The Need for a More Stable Cacao Industry

Lauren Griffith

SIT Study Abroad

Follow this and additional works at: https://digitalcollections.sit.edu/isp_collection

Part of the Agricultural and Resource Economics Commons, Civic and Community Engagement Commons, Family, Life Course, and Society Commons, and the Natural Resources Management and Policy Commons

Recommended Citation

https://digitalcollections.sit.edu/isp_collection/1738

This Unpublished Paper is brought to you for free and open access by the SIT Study Abroad at SIT Digital Collections. It has been accepted for inclusion in Independent Study Project (ISP) Collection by an authorized administrator of SIT Digital Collections. For more information, please contact digitalcollections@sit.edu.
Acknowledgements

I would like to say thank you to Orlando Lozada for opening up his home to me and teaching me a great deal about cacao production as well as the industry, and also helping me to figure out how to navigate my many travels into the communities. He is highly admired and respected all throughout the region by numerous farmers for his extraordinary work with his farm and with the community. I would also like to extend my gratitude to all of my interviewees for their time and gracious help as I gathered the necessary information for this project. I had the pleasure of working with several Ngobe people, a Peace Corp volunteer who helped me to communicate with cacao farmers in a remote Ngobe village, and with administrators from COCABO, one of the most successful international organizations in the region. With the help of Ruben Gonzalez and Osvaldo Jordan I was able to formulate the idea of my project, properly analyze my data, and write a well synthesized paper. Finally, I would like to thank SIT for providing me with this opportunity to not only explore an area of interest to me, but an area of critical importance to many citizens on Bocas del Toro, Panama.
Abstract

The cacao industry is slowly growing in the region of Bocas del Toro, Panama. It is largely populated by indigenous farmers, but there are others who have invested in the business as well. With so many people becoming involved in the industry this study aimed to determine if the system represented a stable model. Through interviews and participant observation the stability of income, steadiness of demand, opportunity for growth, and the effect of organic certification were examined to determine the overall stability. It was found that very few farmers sell only cacao and rely on the sale of other crops, to varying degrees, to supplement their incomes. Although the demand for cacao and chocolate does fluctuate, there seemed to be a steady desire for the products that the farmers were producing. There are many people beginning to farm cacao throughout the region, thus generating more supply to meet the global demand, but once they begin there is not much room for growth. There are two main cooperatives in the region that many farmers are a part of, but once that decision is made many do not have an opportunity to develop within the industry. Finally, in analyzing organic certification, I was met with conflicting opinions pertaining to its benefits and thus met with people who were strongly in favor of it and others who were not. Overall the market has several unstable factors, but there is room for improvement within the industry.
Resumen

La industria de cacao está creciendo lentamente en la región de Bocas del Toro, Panamá. Muchos de los agricultores son indígenas, pero hay otros que están involucrado en el negocio también. Este estudio tuvo como objetivo determinar si el sistema representa un modelo estable. A través de entrevistas y observación participante la estabilidad de los ingresos, la estabilidad de la demanda, las oportunidades para el crecimiento, y el efecto de la certificación orgánica, se examinaron para determinar la estabilidad del mercado. Se encontró que muy pocos agricultores venden sólo el cacao y se basan en la venta de otros cultivos, en diversos grados, para complementar sus ingresos. Aunque la demanda de cacao y chocolate fluctúa, parece que había un deseo constante de los productos que los agricultores estaban produciendo. Hay muchas personas que comienzan a producir cacao agrícola en toda la región, generando así más oferta para satisfacer la demanda mundial, pero cuando comienzan no hay mucho espacio para el crecimiento. Hay dos cooperativas principales en la región donde muchos agricultores son miembros, pero una vez que se tomó esa decision, muchos no tienen la oportunidad de desarrollar dentro de la industria. Finalmente, en el análisis de la certificación orgánica, conocí a opiniones diferente sobre los beneficios y así reuní con personas que estaban muy a favor y otros contra eso. En general, el mercado tiene varios factores de inestabilidad, pero la industria todavía puede mejorar.
Table of Contents

Introduction..................................................................................................................................1

Literature Review..........................................................................................................................2

Working Definitions.......................................................................................................................2

Agroforestry as a Method of Market Stability............................................................................3

Costs of Organic Certification.......................................................................................................4

Research Question.........................................................................................................................5

Materials and Methods..................................................................................................................6

Results...........................................................................................................................................7

Individual Farms.............................................................................................................................7

Crops.............................................................................................................................................8

Entry into the Market......................................................................................................................10

Organization: ASAP......................................................................................................................12

Organization: COCABO................................................................................................................13

Organic Certification.......................................................................................................................14

Discussion.....................................................................................................................................16

Conclusion....................................................................................................................................21

Bibliography..................................................................................................................................23
The Need for a More Stable Cacao Industry

Introduction

The business of cacao is one that has grown in the region of Bocas del Toro, Panama over the last one hundred years. In the early 1900s bananas were the stable crop in the region but the once booming business, a staple to the Panamanian economy, fell victim to a disease that wreaked havoc in the market. Slowly more and more farmers began to become involved in the farming of cacao, until 1952 when a company now known as Cooperativa de S/M Cacao Bocatoreño R.L. (COCABO) entered the scene (Professor #1). COCABO is a cooperative that works with numerous farmers throughout Bocas del Toro and provides a place for farmers to bring their cacao products to sell. After COCABO’s opening the cacao industry continued to grow, until the 1980s when the business suffered from a disease outbreak. Because of this outbreak, and an increase of other countries around the world beginning to grow cacao as well, there was a sharp decrease in cacao farming for several years. The price received by farmers diminished so greatly that farmers could not keep up their farms because the income they received was not enough to compensate for the work they were putting in. This did not last forever, however, for the following decade saw the renewal of cacao with indigenous farmers representing the majority of the new farming population. This pattern continues today, for around 95% of the farmers working with COCABO belong to the Ngobe tribe with several Naso farmers also partaking in the practice as well (COCABO #1).

In present day Bocas del Toro cacao farming continues to grow as more and more farmers are beginning farms after see the financial success of their neighbors (COCABO #2). In addition to COCABO there is now another growing cooperative,
Asociacion Silvo-Agropecuaria (ASAP), that is providing farmers with the opportunity to grow and expand their profits while still teaching them how to protect and preserve the land that they work on. Although this organization is significantly smaller than COCABO it is providing farmers with opportunities for growth as well as creating a new market for cacao in Panama. The group is in the process of opening a cacao processing plant that will convert cacao into chocolate that can be sold here in Panama, something that is not typically done here for the cacao is usually sold as raw material.

Between these two organizations there seems to be a system of organization and progress being made in the area of cacao in Bocas del Toro, but is the market as profitable and as stable as it seems? By looking at the stability of income, demand, opportunity for growth, and the impact of organic certification I will determine if the cacao industry is stable for the small cacao farmers of Panama.

**Literature Review**

**Working Definitions**

1. **Stability**: “degree of constancy of production through time, while subject to disturbing forces and changes in local environmental variables” (O. A. Ramírez, E. Somarriba, T. Ludewigs, and P. Ferreira 2)

2. **Cacao Industry**: When discussing the cacao industry I am referring to a business model where farmers only sell cacao in order to earn a living

3. **Stable Industry**: one that creates a steady demand of goods, allows a person(s) to make an stable income, and provides the opportunity for growth
4. **Stable Income**: one that does not fluctuate greatly over time, but allows a person to trust that they will be able to sustain their current lifestyle from month to month.

5. **Agroforestry**: “a form of multiple cropping under which three fundamental conditions are met: 1) there exist at least two plant species that interact biologically; 2) at least one of the plant species is a woody perennial; and 3) at least one of the plant species is managed for forage, annual or perennial crop production” (Somarriba 1)

**Agroforestry as a Method of Market Stability**

Monoculture (also known as monocropping) is the growth of only one species of plant on a given area of land. This has been gaining popularity over the past few decades to meet the global demand for various crops, but there are still many farmers who are very aware and knowledgeable of the benefits of agroforestry. “Diversification of agroecosystems has long been recognized as a sound strategy to cope with price and crop yield variability, thus increasing farm income stability and lowering financial risk” (O. A. Ramírez et al 10). A study done in 2001 looked at farms that were used for monocropping and others that planted a combination of cacao, plantains, and timber to compare the stability and riskiness of each type of farm. They found that “the [Net Present Value] variance and risk levels were lower for the agroforestry systems than for the cacao monoculture. This confirmed that there were important risk and return gains that could be achieved through diversification, especially of cacao plantations,” (O. A. Ramírez et al 10). The group also found that agroforestry systems with proportionally more cacao plants to plantain plants were more successful than the reverse, and thus recommended this.
The presence of varying crops, but especially the presence of trees that would be cut and sold as lumber, were critical components in the agroforestry system. The three crops evaluated all have varying cyclical market cycles where they experience years of prosperity followed by years of severely decreased prices. By having the three different types of crops to rely on for income farmers are provided with a more reliable source of income. The study did find that farmers working with monocultures of only plantains or only timber experience less variance in their Net Present Value (NPV) because cacao prices vary greatly throughout the year and over time. They made the point of saying, however, that “the NPV variance and risk levels were lower for the agroforestry systems than for the cacao monoculture,” (O. A. Ramírez et al 10). In conclusion, for farmers who have made the decision to invest in cacao farming it is in their best interest to work within an agroforestry framework where cacao crops are proportionally greater than plantain crops.

**Costs of Organic Certification**

There is a growing demand in the cacao market for organic products to appear on the shelves of supermarkets around the world. Luanne Lohr helps us define what organic production is in “Factors Affecting International Demand and Trade in Organic Food Production” when she says:

> Although there is no single international organic production regulation, all generally accepted organic rules prohibit use of synthetic fertilizers, pesticides, growth regulators, and livestock additives, and require long-term soil management, emphasis on animal welfare, and extensive record keeping and planning. (1)
This rising demand is then in turn providing producers with a pressing opportunity to invest in organic farming and meet these high standards, but not everyone is ready to commit to the switch. Organic certification gives farmers access to better prices for the cacao in the market, and thus greater yearly incomes, and gives farmers greater market access since there is such a high demand for organic products right now (Basso 33). On the other hand, for others the extra money earned from the higher price would not be enough to offset the cost of upgrading their farming practices and equipment as well as purchasing the certification (Basso 31). This conflict of interests is what is keeping small farmers from converting to organic.

One way around the stumbling block of high costs is by forming a collective of farmers so that they can jointly purchase organic certification at a lower price. One study found that, “the financial viability of organic cocoa production depended on a number of variables, such as the number of farmers involved, their yields, and their loyalty in selling their cocoa to their organizations,” (“Feasibility Study on Opportunities in Organic Cocoa Production in Africa”). This is because there are large organizations can purchase organic certification as a whole and the farmers can then buy a share of it at a reduced price. By increasing the amount of farms involved in organic certification through their respective organization the price may become more feasible for small, independent farms.

Research Question

1. Does the cacao industry represent a stable model?
   a. Does it provide a stable income?
b. Is there a steady demand?

c. Is there an opportunity for growth in the business?

d. Is organic certification a positive and possible option for small farmers?

Materials and Methods

During my two weeks of research I lived on a small farm in the Charague region of Bocas del Toro, Panama. While there I participated in many of the daily activities involved in running the family farm. I helped harvest cacao in the fields and prepare the seeds to be dried, as well as paint the new building that will be opening up in a few months as the new processing plant for the organization ASAP to use to process their cacao and turn into chocolate. While living in house I also spoke with the different members of the family to gather information about their farm and how they conduct their business. I also used participant observation to develop a better understanding of the life of the family, of their work, and of the cacao industry.

To gain more insight into the cacao business I then traveled to Almirante to visit COCABO, a cooperative formed to help farmers all throughout the Bocas del Toro region sell their cacao product. While there I spoke with two administrators about cacao farming and the involvement of COCABO in the business. I formally interviewed one administrator in the offices of COCABO, and I spoke with another as he drove me throughout surrounding towns that had cacao farms. During our travels I visited the Ngobe villages of Valle Risco and Rio Oeste and was able to talk to two separate farmers in the region who had a cacao farm. I spoke with the first farmer in a regional
collection office of COCABO in the Valle Risco area, and then met the second farmer who was a community delegate for the cacao farmers and COCABO as we were driving through the town and interviewed him as well.

During the final round of interviews I traveled to the Ngobe village of Alto Cedro, a thirty minute climb from Bajo Cedro. While there I met with a Peace Corp volunteer who was working in the area with the local cacao farmers. I interviewed her and we discussed what she does in the village and about the farmers in the community. After that we visited different households in the community to speak with some of the local farmers about their farms, the practices that they use, and how they sell their cacao products.

Results

*Individual Farms*

After speaking with a variety of different farmers it quickly became clear that cacao farming is a family business for farmers living in Bocas del Toro, Panama. Most of the farmers interviewed discussed how the farm was originally started by, or with, an older relative and has been passed down unto them to upkeep. In order for them to keep their farms functioning almost all interviewees recruit multiple hands to help on the farm, and it is typically done by solely family members. One woman, when asked how many people help her tend to the farm, said, “It is constantly changing. One day I have all seven children with me and the next day half of them are out of the house busy doing something else, but it is usually some combination of my seven children,” (Ngobe #3).
The sizes of the farms vary, with the smallest at 1.5 hectares belonging to the one farmer who said that he is the sole caretaker of his land (Ngobe #4). The rest of the farms, however, fall within the range of 2-4 hectares. These plots of land will produce cacao fruit year round, so because of this the farmers will sell their dried cacao beans to their respective buyers whenever there is enough to bring to market. In speaking with a Peace Corp volunteer who is working with a Ngobe community that is associated with a cooperative, COCABO, she said, “The farmers will carry their cacao beans to COCABO whenever there is enough to sell. There is not a schedule with assigned days. They bring it when they can,” (Peace Corp #1).

Since the farms are mainly managed by strictly the family the farmers do not often interact with other cacao farmers in the community. With the exception of Farmer #1, all of the other farmers that I interviewed did not report having interactions with very many other farmers, further showing that small, family farms are the dominant presence in the business of cacao in the Bocas del Toro region. There are two main cooperatives in the Bocas del Toro region (discussed later) that give farmers an outlet to sell their products. Although all farmers interviewed ascribed to only one of the two said organizations, only one of them was able to speak of other farmers from his organization (Farmer #1).

_Crops_
Figure 1A and 1B show two different types of cacao pods growing on the cacao tree.

Each of the farmers interviewed was chosen for their involvement with cacao farming, however each farm also dedicated land to the growth of other crops as well. Some of the crops grown by the farmers include citrus fruits, avocados, coconuts, yucca, and yampi. Two of the most commonly mentioned plants, however, were plantains and trees to be cut for lumber. Each of these edible crops were used to feed the farmer and his family. Every Ngobe farmer interviewed said that these crops served as a source of food first and foremost, and if there was any surplus then he may sell what is left over. When Farmer #1 was asked if selling just cacao and processed chocolate provides a
stable income that can support him and his family he said that it depends on the year. The market demand fluctuates yearly, so he supplements this with selling bananas and timber from his farm as well. If cacao has a bad year then the sales of the other two crops can help make up the difference.

   Every interviewee also confessed to growing organic cacao. Some had other crops that did not fully meet organic standards, but in every case the farms were producing organic cacao pods. With that said, although all said that their crops were organic, not all of them were actually certified. The interviewee with the largest farm (40 hectares over all with 3-5 hectares dedicated to cacao) discussed how although he used organic practices the high price to certify his crops with the organic label was not cost effective (Farmer #1). When asked why they chose to grow organic the two responses given from every community were that organic products brought in a better price when they are sold and that the farmers did not like the chemicals often used in conventional farming because of their negative effects and the cost to buy them so did not want to use them.

*Entry into the Market*

   Throughout the varying regions of Bocas del Toro there seems to be a consensus about why farmers decide to begin farming cacao. When questioned about why the farm was originally started every farmer interviewed stated that they saw other people already invested in the business of cacao and realized that they were earning a respectable income from their sales. From the conducted interviews it is clear that the market for cacao farmers in Bocas del Toro offers a few different opportunities. All of the Ngobe farmers that were interviewed said that in selling their cacao they were
responsible for drying and fermenting the seeds harvested from the cacao pods from their fields, and they then sold the dried cacao seeds.

Figures 2A and 2B show where farmers bring their dried and fermented cacao to when they come to the Valle Risco collection house. The cacao is placed in each sorting mechanism, one for organic and one for conventional, checked to ensure it is properly dried, and then sifted into bags that can later be weighed, sealed, and sold.

This was the most common method of sale, but Farmer #1 deviated from this structure.

He said that in the past selling the cacao seeds was his primary method of sales, but he now focuses on converting that raw product into processed chocolate, such as chocolate bars and chocolate rounds used for hot chocolate, and sells more of that (Farmer #1). When asked how he found customers to buy the chocolate he produces in his house he said that it is almost completely through tourism. “People come here, see the farm, taste the chocolate, and have a great time. Then they leave and tell other people about it and tell them to come visit. This is the best form of advertisement because people are hearing it from their friends, a credible source, so they are more likely to come then if I were to tell them about it,” (Farmer #2). Through this system of “word-of-mouth” advertising his business has continued to perpetuate.
growth experienced by Farmer #1 is not common among other farmers. Every other interviewee expressed an interest in growing and expanding his/her farm, but then continued on to say that this was difficult to accomplish. One farmer explained by saying, “I would like to gain more land to grow my crops, but is not any space left within the villages that is not already in use,” (Ngobe #2).

Organization: ASAP

There are two main organizations in the Bocas del Toro province for cacao farmers looking to be a part of a cooperative (Farmer #1). One is called Asociacion Silvo-Agropecuaria (ASAP) an organization that does indeed work with cacao, but also deals with several other outlets as well. ASAP was founded on September 15, 1997 and was founded with the mission of creating an agricultural system that:

1. formed a more direct connection between consumer and producer
2. worked to conserve and preserve the environment that was crucial for its success

Because of his involvement with ASAP, Farmer #1 is able to interact with many farmers in the surrounding area, thus building a community within the cacao business that was not experienced by the Ngobe farmers who were interviewed.

Figure 3A and 3B show the progress being made at the new processing plant for ASAP.
Members of ASAP have a unique opportunity, in that they are working to open up a new processing plant where they can bring all of their cacao to where it will be processed and sold in various forms as chocolate. In order for this community to be successful in its endeavor at the processing plant there will be a website created to attract customers from across the country (Farmer #1). Farmer #1 discussed how word of mouth was enough when it is just him and his farm, but he said they needed more advertising for the business to be successful for everyone.

*Organization: COCABO*

The other main cooperative in the area is known as COCABO. The headquarters for COCABO is located in Almirante, but farmers from all over the Bocas del Toro region bring their cacao to the warehouse where it will ultimately be sold.

Figure 4 shows how the cacao is stored in the warehouse when it is brought in by the farmers.
The organization was founded in 1952 and began with just twenty members, one female farmer and nineteen male farmers. The organization is now made up of about 1,300 farmers from the surrounding area, 95% of them being from the indigenous Ngobe tribe. The purpose of the organization is to work with the system of cacao to give people the opportunity to sell their products, as well as work to conserve the environment through the use of agroforestry. While speaking with an employee at the cooperative he described that to ensure environmental protection is ensured many farmers work within the agroforestry system that utilizes the combination of bananas, wood, cacao, and other fruiting trees (COCABO #2).

Organic Certification

For several decades now COCABO has been invested in organic certification for its members. Member farmers were able to become certified through this system because they were able to pay a collective price since they were part of COCABO. The price for an individual farmer to pay for organic certification is $70 per year. For COCABO the price for them to purchase collective certification is $20,000 to $30,000 per year, but there are 1,200 member farms that are paying for this certification so the price per farm is about $17 to $25 (COCABO #2).

When asked what were the benefits of paying this price and using organic practices both employees from COCABO said that the main benefit was a better price for the farmer when he sells his cacao. This, however, was found to be very difficult to measure because interviewees each had a different idea of what the price was for organic cacao versus conventional cacao. The first set of data comes from COCABO which has what is known as a fixed rate for its farmers. This means that although the
cacao market fluctuates greatly over time there is a certain price floor that prevents the farmers from not receiving a fair payment for their product. COCABO #2 said that at the moment the fixed rate for farmers bringing in organic cacao to COCABO is $0.95 per pound, and this could increase if the market improves but will not fall below that. For a farmer selling conventional cacao the fixed rate is $0.25 per pound, and this is subject to change depending on the market but will not fall below that price. The conflict comes from the comparing what he said with what data I collected from other sources. Below is a chart of prices that I was told by another employee of COCABO, a Peace Corp volunteer working with a group of farmers who bring their cacao to COCABO, and from a display put up in a cacao collection house in Valle Risco.

<table>
<thead>
<tr>
<th>Source</th>
<th>First Grade Organic</th>
<th>Second Grade Organic</th>
<th>Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>COCABO #1</td>
<td>$1.00 - $1.10</td>
<td>N/A</td>
<td>$0.45</td>
</tr>
<tr>
<td>Peace Corp</td>
<td>$0.70</td>
<td>$0.60</td>
<td>$0.55</td>
</tr>
<tr>
<td>Collection House</td>
<td>$0.70</td>
<td>$0.50</td>
<td>$0.45</td>
</tr>
</tbody>
</table>

Table 1: a list of current market cacao prices according to three different sources

It is quite evident that not only is there no clear understanding of what is available from the cacao market right now, but that these prices for organic cacao do not all satisfy the price floor requirement established by my interview with COCABO #2. Somehow these prices are not being clearly understood or communicated among all parties involved in the cacao industry. Another explanation could be that since the cacao market is subject to a great deal of fluctuation, and these prices reflect a knowledge of prices from different months.
Since the market is subject to fluctuations both interviewees from COCABO said that almost all farmers do rely on the sales of other products like fruit and/or timber to supplement the income received from cacao sales. To emphasize the variability of the market COCABO #2 said that in the late 20th century, around 1980, there was a spike in global chocolate demand where the price for chocolate rose to $2.50 per pound, almost three times what the stated fixed price for organic cacao is today (COCABO #2). COCABO sells their products internationally to countries such as Germany, the United States, Italy, and several other European nations, so such market variability is left in the hands of these developed nations that are consuming the chocolate. Because large market swings like the one in the 1980s are possible and have occurred, it is necessary for farmers to have additional means of income in order to be able to support themselves, their families, and their businesses.

The final aspect discussed in the COCABO interview dealt with the different qualifications that farmers must meet in order to obtain organic certification. Each farmer must go through a two to three year waiting period during which they must prove that their farm meets the necessary standards. During that time period, and from that point forward, they are prohibited from using agrochemicals on their farms, they must create a system for waste products so that there is no garbage on the fields, and they will learn how to use the proper drying and fermenting methods for the cacao. The overall purpose of this process and becoming organic is to conserve resources, water, the forest, the soil, and biodiversity (COCABO #2).

Discussion
The information gathered after talking with the different farmers from various communities paints the cacao industry, by itself, as relatively unstable. Each interviewed farmer relied on the sales of other crops such as citrus fruit, plantains, and timber to different degrees, but the majority of them received income from more than just cacao. All of the interviewees said that they began farming cacao because they saw others making money selling this crop, so why would they now need to rely on the sales of other crops if cacao was supposed to generate a good income? Ramirez explains it in his paper, “Financial Returns, Stability and Risk of Cacao-Plantain-Timber Agroforestry Systems in Central America,” by saying:

Price cycles were about four times longer for cocoa than for plantain. Thus, agroforestry systems can help reduce the impact of prolonged periods of depressed cocoa prices on the farmers’ income while allowing them to reap superior earnings when cocoa prices are closer to their long-term trend and during any cocoa price spikes. (Ramirez et al 10).

By using an agroforestry model instead of just a monoculture of cacao not only are these farmers making an environmentally sound decision, but they are creating a system that is self-sustaining. The cacao market goes in ebbs and flows, some years the price will be great and other years it will not. One interviewee explained it by saying, “I need to grow and sell plantains and trees for timber so that I can maintain a secure income. If the cacao market does terribly one year then I can rely on the money from my plantains and timber. They balance each other out and make my system more stable,” (Farmer #1). So in order to maintain balance and create a stable income many farmers typically need to rely on the profits of multiple crops instead of solely cacao.
What is important to note, however, is that not all farmers rely on the sales of other crops to the same degree. All of the Ngobe farmers interviewed said that their primary source of income came from the sale of cacao, and then they would sell their other crops if there was excess after the family had used it to feed themselves. One of the interviewees explained it by saying, “I basically sell only cacao and only to COCABO. Sometimes I will sell some of the citrus fruits we grow, but most of our income comes from cacao,” (Ngobe #3). This differs from some of the other interviewees, especially Farmer #1 mentioned earlier, who explained that he needed the money from the sales of the other crops. Based on observation, this can be explained by the varying lifestyles of each family. The Ngobe farmers that were interviewed lived simple lives with minimal amenities, depending on the village, so their desired income level is relative to their living situation. In comparison, the standard of living for other farmers is much different with more access to electricity, running water, transportation, and consumerism in nearby cities. In order to maintain that lifestyle their income needs to be greater.

Another interesting disparity that appeared between Farmer #1, who has a total of 40 hectares, 5 of which are for cacao, and the Ngobe farmers was the opportunity for growth. Farmer #1 is currently in the process creating a new processing plant to make and sell chocolate with the other farmers from his organization, ASAP. This is a big step for a small organization to make in the region and will provide all farmers involved with more access to a larger consumer base, and thus an opportunity to make more money. Farmer #1, however, has the most years of experience in the business and is very involved in the organization of not only his farm but also the workings of the
organization. All of the Ngobe farmers interviewed expressed a desire to increase their farms and production capacity, but said that finding available land and then the money to buy it is very hard to do. This stunted growth is seemingly caused by the individual communities reaching their carrying capacities so there is no more available land, but there is another interesting fact to notice. All of these farmers are small cogs in a much bigger machine. They all sold to COCABO, a cooperative that works with at least 1,300 farmers in total, making their presence in their respective market proportionately much smaller than the 35 farmers from ASAP. Becoming involved in an organization can be seen as the primary beneficial step for growth, for it provides access to a larger market, but after that there is limited growth opportunities for the small farmers from the Ngobe villages. Being a member of a smaller organization like ASAP seems to have a greater opportunities for individual growth, but it is yet to be seen if it provides the same financial benefits. This can be examined in several years once the new processing plant is opened and running.

Although there may be limited availability for growth there seems to be a steady demand in the market for cacao, possibly even more so for the Ngobe farmers who are part of COCABO. There is not a schedule for members of COCABO to bring in their product, they instead bring their bags of cacao to the warehouse when they have harvested enough from the fields. Since COCABO does not only sell within the country of Panama, but instead has several international buyers, there is a constant demand for cacao from all over the world. Since there is a constant, and growing, global demand for chocolate these farmers have a market that provides a stable demand.
Members of ASAP have a slightly different scenario with the opening of their new cacao processing plant. Their projected market will consist more of local, and eventually a national, consumers. When speaking with Farmer #1 about his current operations where he solely sells chocolate out of his kitchen, he said that he mainly sells his products to people who come to visit his farm after hearing about it from others. Although this method may seem unreliable, he said that enough tourists come to visit that making the chocolate is a profitable endeavor. Once the plant opens the organization with have even more material to use and sell and they will generate a website in order to advertise to a greater audience. If there is a steady enough demand now when there is only one farmer who is relying on customers learning of his business solely through word of mouth, then we can speculate that with the addition of more material, more help, and more advertisement that the market that ASAP will be working with will provide a steady demand.

One more important factor that has been affecting the cacao market over the last several decades is the option to become organic certified. There is an ongoing debate over whether or not becoming certified organic is worth it for small farmers, mainly because of the cost. The report *Cocoa Certification* summarizes it well by saying:

>Certification is considered by some as an adequate tool to promote sustainability in the cocoa value chain and to improve the livelihoods of cocoa farmers. Other actors involved in the sector seem to be less optimistic on the net benefits that certification offers at farm level and highlight the burden that it can bring in terms of required investments.

(Basso, Karine, Klaas Schouten, Thea Renner, and Marielle Pfann 5)
While conducting my interviews with cacao farmers the opinions seemed to be split along these lines. All of the Ngobe farmers, who live very simple lives, were certified organic, but Farmer #1, someone in better economic standing, was not able to afford the certification. How is this possible? The Ngobe farmers were each a COCABO member, and thus had access to a much lower certification price because the cooperative buys what is known as collective certification. After that farmers are able to purchase the certification at a discounted rate since they are part of the organization. Farmer #1 would have to pay a price as an independent small farmer that is more expensive than members of a collective would have to pay and the cost is too steep for him. ASAP could purchase the collective certification, but since they have significantly less members than COCABO, 35 versus 1,300, the price each farmer would have to pay would be more than what it would be for an individual farmer.

Based on this knowledge, and the actions (or inactions) of the interviewed farmers, it seems that for the farmers of Bocas del Toro if they are either a part of an organization where they can purchase certification at a discounted price or are an independent farmer who makes enough money annually to afford the cost of certification organic certification is a beneficial option. Although it is unclear how large the margin is, selling organic products brings in a better price in the market and if the switch to organic production can be done then it should be.

Conclusion

Reflecting on all of the data collected and discussed it cannot be said that the cacao industry is stable because it does not satisfy all of the criteria laid out in my research
question. When looking at just the cacao industry, not including sales from other crops, there is not a stable and reliable income generated. In terms of a steady demand, the Ngobe seem to have this security through working with COCABO and Farmer #1 says that for now, as he sells chocolate out of his home, he has a steady demand. He expects this success to continue with the opening of the new processing plant, but that is yet to be seen. The third aspect, opportunity for growth, is experienced by some and is seen in the opening of the processing plant for ASAP. They saw an opportunity, turning the cacao into chocolate and selling it here in Panama, and were able to make that idea a reality. Other farmers, however, do not have the same opportunities or possibilities. Finally, it was found that organic certification gives farmers access to better prices in the market, but the option is not feasible for all farmers because of the high cost of certification. The constant fluctuation of prices and lack of knowledge dispersal also calls the benefits of buying into the organic system, and the cacao industry as a whole, into question.

Even though the cacao industry is not completely stable, there are still signs of hope and room for improvement. In terms of improving income levels farmers can supplement their cacao profits by selling other fruits, vegetables, and/or timber. Many farmers already successfully do this to varying degrees, so the adaptation of this system could greatly improve farmers’ income. There is not much that can be done to create a more steady demand for cacao and chocolate. Better advertising could be created, for example, which ASAP will be doing soon with the creation of a website. The national and international demand for cacao products, however, is a fickle system and cannot necessarily be controlled. Finally, regarding organic certification, the best possible
option for farmers is to become certified so that they may have access to better prices for their product in the market. This is hard when the cost can be expensive and the exact monetary benefits are so fickle, so of all available options it makes the most sense to part of a large collective like COCABO so that they can have access to a discounted price and be guaranteed a price floor that they can depend on. By joining said large organizations farmers can become certified, which would in turn improve their income and possibly make it more stable and make the industry more stable.

Bibliography


COCABO #1. Personal Interview. 13 November 2013.


Ngobe #3. Personal Interview. 18 November 2013.
Peace Corp #1. Personal Interview. 18 November 2013.
Professor #1. Personal Interview. 8 November 2013.