



## Brewing Unequal Exchanges in Coffee: A Qualitative Investigation into the Consequences of the Java Trade in Rural Uganda<sup>1</sup>

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### Abstract

*This study represents a qualitative case study examining the broad impacts of coffee cultivation from a rural region in Eastern Uganda, the Bududa District. Over 20 interviews with coffee cultivators provide insights into how the coffee economy impacts gender relations, physical health, deforestation, and economic conditions. While there are some material benefits from cultivating and selling coffee beans, a lack of long-term economic stability for households and the consequences for the status of women, the health of the community, and the local environment calls into question the efficacy of coffee production as a viable development scheme that significantly enhances overall community well-being. This research hopes to bring attention to the mechanisms that enable broader unequal exchange relationships by focusing on the perspectives and experiences of growers in Bududa, Uganda, where a considerable amount of world coffee is grown and supplied to consumers in core nations.*

**Keywords:** Coffee exports, ecologically unequal exchange, Uganda

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Coffee represents one of the world's most important and heavily traded commodities. In fact, coffee is the world's second most valuable primary sector product, trailing only oil (ICO 2015). Coffee is the largest "food" import in the United States, as well as several Western European nations (ICO 2015). Although coffee often is described as a food product, it is important to emphasize that coffee does not contribute to caloric intake or have any significant nutritional value (e.g. Talbot 2004). It is purely a luxury commodity. The irony of coffee extends beyond this point, as coffee cannot be grown at the sites where it's consumed. While people in the United States drink on average just under three cups of coffee per day, the temperate climates of the global North prevent coffee cultivation. Instead, coffee is produced in more tropical African, Latin American, and Southeast Asian nations, often representing one of the largest and most lucrative exports from these countries (ICO 2015; Talbot 2004).

Coffee was initially grown and exported to core, developed regions during colonial times, and thus represents one of the oldest commodities of colonial exchange and exploitation (Talbot 2004, 2011). These patterns persist today, as coffee exporters send coffee most principally to their former colonial powers. For example, in Uganda, over 70 percent of coffee exports go to the European Union, followed by the U.S., Switzerland, Singapore, and Japan (Ojambo 2014). The coffee export profile of Uganda also illustrates another emerging trend—coffee consumption is growing most rapidly in developing regions of Asia, including China (ICO 2015).

Perspectives rooted in world-systems analysis on unequal exchange provide a theoretical lens through which to view global patterns in production and consumption (e.g. Emmanuel 1972; Hornborg 2009; Rice 2007, 2009). Since coffee is grown exclusively in poorer, less-developed nations, and consumed almost entirely in developed or rapidly developing nations, it represents an "ideal type" to consider as a product of unequal exchanges (e.g. Austin 2012). Although coffee is a lucrative crop, commodity chain analysis demonstrates that those at the bottom, but most foundational level, of the coffee commodity chain—the growers—on average earn less than 10 cents on every coffee dollar spent in Northern regions (Talbot 2004).

Although the concept of unequal exchange was initially developed to explore the differences in profitability across core and peripheral exports, and therefore the transfers in surplus value that accrue in the core relative to the periphery through trade (e.g. Amin 1976; Emmanuel 1972; Wallerstein 1974), more contemporary explorations also consider the unequal environmental impacts of the structure of international trade and specialization (e.g. Bunker 1985; Rice 2007, 2009). Even more recently, the social and health impacts of trading in primary commodities in poor nations are coming under scrutiny; in addition to relative profit and ecological material loss, periphery nations that specialize in key primary sector commodities also face increased social and health inequalities (e.g. Austin 2012, 2013; Dunaway and Macabuac 2007). While most studies in the world-systems tradition on unequal exchange represent quantitative, cross-national analyses,

here I undertake a qualitative “structural fieldwork” approach (e.g. Gellert and Shefner 2009) to explore how growers experience inequalities created through supplying the coffee commodity chain. Such an approach draws on macro-level dynamics to explore how real people in a specific location are affected by the coffee trade, illuminating key mechanisms and processes that enhance general understandings of unequal exchange that are often missed by country-level analyses (Gellert and Shefner 2009).

In Bududa, coffee represents the only crop that reaches the international market. Coffee is the sole product that links this remote region to the global economy, and in so doing, this study shows that coffee cultivation contributes to gender disparities, malaria vulnerabilities, and environmental degradation. Before I begin to articulate the relevance of Uganda in the global coffee trade, I start by considering developments in unequal exchange thinking rooted in world-systems analysis.

### **Unequal Exchanges in the World-System**

As previously emphasized, global patterns in coffee production and consumption necessarily follow broader lines of international inequality, as coffee is roasted, packaged, marketed, distributed, and consumed almost entirely in core nations, after being cultivated, harvested, and exported from periphery nations (e.g. Talbot 2004, 2011). Critical perspectives of world-systems and dependency theory highlight the unequal international structure of trade and production, illustrating that the world-economy is stratified with the highest skill and profit-making industries concentrated in nations positioned at the top of the international hierarchy (Mahutga 2014; Wallerstein 1974). The concept of unequal exchange explicitly describes the systematic inequalities in international trade dynamics across core and periphery nations, enabled through broader asymmetrical political and economic relationships, which ultimately reproduce global inequalities (e.g. Bunker 1985; Emmanuel 1972; Hornborg 2009; Rice 2007, 2009). The phrase “unequal exchange” was originated by Arghiri Emmanuel (1972), to describe that the exchange of core products for peripheral products involves transfers in surplus value up the world-system from less-developed nations to more-developed nations, as core nations retain the most profitable phases of production, including the command, control, and coordination of commodity chains (e.g. Clelland 2014a; Gereffi and Korzeniewicz 1994).

In many ways, the concept of unequal exchange is foundational to world-systems analysis, as inequalities in trade are a chief mechanism for enabling and maintaining the unfair relations between core and peripheral countries. Indeed, emphasis on the global division of labor by prominent theorists such as Wallerstein (1974), Amin (1976), and Frank (1979), serves as a basis for this line of thinking. The global division of labor continues to characterize the organization of international production today, as the lowest-paying, most labor-intense, and environmentally-

damaging industries, including coffee, largely represent those located in less-developed nations (e.g. McMichael 2012).

Although initial thinking on unequal exchange dynamics focused on economic factors, based on Marxian conventions regarding surplus value transfers, assessments building on this line of thinking also emphasize that unequal exchange entails an ecological dimension (e.g. Hornborg 2009; Rice 2007, 2009). The ecological aspect to unequal exchange was spurred by Bunker's research (1985) in the later 20th century on the detrimental outcomes of extractive rubber industries in the Brazilian Amazon. Bunker (1985) built upon early unequal exchange theorization by demonstrating that the production and export profiles in peripheral regions increased the amount of relative harm to the environments and people of poor nations in comparison to the production impacts of the core. In particular, the use of extractive technologies (often provided by core investors and governments, or multilateral development institutions such as the World Bank and IMF) and changes to the local markets, structure of labor, transport and production capacity, and power and land ownership structures, greatly disrupts the environmental and social well-being of less-developed nations (Bunker 1985; Bunker and Ciccantell 2005; McMichael 2012).

Thus, many recent cross-national assessments of unequal exchange use Bunker's work to articulate patterns in "ecologically unequal exchange." These studies highlight that the global organization of production facilitates greater resource degradation in peripheral areas relative to core zones, especially for outcomes related to deforestation and biodiversity loss (e.g. Austin 2013; Jorgenson et al. 2010; Shandra et al. 2009). Even newer branches of research are also starting to consider what we might term "socially unequal exchange" to illustrate the negative well-being, health or gendered consequences of harnessing supposed comparative advantages in key primary or extractive products that are required for core consumption (e.g. Austin 2012, 2013; Dunaway and Macabuac 2007). Although this review of unequal exchange literature focuses on comprehensive global dynamics and international linkages that go beyond the scope of this specific study, the "structural qualitative fieldwork" approach taken here is deeply informed by the broad patterns exemplified in these macro-comparative perspectives (e.g. Gellert and Shefner 2009).

Of particular relevance to this study, a recent assessment by Austin (2012) finds unequal exchanges in coffee, or the relative flow of coffee exports from poor nations to core nations, leads to enhanced hunger, lower rates of educational enrollments, and heightened deforestation in coffee-producing nations cross-nationally. Austin's (2012) results corroborate case-study investigations indicating that increased pressure to produce coffee and the use of high-yield seeds results in less mixed cultivation with subsistence crops and higher rates of deforestation in some areas (e.g. Gillison et al. 2004).

In addition to hunger and forest loss, case studies conducted in a number of settings link coffee cultivation with lower rates of schooling among youth in rural households (e.g. Jaffee 2007;

Kruger 2007). This research points to the heightened labor requirements of coffee production, where children often are pulled from school to help with the coffee harvest. Indeed, this is particularly relevant in regions like Bududa that produce the Arabica variety of coffee, as the cherries must be picked at the peak of ripeness, requiring many passes through the same coffee cultivation site, thus greatly increasing the length of time overall needed for harvest.

Furthermore, other literatures examining the detrimental impacts of export agriculture in poor nations indicate links to infectious diseases like malaria (e.g. Austin 2013; Norris 2004; Pimentel et al. 2007). In particular, epidemiological research finds that expanding cultivation sites leads to ecological transformation in a variety of realms that spur mosquito habitats. For example, expansions in agriculture lead to the construction of roads and, therefore, ditches and puddles that serve as prime mosquito breeding grounds. Also, felling trees intensifies sunlight and temperatures, and water withdrawals lead to declines in stream flow, potentially supporting additional mosquito proliferation (Norris 2004).

While ecological and health impacts are beginning to be considered in unequal exchange frameworks, discussions of gender remain scarce. However, ideas on gender and gender inequalities are emerging in the related branch of commodity chain analysis, and have been explored in depth by some world-systems scholars (e.g. Dunaway 2014; Feldman 2007; Smith 1993; York and Ergas 2011). However, these authors note that considering gender dynamics in world-systems research remains sparse and deserves more attention. Many political-economy examinations of gender focus on women's role in the household and contributions to unpaid labor, including non-wage subsistence work, and articulate this as central to the spread of economic activity and the functioning of the global economy (e.g. Feldman 2007; Smith 1993). Many women, in both developed and developing countries, are involved in non-remunerated work, simultaneously sustaining the individual household and the capitalist system.

In these ways, Dunaway (2014) articulates the centrality of women's labor in the production of global commodities and of gender's broad role in the dynamics of commodity chains. Women play an imperative but neglected role in producing commodities, and the devaluation of women's labor relative to men's allows for greater capital accumulation at the top of the commodity chain (Dunaway 2014). Of particular relevance to this study, Clelland (2014b) provides an analysis of coffee production, arguing that commodity chains are better understood not as networks for adding value, but instead as structures for extracting surplus. One important source of surplus is "dark value" (e.g. Clelland 2014a), defined as unpaid household and informal sector labor. Clelland (2014b) applies his concept of "dark value" to the production of Arabica coffee, contending that the primary beneficiary of this surplus are the consumers in core nations, who get to enjoy a low-priced cup of coffee because of the unpaid or underpaid work largely done by women in coffee-exporting countries in the periphery.

Existing research on coffee production documents the relative lack of power for women, as women represent those who grow and harvest the coffee, but rarely sell it or control the profits (e.g. Chiputwa and Qaim 2016; Clelland 2014b; Jaffee 2007). However, few studies have compared the views of women directly to men in this regard. Also, the unpaid labor that women put into coffee has not been overtly considered in contributing to unequal exchange relationships. Indeed, one likely reason that coffee is not valued at the same level as core exports or production processes is precisely because it is disadvantaged women who represent the main coffee cultivators in periphery nations. While women are often the key cultivators of other crops as well, including crops for household consumption, the comparatively intense time and physical demands required to grow and harvest coffee is likely to be key in intensifying the nature of unequal exchange relationships.<sup>2</sup>

As previously emphasized, coffee represents an exceptional case through which to engage unequal exchange perspectives. Recent research begins to not only look at the ecological impacts of coffee and other primary commodities, but also social or health impacts for producing nations. This study builds on these emerging applications of unequal exchange to more deeply investigate the consequences of cultivating coffee in a rural Ugandan district. By taking a qualitative approach, some of the mechanisms by which unequal exchanges in coffee occur may be illuminated. Although a myriad of quantitative, cross-national work documents the existence and adverse effects of unequal exchange relationships across nations, much less is known about how and why these consequences are produced at the local level (e.g. Gellert and Shefner 2009).

### **Coffee Production in Uganda**

Uganda is Africa's second largest coffee exporter, following Ethiopia (ICO 2015; Ojambo 2014). Around 70% of the coffee beans grown in Uganda are of the Robusta variety and Uganda is Africa's leading Robusta exporter (Ahmed 2012; Ojambo 2014). However, this study is set in a high altitude, mountainous area where Arabica beans are grown. Robusta coffee is cultivated in the warmer, lower-lying regions in central Uganda, while Arabica is most common in the cooler and mountainous Eastern and Western regions of the country. Arabica beans are considered to be of higher quality in comparison to Robusta coffee, and fetch a slightly better price on the international market (e.g. ICO 2015; Talbot 2004). In Bududa, the coffee harvest is typically from July through October. However, harvest can extend beyond this, depending on the amount of rainfall, temperatures, and the ripeness of the coffee cherries.

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<sup>2</sup> However, while the direct comparison between the effects of growing coffee versus other products is not a central focus in the current study, I will later elaborate on some of the specific characteristics of coffee, including the more labor-demanding nature of harvest, that likely intensify these dynamics in relation to other crops produced and exported in developing countries.

Less than 5 percent of Uganda's annual coffee crop is consumed in the country; over 95 percent of production is exported (Ahmed 2012; Ojambo 2014). Overall, coffee is Uganda's most important export commodity, accounting for nearly a quarter of all export revenues (Ojambo 2014). Uganda ranks fourth globally in terms of the contribution of coffee exports to overall export earnings, following Burundi, Ethiopia, and Honduras (Ahmed 2012; ICO 2015). In addition to coffee, key exports from Uganda include sugar, tea, corn, rice, cement, fish, and raw iron. The most prominent imports in Uganda include capital machinery, vehicles, medical equipment, and pharmaceuticals. The trade profile of Uganda, consisting of relatively low-value raw materials and agricultural exports and high-value technology imports, exemplifies this nation as a periphery nation in the world hierarchy, suffering from unequal exchanges.

The coffee industry in Uganda has undergone major reforms since the early 1990s. Under counsel and requirements from supra-national organizations such as the International Monetary Fund (IMF) and World Bank, whose doctrines are consistent with the need to liberalize trade policies in support of harnessing comparative advantages to spur economic growth (e.g. McMichael 2012), Uganda has undergone neoliberal reforms in their trade policies. The coffee market is completely liberalized; there are no coffee export taxes, charges, or levies except for a scant 1% fee on all coffee exports paid to the Uganda Coffee Development Authority (Ahmed 2012).

The coffee sub-sector in Uganda is dependent on about 500,000 smallholder farmers (Ahmed 2012). The average farm size ranges from less than 0.5 to 2.5 hectares. In the Bududa District, and in many other areas of Uganda, there are relatively few cooperatives and a lack of enforcement of quality control, causing the coffee to sell at an extremely low price on the international market compared to the labor needed to produce it and despite that the Arabica coffee grown in the region tends to be of very high quality (Ahmed 2012).

### **The Bududa District**

The Bududa District is located in the eastern region of Uganda. This district lies at the foot of the slopes of the Mount Elgon volcano, one of the largest inactive volcanic mountains in the world. Bududa is bordered by Sironko District to the north, the Republic of Kenya to the east, Manafwa District to the south, and Mbale District to the west. This district consists of 15 sub-counties and one town council, with 90 parishes and 899 villages (Republic of Uganda: Ministry of the Local Government. N.d.).

The Bududa District has a population of 211,683 and the growth rate is about 3.8 percent, higher than the national population growth rate of 3.2 percent (Uganda Bureau of Statistics 2014). In Bududa, as in wider Uganda, there is an extreme youth bulge, with over half of the population under the age of 16 years (The Republic of Uganda: Ministry of the Local Government. N.d.).

Although it is a rural area, Bududa has a relatively high population density of about 952 persons per square kilometer in some areas, a statistic that has been linked to an increase in deforestation as well as landslides in the region.

The Bududa District has a unique set of natural resources, such as fertile soil from the volcanic dirt and regular and abundant rainfall (Watira 2011). These conditions help facilitate the intensive growth of coffee, as well as a host of subsistence crops such as bananas, beans, cassava, sweet potato, cabbage, and a variety of other fruits and vegetables. Over 93 percent of households in the district are considered subsistence farmers with many combining subsistence with some level of coffee cultivation (Watira 2011). Other economic activities include livestock rearing, small- to medium-scale business enterprises such as retail trading, mining, timber decking, local beer sales, food stands, and transportation services, and limited tourism in the Mount Elgon forest reserve (The Republic of Uganda: Ministry of the Local Government. N.d.; Watira 2011).

While the average GDP per capita of Uganda is around \$1,700 USD (World Bank 2015), the average household in Bududa earns around \$100 USD per year. The Bududa District has no formal water or sanitation systems, and the electricity supply is inconsistent at best. Most dwellings are not even wired for electricity. The roads within the district, and the main road that connects the Bududa District to the nearest urban center, Mbale, are unpaved and typically in very poor condition (The Republic of Uganda: Ministry of the Local Government. N.d.).

Most households in the Bududa District have an excess of 6-7 children, and polygamy is still commonly practiced, especially among older generations (The Republic of Uganda: Ministry of the Local Government. N.d.). The average age of first birth for women is around 14-16 years old. Most households include extended family members, such as grandparents, aunts or uncles, etc., and the large family size helps to contribute to farming and household labor. The culture in Bududa, like much of the country, is quite conservative, with traditional gender roles and norms rampant. Many women are confined to working in the home and gardens, while men dominate the other forms of more formal employment mentioned earlier.

### **Research Methods**

Based on the literature on unequal exchange, as well as the characteristics of the coffee trade and production in Uganda, this study is exploratory in nature, and focuses on understanding the methods used to grow and harvest coffee in the region, how coffee growers perceive coffee and price fluctuations, and opinions on gender dynamics and potential negative health and environmental outcomes of coffee cultivation.

This research makes use of 21 semi-structured interviews (12 females and 9 males) with coffee farmers and 2 male coffee traders in the Bududa District. I also draw on over 11 months of participant observation during June - August from 2013-2016, including living with a local family

who grows coffee to supplement their income. The interviews were conducted over 2 periods; one from June - July in 2015, and secondly in early June of 2016. All interviews were audio-recorded and lasted between 30 minutes to 1 hour.

Conducting interviews with coffee growers in the Bududa District is vital in unearthing the processes, trends, and consequences of coffee cultivation in the region. By employing interviews, I was able to gain detailed information about participants' thoughts and behaviors. The interview sessions broadened my understanding of the factors that contribute to coffee cultivation and how it impacts rural livelihoods in Uganda (Boyce and Neale 2006; Weiss 2004).

During the interviews, I tried to provide a relaxed atmosphere, allowing participants to feel comfortable discussing their experiences and perceptions, by conducting the interviews in a conversational style on a secluded but open porch at the local family's house that I stayed with. Moreover, by maintaining an ongoing relationship with the Bududa community for over 5 years, I earned the trust of local community members and leaders. This was instrumental in allowing participants to feel at ease sharing their experiences with me, some of which touched on sensitive topics, such as spousal abuse. I probed participants about relevant topics that led to the exploration of themes important to this study that simultaneously demonstrated my interest in the participants' lived experiences (Strauss and Corbin 1990; Weiss 2004). Overall, my long-standing presence in the community and the use of open-ended interviews enabled me to collect data rich in information that goes far beyond what could be gleaned from survey data or other types of assessment (Strauss and Corbin 1990; Weiss 2004).

The interview instrument was designed to facilitate wide-ranging discussions about how coffee is cultivated, processed, traded, and the consequences of such. I used a local male translator for interview sessions so that I could conduct interviews in the local language, Ligisu, which enabled informants to provide fuller answers and feel more comfortable talking about their perceptions and experiences. The local interpreter/translator also helped design and refine the interview guide to phrase questions in a manner that were relevant to the community and that community members would understand easily.

To gather data, I employed convenience and snowball sampling in order to connect with community members who are involved in coffee cultivation in the Bududa District. I also loosely employed quota sampling to get a range of both female and male participants. This proved to be especially important, as the views of the women often diverged from the views of the men in the community.

To begin the analysis of my data, all interviews were transcribed using the transcription software Express Scribe. The transcriptions were imported into an electronic database, and coded systematically using the qualitative software ATLAS.ti. I wrote memos during my fieldwork in Bududa and when transcribing the audio files to identify and keep track of evolving themes and

ideas that influenced the first round of coding (Friese 2012; Miles and Huberman 1994; Saldana 2009; Strauss and Corbin 1990). This initial round of coding was focused on grouping together a variety of themes in a meaningful way based on how they elucidated my research questions. To avoid losing context when community members explained their knowledge about coffee cultivation and the effects, I coded references to each family of codes liberally, capturing as much of the surrounding texts as needed to understand the connections and conceptions members' make (Friese 2012).

I carried out a recursive process of coding where I “moved back and forth between noticing and collecting, for instance when developing subcategories” (Friese 2012: 101). Although many of the initial codes produced were based on themes and ideas from my memos, the majority of the codes emerged from the data and were refined over the multiple rounds of coding (Friese 2012; Miles and Huberman 1994; Saldana 2009). My memos and coding processes highlighted themes and direct quotes from the interviews necessary in providing the perceptions of community members on the consequences of coffee farming. Quotes were organized according to the sets of codes and themes with which they were associated. This list of quotes was investigated and specific quotes were chosen based on their ability to elucidate the research themes. The quotes presented are often in third person, due to use and phrasing of the local translator.<sup>3</sup>

The participants in the study were all between the ages of 30 and 76 years old. All of them had been involved in coffee cultivation for several years, with many of them learning to cultivate from childhood or adolescence, and therefore were involved in coffee farming for decades. The overall level of education was low, but did vary. Several participants had completed or at least started some level of secondary education; however, quite a few of the participants never attended any formal schooling or had levels of schooling that were below the basic primary level. All participants were married, or had been married in the past and were no longer married due to death of the spouse. Several of the interviewees were involved in polygamous marriages.

### **Findings**

Deciphering why community members grow coffee is important as it sets the framework for their conception of the consequences of coffee cultivation, harvest, and selling. The semi-structured interviews conducted in the Bududa District of Uganda reveal that community members generally engage in coffee production because they know there is a market for selling coffee to the traders, even if the prices are low and true economic gains are minimal. In comparison, there may be only

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<sup>3</sup> The translator provided direct translation from the local language, Ligisu, to English. However, the translator often translated responses in the third person as “he says...” or “she says...” during the interview session in order to make it clear when he was offering his own explanation. Although this was relatively rare, there were instances when the translator would clarify what was meant by a phrase or technique commonly understood by the local community upon my probing.

an extremely limited market for other agricultural products made in the region, such as bananas, as almost every other household in the district also produces these items for themselves. In other words, coffee growing is one of the few ways for rural households in the Bududa District to make any money. There are scarce formal sector jobs, and while many work informally, such as by working as a boda-boda (motorcycle taxi) driver or selling other crops for local consumption at road-side stands, coffee cultivation is considered to be a key form of money-making activity in the district. While all coffee cultivators also grow subsistence crops, money is still needed for other expenses, such as school fees for their children, clothes, and medicines when one falls ill. As one female coffee grower explicates,

She thinks you can make more money from coffee than other crops... It is very marketable. Even if the price is low, you still get some money from it. Coffee has no risk.

Because of these basic factors of marketability and few other means to get cash in the district, all respondents ultimately conveyed that they think that growing and selling coffee is good for the community. Another cultivator responded,

It is very good for the community. The people will feast, the bars will be packed with young men. Some will pay school fees.

### **The Process of Cultivating and Selling Coffee in Bududa**

There was overwhelming consensus on the basics of growing, harvesting, processing, and selling the coffee; in other words, there was a common set of practices used in the community and respondents described these practices in similar ways. Many farmers grow their own seedlings from the coffee cherries harvested in the prior season. They start them in small, “nursery beds,” then transplant them to the coffee garden when they are around 6 inches tall. Additionally, over three-fourths of the interviews revealed that the government and local counselors also provide coffee saplings to anyone that has land to grow it. In fact, most respondents thought that coffee cultivation in Bududa is currently expanding due to this direct support from the government. When asked why they think that the government is providing free plants to cultivators, one male respondent remarked, “*To help people who are backward to have a better life.*”

The coffee saplings are planted about 18 inches to 2 feet apart, enough distance such that the branches from neighboring coffee trees don’t crowd out one another when they become full grown. Most respondents said that it takes several months for the coffee plant to produce any harvestable cherries. For example, one cultivator explained, “*If you take good care of it, it takes one year and*

*a half, that's when you get good beans from it.*" While the coffee trees are maturing, they require little labor beyond pruning, fertilizing, and keeping the ground around them wet by hauling water up into the hills (if the garden is far from the river) and digging trenches. Most cultivators fertilize their plants "organically" with only one male farmer stating that he used a commercial fertilizer. All of the other growers, if they mentioned fertilizing, did so using cow or chicken manure. Also, most cultivators mix their coffee plants with some subsistence crops, such as bananas or beans. Several growers commented that the beans also act as a fertilizer for the coffee plants and that the banana trees help to protect the coffee from the wind and provide some partial shade. However, the level of mixed cultivation varies considerably. Some gardens I visited appeared more like plantations, with just a few banana trees planted sparsely throughout.

While cultivating the plants does not seem to require much more work than other crops, every respondent commented that harvesting coffee took considerably more time and was very labor-intensive in comparison to other crops.

When you go to pick the coffee you have to make sure you pick the ones that are red. You go through all the gardens many, many times.

The coffee takes more time [than other crops]. You go at like 7 and come back after 3. At the end of the harvest, you have a lot of pains, using your arms to pull down coffee.

Indeed, almost every respondent talked of back, shoulder, and arm pains from harvesting the coffee. Many people used phrases like, "*It takes much energy*" or "*It is very labor intense.*" Many cultivators rely on other family members to help them harvest the coffee, and many also "rent" their neighbors to assist with the harvest, paying them about 3,000 UGX (Ugandan shillings) or less than \$1 per day.

After picking the coffee, you have to hull it the same day. Then it stays pure white. If you wait, it will turn brown and traders do not want it. The coffee that is pure white is better.

Following the picking of the ripe coffee cherries, many people hull the coffee, removing the outer pulp from the coffee bean. Most of the growers take their coffee cherries to one of the few other growers who owns a hulling machine (a hand-crank device that separates the bean from the husk), giving up a small portion of the coffee beans as payment. The coffee is dried for 1-2 days, then washed again to remove any remaining pulp. The coffee is then dried for a longer period of

time on large mats that are raked regularly to prevent the beans from getting too much sun. The exact time it takes to dry the beans varies, depending on the weather and amount of direct sunlight, but usually it takes around 3 days to one week.

Some traders also buy the fresh picked coffee cherries directly from the farmers without any processing at a lower price. The interviews reveal that cultivators in Bududa very rarely sell their coffee to a cooperative, and are much more likely to sell their coffee directly to a trader. In fact, out of the 21 interviews with coffee cultivators, only 2 respondents commented that they sometimes take their coffee to a cooperative. Although the cooperatives can often get a better price for the coffee, there are a number of reasons why farmers do not use them. One key factor has to do with the amount of time it takes to get payment from the cooperative. The cooperatives do not pay farmers for their coffee until after it is sold at a higher level of aggregation in Mbale or Kampala, which can take several weeks or even months. Farmers are given a receipt that shows how much coffee was sold to the cooperative, but due to a lack of basic infrastructure, with most homes lacking even furniture, people often lose the receipts and have no way to validate for the money entitled to them. Several of the growers made comments like the ones below,

Sometimes the cooperatives that buy the coffee take long, and there happens to be a lot of corruption which prevents him from selling to the cooperatives.

In addition to the long delay between selling the coffee and receiving payment, this comment also highlights that many growers feel there is corruption and that the cooperatives are not well managed. Also, to sell coffee to the cooperatives, you must be a member, including paying a membership fee before the coffee harvest season begins, which is not possible for most. Moreover, the cooperatives only take hulled coffee, and some growers do not have access to a machine. Thus, the overwhelming majority of growers instead sell their coffee to traders that are located at the trading centers. *“They sell it to the traders because the traders give you fast money.”*

The explanations describing the issues with cooperatives begin to point to some of the mechanisms of unequal exchange, or the processes occurring at the local level that allow growers to earn only a very limited profit for the coffee they cultivate and process. I will elaborate on this point further in the conclusion section.

### **The Economic Gains from Coffee**

As initially demonstrated, coffee does provide households in Bududa with access to cash money. However, several of the growers interviewed admit that in a bad coffee price year, they would have been better off growing other crops. A male grower says, *“In case the price is so bad, he can*

*make more from maize, beans, potatoes.*” Another female grower said, “*Coffee sometimes helps you get some good money. But matoke [bananas] helps you get food throughout the year.*” Thus, while there are some economic gains, if it happens to be a bad price year, the household would have perhaps benefitted more from growing more subsistence or locally-consumed crops.

Another key theme concerns the short-term benefits from coffee harvest, where selling coffee leads to monetary gains, but only for a few weeks or months of the year. As the population in Bududa is not used to making abundant money and does not have access to formal banking, there is a lack of a savings culture or infrastructure. Much of the money made from coffee is used or squandered in the immediate months or weeks after harvest. One female respondent noted,

You can spend all the money by December or January, and then have nothing. February, March, April. These are the months of poverty. The money from coffee only pays for one term of [school] fees.

The total amount of money a household makes from coffee depends entirely on the size of their coffee gardens. Most people own between 1 and 3 coffee gardens, and the size of the gardens can range from 20 to over 100 plants. Many growers commented that the price for one kilo of coffee can range from 2,500 UGX (~ 75 cents) in a bad year, and has been up to 10,000 UGX (~\$3) in strong years. During June of 2016, the traders I interviewed reported that the price for coffee in Bududa is selling at around 5,000 UGX (~\$1.50) per kilo. The ICO (2015) estimates that one kilo of coffee yields at least 60 cups of brewed coffee. This means that coffee farmers in Bududa make about 2.5 cents on each cup of coffee sold in Northern markets. Certainly, these estimates convey that the bulk of profits made from coffee grown in Bududa are accrued by those at the top of the commodity chain. Such a devaluation of the actual coffee grown and later sold in Northern markets points to the underlying processes that allow unequal exchanges to occur.

### **Understanding and Consuming Coffee**

The interviews in Bududa reveal that most coffee farmers in this region know little about coffee or the broader coffee market. Very few respondents have any idea where the coffee goes after they sell it to a trader, and even fewer had any conceptions on why the coffee prices may change so much from year to year. As a rare example, one grower had a fairly accurate understanding, commenting that, “*He has been told, in case Brazil produces more coffee in a year, the price will go down.*”

A much more common response was,

She is not sure why the price fluctuates. She doesn't know what they [the traders] do. But she thinks that the coffee goes to a large cooperative in town, but she doesn't know what they do after that.

Additionally, only around half of the coffee growers I interviewed know that coffee is used most principally to make a drink. Growers often made comments like the one below,

He doesn't know what they use the coffee for. For him, it is about growing it and selling it.

Interestingly, several of the respondents said that they thought coffee was used to make bread or medicine. Even more shocking, another common response was that coffee was used to make weapons. For example, a male grower remarked, "*They use the coffee for making gunfire or weapons and bullets.*"

A very small proportion of the growers interviewed said that they have "taken" [drank] coffee in their home. However, they only drink coffee when they have the beans freely available to them during the harvest season. For the overall majority of the respondents who reported drinking coffee, the level of consumption was very low, perhaps only 3-4 times during the entire coffee harvest season and, therefore, only consuming coffee a few times per year. Most of these households roasted their coffee just using a pot over the fire, adding the crushed, roasted beans to hot water.

### **Gender Inequalities**

A key research question concerns whether men and women benefit equally from coffee cultivation in Bududa. The results are glaring. All of the women interviewed believe that coffee benefits the men of Bududa much more than the women. About half of the males interviewed agreed, while half contended that men and women equally benefit. These men would comment that they worked equally to cultivate the coffee, share all the profits from selling coffee evenly with their wife or wives, and that the money gained was only used for things like their children's school fees. However, much more commonly, informants reported the opposite.

The women work a lot in the garden. The men do nothing. Men marry mostly to have workers. Men take all the money and have the women

remaining with nothing. They use the money to gamble and drink, and even take other women.

All of the women and several men reported that the women principally grow, water, harvest, and carry the coffee, but only the men are involved in the selling. *“It is not the same. Women can harvest the coffee, but the man comes and sells it off.”* Even a male respondent commented, *“The reason the man holds the money is because the coffee is his. The man owns the coffee.”*

Many women admitted to being victims of spousal abuse over disagreements about coffee. One woman showed me a large scar, saying that *“This is what the husband did when she quarreled with him about coffee.”* Women being interviewed said,

Yes, I am a victim myself. When the man sells the coffee, he might take it [the money] to a second wife, who does not cultivate the coffee. We would fight. I got hit.

Many people fight because of coffee. Most times the men want to beat up their wives if they complain about him using the money to buy alcohol or cheat with other women.

The interviews with women reveal that they never know how much money is made when the coffee is sold. All women contend that their husbands keep money for themselves and never share the full amount. These accounts reflect prior research discussed earlier on “dark value” and how women’s contribution to coffee cultivation is unpaid and unrecognized. These factors contribute to processes of unequal exchange, as the hidden value of women’s labor allows for greater accumulation of surplus at the top of the coffee commodity chain.

The men benefit more because the men use the money from coffee to drink [alcohol] or take other women to the lodges. Men are dishonest in how much they make from the coffee.

These accounts also reveal that the money gained by men from selling the coffee is often not used to benefit the household, as many of the men interviewed claim. The women are often coerced into laboring for their husbands in the coffee gardens due to a lack of other options. Just as coffee is viewed as the husband’s property, so are wives.

The reason she has kept working because she is at the husband's will. She cannot disobey. If she disobeys, he might divorce her and she will be stuck with the kids. She has no other option of surviving.

### **Child Labor and Missing School**

In addition to female labor, the interviews in Bududa reveal that children are used to harvest coffee. While several interviewees contended that they never take their children out of school to help with the coffee harvest, using them “*only on the weekends*,” the overall majority of respondents said that they notice children missing from school during the harvest months.

There are many parents who use their kids to grow and harvest. Some parents tell their children not to go to school to help pick the coffee. Some kids who do not go to school [at all] sneak into the coffee gardens and steal the coffee. Then they use the money for gambling.

This quote reveals that not only are children pulled from school to harvest coffee,<sup>4</sup> but also that children who are not in school (usually due to a lack of the family's ability to pay school fees) also steal coffee from other farmers and use it in ways that does not benefit their social development. One grower who is also the head master at a primary school commented, “*When it is harvesting time, attendance goes down.*” A key reason for the use of child labor concerns the nature of the coffee plant itself. One male grower reports,

Harvesting coffee is very hard. There are small fruits. So they need the children to help them.

### **Connections to Malaria**

Malaria represents the key health threat in this community, and the interviews reveal that there are keen connections between coffee cultivation and increased malaria vulnerabilities. Some of these vulnerabilities are created at the stage of cultivating young coffee saplings. Three of the coffee growers said that they use mosquito bed nets to protect and provide partial shade in the nursery bed. One interview with a male grower reveals, “*On the bed, you can put a small net to regulate the amount of water and sun...They use mosquito nets.*”

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<sup>4</sup> There were no discernable patterns regarding gender on which children tend to miss more schooling to help with the coffee harvest.

Coffee is the only product grown in the region that I have seen requiring shade cover as saplings. The fact that some families may prioritize the use of nets for young coffee plants over the protection of their children or other family members from malaria could easily contribute to increased vulnerabilities to the disease. Additionally, the overwhelming majority of the growers interviewed also said that they perceive that they get more mosquito bites in their coffee gardens in comparison to their other gardens.

Yes, she gets a lot of mosquito bites. Most times, there are more mosquitoes in the coffee gardens. She is not sure why, she just knows she sees more mosquitoes there.

This quote illustrates that many do not know why there are more mosquitoes in the coffee gardens than in their subsistence gardens, however, many cultivators attributed the discrepancy to the nature of the coffee plant and needed growing conditions.

There are very many mosquitoes. Like more mosquitoes in the coffee gardens. The plants make dark areas that breed the mosquitoes.

In addition to the shade of the bushy coffee plants, many also commented that the mosquitoes breed in the damp trenches of the coffee gardens. The deep trenching and greater requirements for water is something that is unique to the coffee plants in relation to other crops being grown in the region. I also notice that the coffee harvest season from July through October coincides exactly with the wet season, meaning that women and children are outside in mosquito breeding grounds at the time of the year when the exposure to mosquitoes and malaria parasites peak. Every respondent said they had acquired malaria, often multiple times, during the last coffee harvest season. Though direct causation cannot be made, it is common knowledge in the community that the mosquitoes endemic to this region prefer “bushy,” wet areas that are characteristic of coffee gardens and that the harvesting of coffee requires much more time spent outside in the garden, while other local crops (e.g. bananas, cabbage) do not share these qualities. In these ways, exposure to malaria-carrying mosquitoes is likely heightened for those working in coffee gardens in relation to gardens that only contain subsistence or local crops.

### **Environmental Costs**

Lastly, the interviews reveal important environmental costs to coffee. Only about half of the cultivators made any comment regarding negative consequences to the environment. Many of them

did not perceive any negative environmental harms to growing coffee, and when pressed on potential issues of deforestation, for example, many explained that they inherited their coffee garden from their parents, or bought land where there were no trees.

However, other interviews did bring to light issues of deforestation and soil erosion. Some people that had more recently expanded into new areas, mainly up on the steep hillsides where there is unclaimed or uncultivated land remaining, did admit to felling large, native trees.

So, the reason the people are cutting the trees, they claim that the trees spoil the coffee plantation. The trees compete with nutrients in the ground. That's why they cut them. When they cut the trees, the coffee gets enough sunshine.

While many large trees are cut to make way for coffee, some are left to provide semi-shade and protection to the coffee plants or soils. Though, this is usually only a few trees.

You have to leave very few of them [trees]. If you leave many of them, they compete with the [coffee] plants for nutrients.

Landslides represent a key environmental threat in the region, and the connections to increased deforestation on the steep hillsides are clear. For example, when entering the Bududa District, there is a large sign or billboard warning of the dangers of felling trees in creating conditions that lead to landslides. Despite this, high levels of population growth and the desire to earn money pressure farmers to expand cultivation sites into unclaimed, forested areas. In fact, a landslide that claimed 5 lives just occurred in Bududa in 2016 during the time of the second wave of interviews.

Planting up there, in the hills. It is causing soil erosion. Intensive soil erosion. Of course, they create landslides. They are very dangerous. So much pressure on the land.

Taken together, this research reveals that there are a number of social, health, and ecological costs to producing coffee in Bududa. Furthermore, the economic gains appear to be very limited, especially for women, both in the share of profits for growers, as well as the short-lived benefits from gaining cash at only one time of the year. The interviews also reveal several mechanisms that enable unequal exchange relationships to occur, such as issues with the cooperatives and the intense labor demands of coffee harvest. I elaborate on these points below.

### Conclusion

The International Coffee Organization (2015) contends that demand for coffee will increase by nearly 25% over the coming five years. Consumption is increasing most prominently in developing societies such as China, India, and some Latin American countries. After several years of decline, world coffee prices are also on the rise, largely due to droughts in Brazil leading to elevated demand from other producing nations, like Uganda (ICO 2015). Climate change is leading to less rainfall in central Uganda where Robusta is produced, and in the most recent years, total Robusta exports have declined (Ahmed 2012). All of these factors signal potential increased demand for Arabica coffee in the wetter region of Bududa.

While rising demand can lead to an increase in coffee prices, and, therefore, better profits for growers in communities like Bududa, there is also a clear push to expand cultivation in the region. In two to three years, once the new trees provided by the government mature fully, the Arabica market in Bududa could be flooded. Similarly, yields in Brazil could recover, and other nations may also use the recent rise in global prices to start planting more coffee; this could lead to declines in global coffee prices in the years to come.

The interviews reveal that overall the growers in Bududa think that coffee is good for the community, as it provides an influx of cash not likely to be achieved with any other product or commodity. However, there are also clear economic, social, health, and ecological costs that contribute to community well-being declines or stagnation. Perspectives grounded in unequal exchange shed light on the harmful impacts of specializing in coffee, and the qualitative approach undertaken here helps to illustrate some of the key mechanisms that allow such inequalities to manifest. For example, one of the most consistent and emphasized findings from the interviews concerned the intense labor demands of coffee cultivation in relation to other crops. The physically-demanding nature of picking the coffee from tall bushes combined with the many passes required through the gardens to pick the cherries at the peak of ripeness means that coffee is much more labor-intensive than other products. As women represent some of the main harvesters, and also maintain demands in the home and with other crops during the coffee harvest season, there is a significant amount of unpaid labor and hidden value that likely attenuates unequal exchanges in coffee in relation to other crops.

Another key mechanism illuminated in this analysis concerns the limited profits made by growers or coffee owners in the region, which is in part due to the corrupt nature of the cooperatives. In addition to corruption, delays in payment and the membership structure of cooperatives also make participation in them unattractive or impossible for growers. A lack of participation in cooperatives limits possibilities for fair-trade initiatives and the enforcement of quality control at the local level would could, in theory, increase the profits that are realized by

local farmers. Internal factors like these point to local processes that interact with broader forces to allow unequal exchanges in coffee.

It must be emphasized that in the end, the average male coffee grower in Bududa will only make less than two and a half cents on every cup of coffee sold in Northern markets. This is a gross injustice. The average female coffee grower in Bududa will make nothing. If she's lucky, she might escape the coffee season with only aches and pains, and no permanent scars. By bringing gender into the discussion of unequal exchange, the hidden, unpaid labor of women becomes manifest in the systematic devaluation of primary sector and other labor-intensive products that women are disproportionately responsible for generating. Gender inequalities facilitate unequal exchanges at the global level, as well as more micro levels. The fact that women rarely, if ever, see any profits from their time growing and harvesting coffee is reflective of unequal exchanges between men and women within Bududa.

In addition to gender, this study also seeks to emphasize health inequalities in unequal exchange relationships. Just as the international division of labor sets up profit and ecological material appropriation from periphery nations, so too does unequal exchange involve relative losses or risks to health for nations at the bottom of the hierarchy. A growing literature makes links between export agriculture and malaria in epidemiological case studies and cross-national analysis (e.g. Austin 2013; Norris 2004), and the findings presented here add another dimension of evidence to this phenomenon using community-based qualitative research. As community members in Bududa engage intimately with their local environment to obtain food, water, and other resources, they notice patterns in mosquito populations that bring their most significant threat to health: malaria. The fact that growers observe more intense populations of mosquitoes in their coffee gardens than in other gardens should come as no surprise, given that mosquitos thrive in wet areas with the right mix of sun and shade. The time necessary to harvest coffee puts women and children outside in the mornings and through the evenings during the rainy season when malaria-carrying mosquitos are most active.

In addition to the social and gender contributions of this research, the findings presented also support conceptions of ecologically unequal exchange. While coffee has been considered as shade crop with minimal impacts to forests in the past, it is clear that many growers fell large, native trees and perceive native trees as competing with coffee plants for nutrients in Bududa. Deforesting and expanding cultivation sites on hillsides creates perfect conditions for landslides, with grave, lasting impacts for populations and the local ecology of the region.

Despite the fact that coffee growers make money selling coffee, the results show that the level of economic gain is not reflective of the true value of coffee to consumers in the global North and other rapidly developing regions. Ironically, many male growers contend that they use the little profit they make from coffee to pay school fees, yet children are pulled from school to help with

the harvest. While some school fees or basic needs may be met through coffee,<sup>5</sup> the profits don't last long since they are received just once a year and most families have no means of saving.<sup>6</sup> Layered with gender inequalities, much of the profits from coffee appear to be wasted quickly by men who "feast and party" following the harvest, buying alcohol, gambling, or engaging in other behaviors.

As a starting point in mitigating these patterns, village savings and loans associations (VSLAs) are growing in popularity and membership across the district; perhaps greater sensitization on savings and other incentives for VSLA membership during the time of coffee harvest should be created. Additionally, employing women as leaders in these groups may help to increase investment of coffee money into key household or community resources, as well as improve women's status and autonomy. On a more macro-scale, the coffee industry should be brought under regulation. Before the global coffee trade was liberalized in the late 20th century, producers were able to better regulate coffee prices, and a greater share of profits went to growers (e.g. Tablot 2004). However, such regulation is not likely to come to fruition, given the different interests of producing nations and coffee corporations in consuming nations, and current pervasive neoliberal approaches to development and trade.

It is important to acknowledge that conducting semi-structured interviews has some limitations. This study is established from data obtained by interacting with people. The research is therefore open to be influenced by my own personal and emotional dimensions as well as those of the community members with whom I interviewed. My results could have been affected due to the fact that I am a female "Mzungu," a term that refers to people who seem outwardly foreign. Being recognized as "Mzungu," and therefore a clear outsider, could have inhibited some people from providing honest answers. However, I made sure to mitigate this.

First, as emphasized, I have been working in the Bududa community over several years, and I am familiar with the local cultural norms and some of the local language. I always greeted my participants in Ligisu and behaved in line with local customs (e.g. wearing long skirts). Additionally, as noted, I employed a male interpreter who is native to Bududa in order to overcome remaining cultural, language, and gender norms that would have otherwise limited my interactions with male coffee growers. Moreover, I deferred to my translator about identifying participants or asking certain questions. I made sure to debrief with my interpreter after every interview so as to

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<sup>5</sup> It is likely that some children are able to attend school because of the profits made from coffee. It is impossible to know for certain how much schooling would be viable without coffee profits. However, it is clear from the interviews that coffee profits typically only pay for one term of schooling, then are spent (there are 3 terms in the typical school year in Uganda).

<sup>6</sup> Given the lack of infrastructure and savings culture, any inflow of cash to Bududa could lead to these trends. However, because coffee is so seasonal, while most other crops (like bananas) are grown year-round, the sudden influx of money earned from coffee at only one time of the year could be attenuating these effects.

revise questions that needed improvement (such as to reduce social desirability bias) and to make sure that I was understanding responses appropriately. Furthermore, my status as a woman likely helped in many circumstances. I highly doubt that the female growers would have been as willing to share with me their stories of abuse and discrimination if I had been a male researcher.

Working with a translator also poses challenges that may have impacted the research. For example, there is no written dialect or dictionary for Ligisu, so some words or phrases may be imperfectly translated or lack a direct translation. At times, working with a translator can be “clunky” and disturb a truly conversational approach. Also, my translator was male, which may have caused some of the female informants to feel uncomfortable sharing their experiences. However, these weaknesses were also likely lessened as I have worked with this translator for over four years, and we have conducted countless interviews together on a variety of topics. Thus, our exchanges were relatively smooth, especially as I am becoming more versed in the local language. Additionally, the translator is relatively young (~25 years old) and comes from a distinctly well-educated and well-respected family in the region. His fluency in English is superb making him among the most qualified to provide Ligisu to English translation. His younger age and the fact that he comes from a family who runs a locally-based NGO focused on empowering women also likely eased concerns the female informants may have experienced.

Coffee is an obvious product of unequal exchanges. The coffee growers in Bududa are grossly underpaid for their coffee, and trading in green coffee will never accrue the profits gained in the global North from transporting, roasting, marketing, distributing, and selling the coffee in upscale coffee houses. The fundamental idea behind unequal exchange theorization is that periphery nations will not profit as much as the core for their exports. As coffee production happens to produce an ideal habitat for mosquitoes, reduces school participation among children, exacerbates the lower status of women, and, in some cases, leads to enhanced deforestation and erosion, there seems little possibility that the long-term negative well-being consequences might ever outpace any economic gains of cultivating coffee. Rather, unequal exchanges serve to reproduce the core-periphery hierarchy, undermining any potential for sustainable, successful development in underdeveloped regions like Bududa.

### **About the Author**

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Any conflicts of interest are reported in the acknowledge section of the article's text. Otherwise, author has indicated that she has no conflict of interests upon submission of the article to the journal.

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