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 Ivory Coast, Factor 16: Education

The Power of the Ivorian Youth

“Silently, the children squatted down and started work. They wore torn and grubby shorts and T-shirts. There was no laughter or play. On their legs were scars from machete injuries. There was no first aid kit around or any protective clothing. In one hand they held a cocoa pod. With the other they hacked it open with a machete, then prized out the beans.” - Humphrey Hawksley

Intro

After gaining its independence from France in 1967, Ivory Coast began to make significant economic improvements through urbanization and industrialization. For example, Abidjan, the largest city in Ivory Coast, was able to modernize through creation of office buildings and skyscrapers. Major highways were created to accelerate transport from the farm to major seaports, such as Abidjan and Sassandra . But, one part of the Ivorian lifestyle that sets them apart from many countries is their focus on traditional agricultural practices, as well as the relevant juxtaposition between the rural and urban societies. Agriculture is one of Ivory Coast’s few strengths of its economy. Ivorians rely heavily on the cacao bean, as well as a few other crops such as bananas and coconuts, for the overall well-being of their country. Unfortunately, Ivory Coast is a country that is often overlooked by other countries because of its well-developed economy and infrastructure compared to other African nations; however, Ivory Coast is, in fact, struggling to find a balance between the prominent urban society and the inconspicuous rural society (Côte D'Ivoire). In order to develop these new technologies and further connect the rural to the urban, we will first need to target the education system.. A vast number of refugees have crossed the border without any sort of recognition or citizenship in search for a job to support his or her family. Often, they focus their attention on cities where jobs are higher-paying and easier to find. In contrast, millions of Ivorian natives are forced to work on cocoa farms, most at a very early age. Therefore, a vast number of children are not able to receive higher education because of the highly demanded physical labor needed on the family farm. What may seem like a problem that can be easily solved turns out to be a concern for the future generations of Ivory Coast. Without further education and modern technology, the majority of the population that works in the agricultural sector finds it difficult to develop solutions involving agricultural productivity and therefore, the country’s food security.

Life in Ivory Coast

To find out why this is happening, one must first analyze how a typical family lives on a day-to-day basis.. The typical family, on average, is made up of a father, his wife, and four children (CIA). This is a vague statement because of the large contrast in culture between the urban and the rural societies in Ivory Coast. The rural part of Ivory Coast is mostly made up of families that tend to have up to six or seven children for physical labor support on the cacao farm. This can relate to many cultures around the world, as the rural areas of countries are prone to be less populated but show higher fertility rates in women. The rural society also is made up of different ethnic groups who grasp the common belief that children are of high value to the household. Childbearing thus creates a sense of pride and purpose in an Ivorian woman’s life. This asset is very important for women, especially since they don’t have as many rights as men (Countries and Their Cultures).

As for their diet, the typical family consumes large amount of grains, tubers , and legumes (Countries and Their Cultures). Rural families also raise livestock for their own consumption, mostly chickens and other small domestic animals (Food and Daily Life). With Ivory Coast being located on the coast of the Atlantic

Ocean, coastal Ivorian families tend to consume larger amounts of fish than the rural midland families in Upper-Ivory Coast (Countries and Their Cultures).

Education

For most Ivorians, the typical lifestyle is related to the amount of education they have received. According to a study done in 2012 by epd.org, about 77.8% of all Ivorian children between ages 6-18 (years at which Ivorian children are able to attend school based on education system) are in primary school at ages 6-11. Unfortunately, “about 11.8% of all children within ages of 6-18 attend lower secondary school at ages 12-15” (National Education Profile). An even lower attendance is seen in higher education. About 10.4% of all ages between 6-18 attend higher secondary school at ages 16-18” (National Education Profile). Even though each level of education involves one less year of study, there is still a significant drop in the amount of students who graduate from primary school and move on into secondary school. The drop in attendance is evident from the understanding that most families cannot afford education for their children after six years of primary school. Some high schools that offer secondary education “costs up to \$7,000 a year”, according to a girl named Zeina Jebeile who grew up in Ivory Coast and is currently attending Boston University. Although secondary school may be too expensive for the typical family in Ivory Coast, the lack of modern technology in schools makes it difficult for these high school students to receive a “higher” education.

The education system of Ivory Coast is based on the French education system, six years of required primary school (elementary school) and optional secondary school. The primary school curriculum, taught in French, focuses on math (simple arithmetic like addition/subtraction), basic literacy, and a foreign language, often being English. Secondary schools offer a variety of subjects compared to the basic primary school curriculum. Subjects include history, science, civic education, physical education, math and literacy, art, and English as a foreign language. Students who attend lower secondary school at age 12-15 prepare for a higher secondary school entry exam. If a student passes the exam, the student is able to attend higher secondary school, similar to high school in the United States (French Education). Primary school is free to natives, but school equipment is not provided by the school, and is thus paid for by family members. In Ivory Coast, the typical farm family values the child as a caregiver and a perpetuator. However, according to everyculture.com, “the immigrant population of Ivory Coast is about one-third of the total population.” Immigrants of Ivory Coast are not able to receive free primary school education, and thus have to pay for acceptance into private schools. Consequently, most of these immigrants focused their attention to cities where a job was easy to find. The city jobs near the coast were generally higher-paying compared to the rural farming jobs in the midland where the Ivorian natives lived. Also, access to private schools was easier in the urban for the immigrants. This allowed immigrants to provide a higher education for their children (private school education in Ivory Coast typically compares to U.S. public school education), while natives struggled to create a better future for their children (Lovett).

Health Care

The standard amount of education received in a country often relates to how much health care is provided there. The interdependence of these two aspects can create many issues in the country, especially if one is not as well supported as the other. Ivory Coast struggles to provide appropriate health care for the majority of the population. This all comes back to the educational system, which struggled during a time of rapid urbanization and political unrest. A big problem that faces the health care system in Ivory Coast today is the lack of physicians. According to the CIA World Factbook, in 2010, there was on average only “1 physician / 20000 population.” This number not only ties back to the unstable education system, it ties back to the similar beliefs of the sixty ethnic groups located in Ivory Coast. “About sixty-three percent of the population stick to traditional ethnic beliefs” (People and Culture).

Another issue within the health care system is free public healthcare. This idea, free healthcare for every citizen in a span of nine months, was an emergency plan to quickly rebuild the healthcare system, eventually put forth into action by President Alassane Quotarraa just after the recent period of political turmoil in 2011. The civil war created a high demand for hospitals and clinics in Ivory Coast. Lab equipment, computers, hospital beds, medical devices, and even ambulances were being stolen by armed forces during the political conflict to take care of wounded soldiers. The remaining citizens turned to pharmacies for health care because hospitals were out of stock (Palitza). Since there weren't many physicians in the country and medication was in high demand, the free health care system was difficult to maintain. After nine months went by, the president decided to switch to a program that involved free health care to only mothers and their children under the age of six months. This allowed free deliveries for the mother and free treatment for illnesses in children under the age of six months (expatfinder.com).

Typical farm

Aside from the incomplete and unstable education/ health care system, the real definition of Ivory Coast as a nation all comes back to the farm. In fact, "almost 70 percent of the labor force is engaged in agriculture, livestock raising, forestry, or fishing" (everyculture.com). Of those seventy-percent, "about eleven-percent are wage earners" (Ounissi, 2008). The majority are cash crop smallholders, selling their crops to the global commodity market. In contrast to developed country farmers, the typical Ivorian farmer owns a modest five hectares of land. This land provides income for the farmer and his or her family, but is not owned by him or her. Social protection has therefore become a major problem in farmers because they have no records that give them the right to plant crops on a plot of land (Smallholder Farmers).

Some of the main cash crops on a typical Ivorian farm include, cocoa, coffee, bananas, and palm oil. Each crop is grown in a certain area of Ivory Coast based on its optimum environment for growth. Temperatures are often higher in the south which is closer to the equator, making it easier for smallholders to plant the coffee bean, requiring a temperature of about twenty-five to thirty degrees celsius to grow (Abenyega & Gockowski). Also in recent years, new crops have been included on the farm including palm oil and rubber. Both crops have become the "easy way out" for farmers who struggle to make a living off of the cocoa commodity. A 38 year old cocoa farmer named Olga Rosine Adou living in Agboville once said, "Rubber is a great threat here to cocoa farming. Everyone is wanting to do it. Among other things, it produces every month. Some people are even destroying their cocoa fields to replace them with rubber" (Zilberman). Besides rubber being a threat to its overall status, the cacao bean is still a determining factor in a typical family's income. The cacao bean is often seen in the northern part of the country; however, it is grown all over. Ivory Coast has always been known for the cacao bean, "producing 35% of the world's crop" (Gender Inequality). Most farmers rely on this crop for income. But new alternative crops, like rubber, have made it easier for the typical farmer to get by. David Zilberman, a professor in agricultural economics, travelled to Ivory Coast and talked to local villagers in a town called Zubre. One villager stated that "cocoa was once 'King' but now if you plant 10 hectares of rubber you drive a car but with cocoa only a motorcycle" (Zilberman).

By knowing the significance of each crop on a typical farm and how much of it is grown, one must understand how that crop is tended and nourished for a maximum yield. Looking back at the unstable education/health care system and sharp contrast between the urban and rural societies, one may conclude that Ivory Coast has not looked into more modern ways of producing/tending their crop. In fact, the Ivorian farmer relies heavily on the child for manual labor. "Around 28% of children in Ivory Coast were involved in some form of child labor" from data taken from 2002 to 2012 (UNICEF). Most work that is done by the child is "hazardous" to his or her health since they are constantly around chemicals and sharp instruments, such as machetes. Since the cacao bean is found inside the pod that is grown on trees, the harvesting process involves using the machete to open the pod and collect the cacao beans. Other practices include using pesticides and fertilizers to protect the trees from any pests, such as capsid bugs,

and transporting the cocoa beans to large bins or surfaces to ferment for four to seven days (Abenyega and Gockowski).

Major Barriers that Face the Typical Family

Knowing that Ivory Coast relies heavily on agriculture, it's relevant that major obstacles stand in the way of a typical family living in Ivory Coast. The major obstacles seen in most families are derived from little technology involving agricultural productivity, limited employment options that offer higher wages, and restricted access to various foods on the market that can provide a more diverse amount of nutrients to Ivoirians. One of the main issues with the agricultural productivity in Ivory Coast is that, even in a world dominated by research and technology, there still isn't an easier alternative to tend and harvest main crops, like cocoa and rubber, besides implementing manual labor. Another thing that holds the typical family back from the rest of society is illiteracy. According to CIA.gov, the literacy rate for all Ivoirians ages fifteen and older is 43.1%. Women, in particular, don't have as many rights as men, and this can trace back to the traditional, related ethnic beliefs of the sixty ethnic groups living in Ivory Coast. The literacy rate for females is 32.5%, and for males 53.1% (CIA). The lack of technology often places more emphasis on the man to do the physical work, while the woman is supposed to focus on the protecting and feeding the children. Since the woman generally has no say in what needs to be done on the farm, the woman heavily depends on the man for income from growing crops (IFAD). Although there has been some things that have been done in the effort to give women more rights, the men still make most of the decisions.. And now, the woman is left uneducated and unable to make a significant contribution to Ivoirian food security and society.

A country that struggles to "catch up" to the technology of other countries also struggles to provide jobs, involving higher wages and more opportunity, to families. The GDP per capita in Ivory Coast "still stands at \$3,400, 184th out of 230 countries" (CIA). As we know, about 70% of the population in Ivory Coast works in agriculture, and most sell their crop straight to the global market as cash crop smallholders. Nowadays, Ivoirians are moving to the cities to find higher paying jobs and better education for their children faster than ever before. The rate of urbanization is 2.7% in Ivory Coast, ranked 32nd out of 257 countries (2012 est.) (Urbanization). The already improving infrastructure and development in cities like Abidjan made it easier for city migrants to find higher paying jobs, gain access to key micronutrients through food markets, and provide an adequate education for their children. Farmers left the farm and moved to cities where jobs didn't involve income based on the fluctuation of the commodity markets. While the urban family moved forward with economic and financial prosperity, the rural family took a strong step backward as agricultural productivity began to decline.

The Underlying Cause

In developed countries like the United States, the vast majority of common people have a basic idea of what's going on in a developing country, and what factors are causing it. Often what they don't know is the underlying cause of food insecurity in that country. Ivory Coast is a country that is experiencing rapid urbanization rates, eventually leading to a decline in the value of agriculture. Even though urbanization rates are high, the typical Ivoirian family still puts a lot of pressure on the child to make significant contributions to society. According to the CIA world factbook, "37.94% of the population in Ivory Coast consists of children between the age of 0-14 years". Because of this, the people of working age (15-64) have troubles supporting the child,. Also, the rural family struggles to feed the seven children on average, especially when cocoa prices are low on the commodity market. Therefore, families place children in positions that require a lot of responsibility at a very early age, including using dangerous equipment on the cocoa farm, to support the family financially. As of now, the youth dependency ratio in Ivory Coast is 77.9% (CIA). In order to control these factors, we must first realize that all of these factors stem back to the unstable education system.. Schools may be educating students about basic subjects such as math,

literacy, and history, but what they don't teach is what, I think, may be causing all of these surprising facts, about a country that is known to be the richest in West Africa, to be true.

Factors affecting Education

As of now, there is a high demand for cocoa from the multinational industries like Mars, Hershey's, and M&M's. The high demands for cocoa from large multinational chocolate industries takes away a child's education in Ivory Coast because it is the only way for the cocoa farmer to harvest the cocoa at a faster rate. Also, the sudden increase in costs to attend secondary school from primary school leads families to their only option of forcing their child back into the hazardous conditions on the family farm (O'Keefe). Another factor that led to child labor in Ivory Coast was poor government funding. In the 1980s, the government of Ivory Coast spent more money on its educational sector than any other country in the world. Unfortunately, the money was not used wisely, and most of it went to expatriate teacher salaries instead of new and advanced technologies in schools. Also, generous scholarships were awarded to a select few Ivorians who attended secondary school and beyond. Because most of the money went to teachers and talented/gifted Ivorians, the government was left with little money to spend on the rest of the educational sector. With reduced funds, the government was unable to provide the money that was needed in public schools for more advanced education programs and technologies (Handloff & Roberts).

Knowing this, the typical Ivorian is now unable to receive a solid education and is forced back to the farm. With an understanding that more and more children are being placed on the farm for cheap labor (around 37% of the population under age 15 is involved in some form of child labor), education will be the first, and most essential, step forward in balancing out the importance of both the urban and rural societies, avoiding future political turmoil, and implementing modern technologies into traditional agricultural practices on the typical family farm in Ivory Coast (O'Keefe).

Solution

While there may be so many factors that have led to food insecurity in Ivory Coast, one stands high above the rest: inadequate education. What I have noticed is that child labor is still prevalent in Ivory Coast. In order to eliminate child labor, farmers in Ivory Coast must find ways to be more productive without relying heavily on their children or young migrants for labor. Multinational chocolate makers (these industries rely on Ivory Coast for the cocoa to produce chocolate), like Nestle and Hershey, have recently been funding for programs in the effort to end child labor in Ivory Coast. The plan, called CocoaAction created in 2014, "aims to reach 300,000 farmers in Ivory Coast and Ghana with training programs to help them boost productivity" (O'Keefe). What these companies are also doing is buying cocoa beans "certified" as sustainably grown. Nestle, for instance, has been educating farmers about different practices to improve productivity, including how to properly use pesticides and fertilizers, and make farmers "sign a pledge not to exploit child labor" (O'Keefe). So far, 32,000 farmers have become part of the certification program. Unfortunately, not every farming community will be able to benefit from the education programs created by the multinational chocolate makers. But, if Ivorians want to make any sort of improvement in food security, they will first need to get rid of any sort of child labor.

What also needs to be included in Ivory Coast's agricultural sector is technologies that automate the planting, harvesting, and fermenting process of the cocoa bean. With a machine that can cut the cocoa pod from the tree, open the pod, and collect the bean out of the pod, cocoa farmers will not have to rely on humans to perform the long, arduous labor that cocoa farming highly demands. Also, a technology that can transport and dump heavy amounts of cocoa beans into piles to ferment for five days is needed. This technology could be similar to a utility tractor. The utility tractor uses two hydraulic arms and a loader bucket on the front end to lift and transport heavy loads relatively short distances. With this technology, large amounts of harvested cocoa beans from the threshing machine can then be transported to large piles where the bean can be fermented for five days (O'Keefe). Since these technologies lessen the need for labor on the farm, children are able to receive an education and therefore pursue other careers that don't involve farming. In order to develop and fund for these technologies, the government of Ivory Coast will

need to recognize this issue and further address it to the United Nations, the USDA, and other international research agencies. The USDA's Agricultural Research Service has recognized issues involving cocoa production and began to fund for research projects involving cacao disease resistance and sustainable management practices. The primary goal of the research is not only improved cocoa production, but also environmentally-safe management practices that come along with it (USDA). To allow local citizens and residents of Ivory Coast to research things involving crop production and develop automated technology, a specific curriculum that focuses on research and technology will need to be added or created in schools, mainly primary schools so Ivorians are introduced to this at an early age, by local governments. One curriculum that could be implemented into the education system in Ivory Coast is a curriculum known as STEM. STEM, which stands for science, technology, engineering, and math, is a curriculum developed by the National Science Foundation that focuses on "an engineering and design approach towards real-world problems" in addition to improvements in math and science. The STEM curriculum would introduce Ivorian students to the modern, innovative technologies that developed countries have already implemented into everyday life. The STEM system will also give Ivorian students background knowledge of engineering concepts that they can further look back on when finding solutions to food security in Ivory Coast (Jolly).

Lastly, we need every Ivorian to be on the same page. If the child is free from labor on the farm, he or she can be educated about all the factors that have made it difficult for him or her to access an adequate amount of nutrition to live a healthy lifestyle. This includes rising urbanization rates leading to a decline in rural value, deforestation, political turmoil, and limited access to technologies that have the potential to increase the productivity of crops grown in the region. To accelerate the research and development process, local governments, international organizations, and even multinational corporations could pitch in funds and create programs that promote education. However, what it all comes down to is the success of the farmer living in Ivory Coast. Every Ivorian farmer plays a vital role for the future of Ivory Coast. Since they will have the most knowledge of agriculture in their region, it will be very important that they provide input to researchers, share their farming experiences, and contribute to funding and research to eliminate child labor. Without their help, it will be tough for foreigners from international organizations and research agencies to make any progress. This is why local governments and Ivorian citizens play a huge role in promoting education and eliminating child labor.

Another issue that the Ivorian government disregards is its over-reliance on exporting goods. Improving the quality of goods within the country borders will increase the value of the good before it is exported to another country. As put by Michael Bible, "I feel that the government of Côte d'Ivoire should discourage simply exporting goods but should encourage the refinement of those goods within the nation. This would create jobs, increase the income from exports, and would help to truly industrialize the nation's urban centers". Therefore ending child labor, funding for research into new technologies that will increase agricultural productivity, providing a solid education to all children who, at first, couldn't afford it, and refining the goods before exporting to other countries are four basic steps towards a more developed Ivory Coast where food security exists.

Food security exists "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life". - World Health Organization

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