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Daisy Kettle
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“Hadithi ya Matunda”: The Informal Fruit Economy on Unguja Island

A study of the livelihoods of smallholder producers, intermediaries, and sellers

By Daisy Kettle

Advisor: Amour Juma Mohammed
Academic Director: Richard Walz

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First and foremost, I want to thank all of the Zanzibaris that have been a part of my study abroad experience. The richness of this culture and its people are the inspiration and lifeblood of this project. While this study will not change lives, I hope that it draws light to this place and the many parts of life here that deserve attention and celebration. Many people suffered through long conversations with me and my very limited Kiswahili. Their generosity and willingness to help made this project possible and pushed me through the difficult parts.

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Abstract

This is the story of fruit on Unguja Island. It illuminates the livelihoods of farmers, intermediaries, and sellers and each of their roles in the island’s fruit commodity chain. Linkages between these actors are known to play increasingly important roles in agricultural economies across the world due to their ability to create “multiplier effects” through networks of non-farm income opportunities (Wineman, 2020). Through interviews with 19 Zanzibaris who work in this trade network, I learned about the intricacies of these networks. My data revealed that the fruit flow chain on Unguja creates a network of extensive backward and forward economic linkages, which start with smallholder farmers. This commodity chain is an informal system which relies upon formal systems in its operation. And finally, that the fruit commodity chain is built upon personal relationships between actors who have mutual trust. The fruit trade on Unguja does not adhere to any singular system of regulation or governance; it weaves itself into the cracks of the unspoken routines of everyday life in Zanzibar.
**Introduction**

Mango and Indian Almond trees stand tall over the rush of everyday life in urban areas, buildings and humans making room for their many branches. Roadways are shrouded by a thick ceiling of coconut trees, swaying gracefully in the kind breeze of the Indian Ocean. Papaya trees and banana plants surround every house, providing sustenance and a livelihood through agriculture for many Zanzibaris. Markets form community gathering points, hotspots for local goods being exchanged between people from across the island. The swirling smells of piles of tuna, tarp bags bursting with fresh tamarind, a man squeezing fresh passion fruit, and a trail of cardamom lingering in the air tickles my nose. Busy areas bustle with people pushing carts piled high with freshly peeled oranges, bicyclists perched on every other corner selling drinking coconuts, and women carrying baskets full of plump mangoes for the day’s juice. The fruit commodity chain creates a network of linkages between producers and consumers, which fuels the agricultural economy of Unguja and plays a role in national and global food networks.

In a family neighborhood in the village of Fujoni, a child mimics a woman as she collects *finesi*, or jackfruit, from the neighborhood trees. She walks through the forest in bare feet and a *khanga* with a large stick in her hand, 25 to 30 feet in length, capable of reaching the highest jackfruits. The young boy trails behind her with his own stick he gathered from the forest floor. Not budging with the help of the stick, the woman scales up the vertical trunk of the tree with nothing but her own strength. She twists the ripe jackfruits until they fall to the ground, and then gracefully inches herself back down the tree to the forest floor. The neighborhood’s *babu*, or grandfather, stores the jackfruits in his house until they are ready for eating. They then become gifts for each family along with any other fruit that has been harvested from the trees surrounding their family village.
From the producer to the consumer, what are the processes that influence the flow of fruit on Unguja Island and who are the people involved? This study explores the story of fruit and the many pathways it takes along its journey to consumption on Unguja Island. The fruit economy on Unguja is not merely a streamlined system of commodification for profit, but rather a complex web of knowledge and relationships which are part of the island’s society. The fruit trade on Unguja does not adhere to any singular system of regulation or governance; it weaves itself into the cracks of the unspoken routines of everyday life on Zanzibar. Baskets of fruit are transported across the island on top of a daladala full of people on their way to work, oranges are sold outside workplaces and tourist hotspots, and informal markets appear wherever room appears in busy areas.

This study illuminates the livelihoods of farmers, intermediaries, and sellers on Unguja Island through interviews and observation. It details their individual roles in the larger system of the fruit commodity chain. But the following pages also detail the arrangements that occur in between these delineations of farmers, intermediaries, and sellers; they illustrate the links between the actors and the many shapes they take the form of. These linkages constitute an increasingly important role in agricultural economies across the world due to their ability to create “multiplier effects” and networks of non-farm income opportunities (Wineman, 2020). This study observes smallholder fruit farmers and the trade chain that follows until the fruit is consumed.
Background

Unguja Island is the hub of the Zanzibar Archipelago (illustrated in Figure 1). While isolated geographically, Unguja is a bustling commercial hotspot in the Indian Ocean. The island is separated from mainland Tanzania by the 35-kilometer-wide Zanzibar Channel, a marine highway for transportation and trade between the Zanzibar Archipelago and the East African Coast. Ferries shuttle people between Unguja and Tanzania’s largest city of Dar Es Salaam, large barges ship goods across the Indian Ocean and dock at Unguja’s port, and small fishing boats search for schools of fish and transport their night’s catch to markets on the mainland. The Zanzibar channel and the physical location of the island being along the pathways of many Indian Ocean trade routes has shaped Swahili culture on Unguja. The East African Coastal Current – which flows northward along Unguja’s east coast – coupled with the seasonal monsoon winds, influence interactions between Zanzibaris and other countries connected by the Indian Ocean. Trade interactions between the archipelago and countries such as Saudi Arabia, Oman, the United Arab Emirates, southern Asia, the African mainland, and European countries account for a large part of the cosmopolitan makeup of the island. Accounts describe large dhow boats leaving the island in March and April with the monsoon winds, bringing boats full of ivory, coconuts, cloves, and rice to countries across the Indian Ocean (Petterson 2002: 7). But Zanzibar’s history as a trading hotspot is also deeply entwined with colonialism and exploitation, an inheritance that lingers to this day. These same dhow boats carried decks full of enslaved people recently sold at slave markets in Stone Town and elsewhere along the island’s coast. Slavery burdened Zanzibari society under colonial rule. The introduction of cash crops and the beginning of agriculture as one of the few pillars in the island’s undiversified economy also resulted from enslavement. Using the labor of enslaved people, colonialists built expansive clove
plantations on Unguja, which the island quickly became heavily reliant on for income. To this
day, agriculture remains an important part of Zanzibar's economy, accounting for 28 percent of
the island’s GDP in 2020; one of three contributing sectors (services, industry, and agriculture)
and only second behind services (ZIPA, 2021).

Key Concepts

Key concepts including fruit commodity chains, the informal fruit economy, and social
networks involved in the fruit trade will be referenced throughout the following sections and
provide a framework for the study.
Zanzibari life is now heavily reliant on the agriculture industry for economic stability, employment, food sustainability, and global connections. On Unguja particularly, the fruit commodity chain composes a significant part of the agricultural sector due to the high value of fruit across the island. Fruit and its many by-products are deeply intertwined with Swahili culture. The trunks of mango trees are carved into Dhow boats as fishing and transportation vessels, dried banana leaves are packaging material for fragile goods being carted across the island, and unripe papaya juice is used to treat sea urchin wounds. A Swahili poem found in a home in the late nineteenth century details the many uses of nazi, or coconut (Harris, 1962):

They are plucked down and stripped of their husks and cooked with boiled rice and sauces.
From the empty shells they carve a ladle and the hand-maiden Saada cooks with it.
Its grated nut squeezed free of juice is scattered on the midden and the cock scratches for it there.
Its fiber they plait into cord for the rigging of clippers and dhows.
With its fronds they thatch a house and ward off the winds and the wind-swept sand.
Of its trunk they make a door to resist the enemy and the robber.

Fruit is woven into life on Unguja, and agriculture and the associated processes as livelihoods run deep. The reliance on and use of fruit among Zanzibaris has created an expansive fruit production and trade network which now is a sector vital to the island’s economy; consisting of producers, intermediaries, and sellers (Omolo et. al., 2019). Place-based solutions and processes have been implemented on Unguja that may not exist in other parts of the world. Scholars recognize that informal and formal markets develop around various community hubs, which in themselves have their own, intricate dynamics. A shift in location of a market or trade hub results in disruption of food distribution chains (Lynch 1994: 316). The fruit trade is governed by informal agreements among community members. Lynch recognizes that current
fruit supply chains are based on the contacts and knowledge of those involved in buying and selling, and not just physical aspects of infrastructure like roads, buildings, and vehicles (Lynch 1994: 316). Thus, these relationships and the systems that develop are not uniform everywhere. Physical location and the multitude of factors that accompany have a large influence on the processes that are developed.

The informal nature of these systems leads to extreme variability and allows a multitude of other factors including culture, traditions, economic motivations, and formal systems to influence the pathways that are created in fruit commodity chains. Informal employment in trade chains in Sub-Saharan Africa typically accounts for a large part of the workforce and chain networks, with the share of informal employment ranging from 33 to 82 percent. Retail trading constitutes a large part of this, as “traders (persons selling goods along streets or in public places, including markets) provide a major source of urban informal employment” (Anyidoho and Steel 2016: 176). While scholars propose many different definitions of informal economic activities, this study will define it as activities that “…Include not only enterprises that are not legally regulated but also employment relationships that are not legally regulated or protected” (Chen 2007: 1). The formal economy differs from this in that the systems are regulated by government authorities and businesses are formally registered, taxed, licensed, and controlled (Anyidoho and Steel 2016).

Study Areas

This study begins with smallholder fruit farmers in the small, coastal, fishing and farming village of Mangapwani. Here, most of life revolves around the moon cycles, as fisherpeople depend on the moon for plentiful catches. But the village’s fruiting trees persist through these
cycles, only dependent on rainfall. Fruit farms in Mangapwani, for the most part, take the form of the natural environment. An overstory of coconut palms towers over small groves of banana plants outside family homes. Small fruit farmers might host an orchard of papaya plants in their yard alongside a few mango or avocado trees. Bullock carts frequent the roadways and village pathways, carrying loads of lumber or jackfruits. Mangapwani is located 25 Kilometers north of Stone Town on the northwestern coast of Unguja, where deeper surface soil supports large fruit trees and fertile farms. This differs from the southern and eastern parts of the island which have shallower soil, and bear less of the large fruiting trees such as mangos and avocados. However, farms in these parts of the island do produce large quantities of papayas and other smaller fruiting trees. One large-scale farm was identified in the region of Machui, part of the inland region of the island.

A short walk down the road in the villages of Maji Mekundu and Fujoni, a similar landscape exists. Mangapwani and these neighboring villages are situated along a major north-south roadway that passes through Stone Town and its vicinity; the major marketing hub of Unguja Island.

Zanzibar City, the outskirts of Stone Town, constitute this marketing hub. This area of Unguja contains the largest number of people, approximately 784,098 as of 2022 (World Population Review), and is the lifeblood of the island. Daladalas (the island’s public transportation network) flood with people every time of day; transporting people from all over the island for work, business, leisure, and daily tasks. Major marketplaces cluster in various regions of Zanzibar City. These include Mwanakwerekwe, Jumbai, Mombasa, Kijanwani and Darajani in Stone Town (shown in Figure 2), with more informal, smaller marketplaces appearing in between these major establishments. Markets are the meeting points for most of the
fruit movement on Unguja and play a vital role in the distribution of fruit to actors further down the chain, only being avoided by sellers purchasing directly from farmers. In these market settings I spoke to intermediaries, which I define as the group of actors that work between the farmers and retailers or sellers. This group is divided into various roles, which will be referenced throughout the study and include consolidators, transporters, suppliers, brokers, and wholesalers. Consolidators are actors who gather fruit from various producers into the same location. Transporters are “Facilitators of trade but not traders themselves” (Eskola 2005: 64); people whose job is to transport the fruit between places. Suppliers are defined as actors who supply fruit to various buyers, such as hotels or restaurants who do not want to go to buy the fruit

Figure 2: A map showing the relevant markets in the Zanzibar city area, as well as the two village locations.
themselves. Wholesalers are sellers who buy and sell the fruit in large quantities. This role is contained within intermediaries because fruit being sold for wholesale is often not the final sale, as “Retailers from other markets … come to buy their products from the wholesalers…” (Eskola 2005: 64). This group is involved in transporting the fruit, supplying to various other buyers, brokering at market settings, wholesale selling, and consolidating fruit. Thus, the key terms transporters, suppliers, brokers, wholesalers, and consolidators will be referenced throughout the study.

In Stone Town and its surrounding neighborhoods, fruit sales occur everywhere. While Darajani is located within the Stone Town area, smaller vendors occur much more frequently outside of the market on roads and gathering areas. In the heart of Stone Town, the winding pathways are communal gathering spaces where people eat, talk, and sit. Like intermediaries, different people have various methods of selling. I identify market retail sellers as people who are selling the majority of their fruit directly to consumers. Street cart vendors are sellers who have mobile carts that they sell fruit from. These are very popular in the Stone Town area because sellers are able to walk freely with them. I identify street kiosk vendors as people who have a permanent structure where they sell fruit from. These sellers are similar to market retail sellers, but they are removed from the market and have their own private spaces. Lastly, minimarket sellers are people who have very curated supermarkets for selling fruit to consumers who want higher-end fruit, or do not want to go to the market.

Methodology

This study is a collection of interviews with farmers, intermediaries, and sellers coupled with direct observation of their routines and practices. It took place in various locations starting on November 10th and concluding on December 3rd. A span of approximately one week was
devoted to each of these three groups as I learned their livelihoods and practices. I progressed chronologically down the flow of fruit trade, beginning my study underneath the coconut palms of Mangapwani. During this time, I lived among and interviewed six smallholder farmers with varying practices, and one larger-scale farm. The large-scale farmer was identified to be used for comparison. I then began interviews with six intermediaries which included suppliers, transporters, and brokers. Lastly, I had conversations with six sellers, each with a unique method of sales. Outside of the three categories of interviewees, I had one conversation with a Zanzibari nonprofit. Out of these nineteen interviews, I identified three key informants who I met multiple times or remained in contact with for further information. Only two of these nineteen interviewees were females, one farmer and one intermediary.

Both qualitative and quantitative data was sought out through a set of pre-written interview questions and observation. While interviews did adhere to the basic format of these questions, I used a semi-structured interview technique, adding in questions where I saw fit. I developed three sets of interview questions (see Appendix B), one for each of producers, intermediaries, and sellers. Questions were written to learn about the role of each of these groups within the larger fruit commodity chain. A snowball and random sampling technique was used to identify interviewees. Methods of identification varied greatly, with some interviews being set up via prior communication, some through community members I knew, and some through random identification. Observations contributed to a significant part of data collection. Information was also gathered through multiple short interviews with over 35 people.

Interviews ranged in length and formalily, however the majority of conversations lasted approximately 45 minutes and were conducted at the interviewee’s place of work – on their farm, at the market, or on the streets of Stone Town. Two of my interviewees generously offered to
take me along their day to observe and discuss, which lasted approximately 6-7 hours each.

Typically, there was only one interview conducted per day, however sometimes a second interview was conducted.

Interviews were conducted in Kiswahili and English, sometimes with the assistance of a translator. When interviews were conducted in Kiswahili without the assistance of a translator, interviews were frequently done in a mixture of English and Kiswahili. A small handful of interviews were conducted fully in Kiswahili without the assistance of a translator. In all instances, I would first pose questions in Kiswahili. With the assistance of a translator, they would then translate responses into English.

All interviewees were given an explanation of what I was doing and asked if they were okay with their answers being used in my study and report. This was done through verbal confirmation, and all respondents were okay with their answers being used. All identities of interviewees will be kept confidential in this study, with only me and my translator knowing their identities.

Because much of my study involved following fruit around the island, daladalas were frequently used to access various locations.

A Note on Ethics

This study uses the knowledge of Zanzibaris. Deciding whether to amplify the voices of these people and broadcasting their identities (if desired by the respondent) or remaining confidential remains a difficult field to navigate. While in this study, the identities of respondents are kept confidential in an effort to protect their business and livelihoods, this report still aims to illuminate the work of actors engaged in the fruit commodity chain as a whole.
My positionality as a female, white, foreign student likely impacted the results of this study in various ways. In many cases throughout the course of my interviews and observations I was alone, and while I followed the traditions of Zanzibari dress in terms of wearing long skirts and covering my shoulders and hair, my appearance and positionality did warrant curiosity. There is a possibility that this impacted the information that respondents shared with me throughout interviews.

Results

This section details the results of the eighteen interviews with producers, intermediaries, and sellers. These roles are each split up into their own section and appear in this order. The eighteen interviews across smallholder farmers, intermediaries, and sellers revealed the network of relationships that fuels the fruit commodity chain on Unguja. The jobs of these actors varied highly, and many played more than one role within the entire system. Knowledge I gained through these conversations with fruit trade actors are described below.

Part 1: Smallholder farmers

“The market makes the price.”
(Respondent #6, November 15, 2022)

The ways of smallholder farmers in the region of Mangapwani vary widely. Of the 5 smallholder farms, two respondents were primarily papaya farmers, two grew a mixture of tree fruits, and one grew bananas. The large-scale farmer specialized in papaya and passion fruit. These farmers primarily sell only one or a small portion of their total array of fruits, the rest being used within their household or gifted to neighbors. Of the five smallholder farmers, every
respondent identified that they grew other products besides their primary selling fruit (see Table 1). These alternative crops ranged from other common fruits such as jackfruit, bananas, and papayas; to spices such as vanilla and cloves; to vegetables. The majority of crops grown in Mangapwani are vegetables and thus their cultivation is widespread, whether on a large or small scale. Additional crops farmers grew for household or neighborhood use tended to just be a singular or a small handful of trees, whereas additional crops used for selling tended to be a slightly larger collection of trees or crops.

These small scale farms stick to traditional farming techniques in their practices (demonstrated in figure 3). These farmers do not invest in resources such as water or more desirable fruit varieties, profit addition strategies that larger scale farms might use. In Mangapwani, water for agriculture requires a fee of TSH 5,000 per month, deterring these farmers from using it for their fruit. One interviewee developed an improvised irrigation system which collected gray water from his house and funneled it to his avocado tree using a small dirt trench. He was proud of this idea, demonstrating to me how the system works when there is enough water. However, this was unique among interviewees; all identified small holder farmers depend on the seasons for water, including this interviewee with the improvised irrigation system. Farmers identified that they grow significantly less fruit during the dry season than they do in the rainy season. And with the addition of late and diminished rains during the short rain season this year, their fruit production continued to suffer. However, these smallholder farmers accept this variability due to lack of alternatives. This problem is recognized across the island, but differs with different sizes of farms.

While water supply was an issue identified by the larger-scale farmer also, he also used an irrigation system and had a private well on his farm. With the increasingly inconsistent rain
patterns on Unguja, farmers of all sizes are forced to change farming practices, but small holder farmers have fewer resources to reduce the effects on their farm and subsequent profits. Across the island, “Farmers who water their crops are making higher investments of either labor or capital than those relying on rain,” however regions with larger scale farms tend to invest in water resources (Fales and O’Hare, 2010) . This variability in production extends all the way down the fruit commodity chain and has a large effect on the profit of farmers; as supply is the overpowering factor in determining price (Mgeni, 2014).

Figure 3: A farmer collects *dafu* from trees surrounding his house using the traditional foot-rope method.
Revenue for farmers is at the mercy of a complex network of factors and varies greatly depending on methods of sales. Methods of selling varied among the five smallholder farmers, as well as the larger-scale farmer. The large-scale farmer uses two separate pathways for his papaya and passion fruit: he uses contract farming for passion fruit, which he sells directly to a hotel located on Unguja; and sells his papaya directly to a market broker located at Kijangwani Market, transporting it himself via daladala. During the tourist season, the contracted hotel orders approximately 60 kg of passion every week and he generally sells about three large boxes of papayas every 3-4 days.

The identified small scale farmers used intermediaries more commonly, with four of the 5 respondents using some form of this actor. The only smallholder farmer that did not sell to an intermediary was the respondent who only sold her fruit within the village of Mangapwani, cutting out market sales completely.

Farmers who sell their fruit to an intermediary are offered a price by this actor. This price is determined primarily by supply of the fruit at various markets, which differs greatly according to the season. The buying price proposed by the intermediary, however, is then further lowered to account for their own profit. In some cases, such as respondent #1, farmers have multiple intermediaries that want to purchase their fruit. These respondents identified that when multiple intermediaries come and offer various prices for buying, they are able to wait for the highest price. In this scenario, the farmers have a small amount of agency in price taking. These intermediaries typically purchase the fruit wholesale directly from the farm where the intermediaries then package and transport the fruit for sales. Using an intermediary for small farmers provides a link where there might be a lack of resources preventing the farmer from acting as the intermediary themselves.
This process differs, however, with different methods of sales. For farmers that sell within their villages, the price is determined solely by the supply of that fruit. These farmers identified that during the short rain season they are able to sell their products for a higher price because there is a relatively low supply; but they will lower this price during the rainy season, when there is an increase in fruit production.

In the scenario of another respondent, an intermediary was used but payment differed in that the smallholder farmer sets the price of his papaya based on market prices, and then paid his broker a set fee to transport and sell the fruit for him. He identified that he might pay the broker approximately TSH 15,000 for transportation and sales each day he goes to the market. This is an unusual scenario, as typically the fruit itself is sold to the intermediary with the cost of brokering taken out.

Table 1: Summary of smallholder and larger-scale interviews

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Types of Fruit Sold</th>
<th>Additional Crops for Selling</th>
<th>Additional Crops Not for Selling</th>
<th>Method of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Smallholder</td>
<td>Mango, rambutan, avocado, orange</td>
<td>Vanilla, cloves</td>
<td></td>
<td>Intermediary, within village</td>
</tr>
<tr>
<td>#2 Smallholder</td>
<td>Papaya</td>
<td></td>
<td>Banana, pumpkin</td>
<td>Broker (sells for him), sometimes sells himself at market, within village</td>
</tr>
<tr>
<td>#3 Smallholder</td>
<td>Oranges</td>
<td>Variety of vegetables</td>
<td>Daju, jackfruit, avocado, grapefruit</td>
<td>Intermediary, roadway</td>
</tr>
<tr>
<td>#4 Smallholder</td>
<td>Bananas</td>
<td></td>
<td>Papaya, jackfruit</td>
<td>Within village</td>
</tr>
<tr>
<td>#5 Smallholder</td>
<td>Papaya</td>
<td>Tomatoes</td>
<td></td>
<td>Intermediary</td>
</tr>
<tr>
<td>#6 Large-Scale</td>
<td>Papaya, passion fruit</td>
<td>Variety of vegetables</td>
<td></td>
<td>Sells to market wholesaler, hotel</td>
</tr>
</tbody>
</table>

Part 2: Intermediaries

“There is a big chain, a big connection. It’s a good business.”
(Respondent #8, November 21, 2022)
Intermediaries fuel the realm of market fruit sales. These actors provide the many links vital in connecting fruit production and sales for consumption. An overview of these interactions are shown in Figure 4. In my six interviews with intermediaries, I was able to speak with one market broker who is not involved in transportation of the fruit, two consolidators who are also market brokers, one wholesale market auctioneer, and one supplier who also transports the fruit (see table 2). Variance among the roles of these intermediaries was sought out intentionally to an extent, however stark differences still occurred even between actors with the same role just due to the extreme variability of the job.

![Figure 4: Summary of observed flow chain channels and interactions between intermediaries](image)

Markets are the hubs for all intermediaries, each one with different roles within the fruit commodity chain. In this study, I visited a total of five major markets within the Zanzibar City area. Three of the six interviews took place at Jumbi, the most popular market for intermediary
transactions on the island. This market is primarily for \textit{mnada}, or wholesale transactions. Unlike the sleepy, early morning streets of Stone Town, a short \textit{daladala} ride away in the sprawl of the city, actors involved in the fruit trade are already among the bustle of their everyday routine at Jumbi Market. Starting as early as 4:30 am, the fruit trade begins. \textit{Daladalas} filled with pineapples inside and stacked high with bananas on the roof teeter through the muddy roads of the market; sellers form assembly lines, tossing pineapples one by one from the roof of the car; brokers stack piles of papayas and fill bathtub-sized palm baskets to the brim with mangoes. Meanwhile, people flock out of the day’s first \textit{daladalas} and lorries coming from across the city; they congregate around auctioneers hollering off prices for stacks of pineapples, bananas, and jackfruit. “\textit{Elfu kumi na tano, elfu kumi na nne, elfu kumi na tatu, elfu kumi na tatu, elfu kumi na tatu},” he shouts, gradually moving across the fruit battlefield. This takes place in a large dirt lot covered in a thick layer of dried banana leaves from the past days of sales, a popular packaging material for the more fragile fruits. The start of \textit{vuli}, the short rain season, has created a mud pit where sales usually take place, making navigation by foot and vehicle more challenging but not hindering business as usual.

The process at Jumbi begins with consolidators selling truckloads of fruit to brokers. One of my respondents, a jackfruit auctioneer, purchases a lorry full of Zanzibar jackfruit each morning at Jumbi. Then, when buyers begin arriving around 6:30 AM, he begins the jackfruit auction. He typically sells around 100 jackfruits every day. Like many brokers, he plays no role in the transportation or consolidation of the fruit, relying on other actors for that. As we spoke, some teenage boys in a bullock cart came to purchase four jackfruits. At Jumbi, most of the fruit is sold to other intermediaries or sellers. This jackfruit broker notes that many different hotel
suppliers and sellers purchase from him every day. I did not observe any other wholesale jackfruit brokers at Jumbi.

In Kijangwani Market, across the city from Jumbi, I spoke to a broker with a similar strategy. Here I met the fruit king. When I approached his stall in the market, he was shrouded by a veil of bananas hanging from the ceiling. A ramp led up from the ground to the raised platform where he and the fruit sat. A narrow pathway weaved between the overflowing towers of pineapples, mangoes, papayas, and grapefruit to the back of the platform, where he sat upon his throne. His large, velvet, blue wing chair consumed him as he dozed off with his arms draped over the wide armrests. Two men who sat on stools on either side of him stood up and gestured for my translator and I to sit down.

While Kijangwani Market still has plenty of wholesale transactions that take place, it is more similar to other markets such as Darajani and Mwanakwerekwe, which are designed for both wholesale and retail. Here, the fruit king does not just buy from a single consolidator each day, but rather buys from a variety of farmers and other suppliers who he has connections with. But, similar to the jackfruit broker at Jumbi, he is not involved in the transportation at all. Rather, farmers -- such as the large-scale farmer I interviewed -- bring him their fruit which he then buys, increases the price of, and sells all in the same location. However, in addition to purchasing fruit grown on the island, he supplements his supply with fruit from mainland Tanzania. Like Jumbi, most of his sales are wholesale and occur in the morning when sellers and hotel suppliers come to purchase fruit for the day. While at Jumbi, the jackfruit broker determines price largely based on the size of the fruit (ranging from TSH 2,000 to TSH 5,000), this broker sets his prices relative to the rest of Kijangwani Market and the availability of the fruit.
However, other wholesale brokers consolidate and transport the fruit themselves. A pineapple and watermelon broker at Mwanakwerekwe market sells the fruit himself throughout the day, then goes to collect fruit for the next day using a *daladala* in the evenings. He orders watermelons from mainland Tanzania, and collects pineapples from farms around the island (while also supplementing with pineapples from the mainland). For him, consolidating requires a network of relationships with farms across the island. Because of the fluctuation in supply of farmers, he buys from a different farm each time he needs more pineapple. He explained that he calls his contacts and figures out who has pineapple that day, then goes to pick it up.

This process is very similar to how a group of women at Jumbi consolidate and sell papaya. While some of their papayas come from their own farms, they also collect from other farms around the island using daladala as transportation. The night before our interview, they collected papayas from Paje and used the *daladala* to bring them to Jumbi that morning. These women also alternate fruits frequently according to season. Because now it is not the season for papayas and the supply is low, they are able to make the selling price higher. However, they also noted that they sell mangoes and limes. One unique strategy they mentioned was renting fruiting trees – such as a mango tree – for a certain fee, then harvesting, transporting, and selling the fruit at Jumbi.

All of these wholesale sellers noted other sellers accounting for the biggest portion of their clientele. At Jumbi Market, some of the wholesale buyers are suppliers – actors who supply fruit to other entities that want fruit, but don’t want to go to the market themselves. On Zanzibar especially, many suppliers sell their fruit to hotels. These suppliers provide a linkage that the fruit commodity chain depends on in distributing the high quantities of fruit demanded by hotels and restaurants. These suppliers do not work for a particular hotel, but are freelance agents who
have contracts with multiple hotels. The supplier I spoke to at Jumbi Market owns his own lorrie and has contracts with various hotels to deliver fruit to them weekly. The hotels then send him a list via WhatsApp of the amounts and types of fruit they need. The hotels have a set price for each fruit that they purchase each fruit from the supplier for, which the supplier relies on to be slightly higher than the market price to account for his profit. For example, a hotel this interviewee sells to, will buy a single pineapple from him for a fixed price of TSH 3,500. However, he was able to buy pineapple at Jumbi for 3,200 TSH each. Since the hotel ordered 30 pineapples, he made a total profit of TSH 9,000. Similarly, a large stalk of bananas which the supplier bought for TSH 15,000, the hotel will purchase for TSH 20,000. With a truckload full of fruit, these profits add up; however, additional costs take away from his profits. Because many tourist hotels are located on the northern and eastern coasts of Unguja, suppliers travel long distances for delivery, making the price of gasoline for transportation a significant cost. In order to maximize profits, these suppliers price check various markets each day to see where he can buy each fruit for the lowest cost. While we were talking, this supplier had somebody deliver potatoes from Mwanakwerekwe for him because they were cheaper there; and paying someone a small fee to deliver them would be less expensive than going himself due to gasoline costs. So while suppliers have less dependency on the commodity chain in some ways because they have contracted arrangements for their sales, they are still heavily reliant on market brokers to provide a consistent and inexpensive supply of fruit.
My final broker interviewee was an intermediary who consolidates, transports, and wholesales oranges from Tanga, Tanzania (shown in Figure 5). The fruit commodity chain heavily relies on intermediaries who supply fruit from the mainland to meet the high demand for fruit on Zanzibar. Oranges are highly demanded on Zanzibar because of their inexpensive price and popularity among street sellers. At Mombasa Market, the hub for orange exchange on Unguja, multiple orange sellers await their many buyers. Similar to Jumbi, Mombasa Market has an area designated for wholesale transactions. However, at Mombasa, this area is only for oranges and while oranges are sold wholesale at Jumbi Market, the supply is much higher at Mombasa.

These orange brokers operate in two entirely different fruit supply chains on Unguja and mainland Tanzania, and do not have the same network of relationships that other actors do. Thus,
these orange brokers play more diverse roles in the overall fruit supply chain, acting as consolidators, transporters, and brokers. First, they consolidate oranges from farms around the Tanga region. These oranges then are transported to the port in Tanga, loaded into conex containers, and shipped to the Stone Town port where they are brought to Mombasa. These intermediaries and their employees travel on the container ship along with the oranges and remain on Unguja until they sell all the oranges, usually taking three to four days.

Table 2: Summary of intermediary interviews

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Type of Intermediary</th>
<th>Types of Fruit Sold</th>
<th>Location</th>
<th>Self-Transported?</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Market broker</td>
<td>Large variety</td>
<td>Kijangwani Market</td>
<td>No</td>
</tr>
<tr>
<td>#2</td>
<td>Consolidator, market broker</td>
<td>Pineapples, watermelon</td>
<td>Mwanakwerekwe Market</td>
<td>Yes</td>
</tr>
<tr>
<td>#3</td>
<td>Market broker/Auctioneer</td>
<td>Jackfruit</td>
<td>Jumbi Market</td>
<td>No</td>
</tr>
<tr>
<td>#4</td>
<td>Market broker</td>
<td>Papaya</td>
<td>Jumbi Market</td>
<td>Yes</td>
</tr>
<tr>
<td>#5</td>
<td>Supplier</td>
<td>Large Variety</td>
<td>Purchases Jumbi, various markets</td>
<td>Yes</td>
</tr>
<tr>
<td>#6</td>
<td>Consolidator, transporter, market broker</td>
<td>Oranges</td>
<td>Mombasa Market</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Part 3: The Sellers

“I sell fruit to buy food for my family.”
( Participant #15, November 30, 2022)

I interviewed a total of five fruit sellers, including one market seller, one supermarket seller, one street kiosk seller, and two street cart sellers (outlined in Table 3). Questions were asked to these actors to gain insight into how they interface with the rest of the fruit commodity chain, and what differences occur within the role. Sellers were interviewed primarily in the Stone Town area because of the high density present. Interviewees engaged in a variety of fruit selling strategies in terms of methods of selling and location. Location of fruit sales was highlighted particularly by respondents as an important factor in their business. While street cart sellers are...
highly mobile, all six respondents had a singular location they return to every day to sell fruit. Fruit sellers were observed across the entirety of Stone Town and its surrounding areas, some clustering within the tightly-knit alleyways of the inner city and others choosing spots on roadways or parks. The distribution of these sellers is fairly widespread; there is not a single particular spot that seems to be more popular than another. A large portion of sellers are present at Darajani Market, the location of one respondent who sells to both consumers and suppliers.

The locations of the street cart seller interviewees varied; the orange vendor sold in Vuga directly next to a very busy roundabout, and the dafu seller just outside the old fort in downtown Stone Town. When asked about why they always sold there, they both explained that it is how they have always done it, “kamakawaida” he said, meaning as usual or as always. This respondent, who operates at the Vuga roundabout, is commonly surrounded by people – sometimes people pull over and buy oranges through their car window, Zanzibaris stop by on their way to and fro, and tourists exploring the city break for a refreshing snack. These street cart sellers each had different methods of purchasing and selling their fruit. While the orange seller relied on a network of intermediaries, the dafu seller avoids this system altogether by purchasing dafu directly from the farm. While he relies on systems of transportation such as renting a motorcycle and daladalas, he does not rely on other intermediaries themselves.

In contrast, orange sellers depend on multiple actors including orange suppliers from Tanga (such as the one mentioned above); Mombasa Market; and transporters who bring the fruit to the preparation location for the sellers. Like other fruits, the supply of oranges fluctuates according to season; so many orange sellers such as the one I spoke to, sell mangoes or other fruit during their off season to maintain profits. And while these sellers noted that mangoes are
more profitable than oranges, it is more difficult to get large quantities of mangoes during the summer months so they choose oranges.

However, the demand for mangoes continues even during the off season and some suppliers maintain a consistent selection regardless of the extreme price fluctuations and difficulty to purchase. My interviews with a street kiosk seller and a fruit minimarket seller gave insight into what these more curated sellers look like. While these two sellers still have extreme differences, they are unique in that they have private, stationary spaces where they sell the fruit; and they provide specialty products demanded by consumers. On the more market-like end of the scale, this street kiosk seller specializes in mangoes, maintaining a consistent supply of fruits highly demanded by consumers. While he gathers the mangoes from the same markets as street and market sellers, primarily Jumbi, he chooses special products that consumers want. These include higher quality varieties of mangoes such as Muyuni, Boribo, and Apple mangoes; as well as local Zanzibar varieties, which are more expensive but of the highest quality. This respondent, with 30 years of expertise both at the seller level and previously as a hotel supplier, has an extensive knowledge network of fruit that benefits his business.

In a fruit minimarket in the district of Mombasa, a higher end version of this street kiosk exists. Here, fresh fruits are compiled from various locations and marketed toward more selective consumers. The store boasted specialty oranges, available for TSH 2,500 each; small containers of raspberries being sold for TSH 10,000; along with a variety of products from local markets, repackaged in small containers with labels. This shop is involved in both Unguja and international fruit commodity networks. However, shops like this mini-mart are rare and constitute a small fraction of all fruit sellers; as most are street, kiosk, and market sellers.
Table 3: Summary of seller interviews

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Type of Seller</th>
<th>Types of Fruit Sold</th>
<th>Location of Fruit Purchase</th>
<th>Location of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Market Seller</td>
<td>Mangoes, pineapples, papayas,</td>
<td>Jumbi, farms, mainland agent</td>
<td>Darajani</td>
</tr>
<tr>
<td>#2</td>
<td>Curated supermarket</td>
<td>Variety of fruits</td>
<td>Jumbi, farms</td>
<td>Mombasa district</td>
</tr>
<tr>
<td>#3</td>
<td>Street Kiosk</td>
<td>Mangoes</td>
<td>Jumbi</td>
<td>Vuga, Stone Town</td>
</tr>
<tr>
<td>#4</td>
<td>Street Cart</td>
<td>Dafu</td>
<td>Farm</td>
<td>Old Fort, Stone Town</td>
</tr>
<tr>
<td>#5</td>
<td>Street Cart</td>
<td>Oranges</td>
<td>Mombasa</td>
<td>Vuga Roundabout, Stone Town</td>
</tr>
<tr>
<td>#6</td>
<td>Street Cart</td>
<td>Apples</td>
<td>Darajani</td>
<td>Old Fort, Stone Town</td>
</tr>
</tbody>
</table>

These results detail the many roles of producers, intermediaries, and consumers, and reveal complexities within each of these roles, as well as the layers of linkages that occur between these people. Smallholder farmers engage in multiple selling methods included within their village, to intermediaries, and not at all. They form sustained interactions with other members of the fruit commodity chain and depend on them for profit. These smallholder farmers have little agency within the system because of their lack of agency. Intermediaries take on many roles based on the resources they have available, and they vary widely. Transactions occur in any and all public spaces and markets, becoming trading hubs. Intermediaries use various methods of transportation involved in these transactions, with some depending on other intermediaries for the fruit to be transported. Sellers are heavily involved in market activity as well, because the majority source their fruit from these major markets. Many sellers rely on intermediaries for fruit coordination, however some also play multiple roles within the system and cut out intermediaries entirely.
Discussion

The results of this study reveal three key takeaways. Firstly, the fruit trade flow creates a network of extensive backward and forward economic linkages which start with smallholder farmers. Secondly, this commodity chain is an informal system which relies on formal systems in its operation. And lastly, the fruit commodity chain is built upon personal relationships between actors who have mutual trust, and thus they are able to overcome challenges.

The fruit commodity chain on Unguja is entirely reliant on the networks of relationships that actors themselves create through “backward and forward linkages” (Wineman 2007); meaning outside actors involved in processes starting with smallholder farmers and linking to the rest of the economy. The need for these linkages stems from the geographical distribution of where smallholder farmers live, where markets are built, and where the majority of consumers reside. Most smallholder farmers lack the resources and time to sell their products directly to consumers themselves, creating a demand for intermediaries and sellers to play those roles. On Unguja, smallholder farmers exist in rural and even urban areas across the island, however markets and consumers cluster in the Zanzibar City area. Webnan-Smith agrees that while fruit products “...Are widely marketed through village shops and traders … the bulk of sales take place in urban areas” (Webnan-Smith, 2016, p. 976), where the majority of the island’s population lives. This creates an array of challenges for smallholder farmers through rural infrastructure issues, lack of knowledge of market forces, and time constraints, just to name a few.

The fruit chain is still heavily at the mercy of seasonality, and the dependency on these outside linkages has relieved some of the challenges that exist for intermediaries as an agriculture-dependent economy. However, much of this dependency on outside fruit commodity
chains is a result of the lack of available resources for smallholder farmers. This, in part, has created an agricultural economy where smallholder farmers are encouraged to sell to international markets rather than local markets, because they are more profitable due to the presence of mainland imports (Respondent #19, November 17, 2022). However, these international markets are not realistic targets for smallholder farmers on Unguja due to their high standards of quality, and desire for specific fruit varieties. In an environment where the majority of smallholder farmers do not have access to water for their fruits, they rely heavily on traditional farming practices, minimal infrastructure for supporting these farmers exists, and production is comparatively low; a reliance on international markets seems highly unlikely to provide substantial benefits to smallholder farmers. Scholars agree that the multitude of challenges they face, leads smallholder farmers to “…Undertake lower-risk and lower-yielding agricultural activities that perpetuate a cycle of poverty” (Fan and Rue, 2020, p.19). Smallholder farmers, in many cases, lack the agency to increase their profit by becoming more involved in the marketing of their fruits.

This differs with intermediaries because they typically have more agency and knowledge of the workings of commodity chains. Because of the shared knowledge and overlapping between these roles, some intermediaries and sellers do participate in multiple roles. The mango seller in Stone Town used to participate in the value chain as a hotel supplier and now he has shifted his role into old being a seller. Many actors specialize in their primary role, however many take on multiple of these roles. “…As the path of the supply chain is not uniform, neither is the role of the different stakeholders in the chain: the same people often fulfill the role of a broker, wholesaler and a retailer simultaneously” (Eskola 2005: 19). In many cases, people play multiple of these roles because it increases profits. For example, respondent #16, the dafu seller,
is able to significantly increase his profit from each coconut by buying them directly from a farm he has a long established relationship with and transporting them himself. At a market, a single dafu might be sold for TSH 1,000; however, he is able to purchase them for TSH 600 each from a farm, and ends up making TSH 900 from each dafu sold. While he spends money on transportation, he increases his profits by cutting out all intermediaries and points of price increase.

While contracted agreements do exist, they are typically only arranged with transactions involving hotels. And even then, the actors involved are still deeply dependent on informal relationships for various other functions of their work. For example, while the hotel supplier operates via contract for his hotels, he relies on connections he has with sellers at Jumbi and Mwanakwerekwe – as well as transporters – to get the supply of fruit he needs. Although the fruit commodity chain relies on outside factors, as discussed above, the system is entirely built upon cooperation between actors who know each other and have been working together for many years. Multiple interviewees have been working in the fruit commodity chain for thirty or more years, and thus have created extensive and trusting relationships with people who they depend on. Eskola agrees with this, “Even at the national level, trade in Tanzania is mostly based on long-term personal relationships, which is seen as the only functional way for trading in absence of adequate market information and weak legal framework for enforcing contracts between strangers" (Eskola, 2005, p.17). Multiple interviewees emphasized their trust in other actors in the fruit trade. People frequently make use of systems of loan, where sellers return after transactions to make payments to market wholesalers; and many market brokers provide payment to producers or consolidators many days after the fact. Khamis stressed to me his trust in his fellow businessmen though. The market broker might not pay me for my papayas until a
month after, but he always ends up getting me the money (Respondent #6, personal communication, November 15, 2022).

As Esokla points out, the need for these informal networks which heavily rely on trust and personal relationships, are the result of a lack of formal systems that govern the process. While major markets are spaces designated and funded by the government to be markets, there are virtually no other formal systems in place to regulate fruit trade on the Island. Thus, the commodity chain has developed its own informal rulebook and trade network, as discussed above. However, even though these relationships hold high power within the trade network, actors involved and the system as a whole still heavily relies upon formal systems. This is not to say that without these formal systems the fruit commodity chain would fail. Rather, actors make use of the systems that do exist, and use them to their advantage. The fruit trade network is highly adaptive and innovative in developing solutions to patch holes that do exist.

Throughout this study, three of the major markets in Zanzibar City – Mwanakwerekwe, Darajani, and Jumbi – were all under construction. While at first I thought this might pose a barrier to my research of these areas; I instead found that business, for the most part, carried on as usual. At Jumbi, a tall metal fence blocks off a large area where residents say that minimal construction has been done over a year and a half of closure. Now, business has been relocated directly next to the old market and brokers continue to sell just as they did before. Similar situations exist at both Darajani and Mwanakwerekwe; people adapting to the closures, but finding ways to persist and continue their businesses. Markets and the communal gathering space that they create are vital to the commodity chain, but they are not the only formal system that fruit trade actors rely on.
Daladalas were used by almost every interviewee for doing business, with the exception of smallholder farmers because they are largely stationary. Daladalas play multiple roles within the chain, as transporters of people and also fruit. When asked about transportation, respondents frequently mentioned the use of open-back daladalas with the roof rack (shown in Figure 6). These daladalas are able to carry large amounts of fruit both on the roof and inside on the bed of the truck. Regular bus-style daladalas are used as well in many scenarios to transport smaller quantities of fruit such as a single stock of bananas or a bag of mangoes. Transportation systems vary widely, however daladala is by far the most cost-efficient for most actors. Sellers are able to pay a small fee to transport their day’s fruit on top of a daladala to their selling location from a market, or even from a farm across the island. These daladalas provide a reliable method of fruit transportation which does not require another intermediary, such as a transporter, to be hired.

Lastly, parts of the trade chain depend on other formal and well-established, larger-scale methods of transportation such as cargo ships. The Stone Town port is a hub that actors on Unguja and on the mainland heavily rely on. Fruit production on smallholder and larger-scale farms creates chains of relationships between producers, intermediaries, and sellers, as well as many outside factors; extending into flow chains on mainland Tanzania and internationally. Because of the expansive fruit trade network that exists – which has networks that allow for relatively easy transportation – and the high demand for fruit on Unguja, there is a large portion of fruit that is imported from other commodity chains. Imports from mainland Tanzania for products such as mangoes, watermelons, pineapples, and oranges merge with the fruit flow chain that operates on Unguja. Actors rely on the port as a key link in the transportation of these imported fruits. Imported fruit is brokered through major markets such as Jumbi and Mombasa
with market wholesalers who order fruit from agents in Dar Es Salaam; and intermediaries that transport and sell large quantities of fruit from all over to sell themselves. On Unguja, fruit coming from smallholder farmers and various farms on mainland Tanzania are meshed into one system of trade and move uniformly through the fruit pathways on Unguja. This differs from larger fruit economies such as on mainland Tanzania, where “Goods are traded through different channels than the domestically consumed goods” because of the dominance of large-scale traders who are not involved in the local trading networks (Eskola 2005: 17).

Figure 6: A *daladala* being unloaded at Jumbi Market

Without this consistent supply of fruit from other flow chains, fruit on Unguja would be of extremely high value because of the low supply and high demand, particularly during the
low-harvest season. While fruit production on Unguja is widespread, the large population and diverse population of the island creates demands for not only more fruits, but for fruits that are not available on the island. This is the case of specialty mini marts such as the one in Mombasa district.

As seen in many of the interviews with all three groups, prices of all fruit products are determined by the market supply and profit margins of fruit intermediaries. Mainland imports help maintain relative consistency in prices and availability of fruit in markets throughout the seasons. While during the summer months, there is a very low supply of mangoes on Unguja, imported mangoes are still widely available. They are expensive relative to prices during the high season, but the supply holds prices comparatively consistent and low. This is opposite during the harvesting seasons when there is an extreme surplus of fruit. This presented one challenge during this study, as it was conducted during the low-production season. For a full analysis, this study should be observed in the harvesting seasons as well.

This study revolves around many complex and constantly changing factors, which gives rise to various challenges. My biggest challenge I encountered during this study was finding a translator. For many of the interviews, I did not have a translator and thus the data collected is likely more sparse than it would have been with the assistance of a translator. In addition, because translators were largely unavailable, I rarely used the same translator twice. Thus, some communication issues between the translator and I may have also limited information gathered.

Additionally, this was a highly mobile project. I spent a lot of time taking daladalas back and forth between markets and villages. While I learned a lot on these bus rides, they did consume a significant amount of time which could be devoted to other aspects of the project.
Conclusion

As I conclude my time studying the story of fruit on Unguja, I think back to the woman who picked the jackfruit from high in that neighborhood tree. Zanzibaris don’t rely on fruit just as part of their diet, but as an integral part of their culture and its foundation. Fruiting trees occur everywhere and make up both the human and infrastructural *mazingira*, or environments. Children learn to walk under canopies of jackfruit and mango trees, feasting on their gifts as they climb their vines and hide in the shade of their leaves.

Fruit production and trade is an aspect of Zanzibari life that is intertwined with many other aspects of Swahili culture. The workings of the fruit commodity chain are woven into the workings of everyday lives of Zanzibaris. The network of personal relationships between Zanzibaris which the industry is built upon, creates a force of resiliency and sustains trade relationships through seasons and time.

The fruit flow trade creates networks of extensive backward and forward economic linkages which begin with smallholder farmers. In the winding trails of rural villages across the island, farmers work the land to feed their families. The gifts of fruiting trees create livelihoods not only for farmers, but also for the many other people that help the fruit along its journey to the consumer. This study reveals that these actors take the form of producers; a wide range of intermediaries including wholesalers, transporters, suppliers, and brokers; and many sellers.

Through my time learning from Zanzibaris involved in the fruit trade, I gathered that it is not just a system of transactions designed for profit; but rather a group of people joined together by personal relationships who work together to sustain themselves and their livelihoods.

Unguja is an island, however it is extremely connected to the global webs of human movement. This commodity chain is an informal system which relies on formal systems of many
types in its operation. The fruit commodity chain on Unguja has proven to be extremely dynamic and adaptable to the many challenges that arise. There is no doubt that the workings of this trade flow will continue to shift in order to meet the demands of a changing world over time. As Fan and Rue note, “Amid rapid economic growth, urbanization and globalization, food supply channels are becoming longer geographically but shorter in terms of participants” (Fan and Rue: 2020). This study has shown the many linkages that make Unguja vulnerable to the complexities of globalizations, however Swahili traditions and Zanizibari culture run deep on the island and greatly influence livelihoods. These overlapping identities of actors involved and their persistence, have created networks unique to Unguja island which revolve around interconnectedness. These systems are bound to change with time, and some aspects demand institutional change for the sake of Zanzibaris and their livelihoods. However, through changes and challenges, the threads that bind the fruit trade and Swahili culture will persist.

**Recommendations**

This study was not conducted with an intention of making recommendations for changes to the fruit economy of Zanzibar. My voice as a Western student who has spent only a few short weeks studying the complexities of this field, is meaningless compared to those of Zanzibaris. Rather than imposing my opinions, I will instead echo the voices of people I have talked to and thoughts they have raised.

Smallholder farmers have told me of their struggles with lack of resources. In Mangapwani and across the island, water is scarce. Changing climate conditions have led to uncertainty in rain patterns, leading to economic instability and increased demand for watering systems among farmers. Many smallholder farmers do not have access to running water in their
houses, much less on their farm. Jugs of water are hauled from a nearby well and used for essentials. Water supply on smallholder farms would allow for increased fruit production, especially during the short-rain season. Changing climate conditions have led to uncertainty in rain patterns. Smallholder farms are encouraged by Western-funded organizations to change their practices, but lack of resources and government support of the agricultural sector makes this challenging. Smallholder farms could significantly increase their profits by selling their fruit themselves, however these layers of challenges prevent most smallholders from doing this. Fan and Rue state that increasing agency and participation in food value chains among smallholder farmers requires “...Strong institutional capacity, in a stable policy environment that promotes private-sector investments adapted to the needs of smallholder farms” (2020).

Intermediaries compose a large portion of the actors involved in the fruit commodity chain. Many scholars propose that agricultural economics cut out intermediaries in an effort to increase profits for farmers. However, eradicating intermediaries on Unguja would create a large problem for the fruit commodity chain, and a challenge for smallholder farmers. “Food processing and marketing usually show high transaction costs arising from poor infrastructures, such as inadequate physical transport facilities, and by the institutional and physical gaps in the organization of activities” (Webnan-Smith, ). Not only would a large number of these intermediaries lose their jobs, but also sellers further down the chain would be put out of work. Solutions to these issues must address the many layers that exist.

Future studies could begin to address each of the many niches that operate within the fruit economy, each of which have their own systems and norms. There is a world of unwritten knowledge and rules that actors within the system possess and, from my experience during this study, they are willing to share that knowledge.
Asanteni sana for reading!
Bibliography


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Appendix

Appendix A – Additional Pictures

Bananas are transported on the roof of a *daladala* along with empty fruit boxes to be refilled.

Buyers chose from an expansive array of banana stalks. Each day all these bananas are sold by 9:00 AM.
A woman harvests jackfruit from a tree in her neighborhood.

The jackfruits are let to sit in the kitchen while they ripen.

Jackfruits are unloaded from a lorry at Jumbi market. These interactions occur every day around 6:00 AM.

The jackfruits are then auctioned off to buyers. People form crowds around the mounds of jackfruit as the auctioneer yells off prices.
A street kiosk seller in downtown Stone Town. This shop is located on the bottom floor of the seller’s house.

A street kiosk seller on the side of a highway in Mombasa district.

Mangoes being sold from a truck in Mwanakwerekwe District

Fruit is transported to Mwanakwerekwe Market in the back of a truck
A *daladala* arriving at Darajani Market with a roof rack topped with pineapples, and the back filled with people.

A man opens a *dafu* outside of his house, sitting on a cow cart.

*Dafu* are staged on the side of a village road.

The *dafu* are collected for transportation in a lorry.
## Appendix B – Interviewees

<table>
<thead>
<tr>
<th>Respondent #</th>
<th>Actor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Smallholder Farmer</td>
</tr>
<tr>
<td>#2</td>
<td>Smallholder Farmer</td>
</tr>
<tr>
<td>#3</td>
<td>Smallholder Farmer</td>
</tr>
<tr>
<td>#4</td>
<td>Smallholder Farmer</td>
</tr>
<tr>
<td>#5</td>
<td>Smallholder Farmer</td>
</tr>
<tr>
<td>#6</td>
<td>Larger-Scale Farmer</td>
</tr>
<tr>
<td>#7</td>
<td>Intermediary - Market Broker</td>
</tr>
<tr>
<td>#8</td>
<td>Intermediary - Consolidator, Market Broker</td>
</tr>
<tr>
<td>#9</td>
<td>Intermediary - Market Broker/Auctioneer</td>
</tr>
<tr>
<td>#10</td>
<td>Intermediary - Market Broker</td>
</tr>
<tr>
<td>#11</td>
<td>Intermediary - Supplier</td>
</tr>
<tr>
<td>#12</td>
<td>Intermediary - Consolidator, Transporter, Market Broker</td>
</tr>
<tr>
<td>#13</td>
<td>Seller - Market Seller</td>
</tr>
<tr>
<td>#14</td>
<td>Seller - Curated Minimarket</td>
</tr>
<tr>
<td>#15</td>
<td>Seller - Street Kiosk</td>
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<tr>
<td>#16</td>
<td>Seller - Street Cart</td>
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<td>#17</td>
<td>Seller - Street Cart</td>
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<td>#18</td>
<td>Seller - Street Cart</td>
</tr>
<tr>
<td>#19</td>
<td>Key Informant</td>
</tr>
</tbody>
</table>
Appendix C – Producer Interview Questions

1) Do you sell your fruits?
   *Unauza matunda yako?*

2) How much fruit do you produce each week?
   *Unazaa matunda kiasi gani kila wiki?*

3) How much of this fruit do you sell?
   *Unauza kiasi gani cha matunda haya?*

4) When do you harvest your fruit?
   *Utavuna matunda yako lini?*

5) How long after harvesting the fruit do you sell it?
   *Muda gani baada ya kuvuna matunda unauza matunda?*

6) How often do you sell the fruit?
   *Ni mara ngapi unauza matunda?*

7) Where do you sell the fruit?
   *Unauza wapi matunda?*

8) How much do you sell the fruit for?
   *Unauza matunda kwa bei gani?*
Appendix D – Intermediary Interview Questions

1) Where does your fruit come from?
   
   Matunda yako yanatoka mapi?

2) Do you only buy fruit from these places?

   Unanunua tu matunda kutokea sehemu hizi

3) How often do you buy fruit?

   Mara ngapi unanunua matuna kutokea sehemu hizi?

4) How does the fruit get from where it is grown to here?

   Matunda yanasafirishwa kutokea shabani hadi hapa?

5) Do you always sell fruit here?

   Huwa unauza matunda hapa?

6) Why do you sell fruit here

   Kwa nini unauza matunda hapa?

7) Why do you sell these fruits?

   Kwa nini unauza matunda haya?

8) Do you know what your buyers are buying it for?

   Nanu ananunua matunda yako? Kwa ajili ya nini?

9) How is the fruit packaged to be transported?

   Matunda yanafungwa vipi ili kusafirishwa?

10) Do you know who grew this fruit

    Unajua matunda nili lilipandwa na nani?
Appendix E – Seller Interview Questions

1) Where does this fruit you are selling come from?
   
   *Haya matunda unayauza yanatoka wapi?*

2) Who did you buy it from?
   
   *Ulinunua matunda kwa nani?*

3) How much do you sell the fruit for?
   
   *Unauza matunda kwa bei gani?*

4) How do you determine the price to sell the fruit?
   
   *Unajuaje bei ya kuuza matunda?*

5) Do you always sell fruit here?
   
   *Huwa unauza matunda hapa?*

6) Do you always sell the same fruit(s)?
   
   *Huwa unauza maunda yale yale?*

7) How do you determine which fruits to sell?
   
   *Unaamuaje matunda ya kuuza?*

8) Do you know who grew this fruit?
   
   *Ulijua ni nani aliyelima tunda hili?*