cash crops that bring money into the local economies as well as contributing to countries' foreign exchange. Because of low prices, the farmer continues to live a hand-to-mouth existence, unable to provide basic amenities. In fact, while the American farmer receives on average 17.4% of the retail dollar (Anonymous, 2014), the West African cocoa farmer receives far less than 1%. This is hardly a recipe for sustainability.

In fact, the poverty of the cocoa farmer prevents him or her from building homes with running water, proper sanitation, and thereby leads to disease outbreaks such as malaria, dengue fever, dysentery, and Ebola (Baragona, 2014). No amount of intervention by the U.N. or by Doctors Without Borders will solve the problem, as it is systemic. And in the cocoa growing regions of Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Nigeria, and Cameroon, it is directly caused by low prices for commodities, of which cocoa is but one.

Since 2006, Project Hope and Fairness has focused on three countries: Cameroon (accounting for 5% of the world's cocoa crop), Ghana (20.6%), and Côte d'Ivoire (35%) PH&F's initial mission was to expose Americans to the reality of the cocoa trade, while distributing tools to villages to serve as goodwill. (Anonymous, 2012).

In 2012, Project Hope and Fairness expanded its missions. Mission 2 became the idea of building small chocolate factories in villages. The village of Depa was the first test of concept (see Appendix One).

Mission 3, which is now being realized, is to build cocoa study centers in the three countries. Having a chocolate factory as the core business, it would partner with any organization that gives academic credit for an overseas experience. In Cameroon, PH&F is partnering with the University of Buea and the Ekona Research Center in Ekona. In Ghana, PH&F is partnering with ProWorld, Inc (a division of Intrax International) at its Ghana Cocoa Study Center in Frami.

II. THE WEST AFRICA COCOA BUSINESS

West African cocoa growing started on the islands of Sao Tomé and Principe, colonial possessions of Portugal. In the late 1800's Cadbury, Inc. purchased most of its beans from farms and plantations on these islands. In 1906, it became known that Cadbury's beans were slave-produced (Satre, 2005) and the company then shifted its sourcing efforts to nearby Ghana. By then, cocoa growing was common in Southern Ghana, as a freed slave, Tetteh Kwarshie, had imported cocoa beans to his parents' farm in Ghana in the 1880's.

By the 1930's over 60% of the world's cocoa was being grown, fermented, and dried in West Africa. After independence, each of the four main cocoa-growing countries (Côte d'Ivoire, Ghana, Nigeria, and Cameroon) continued to produce cocoa. Côte d'Ivoire's production expanded greatly during the presidency of Houphouët-Boigny.

In neighboring Ghana, Kwame Nkrumah, its first president, actively suppressed the cocoa industry partly as revenge against the Ashanti who were Ghana's major cocoa producers and partly to fund his inefficient state-owned industries. In short, he was pillaging a successful capitalist model to fund an unsuccessful socialist model (Ayittey, 2005).

Nkrumah's successor, Rawlings, committed funds to rejuvenate the cocoa sector, as it and gold have been the main sources of foreign capital. He used the state-fun Cocobod to provide many levels of assistance to the cocoa farmers. As a result of Rawlings' efforts, Ghana's production is now close to 21% of the world's crop and the beans are highly respected for their quality.

Côte d'Ivoire's products, on the other hand, are often said to be uneven in quality but command the lowest prices, partly because of the extensive use of child labor and the poverty of the farmer. Côte d'Ivoire's crop accounts for 75% of American chocolate. Cheap American supermarket bars are mostly Ivoirian beans and therefore are associated with Côte d'Ivoire's issues with Worst Forms of Child Labor and Forced Labor. (Anonymous, 2012a).

In 2,000, reports about the use of child labor and child slavery linked to the cocoa business seriously damaged the reputation of West African cocoa. In response, the World Cocoa Foundation was established to find ways to bolster the industry's image. Financed by the largest chocolate producers, it funded Farmers' Field Schools and a variety of research and development projects. At the other end of the political spectrum, NGOs such as the ILRF (International Labor Relief Forum) and Global Exchange fought to publicize the link between chocolate and child labor and increase American awareness. (Anonymous, 2008)

In 2001, Senator Tom Harkins and Representative Elliot Engel wrote the *Harkins-Engel Protocol*, a voluntary agreement signed by the Chocolate Manufacturers' Association (CMA) and the World Cocoa Foundation (WCF) and witnessed by the authors, the ambassador of Côte d'Ivoire, and a number of NGOs (Anonymous, 2001). This agreement which initially had a deadline of 2005, specified that "cocoa beans and their derivative products have been grown and/or processed without any of the worst forms of child labor." This includes forced labor, a form of slavery.

Criticisms of the protocol included that it lacked any associated certification system. The three certification systems that have grown out of this important agreement are: *Utz, Rainforest Alliance, and Fair Trade*, in ascending order of effectiveness and associated cost to the value chain. Most of the large manufacturers are using the Utz certification.

Tulane University was commissioned in October, 2006 by the U.S. Department of Labor to investigate the state of cocoa growing in West Africa, particularly in Côte d'Ivoire and Ghana, the two countries that had been identified as using the most child labor. After 4.5 years, it issued its fifth and final report (Anonumous, 2011) which essentially listed what it had accomplished in terms of maintaining a database and what steps were needed for the industry to meet the agreements of the protocol.

From the author's experience, the industry was right when it maintained at the outset that certification is not practical. This has turned out to be true. The problem of monitoring 2.5 million cocoa farms located in many thousands of villages is simply gargantuan.

Dr. Neuhaus interviewed the staff of two cooperatives in Côte d'Ivoire in 2012. Before he could even utter a word, they stated categorically that no child under 18 is involved in the cocoa sector under any of the three certifications—Utz, Rainforest Alliance, or Fair Trade. This speaks volumes for the problem of certification, as such a statement is patently false and shows the fundamental flaws.

III. HISTORY OF PROJECT HOPE AND FAIRNESS

2003. The founder of PH&F, Dr. Tom Neuhaus, first became interested in social justice issues after a trip to Ferrañafe, Peru, when he was commissioned to develop a chocolate assortment that would be manufactured in the village. Later in the year, he traveled to Ghana, where he visited the Kuapa Kokoo Cooperative in Kumasi, Ghana in order to learn about Fair Trade and the cocoa farming village. He returned to the U.S. with an appreciation for how little information was available about cocoa and child labor. As an academic (associate professor in the Department of Food

Science and Nutrition at California Polytechnic University, San Luis Obispo) and a sincere believer in an international approach to education, he introduced his findings in his classes on food and culture.

2004. First visitation of Fair Trade cooperatives in three countries: Côte d'Ivoire, Ghana, and Cameroon. Neuhaus realized that American academia was paying virtually no attention to issues underlying an $18 billion industry. One core question to be answered: "Will a certification system, specified by the 2001 Harkins-Engel Protocol actually work?"

Neuhaus donated funds he had raised ($2500 total) to Kavokiva (located in Gonate, Côte d'Ivoire) and Kuapa Kokoo (located in Kumasi, Ghana). As a result of the trip, he developed three chocolate assortments that he sold in various churches and gave numerous presentations to charitable organizations.

2005. With the assistance of Mr. Peter Sewornoo, Neuhaus established a mini-tour of 5 villages in the area surrounding Kakum National Park in Ghana. He was accompanied by his first "social justice tourist", Justin Whitaker, in Côte d'Ivoire; they visited the villages of Broguhe near Daloa, Depa, Pezoan, and Zereguhe near Issia.

2006. Mr. Dale Landis accompanied Neuhaus to visit the villages in Ghana and Côte d'Ivoire. This was also the year that PH&F was established by Ernie Roide, Eric Parkinson, and Tom Neuhaus. Also this year, PH&F donated 5 cocoa weighing scales to the villages of Zereguhe, Pezoan, Depa, and Broguhe in addition to machetes and boots.

2007. Three individuals, Stan Thompson, Kate Montgomery, and Mark Phillips accompanied Dr. Neuhaus to visit the 10 villages of Ghana and Côte d'Ivoire. Each contributed $1,000 toward building public toilets in This year, they picked up tools and distributed them as well as building bathrooms in three villages. Stan Thompson died of a heart attack shortly after the trip, so Neuhaus was able to raise $4,000 to put a roof on a school in Dawayo-Chantier, Côte d'Ivoire.

2008. This year, Ms. Skyline Lau accompanied Dr. Neuhaus. Large plastic bags were distributed to villages in the theory that they would give farmers the ability to hold onto beans until the market conditions were favorable. This approach turned out to be impractical because farmers don't save their money but spend it immediately as they live a hand-to-mouth existence. In Ebekawopa, PH&F built a solar powered cocoa drier; it turned out to be impractical, but the fan was rehabilitated to provide ventilation in the chief's house.

2009. Dr. Neuhaus was joined by Katie and Anna Nakamura. Anna had raised about $2,000 in her church; Dr. Neuhaus suggested it be put toward the purchase of 4 dryness meters; the theory was that this would help farmers dry their cocoa more and thereby receive 100% of the going price rather than losing money through deductions for high moisture content. Follow-up a year later showed that the middlemen who purchase the beans were very impressed by increase in quality.

2010. PH&F visited Côte d'Ivoire and Ghana. Travels to Ghana and Côte d'Ivoire focused merely on visiting villages and donating tools. Suzanne Wei , who had started a chocolate company and later sold it, accompanied Dr. Neuhaus and his mother, Dorothy, on the Ghana leg in order to learn about Fair Trade and about the cocoa farming village.

2011. The trip this year started in Cameroon. Dr. Neuhaus and his Cameroonian contact, Kila Balon, visited Munyenge, Monatele, and Ebalowa, the latter being considered as a potential site for a cocoa study center. Th remainder of the trip was spent in Ghana as Côte d'Ivoire was experiencing a civil war. Dr. Neuhaus and his mother were joined by two Food Science & Nutrition students, Garrett Morris and Lisa Wong; tools were brought to the customary five villages.

2012. PH&F hosted both Dorothy Neuhaus and Deanna Pucciarelli, an Assistant Professor at Ball State University, Muncie, Indiana. Drs Neuhaus and Pucciarelli gave talks at a one day seminar hosted by the University of Buea. The focus was on developing a cocoa study center. Dr. Neuhaus and his mother continued on to Côte d'Ivoire. Ghana was skipped this year. Picture is of Dr. Pucciarelli and Dorothy Neuhaus posing with tools for Munyenge.

2013. All efforts were focused on building a rice hulling and chocolate making operation in Depa, Côte d'Ivoire, a project that cost approximately $20,000. As a result, Depa is now the first chocolate producing village in history in Côte d'Ivoire. The rice hulling operation services four villages, and women no longer spend 1 hour each day pounding the rice in order to hull it for dinner.

2014. This year, Bob Peak and Dr. Neuhaus spent a full month visiting villages in Cameroon, Côte d'Ivoire, and Ghana. An MOU was drawn up with the University of Buea to start a chocolate producing operation in Ekona and in 2016 students from Bloomsburg University, PA will spend several days of their two week Cameroonian experience learning how to make chocolate and visiting several cocoa growing villages. The chocolate factory in Depa, Côte d'Ivoire received a much larger melangeur, enabling them to make 1,700 disks or 340 bars in a 12 Kg batch. 10 days in Frami, Ghana, resulted in a chocolate factory that produces 12 Kg of chocolate per day and sells it in Kakum National Park and in nearby Jukwa. In January, 2015, ProWorld will send its first interns to learn production and to assist with various aspects of running the business.

IV. REALITIES OF INTERNATIONAL DEVELOPMENT AND THE COCOA MARKET

Do poverty and inequity of resource distribution necessarily have to exist? There are those who perhaps cynically point out that from a historical, Biblical, or Darwinian perspective, poverty has always existed (historically), is assumed by the Bible to be part of Original Sin (like murder or slavery), or is written into the human genome (e.g., Napoleon Chagnon's work with the Yanomomo)

On the other hand, there are those who assume that poverty does not have to exist. They point to countries such as Norway, Sweden, Denmark, Holland and Germany where because of the Marxian revolution in the mid 1800's, the assumptions about equality got rewritten. In these countries, wealth is redistributed by the state and citizens are taken care of by the state from cradle to grave. Denmark is, according to the UN's *World Happiness Report* (Helliwell et al., 2013) the happiest country in the world.

A. Development—a Dialectical Approach

Students of international development often categorize development into two camps: big and small. Academically speaking, the most recognized names associated with the two approaches are Dr. Jeffrey Sachs of the Columbia Earth Institute and Dr. William Easterly of the ____ Department at NYU.

Dr. Sachs, who wrote *The End of Poverty*, promotes working with the top levels of government and industry to embark on major projects. He is involved in 13 U.N. funded projects where entire villages are given an economic and infrastructural makeover. The projects are part of the *Millennial Initiative* (sic?). The positives associated with the Big approach are coordination and less risk of reinventing the wheel. The negatives associated with the Big approach are: tendency toward corruption, where large sources of funds end up in the pockets of the wealthy. The Bill and Melinda Gates foundation focus mostly on large, coordinated efforts.

Dr. Easterly, associated with the small approach to development, wrote *White Man's Burden*, *The Elusive Quest for Growth,* and *The Tyranny of Experts*. He recommends many, small initiatives, preferably by NGO's, each involved in its own limited area—e.g., wells, schools, and in PH&F's case, chocolate production businesses. The positives associated with the small approach are: little corruption. The negatives are: lack of coordination and reinvention of the wheel. Churches and mosques are associated with the small approach, providing clinics, water, and schools in exchange for souls.

B. Development—a Lousy Record

In the 1990's Bono instituted the *Make Poverty History* campaign, pushing the V8(?) to forgive World Bank loans, thereby letting many African leaders off the hook in terms of fiscal responsibility. Critics of this approach rightly point out that forgiving debts just encourages more of the same behavior.

In her book, *Dead Aid*, Dambisa Moyo states categorically that $1 trillion has been given to countries in sub-Saharan Africa since independence. Most of that aid, she claims, is of the wrong sort: helping inept and corrupt leaders stay in office, maintain their power through favors bestowed usually on cabinet ministers and others, often of the same ethnicity. In short, the politics of privilege has resulted in the squandering of most of the large resources. In some cases, e.g. Mobutu Sese Seko, many of those dollars actually end up back in the donating countries in the form of multi-billion-dollar bank deposits.

Many sub-Saharan countries were left by the colonists with balanced budgets; for example Ghana was left by the British with a $300,000,000 surplus. In the ensuing 57 years, Ghana's treasury has never once been in the black (but then, neither has the U.S.'s) and the currency has consistently lost value. In 2003, the first year the author visited Ghana, there were 2500 cedis to the dollar. Eventually, their value dropped to 10,000 to the dollar, so a new currency was established—the Ghana cedi. Originally pegged at 1 to the dollar, it is now trading at 3.2 to the dollar.

The World Bank has been a convenient whipping boy, accused of facilitating corruption by continuing to lend to corrupt leaders while also practicing draconian measures to balance budgets on the backs of the lower and middle classes through radical reductions in salaries. These efforts were part of their infamous Structured Adjustment Program. In any case, The World Bank is merely a bank, not a development program and it responds to the requests of countries, not individuals. Like so many of the larger banks in the U.S., it cares little about small projects but instead favors the largest ones—dams, highways, airports.

Perhaps the most egregious, irresponsible use of World Bank funds was by Houphouët-Boigny in the 1980s, who took $5 billion and turned his former sleepy burg of Yamoussoukro into the nation's capital, building the world's largest church, an enormous and very impressive hotel in Abidjan, and bridges across the lagoon that tied the *Plateau* to *Treichville* in Abidjan. At the same time, HB also assumed that cutting down the rainforests of Western Côte d'Ivoire and replacing them with cocoa farms would have no effect on the world price of cocoa and of course, its value dropped precipitously.

Development has consistently favored the largest projects. Certainly, paved roads and electricity that stays on for more than a few hours are critical to maintaining a growing economy. At the same time, development of small projects that build a complex and robust economic system are equally as important.
It is this author's contention that the developed world has favored large projects partly because it stands to benefit more. For example, chocolate produced in Africa cannot compete with the products made in Europe because of the high tariffs that have consistently and steadfastly stood in the way.

The Western World has encouraged only those African businesses (such as flower growing in Kenya) that require cheap labor. Meanwhile, because of the suffering economies, thousands cross the Sahara in order to take boats across the Mediterranean for the opportunity of working in Europe's factories.

C. Impediments to Development

The biggest impediments to development are: history, infrastructure, corruption, negative attitude, disease, and lack of education.

History. Many students of pre-colonial African history speak of a continent not just of villages but of civilizations with sophisticated methods of government and a concern for the common man. When the Europeans divided sub-Saharan Africa into its current states (the *Scramble for Africa*, a conference hosted by Bismark of Germany and King Leopold II of Belgium in 1885), they cemented into place many of the current strife-torn countries of which there are numerous examples. Nigeria, for example, suffers from the continued strife among its three main ethnicities—Hausa, Ibo, and Fulani—which would have been best left to themselves instead of forcibly conglomerated.

Ethnic strife has severely impacted the cocoa industry. In Côte d'Ivoire, for instance, as soon as Houphouët-Boigny had died, his successor Henri Bédié instituted the concept of *Ivoirité,* which became the bedrock of almost two decades of civil strife. Ivoirité stipulated that no one could be president if one or both of his parents had not been born in Côte d'Ivoire. This was targeted specifically against the country's current president, Alasane Ouattara, and it fired up the Northerners.

Under HB's more than 30 year rule, the Northerners (or *djoula*) had been encouraged to move south and west, buy land, especially in the Issia and Daloa areas, then clear it and plant cocoa. This very large population shift had provided the foreign exchange to turn a formerly impoverished, undeveloped country into the *Ivoirian miracle*. Abidjan, its largest city, became known as the "Jewel of Africa"; looking across the lagoon from Treichville to the skyline of the *plateau,* one is truly impressed.

After 1993, many Northerners lost the rights to their lands and moved back to Mali and Burkina Faso as well as to the Northern area of Côte d'Ivoire, which extends from Bouake to the borders. This led to a civil war between North and South with the line between them extending through Bouake.

Infrastructure. Anyone who has turned his kidneys to mush bouncing on African roads can appreciate how difficult transportation is for the cocoa farmer. The roads are built on poorly graded laterite usually with little or no gravel base, and giant trucks carrying the vestiges of rainforest hammer the roads into potholes. American 18-wheelers, like American cars, would quickly disintegrate on West African roads. Instead, companies purchase very heavy duty trucks, which take potholes at 40 MPH, converting them from plate-size depressions to muddy swimming holes. Small cars have to zigzag. Cars that last the longest are Mercedes, Toyotas, Nissans and other Japanese cars. USAID by law must purchase American vehicles, but these last perhaps 2 years before their suspensions are ripped apart.

Not only are roads awful, but there are very few between countries. This has a historical base: the colonial powers discouraged trade between African countries, as it developed small business and made the prices of commodities rise. Most roads in Africa originate in the interior and extend to the ports, confirming what everyone knows about the colonial powers: that they were purely selfish. In fact, it would be interesting to find out how much of the wealth of Europe, the mansions, the great buildings, even the high standard of living is actually due to the giant sucking sound of European companies depriving Africans of their resources at bargain basement prices.

Corruption. Since independence, most African countries have experienced some of the most blatant corruption on the planet. Mao Tse Tung ranted against the *bourgeois tendencies* of the Chinese. And yet, China has a 2000+ year tradition of revering modesty and respect for the elders—founded in Confucianism and Buddhism. This awareness of the selfish tendencies of Homo sapiens has contributed to China's wealth today. Another related example is the former president of Singapore, _____, who reputedly wore the same pair of glasses for years. Considered an example of a benevolent dictator, he turned an impoverished port city into an economic powerhouse.

Corruption saps the economic lifeblood of a country. For example, PH&F purchased two $3500 chocolate machines manufactured in India and shipped to Abidjan and Accra. Both machines incurred approximately $2200 of import fees. Investigation of the import tariffs online shows that each country technically charges 15%. The difference between the actual duty of 63% and the stipulated duty of 15% is 48%, which might be labeled "corruption tax". This of course increases the cost of doing business and saps West African economic vitality.

Far more dramatic stories are experienced at the ministerial levels. Dr. George Ayittey peppers his book, *Africa Unchained* with examples. A joke told to students of development in Cameroon goes like this…

> Two up-and-coming government officals, one Chinese, the other Cameroonian, meet at an international conference and become good friends. The conference is about infrastructure development. After they part, ten years go by and the African happens to be in China and looks up his friend. He (the friend) now lives in a very nice house and has three very good cars. The African asks his Chinese friend, "How did you do it?" The Chinese friend takes him for a ride on some new roads and says, "a portion of each car's toll is deposited in my bank account."
>
> A few more years pass, and the Chinese government official visits his African friend, who lives in a palatial estate complete with 30 servants and with 10 new Land Rovers, LR-5s (more than $100,000 each). The Chinese official says to his friend, "How did you become so very wealthy?" The Cameroonian, like his Chinese counterpart, takes his friend for a ride in the countryside. It is the usual African red dirt roads, crisscrossing here and there, very difficult to drive on. The Cameroonian says to his Chinese friend: "You see? This is how I became wealthy. We borrowed $300 million from China to pave these roads and every bit of it went into my bank account!"

Negative Attitude

Because of the enduring corruption, it is difficult for many West Africans to see ways to make improvements in their lives. The brightest children go to the West, get a very good education, and then come back only to build very nice homes surrounded by walls topped with glass shards. As they say, "The rich get richer and the poor get … children."

There is an underlying assumption that it's just not worth it to struggle and to strive. This is especially true of the village, where young people despair of ever having a job and move to the cities, where they often sell sundries on the street. The cities expand, usually with no planning for sewers and other basic utilities.

How to stop the rural to urban movement that plagues all of the Third World? In the big development perspective, the rural areas need more access to electricity, to clean water, to sewers, and to roads. In the small development perspective, the rural areas need to use their cellphones and their natural resources to develop local industry. This is where developing chocolate factories in villages can go a long way toward bringing money to the village and changing negative attitudes to positive attitudes.

Disease

In West Africa, the main killers are malaria, malaria, malaria and dysentery, dysentery, dysentery. All the other killers, including the very dramatic and frightening Ebola, are minute in comparison (although Ebola's growth phase is indeed frightening). Every single person contracts both malaria and dysentery dozens of times during a lifetime; these two disease sap the very energy of the population.

The fact that there are virtually no sewers in all of West Africa, that sewage is at best channeled and left open means that mosquitoes breed in the sewage and flies distribute cholera and dysentery. The fact also that people still use the habit of eating with the right hand and wiping themselves after using the toilet with the left and that food workers work with both hands means that everyone, visitors and indigenous people, contract a host of visceral diseases.

It is difficult to see how a country can grow its economy when a good portion of that economy is spent on the process of dying. Every Saturday morning is funeral day, and in every community in West Africa, you see hundreds of people wearing red and/or black because they are visiting one or more funerals.

In fact, the main reason that it is easy to borrow a diesel or gasoline powered generator is because they are rented out to power the massive loudspeakers that blast music (mostly local but also some rap and reggae of Bob Marley) all day long. Funerals begin at about 3 in the morning on Saturday; so does the music.

On the positive side, NGOs and governments have pushed hard to drill boreholes, making clean water available. In the cities, people purchase bottled water for drinking, as they have higher incomes. In the rural areas, people have to rely on wells.

Lack of Education

Throughout West Africa, it is easy to enter a village but sometimes difficult to communicate—because the inhabitants have not learned English or French, which are the dominant languages associated with economic success. Similarly, few children learn mathematics, also critical to running a successful business.

When Dr. Neuhaus discusses plans with village chiefs, he does so (as is the custom) with the spokesman or *linguist*., who must translate into the local language.

The connection between speaking a language and commerce is widely accepted; it probably explains why the Peace Corps has focused so many resources on teaching English around the world.

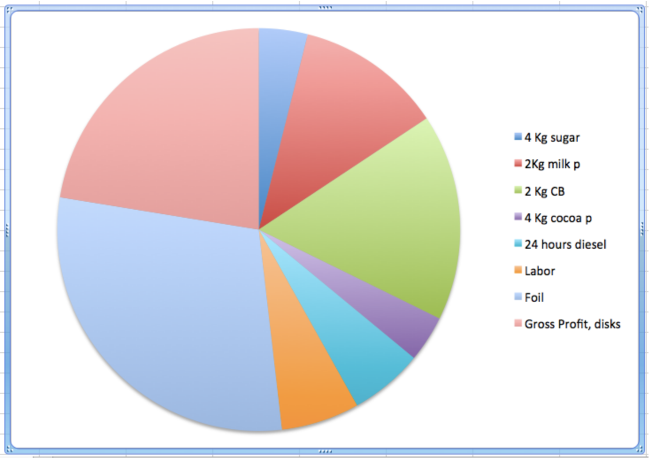
Besides language and mathematics, in order for villagers to keep on the world stage, they need to know something about that stage. For example, cocoa farmers have virtually no knowledge of the cocoa value chain. They do not know why it is critical for large chocolate corporations to maintain extremely low costs. Otherwise, chocolate bars would be reduced from the status of staples to luxuries not affordable to the working classes.

V. BUILDING VILLAGE CHOCOLATE MICRO-FACTORIES

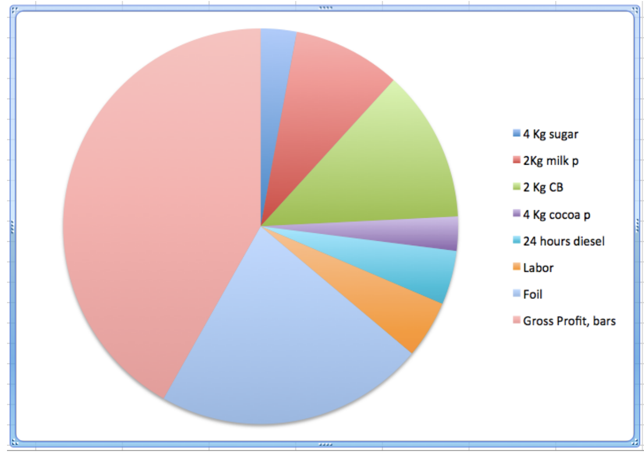
As discussed above, the diseases of Africa are based on poverty, which is based on the farmer's slavery to commodity production. While North American wheat, rice, corn, and cotton farmers till thousands of acres, borrow hundreds of thousands of dollars to purchase machinery that cuts labor costs to almost nill, receive all sorts of government subsidies and price supports, African cocoa farmers receive no such assistance. They farm on average less than ten hectares, and the return for their investment of time and inputs is paltry. Meanwhile, many in the West are advocating the involvement of large Western corporations to replace the small African farm with large, corporate versions; presumably this would lead to an exodus from the rural areas to urban areas—as has occurred in Mexico. Furthermore, as we know from our own history, this is a recipe for the development of a permanent underclass.

The author believes that there is a way out. It is not a certification scheme, which at best doubles the price the farmer receives. Even with Fair Trade, the amount the farmer earns is minimal. The solution, instead, is for the farmer to trade higher on the value chain. In the United States, the average vegetable farmer receives 4% of the final retail price of a product. However, if the West African cocoa farmer not only receives a better price for his commodity but also owns the chocolate business that purchases his beans, he stands to benefit much more.

Consider, below, two cost breakdowns of manufacturing disks and bars as well as profits.



Breakdown of Costs—Disks
Wholesale price: 30 pesewas
Retail price: 50 pesewas
Profit: 22%



Breakdown of Costs—Bars
Wholesale price: 200 pesewas
Retail price: 350 pesewas
Profit: 42%

The above cost and profit breakdowns demonstrate the phenomenal potential for capital generation inherent in villagechocolate production and sales. The production is of course limited by sales. If sales prove to be badly managed, then the model is compromised.

Costs can be greatly improved, upon, improving the picture still further:

Sugar: current cost figures are based on the price of sugar available in400g plastic bags from local vendors. Purchase of sugar in 50 Kg bags will of course slash the cost—perhaps by as much as 50%.

Milk Powder: the same is true of milk powder—sold in 400g bags, locally. It is a "filled" milk, meaning that a vegetable fat has been added to replace milkfat. For better flavor and cost reduction, whole fat milk powder could be purchased in 50 Kg bags.

Cocoa Butter: right now, cocoa butter has to be purchased at *Le Gourmet*, a division of SACO (Barry Callebaut) and at *Golden Tree Processing Company* in Tema, Ghana. Costing $12 per Kg and requiring a long drive from the country to the city, this is the the easiest target for change. Purchase of a hand operated oil expeller for $100 approximately can obviate the need for an expensive trip. Furthermore, insufficiently fermented beans or between-crop beans that command a low price can be converted into cocoa butter while the press cake can be fed to the pigs or composted to produce biofuel or destructively distilled to make carbon monoxide.

Cocoa Powder: this is a coarse powder made by roasting beans in a large pan over a fire (or baking in a convection oven), then hulled by hand then pounded in a mortar. The mélangeur can then grind the particles to 12 microns.

Electricity: considerable costs can be saved when the grid is operational. This cost is for 2 gallons of diesel for every 24 hours of operation.

Foil: it costs $500 to ship 50,000 foils (50, 1,000 foil packets) and another $300 in tariffs (at the current rate of 125%, which is 10X the rate posted by any of the West African governments).

VI. CONCLUSION

This paper has discussed the history of chocolate, the West Africa cocoa business, the history of Project Hope and Fairness, realities of development and the cocoa market including attempts to satisfy the Harkin-Engel Protocol, and the building of small-scale chocolate factories. A primary theme is that certification simply will not work as it does not treat the primary problem, which is poverty. It is reminiscent of the old *unfunded mandate* of which governments are particularly and hypocritically adept. To treat poverty requires local measures with considerable efforts on the ground. One of the great weaknesses of our society is its educational system that does not encourage students to learn foreign languages and to develop a comfortable familiarity with Third World communities.

One solution, in this author's view, is to build small chocolate factories in villages and to link the products of such factories to the Western market. Otherwise, we are condemned to read articles about Worst Forms of Child Labor and Forced Labor in perpetuity.

BIBLIOGRAPHY

Anonymous, 2001. *The Harkin-Engel Protocol,* downloaded from: ww.harkin.senate.gov/documents/pdf/HarkinEngelProtocol.pdf

Anonymous, 2008. *The Cocoa Protocol: Success or Failure?* ILRF.

Anonymous, 2011. *Oversight of Public and Private Initiatives to Eliminate the Worst Forms of Child Labor in the Cocoa Sector in Côte d'Ivoire and Ghana*, Payson Center for International Development and Technology Transfer, Tulane University, New Orleans, LA.

Anonymous, 2012a. *2012 Findings on the Worst Forms of Child Labor*, United States Department of Labor, Bureau of International Labor Relations. Downloaded from http://www.dol.gov/ilab/reports/child-labor/cote_divoire.htm

Anonymous, 2012b. Accessed on September 27, *Cocoa Harvest 2012/2013,* http://chocosuisse.ch/chocosuisse/en/documentation/facts_figures.html

Anonymous, 2014. *What is the Farm Share of the U.S. Retail Dollar?* USDA Economic Research Service, accessed 9/27/2014 at http://www.ers.usda.gov/faqs.aspx#fooddollar

Asante-Poku A. & Angelucci, F., 2013. Analysis of Incentives and Disincentives for Cocoa in Ghana, Technical Notes Series, MAFAP, FAO, Rome.

Ashitey, Elmasoeur, 2012. *Cocoa Report Annual*, Gain Report, USDA Foreign Agricultural Service.

Ayittey, George, B.N., 2005. *Africa Unchained*: *the Blueprint for Africa's Future*, Palgrave-Macmillan, New York, NY.

Baragona, S., 2014. *Poverty Helps Fuel Ebola Outbreak, Experts Say*, accessed 9/27/2014 at: http://www.voanews.com/content/poverty-helps-fuel-ebola-experts-say/1970096.html

Collier, Paul, 2007. *The Bottom Billion*, Oxford University Press, New York.

Easterly, William, 2013, *The Tyranny of Experts*, Basic Books, New York.

Easterly, William, 2002. *The Elusive Quest for Growth*: *Economists' Adventures in the Tropics,* The MIT Press, Cambridge, MA.

Easterly, William, 2006. *The White Man's Burden*. *Why the West's Efforts to Aid the Rest have Done so Much Ill and So Little Good, The Penguin Press, New York, NY.*

Helliwell, John, Layard, & Sachs, Jeffrey, 2013. *The World Happiness Report*, 2013.

Moyo, Dambisa, 2009. *Dead Aid*, Farrar, Straus and Giroux, New York., NY.

Sachs, Jeffrey D., 2005. *The End of Poverty*, Penguin Books, New York, NY.

Satre, Lowell J., 2005. *Chocolate on Trial: Slavery, Politics, and the Ethics of Business*, Ohio University Press.

APPENDIX ONE: Depa Rice Hulling and Chocolate Production

Rice Hulling Building

Chocolate Making Building

David Makes Chocolate

Hulling Rice

Wrapping Bars

Making Hot Cocoa

APPENDIX TWO: Frami Chocolate Production

Building Donated for Ghana Cocoa Study Center

Roasting Beans Over Fire

Hulling the Beans

Roasting the Nibs

Filling Molds

Bars and Disks