Growing What We Eat, Eating What We Grow: Investigating the Enduring Role of Jamaica's Domestic Food System

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

From Spanish colonization in the 15th century until today, Jamaica's agri-food system has been firmly linked to a global network of trade through its agricultural exports and food imports. Common assumptions in critical food studies literature imply that countries with close links to global food and agricultural trade come at the expense of their own domestic food systems. In Jamaica, most scholarly attention focuses on the negative impacts of liberalized agricultural trade, structural adjustment and food import dependence on the country's food system, which render it largely irrelevant. However, the domestic food system, encompassing production, trade and consumption of food on the island, is still very much relevant today. What explains the endurance of Jamaica's domestic food system despite the country's strong reliance on food and agricultural imports and exports? This dissertation makes the case that the domestic food system endures because it serves integral roles in society through its diversity, flexibility and embeddedness, qualities that tend to be obfuscated by dominant bodies of critical food studies scholarship. The central objectives of the research are: (1) to explain three specific roles that Jamaica's domestic food system serves today; (2) to bring insights to critical food scholarship, specifically, food sovereignty and alternative food networks (AFN) scholarship by applying a conceptual framing that analyzes the ways that Jamaica's domestic food system is embedded in its particular social, ecological and historical context; and (3) to provide reflections on the policies that could support Jamaica's current efforts to support its domestic food system. The findings presented in this dissertation result from fieldwork conducted in Jamaica in 2015 and 2016 designed to investigate the specific roles the domestic food system serves today, in response to the research question. Using an interpretivist case study approach, this dissertation relies on mixed methods research, including a comprehensive literature review of food and agricultural development in Jamaica, a household survey (n=702) of food security levels in Kingston, conducted as part of a broader research program on food security, triangulated with direct observation in locales where people purchase food, key informant interviews with stakeholders in the food system (n=17) and semi-structured interviews with small-scale farmers and food traders (n=45) in Kingston and Jamaica's bread basket in the southern region of St. Elizabeth.

The data collected in the course of this research show that the supply chain of food that is grown and eaten on the island serves three distinct functions that are deeply embedded in society

and play important roles related to: 1) urban food access; 2) informal livelihoods; and 3) food culture. These three main functions that emerged from the data thus form the core of my argument. First, the data show that the domestic food system enables access to a range of fresh produce for Jamaica's urban population, specifically in its capital city, Kingston. Second, the domestic food system is a source of income for Jamaica's small-scale farmers and food traders. Farmers' and traders' are, and have always been, firmly linked to a capitalist market in a myriad of ways, yet also embedded in the informal economy. Lastly, the domestic food system represents an integral part of Jamaicans' individual and national identity, fostering both farmers' and eaters' sense of place. Small-scale farmers still draw on a range of place-specific agricultural techniques, and the Jamaican diet remains characteristically creole, drawing on imports as well as domestically grown food. Further, the state has a history of supporting the domestic food system as a way to articulate the country's national identity. This dissertation analyzes the bricolage of everyday activities that keep the domestic food system consistently relevant and, in many cases, vibrant.

This dissertation adds theoretical nuance to critical food studies by framing Jamaica's domestic food system as part of a diverse economy, a concept created by economic geographers to study the embeddedness of markets in society. The framework, when contextualized in the specific political economic context of former plantation economies, reveals the unique, complex ways that domestic food system in Jamaica simultaneously circumvent and reproduce global food system dynamics. It is important to understand the roles and functions of the domestic food system in countries that rely on imported food to get a more complete picture of how localized food systems can co-reside with high reliance global food and agricultural markets. The results presented in this dissertation provide an in-depth, contextualized analysis of the current state of Jamaica's domestic food system that are likely to be relevant to the Government of Jamaica's contemporary efforts reduce dependence on imported food.

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Dedication

This dissertation is dedicated to the two people I wish could read this, but cannot: my parents, Penny Stewart and Rory Timmers, for teaching me the unromantic, yet remarkable ways to grow what we eat.

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Chapter 1: Introduction

Research Puzzle

Since Spanish colonization in the 15th century, Jamaica's agri-food system has been firmly linked to a global network of trade. After 1494, Spanish colonizers largely eradicated indigenous agricultural and dietary traditions centered on agroecological practices. Prior to colonization, the island's indigenous population, the Taino people, were self-sufficient in their food supply. They practiced *conuco* gardening, a sophisticated practice for growing root crops in large mounds of soil and leaves to prevent soil erosion and improve drainage (Rouse 1992). Spanish colonizers brought livestock to the island that devastated the Tainos' agroecological practices (Higman 2008). Then, from 1655 to 1962, Jamaica was governed as a British colony whose chief role was to produce sugar for export. The British Crown used capital investment and enslaved labour to create its most profitable colony on the island's most arable land (Kidd 2016). After 1900, bananas became a key export crop, funded by the United Fruit Company. The country's food system remained tied to global activities through sugar and banana export networks after gaining constitutional independence in 1962. From the late 1970s until today, structural adjustment and trade liberalization policies lead to the removal of agricultural import restrictions and state support, affecting small-scale farmers' ability to grow food for the domestic market (Weis 2004b). More recently, the press deemed food import dependence as a major, 'budget-busting' concern (Cave 2013). Jamaica's food import bill reached US$913 million in 2011 (FAO 2013).

Given this longstanding dependence on exporting cash crops and importing food, select scholars predicted Jamaica's domestic food system, encompassing the supply chain of food that is both grown and eaten on the island, would lose relevance over time. Western-style supermarkets thrived across the United States and United Kingdom in the 1950s-1970s, replacing local food outlets, leading some to expect a similar shift in the ways that people access food in Jamaica. In his renowned studies of Caribbean food and farming, anthropologist Sidney Mintz predicted that food markets, the key distributive institution for Jamaican grown produce, could be rendered obsolete as Jamaica developed economically and urban residents opted to shop at supermarkets "on the American or British model" (1974, 222). Norton and Symanksi similarly predicted local food markets on the island would "break down" as the Government of

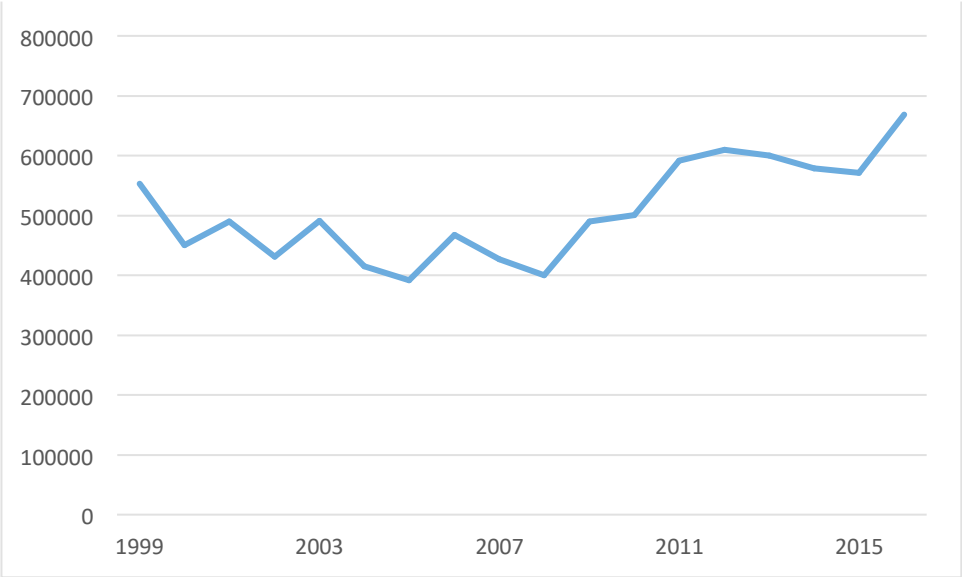
Jamaica set up a "more efficient" state-led marketing program and Western supermarkets developed (1975, 475). These predictions rested on an assumption that supermarkets would proliferate in low- and middle- income countries (LMICs) in a similarly linear fashion to North America and the United Kingdom.

Scholars evaluating structural adjustment policies implemented in Jamaica from the late 1970s to 1990s reported a comparable, bleak outlook for the livelihoods of the island's small-scale farmers, the key food producers of the domestic market. Structural adjustment and trade liberalization policies implemented from the late 1970s throughout the 1990s indeed had significant, lasting impacts on Jamaica's domestic food system. Food imported from the United States and other countries led to major shifts in agricultural production to respond to market conditions (Witter 2000; Weis 2003). Weis (2004b, 483) predicted that food imports would overwhelm the same domestically produced foods found in local markets, commenting that farming for the domestic market "now verges on irrelevance". Weis made this assertion at a time when neoliberal economic policy, imposed through structural adjustment policies, was at a peak level in Jamaica and other LMICs that were grappling with integration into the global economy.

Jamaican food culture did not escape the influence of the influx of imported food to the island. Jamaican economist Michael Witter deemed his country a "consuming appendage of the US economy" because of the dependency resulting from neoliberal economic reforms (2000, 13). While Witter was referring to dependency on many levels, including financial dependency on the United States, his comment aptly describes Jamaica's experience with imported food at the turn of the 21st century. The application of neoliberal principles to food trade, according to Talbot, led to the erosion of "cultural traditions" in Jamaican diets, replaced by "the global standardization" of Western consumption patterns (2015, 54). For example, eating Jamaica's traditional breakfast combining salted cod, leafy greens called callaloo and ackee fruit could be replaced by imported cereal, and Kentucky Fried Chicken could sideline rice and peas for lunch and dinner. Lamming (in Weis 2007, 114) refers to the phenomenon of food import dependency in Jamaica as a "crisis of cultural sovereignty…when patterns of consumption bear no relation to basic needs and cannot be supported by the productive base of the society" where people "have surrendered their very palates to foreign control." A range of scholars predicted that the close connections to global import and export markets would eventually render Jamaican food culture, small-scale production and the domestic food market irrelevant.

Despite facing significant challenges, Jamaica's domestic food system is not obsolete. Rather, the domestic food system represents a "…sector which has over time contracted and expanded in response to crises and developments in the wider economic system" (Le Franc 1994, 119). This presents an intriguing puzzle worthy of investigation: a food system that defies predictions of irrelevance. Most scholarly attention is rightly focused on the negative impacts of global agricultural trade, structural adjustment and food import dependence on Jamaica's food system. To build on and complement this literature, I consider the ways that Jamaica's domestic food system endures the challenges posed by strong links to the global economy. Domestically grown food, today, still makes up an important part of Jamaican diet. An estimated 212,068 registered farmers, making up 7.8% of Jamaica's population produce food that supplies the island's vibrant urban markets (Rural Agricultural Development Authority 2019). From 2008 to 2016, estimates of crop production on the island that was not exported increased from 400,112 tonnes to 668,506 tonnes (Planning Institute of Jamaica 2016). This data is illustrated in Figure 1-1 below. Throughout this dissertation, I explain how the domestic food system is still very much relevant in Jamaica today, by analyzing the specific ways that it remains embedded in society despite the country's reliance on imported food and exported agricultural commodities.

Figure 1-1: All-Island Estimates of Domestic Crop Production (tonnes), 1999-2016



Source: Planning Institute of Jamaica (2016)

Research Question and Objectives

In today's globalized food system, Jamaica's domestic food supply chain is a complex cultural institution that distributes fresh produce from rural farming areas to people across the island. Throughout this thesis, I analyze how and why Jamaica's domestic food system has not lost its relevance by drawing on the perspectives of people who grow, sell and eat Jamaican food. The purpose of my dissertation is to explain the perseverance of this complex food supply chain in Jamaica, despite the challenges it faces, especially in light of its strong connections to global markets. The central question I answer is:

What explains the endurance of Jamaica's domestic food system despite the country's strong reliance on food and agricultural imports and exports?

The findings presented in my dissertation show that Jamaica's domestic food system endures despite the country's position as a major exporter of agricultural commodities and dependence on imported food because it serves integral functions in Jamaican society. I argue that that the domestic food system is able to continue serving these important roles because of its diversity, flexibility and embeddedness, qualities that tend to be obfuscated by dominant bodies of critical food studies scholarship. A conceptual framing that recognizes embeddendess helps to bring to light the domestic food system's lasting roles and helps to generate important, contextualized reflections for food and agricultural policy in Jamaica. I answer my research question with empirical, theoretical and applied research objectives in mind. The **central objectives** of the research are:

1. To explain three specific roles that Jamaica's domestic food system serves today. Specifically, I analyze how the domestic food system continues to support people's access to food, people's livelihoods, and their place and identity. Further, I investigate how and why Jamaica's food system continues to serve these important roles despite facing compounding challenges posed by the country's role as an agricultural exporter and food importer.

2. To bring insights to critical food scholarship, specifically, food sovereignty and alternative food networks (AFN) scholarship by applying a conceptual framing, the diverse economies approach that examines the ways that the domestic food system is embedded in its particular social, ecological and historical context.
3. To provide reflections on policies that could support Jamaica's current efforts to support its domestic food system based on the realities facing those involved. This research contributes to the Government of Jamaica's ongoing programming to support domestic agriculture for domestic consumption.

To fulfill my first objective, I suggest that the supply chain of food that is grown and eaten on the island serves three distinct functions: 1)urban food access; 2) informal livelihoods; and 3) food culture. These three functions emerged directly from the data collected for this research. The domestic food system enables access to a range of fresh produce for Jamaica's urban population, specifically in its capital city, Kingston. Market vendors across Kingston's socioeconomically divided neighbourhoods sell food that is affordable through flexible price arrangements and suits Kingston residents' diverse dietary preferences. Second, the domestic food system offers two important livelihood opportunities: small-scale farming and trading food. Farming and trading are two income-generating opportunities with few barriers to entry, supporting Jamaica's large un- and under- employed population. Lastly, the domestic food system represents an integral part of Jamaicans' individual and national identity, fostering both farmers' and eaters' sense of place. In particular, small-scale farming is an important way of life in Southern St. Elizabeth, where I conducted the rural component of my research. Small-scale farmers still draw on a range of place-specific agricultural techniques, and the Jamaican diet remains characteristically creole, drawing on imports as well as domestically grown food. The domestic food system, historically, has been one way that Jamaicans have expressed their identity. Further, the state has a history of supporting the domestic food system as a way to articulate the country's national identity. Today, this unique supply chain still spans the country to serve important functions in Jamaican society.

To further explain the domestic food system's endurance, I explore *how* it continues to serve the three functions that emerged from my analysis. I investigate the distinctive characteristics that help to support food access, offer livelihood opportunities and foster a sense

of place. My findings show that the three key functions are served through a market system embedded in unique, contextual relationships that include a range of food producers, traders and consumers. The domestic food system's embedded nature allows it to adapt in concert with global food supply chains; this flexibility is fundamental to its perseverance. Additionally, I explore the historical roots of this unique supply chain, suggesting that the ways that it provides access to food, jobs and a sense of place, today, are not new. The domestic market's specific orientation is the product of Jamaica's history as a plantation economy. As early as the 17th century, British colonial officials encouraged enslaved people to grow and sell their own food to avoid food import costs (Mintz 1974; Higman 2008). After enslaved people were emancipated in 1838, this food system provided a rare, viable employment option (Brown-Glaude 2011). That the domestic food system still has some of its original characteristics is an indication of its steadfastness. I argue that the unique historical, cultural and economic dynamics help to explain the ongoing relevance of Jamaica's domestic food system even in the face of dependence on food imports and agricultural exports. The domestic food system is unlikely to be rendered obsolete by trends in the global economy any time soon.

To fulfill my second research objective, I establish that dominant critical food studies[1] literature is unable to explain the persistence of Jamaica's domestic food system. Two bodies of literature dominate the landscape of critical food studies literature: food sovereignty scholarship (Patel 2009; Wittman, Desmarais, and Wiebe 2010) and studies on charting the alterity of food systems, or alternative food networks (AFNs) (Sonnino and Marsden 2006; Watts, Ilbery, and Maye 2005). These two bodies of literature are not necessarily oppositional, but rather look at different possibilities to challenge the global, industrial orientation of our food system. Both bodies of literature offer well laid out critiques of the global, industrial food system and offer potential alternatives. Dominant strands within each body of literature explicitly seek out transformational changes to the economic orientation of our global, industrial food system. In their search for transformational, or structural change, food sovereignty and AFN scholars may overlook or under-research the everyday ways that Jamaica's domestic food system reproduces

[1] Contois (2017, no page) defines food studies as "…a burgeoning, interdisciplinary, inherently politicized field of scholarship, practice, and art that examines the relationship between food and all aspects of the human experience, including culture and biology, individuals and society, global pathways and local contexts."

itself to serve integral roles. I evaluate the landscape of food sovereignty and AFN literature in this introductory chapter.

Further contributing to my second research objective, I apply a conceptual framing that analyzes the ways that the domestic food system's embeddedness in its particular social, ecological and historical context enables it to serve the three important roles. The research presented in this dissertation is a case study of Jamaica's domestic food system that does not necessarily represent the explicit, structural change, or a transformational shift in economic orientation, called for by select food sovereignty and AFN scholars. Instead, my dissertation research shows how Jamaica's efforts toward an 'alternative' or 'sovereign' food system simultaneously connect to and challenge aspects of the global food system. Local production and distribution channels are enmeshed with global supply chains, in dynamic, plural ways that are under appreciated in theoretical framings that seek out structural transformations to our food system. The domestic food system relies on economic principles commonly associated with capitalism, such as market purchases, wage labour and profit-maximizing enterprise, and at the same time draws on contextual, relational dynamics to support people's access to food, work and a sense of social and ecological place.

This dissertation adds theoretical nuance to these critical food scholarship by framing Jamaica's domestic food system as part of a diverse economy, a concept created by economic geographers Katherine Gibson and Julie Graham, allowing me to analyze the unique, complex ways that Jamaicans farmers, traders and eaters simultaneously circumvent and reproduce global food system dynamics. For example, as I explain in Chapter Four, an expectation that supermarkets, an important distributive institution of our global, industrial food system, would replace Kingston's markets as spaces to access fresh produce was not realized. Today, people living in Kingston patronize supermarkets, at the same time that they rely in informal food markets to access fresh, Jamaican grown produce. Gibson-Graham (1996; 2006) developed the concept of a diverse economy, that I explain in detail in Chapter Two as part of my conceptual framework, to study the embedded dimensions of economic relationship. The diverse economies framework helps to explain *why* Kingston's informal food markets persist as important places to access food.

My research contributes broadly to critical food studies literature, specifically to emerging research on the role of embedded markets in food systems. Embeddedness refers to the

ways that market activities are situated within broader social relations, geographies and histories (Granovetter 1985). In my deeper exploration of conceptual paradigms in critical food studies scholarship in the following section of this chapter, I point out newly emerging food sovereignty and AFN studies that are just now beginning to explore the complexities of embedded markets in food systems around the world. Understanding how Jamaica's domestic food system endures raises important questions about the broader relevance of embedded markets in today's global food system. The case of Jamaica, a small island developing state in the Caribbean, offers new insights on the ways that embedded food markets are still relevant in an ostensibly globalized food system. I show that in practice, the ways that Jamaica's domestic food system expresses itself are firmly linked to broader forces directly related to its history as a plantation economy. For example, the domestic agriculture started as a way for plantation owners cut down on the cost of importing food for the people they enslaved, and expanded as an essential means for people living on the island to access fruit and vegetables. In Chapter Six, I analyze how specific foods grown and eaten on the island, such as roots and tubers, were used as symbols of 'Jamaican' national identity that was assembled as the country gained independence after centuries as a plantation colony.

This thesis also explores a significant gap in emerging research that conceptualize food systems as diverse economies (Gibson-Graham, Cameron, and Healy 2013) that is critiqued for being ahistorical and lacking context (Fickey and Hanrahan 2014). I draw on a long tradition of scholarship on the unique legacies of colonization on plantation economies across the Caribbean to contextualize the enduring role of Jamaica's domestic food system. I draw on George Beckford's plantation thesis that was foundational in articulating the unique, lasting dependency of Caribbean countries to the global economy (1972). Jamaica's experience with trade liberalization and strong ties to the global economy shape the ways that people farm, trade and eat Jamaican grown food. Understanding the ways that global processes and local food systems influence each other adds nuance to critical food studies literature including new research on diverse food economies around the world.

To fulfill my third research objective, I suggest that the findings generated from my conceptual framework helps to generate important policy reflections for the Government of Jamaica's current efforts to support the domestic food system. Currently, the Government of Jamaica supports the domestic food system through efforts to boost agricultural production of

specific crops that can be grown in Jamaica, but are currently imported. For example, the Ministry of Industry, Commerce, Agriculture and Fisheries (MICAF) trains farmers to grow onions at a level to meet national demand and has successfully boosted domestic poultry and egg production. This study's focus on production, distribution and consumption can offer a diverse range of opportunities to support the domestic food system above and beyond boosting production, by including trends in distribution and consumption. The results presented in my dissertation provide an in-depth, contextualized analysis of the current state of Jamaica's domestic food system that are likely to be relevant to the Government of Jamaica's contemporary efforts reduce dependence on imported food.

To contextualize my policy reflections, I build on regional literature on food security and sustainability in Jamaica and the Caribbean. Contemporary studies of Jamaica's domestic food system have largely narrowed in focus to agriculture, highlighting the potential of small-scale farmers, in particular, their innovating adaptations to dual vulnerabilities to the global economy and climate change (Campbell, Barker, and McGregor 2011; McGregor, Dodman, and Barker 2009). This dissertation makes an empirical contribution to existing studies on the important role of small-scale farming in Jamaica by taking a supply chain view, including food traders and consumers. Research that includes the whole supply chain of farmers, traders and those eating Jamaican food harkens back to the 1950s and 1960s (Mintz 1959; Katzin 1960). My research builds on earlier studies on Jamaica's internal marketing system that links farmers to food traders (Mintz 1956; Mintz 1973), adding contemporary insights into food distribution and consumption through Jamaica's domestic marketing system. This dissertation returns to a broader view on the domestic market, showing the interdependencies between small-scale farming and food distribution, and highlighting the enduring demand for domestically grown produce.

Conceptual Paradigms in Food Studies

To fulfill my second research objective, in this section I establish that critical food studies literature, specifically, dominant strands of food sovereignty and AFN literature, is unable to explain the vibrancy of Jamaica's domestic food system. The promotion of domestic agriculture for domestic consumption was widely institutionalized throughout the 1960s and 1970s as an accepted way for countries at all levels of development to feed their citizens

(O'Hagan 1976; Clapp 2017). Food self-sufficiency, defined as "a country producing sufficient food to cover its own needs" (Clapp 2017, 89) was a normative policy goal for countries around the world. However, the late 1970s to 2000s marked a distinct shift away from prioritizing countries' ability to feed themselves, to the extent that policies related to self-sufficiency were condemned (Clapp 2017). For example, Naylor and Falcon projected that domestic agricultural support, in the form of food self-sufficiency policies put in place to mitigate food price spikes, cause distortions and price volatility in global markets that compromise food security (2010). Thereafter, scholarship focused on ways that countries could expand agricultural production for export according to their comparative advantage (Godfray et al. 2010; Pingali 2012; Swinnen 2007). Agricultural policy reflected a liberalization agenda through trade agreements that institutionalized global food supply chains and had significant implications for LMICs like Jamaica. Most notably, trade negotiations under the World Trade Organization's (WTO) Agreement on Agriculture (AoA) of the General Agreement on Tariffs and Trade (GATT) required some LMICs to upend their food self-sufficiency policies toward open national borders (Clapp 2006). In Jamaica, this meant a significant reduction in state support for domestic farming and liberalization of the state's efforts to protect its domestic food system from imports (Campbell 2003).

The marked turn in the late 1970s through the 1990s toward opening national agriculture sectors to global markets inspired substantial scholarly critique. Two bodies of literature emerged to counter liberalized trade and the promotion of global food supply chains, focusing on re-localizing food systems: food sovereignty scholarship (Patel 2009; Wittman, Desmarais, and Wiebe, Nettie 2010) and studies on AFNs (Sonnino and Marsden 2006; Watts, Ilbery, and Maye 2005). Food sovereignty scholarship studies a global, peasant-led social movement, La Via Campesina, demanding justice in the global food system. AFN scholarship studies a range of place-based food system activities that challenge specific aspects of global food supply chains. Rooted in two related, but different conceptual paradigms, both bodies of scholarship seek out ways to make our global food system more socially and ecologically just.

Where does Jamaica's domestic food system fit into this landscape? The 'alternative' to global food supply chains, in Jamaica, is expressed through a largely informal distribution system that brings domestically grown food to markets across the island. How do these local level activities fit into the landscape of critical food studies? I argue that the activities that make

up Jamaica's domestic food system, including small-scale farming, and informal trade that distributes food to people across the island, only tangentially relate to the two dominant strands in critical food studies scholarship, but not explicitly. Jamaica's domestic food system activities suit recommendations coming from both food sovereignty and AFN literature to decentralize control in the global food system. For example, the way that the domestic food system was institutionalized in Jamaica in the 1960s and 1970s, as I will explain in Chapter Three, was explicitly designed to reduce dependence on international markets. Food sovereignty scholarship has also espoused policy prescriptions related to enhancing countries' food self-sufficiency (Burnett and Murphy 2014), parallel to the Government of Jamaica's current initiatives to support domestic farming. However, as I explain in the following sections of the introduction, Jamaica's domestic food system is markedly different. Dominant food sovereignty and AFN literature, evaluated in the following two sub-sections, critique globally traded industrial agriculture, and thus useful to understand the consequences of Jamaica's strong connections to the global economy on its food and agricultural systems, but neither can explain the perseverance of the domestic food system. My research findings suggest that the domestic food system's perseverance is connected to the diverse ways that it is embedded in Jamaican society that are not fully explained through dominant critical food studies literature.

Food Sovereignty Scholarship

For over twenty years, food sovereignty scholarship has meaningfully studied peasant-led social movements rallying against the social and ecological inequities in our food system. This section explores the core principles of food sovereignty scholarship more deeply. At the World Food Summit in 1996, La Via Campesina presented the definition of food sovereignty as follows: "…the right of each nation to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity" (La Via Campesina in Patel 2009, 665). Food sovereignty scholarship advocates for a common vision, that centres the rights of peasant movements, in particular across Latin America and other indigenous food systems, local food production and food self-sufficiency at various scales in an agroecological production model (Jarosz 2014). Amy Trauger's *We Want Land to Live* charts the significant progress that the food sovereignty movement has made in terms of political transformations in the global food system (2017). Scholars studying food sovereignty propose a set of recommendations that parallels

those coming from the social movement: institutionalizing the right to food, land reform and supporting agroecological food production connected to an anti-capitalist agenda (Desmarais 2008). Select scholars advocate for these recommendations to be applied to Jamaica (Weis 2004b & 2007; Richardson and Ngwenya Richardson 2013; Talbot 2015), however, I argue that this is a conceptual mismatch due to the nature of the country's existing resistance efforts in the food system that are more explicitly tied to increasing food self-sufficiency. My dissertation contributes to a newly emerging subset of food sovereignty literature that is beginning to take a more plural and nuanced view of food systems, including local markets.

Food sovereignty scholarship analyzes a social movement that resists agricultural globalization and advocates for the rights of the world's peasant food producers. La Via Campesina is the leading organization promoting the idea. La Via Campesina was founded in Latin America in 1993, as a response to the WTO's calls for agricultural trade liberalization in the 1980s and 1990s that was expected to have detrimental impacts on peasant farming and local food systems (Desmarais 2008; Wittman, Desmarais, and Wiebe 2010). La Via Campesina scaled their focus from national sovereignty down in 2007, re-defining food sovereignty as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural systems…[placing] those who produce, distribute and consume food at the heart of the food system, rather than the demands of markets and corporations" (Patel 2009, 666). The social movement spread to eighty-one countries, represented in grassroots collectives, nongovernmental organizations and national and international policy arenas.

For the past twenty years, scholars have theorized the food sovereignty movement's focus on peasant rights as a path forward to resist and counter the global, industrial food system's negative impacts. McMichael refers to the academic articulation of food sovereignty as an "ontological alternative" to "corporate agricultural intensification" (2014, 933). Similarly, Trauger calls food sovereignty "ontologically threatening to capitalist modernity" (2017, 30). Food sovereignty scholarship notably juxtaposes its approach – centred on human rights, ecological sustainability and agrarian cultures – to the commodification of food and agricultural production and the industrialization of agriculture (Desmarais 2017; Clapp 2014). Jarosz (2014, 170) notes that the ontological backbone of food sovereignty scholarship is rooted in Marxist political economy and political ecology to point out the contradictions that are inherent to

capitalist-oriented food systems. In their comprehensive review of food sovereignty scholarship, Claeys and Desmarais (forthcoming, no page) conclude that the food sovereignty movement is anti-capitalist[2] and an "emancipatory political project for radical social change".

Positioning food sovereignty as a stark, ontological alternative to capitalism helps scholars to point out the negative impacts of our global, industrial food system. Food sovereignty scholars collate a compelling range of evidence that agricultural intensification rarely leads to positive social and ecological outcomes (Rasmussen et al. 2018). Further, scholars note how dependency stems from agricultural trade liberalization (Rosset 2006; McMichael 2009; Holt Giménez and Shattuck 2011; Otero, Pechlaner, and Gürcan 2013). Holt-Giménez and Shattuck (2011, 132) argue that agricultural development facilitated by liberalizing agricultural markets, does "…not alter the fundamental balance of power within the food system, and in some cases may even exacerbate inequitable power relations". Agrarian political economists consider unfettered market-led agricultural development flawed and exclusionary, as it rests on contradictory assumptions underpinning capitalism (Bernstein 2010; McMichael 2013). Food sovereignty literature represents a counter-argument to globally oriented food security research and policy in its critique of agricultural trade liberalization and recommendations to decentralize power in the food system by supporting the rights of peasants.

Food sovereignty scholars also suggest solutions to the problems of our global food system that parallel those coming from the corresponding social movement (Wittman, Desmarais, and Wiebe 2010). Broadly, the key recommendation of the food sovereignty movement involves shifting the idea of food as a commodity to food as a human right (Patel 2010). Framing food from a rights-based perspective leads to recommendations to create space for self-determination in agriculture, trade and eating, giving more power to citizens (Wittman 2011). Land reform is a key policy recommendation from this body of scholarship, giving peasant farmers more control over their agricultural practices (Rosset 2009). The food sovereignty movement and associated scholarship also link human rights to ecological sustainability. Food sovereignty scholarship is highly prescriptive in its promotion of agroecological food production (Altieri 2009; 2010; Holt-Giménez and Altieri 2013).

[2] Desmarais' work draws on Moore's (2015, 1) definition of capitalism that is "…understood as a world-ecology that joins accumulation, power, and nature in dialectical unity…through an astonishing historical capacity to produce, locate, and occupy cheap natures external to the system". As such, anti-capitalism would represent the antithetical conception of this world-ecology.

Agroecology is based on smallholder farming systems that rely on agroecosystem management rather than external inputs (Francis et al. 2003; Gliessman 2015). Agroecological food production relies on farmers' knowledge, prioritizing crop diversity and soil sustainability (Altieri 2009). The food sovereignty movement, and associated scholarship, envisions a more sustainable, equitable food system stems from a systemic decentralization of power, accompanied by shifts in land tenure and shifting production toward agroecology.

As food sovereignty scholarship has grown, so have debates within the field (Agarwal 2014; Bernstein 2014). Between 2014 and 2015, several special issues of peer-reviewed journals were published that outline emerging tensions and gaps[3]. Several studies critique the tendency of food sovereignty scholars to contrast the movement's activities with globally oriented policy and practice, creating a false dichotomy that eclipses the inherent complexity of food systems (Clapp 2014; Edelman 2014; Jarosz 2014). In general, emerging scholarship on the complexity of food systems suggests that the debate over the future of our food system needs more nuance (Clapp 2014; Jarosz 2014). For example, in McMichael's (2014) historicization of food sovereignty that appeared in the *Journal of Peasant Studies'* special issue, he contemplates possibilities for food sovereignty politics that widen beyond peasant movements. In particular, he references the lack of a peasant movement in the Caribbean at the same time that the region is grappling with food import dependence (McMichael 2014, 947).

Another gap in food sovereignty research relevant to this dissertation and case study are questions surrounding the scale and orientation of markets in relation to food sovereignty goals. Localized food systems that are enmeshed with capitalist market principles and global food supply chains present an analytical challenge to food sovereignty scholarship. Food sovereignty scholarship's advocacy for a starkly anti-capitalist food future risks obfuscating market activity that links food production, distribution and eating. For example, Burnett and Murphy show how the food sovereignty movement tends to position itself antithetically to international trade, without adequately addressing the existing, powerful influence of global markets (2014). Because food sovereignty necessitates a radical transformation from the global industrial food system, it is difficult to analyze the food systems that rely on market principles of exchange but also may give people a semblance of sovereignty. This point is particularly important for

[3] Special issues of the *Journal of Peasant Studies* (2014), *Third World Quarterly* (2015), *Globalizations* (2015) evaluate debates and criticisms in food sovereignty scholarship.

studying food system dynamics in Jamaica, whose economy is inextricably linked to global networks of trade and very much tied to food import and export markets as a former plantation economy.

At a national scale, Wittman and Blesh (2017) note that while many food sovereignty studies focus on ways to uphold the movement's goals for farmers and consumers, food markets and distribution opportunities warrant further research. Wittman and Blesh highlight the potential of state procurement initiatives as guaranteed markets for farmers who grow food using agroecological principles, effectively creating a 'mediated', or state-supported market that can support farmers' incomes, distribute healthy food and protect the environment (2017). Brazil's school feeding programs provide a clear example of mediated markets, where public funding supports the distribution of agroecologically grown food to schools (Wittman and Blesh 2017; Sonnino, Faus, and Maggio 2014). Thus far, markets outside the scope of public procurement are absent from this literature. The case of Jamaica's internal marketing system provides a unique additional case study to explore the role of embedded markets in distributing food at a local or regional scale.

The reason I explore food sovereignty scholarship in such detail, here, is that select scholars recommend the application of the movement's principles as a way forward for agricultural development in Jamaica (Weis 2004b; 2007; Richardson and Ngwenya Richardson 2013; Talbot 2015). Evaluating food import dependency in Jamaica, Talbot suggests that adopting the food sovereignty movement in the Caribbean could help preserve local knowledge, produce more "traditional" crops and "cultural traditions based on consuming certain kinds of local foods" (2015, 54). Weis advocates for land redistribution in Jamaica, parallel to key recommendations from La Via Campesina (2004a, 2007). He also states that market liberalization must be resisted "…on the grounds of food sovereignty" (Weis 2007, 116). Richardson and Richardson Ngwenya call for a shift in "agrarian ideology" toward food sovereignty principles that represent a "collective and truly counter-hegemonic vision of Caribbean agriculture" (2013, 274). The desired outcomes of the food sovereignty movement somewhat align with Jamaica's efforts to support the domestic food system. For example, supporting small-scale farmers' productive capacities can help ease the heavy dependency the country has on imported food, as envisioned by the state's program to boost domestic production and other related initiatives. However, Jamaica lacks a key component of the food sovereignty

movement's common vision: a mobilized peasantry that resists globalization. Altieri (2010) notes that, without a social movement that creates political will to shift institutions and power, it is impossible to realize the goals of the food sovereignty movement. While food sovereignty scholarship is useful to analyze food systems outside global supply chains, it is not apparent in Jamaica's context as the social movement behind it is simply not present.

Instead of a peasant-led social movement mobilizing around an agenda of food sovereignty, Jamaica nonetheless has a long history of challenging aspects of the global food system. People participating in Jamaica's domestic food system, while not rooted in a social movement, make important contributions that challenge the dominance of import and export markets. Rather than resisting global food supply chains explicitly, Jamaica's domestic food system works alongside them, in interdependent and dynamic ways. The domestic food system is shaped by, and shapes, global food supply chains and capitalist markets more broadly. Food sovereignty scholarship focuses on Latin American and North American case studies, not the Caribbean Community (CARICOM). Food sovereignty literature does not tend to incorporate the specific historical trade relations of former plantation economies in the CARICOM region, in a context that has left small-scale farmers and others involved in the food system inherently linked to global markets. This dissertation contributes to filling in these blanks in critical food studies literature by bringing to light the nuances and unique context of Jamaica's persistent domestic food system.

Alternative Food Networks Scholarship

AFN scholarship also seeks to find solutions to challenge the global orientation of our food system and falls short of explaining the persistence of Jamaica's domestic food system. AFN studies proliferated throughout the late 1990s and 2000s to analyze the diverse ways that food systems challenge global, industrial food supply chains that are not necessarily tied to a social movement (Goodman, DuPuis, and Goodman 2012; Jarosz 2008). Instead of analyzing food systems explicitly tied to a social movement, AFN literature is made up of place-based case studies. The dominant subset of AFN studies explores food system activities that present explicit challenges to global, industrial agriculture, distribution and consumption that might lead to greater social and ecological sustainability and focus on case studies from high-income countries. My case study contributes to an emerging body of literature that chiefly draws on case

studies from low- and middle-income countries[4] (LMICs) and presents more plural food system alternatives.

The ever-growing body of AFN literature analyzes the embeddedness of food systems (Morgan, Marsden, and Murdoch 2006b; DuPuis and Goodman 2005). Throughout the late 1990s and 2000s, a burgeoning set of case studies reported the diverse ways that food networks could explicitly challenge 'disembedded' conventional supply chains (Jarosz 2008; Goodman, DuPuis, and Goodman 2012). Here, the conventional food system is defined as "the food supply system that is linked to large-scale, productivist agriculture and supermarket retail, and the highly industrialized supply chain associated with industrialized, large-scale production and consumption." (Abrahams 2007, 6). AFN literature drawing from high-income country case studies suggests that a better alternative is to have food systems that are re-localized, and challenge aspects of the conventional food system, such as industrial production and processing methods (Watts, Ilbery, and Maye 2005; Sonnino and Marsden 2006). AFNs are diverse, but are framed as sharing three general characteristics: (1) they redistribute value from corporations to communities and people growing food; (2) they connect producers and consumers; and (3) they decentralize power in market relationships (Morgan, Marsden, and Murdoch 2006; Follett 2008).

Within place-based food systems, there is a range between different types of AFNs, determined by the way they engage with and challenge the global food system (Watts et al. 2005). AFNs comprise a mix of agricultural and distribution strategies (DuPuis and Goodman 2005; Sonnino & Marsden 2006; Watts, et al. 2005). Scholars distinguish between 'weak' and 'strong' AFNs, where 'weak' AFNs may take the form of alternative production methods, such as organics, but still engage in a conventional, vertically integrated market system that is subject to unequal power relations (Follett2008). 'Weak' AFNs may challenge political norms of the food landscape, but not necessarily (Goodman and DuPuis 2002; Morgan et al. 2006; Marsden and Franklin 2003). By contrast, 'strong' AFNs represent structural challenges to the global, industrial food system (Allen 2003; Goodman 2003). The distinction of 'weak' and 'strong' AFNs implies that those, which have a transformative political agenda, are superior than those which do not. A key debate within this literature centres on whether or not we can we consider AFNs as a form of resistance to our conventional food system? If yes, this implies that theory

[4] In 2019, the World Bank's list of low- and middle- income countries included those that are low income, including Ghana, lower middle income, including Kenya, and upper middle income, including Jamaica, South Africa and China.

and practice that advocates for sustainability should support 'strong' AFNs. If not, should 'weak' AFNs be re-classified with a less diminutive title?

One critique of literature advocating for 'strong' AFNs is that it tends to dichotomize global problems and local solutions for our food system (Holloway et al. 2007; Sonnino and Marsden 2006). The literature frames food systems as either place-based ('reterritorialized') or placeless ('deterritorialized'). The local aspect is considered the key to re-embedding food systems that have become placeless in conventional food systems (DuPuis and Goodman 2005). Unless AFNs explicitly resist global capitalism, some scholars suggest that they are limited in their ability to have a transformative, positive impact on our food system (Allen et al. 2003; Goodman 2004; DuPuis, Goodman, and Harrison 2006). AFNs that do not explicitly challenge global capitalism risk reproducing the negative social and ecological impacts of the conventional food system (Allen et al. 2003; Guthman 2007). This critique of AFNs is relevant to the case study presented in this dissertation because of the inextricable links between Jamaica's domestic food system and global food supply chains.

Other scholars share a critical view of global capitalism, but are less critical of AFNs that rely on market principles associated with capitalism (Renting, Marsden, & Banks, 2003; van der Ploeg & Renting, 2004). Human geographers share this perspective, for example, Harris, who states, "…the reading of AFN activism as reproducing neoliberal subjectivities is *just one* reading, but it is *not the only reading possible*…" (2009, 61). Instead, we can strive to imagine alternatives, from 'weak' AFNs that promote the most marginal improvements to equity and the environment, to 'strong' ones that, like the food sovereignty movement, represent transformational challenges to the food system. My case study fits in this complex, in-between space, aptly described by Maye et al. (2007, 5) as follows:

> While there may be some form of resistance to capitalist relations, [it] may well be fragmented and perhaps not even intended as a direct challenge to capitalism; it will more likely take shape as a 'little r' of resistance which enables people to wrest back some control over how their food is produced.

Rather than making claims about whether or not Jamaica's domestic food system resists or reproduces global capitalism, I explore how this unique food supply chain endures over time, and the potential measures that could support it.

The second key critique of AFN literature relevant to the Jamaican case is that its recommendations are based on studies in high-income countries. Many AFN studies focus on food systems across North America and Europe (Sage 2003; Goodman 2004; Sonnino 2007). Further, these case studies make claims that are based on North American and European contexts, but imply that their recommendations can be generalized globally (Ilbery and Maye 2005; Watts, Ilbery, and Maye 2005). Abrahams (2007) critiques the global application of an idea that does not draw on data from LMICs, only high-income countries. Haysom (2017, 11) also problematizes this 'Northern' bias, stating, "dominant academic scholarship and civil society organizations frame AFNs in a manner that reflects the domain of privileged developed world food system interventions". In LMICs, the impetus behind AFNs looks different. In their comprehensive review of AFN literature, Maye and Kirwan find that the aims of AFNs in highincome contexts are to serve justice-oriented, ethical goals of environmental sustainability and re-localizing food systems (2010). Haysom argues that AFNs in LMICs may or may not share the same normative aims, for example, of environmental sustainability or reclaiming localism, as those in the high-income countries (2017). While AFNs in LMICs may also serve social and ecological justice roles, they also have different relationships with conventional supply chains and serve different functions (Rocha and Lessa 2009; Haysom 2017).

A growing body of literature analyzes the contrasting ways that AFNs present themselves in LMICs (Peyton, Moseley, and Battersby 2015; Si, Schumilas, and Scott 2015; Haysom 2017; Nickanor, Crush, and Kazembe 2019). Here, AFNs serve a range of purposes. They are important for food access across income levels (Haysom 2017; Abrahams 2007), for employment (Freidberg and Goldstein 2011) and to provide culturally specific food (Abrahams 2007). China's AFNs are important for a wide range of normative goals: not only do they support ecological sustainability, but also access to food that people prefer (Si, Schumilas, and Scott 2015). The diverse roles that AFNs play in LMICs are served through unique, contextual relationships including formal, informal, reciprocal and non-economic exchange (Haysom 2017). AFNs in LMICs, like Jamaica, serve a wide range of aims that are unique to the geographical and historical context where they are located. Building on the central critique of

AFN literature of its limited geographical scope that focuses on North American and European case studies (Abrahams 2007; Haysom 2017), I extend the analysis of AFNs into the Caribbean region. My case study investigates the unique contextual relationships between small-scale farmers, traders and consumers that support the domestic food system over time.

Abrahams defines AFNs outside of high-income countries as "the entire food supply that, in part or in fully, contests or opposes the dominance of the conventional food networks" (2007, 6). Studies based in South Africa note how AFNs there are distinctly shaped by global processes and local contexts (Abrahams 2007; Battersby 2012; 2013). For example, Abrahams (2007) documents how South Africa's diverse AFNs are shaped by the proliferation of supermarkets, dynamics of poverty and shifting food cultures at the local level, and trade liberalization at the global level. In a related study, Freidberg and Goldstein (2011) analyze the challenges of sustaining direct food marketing initiatives in Nairobi. Their study reveals that a local food box scheme, funded by a non-governmental development organization failed because it did not take into account the long history of patronage and associated frustration that residents had with other development initiatives more broadly. In LMICs, activities that contest conventional food networks arise from complex histories that must be understood in order to serve residents' needs and preferences. Studying this type of food system necessitates a conceptual lens that can appreciate these contextual relationships at the local level, and the global processes at play. This dissertation builds on emerging case studies exploring AFNs in LMICs that challenge the need to represent structural, transformative change in the food system.

While dominant food sovereignty and AFN literature represent robust and meaningful critiques of globally traded industrial agriculture, neither can explain the perseverance of Jamaica's domestic food system. As indicated in this section, food sovereignty and AFN scholarship tend to advocate for explicit, transformational challenges to global, industrial food system dynamics. The activities in Jamaica's domestic food system, as I discuss throughout this dissertation, do not necessarily exemplify structural challenges to counter global supply chains. As LeFranc (1994, 119) notes, "in the Caribbean the small farmer has always had a close relationship with…market systems. Hence, our concern is not with the fate and "survivability" of subsistence farmers…but with small farmers who have long been accustomed to, and no doubt make excellent use of the fuzzy and flexible line between…subsistence production and commercial and market production." I argue that the domestic food system in Jamaica manifests

in people's everyday activities, including growing, selling and eating food in a symbiotic relationship with global food supply chains. I expand on the dynamic, overlapping relationships between Jamaica's domestic food system and global markets throughout this dissertation. This dissertation contributes to emerging literature that is beginning to explore the role of markets in sovereign food systems and plural perspectives of AFNs in LMICs.

Diverse Food Economies in the Caribbean

The plural, dynamic nature of Jamaica's domestic food system necessitates a conceptual framework that looks specifically at contextual relationships and global processes that shape food systems. I draw on two bodies of literature, studies of diverse economies and Caribbean political economy literature, to elucidate the complexities of Jamaica's domestic food system. To analyze the perseverance of Jamaica's domestic food system, I turn to an emerging body of literature studying food systems that blur 'alternative' and 'conventional' categorizations (Holloway et al. 2007; Little, Maye, and Ilbery 2010; Sarmiento 2017). This literature frames food systems according to the principles of a "diverse economy" defined as a "…diversity of economic relations including different kinds of transactions, different ways of performing and remunerating labour, and different modes of economic organization with emphasis placed on its geographical context," in a useful way that gets beyond the emphasis placed on anti-capitalist resistance (Cameron and Gibson-Graham 2003, 152–53). The diverse economies framework creates analytical space to address the complexity of food systems that straddle the boundaries drawn by critical food scholars. The epistemological roots and research methods associated with this framework are detailed in Chapter Two.

As useful as the diverse economies framework is to analyze the complex interactions between those growing, selling and buying food to eat and the social embeddedness of the domestic market, I argue that it must be properly contextualized to capture the lasting legacies of colonialism in the Caribbean. The diverse economies framework does not address the global processes shaping Jamaica's food system. Jamaica's domestic food system is the product of the country's particular social and ecological context that builds on a complex history as a plantation economy and the lasting legacies of colonialism. For this reason, it is necessary to integrate insights from literature on Caribbean political economy to properly understand Jamaica's diverse food economy. Contextualising the diverse economies framework alongside Caribbean political

economy literature (Best 1968; Beckford 1972; Levitt and Best 1975) incorporates the interdependencies between the global economy and Jamaica's domestic food system and the interdependencies between global, local, 'conventional' and 'alternative' food system activities. When paired together, the diverse economies framework and Caribbean political economy literature reveal the important functions of Jamaica's domestic food system. I explore the complementarities between studies on diverse economies and Caribbean political economy in more detail in Chapter Two.

Incorporating Caribbean political economy literature in this thesis grounds my argument on scholarship charting the influence of colonialism on food and agriculture in former plantation economies. This body of literature originated by a collection of scholars called the New World Group who came together as Caribbean countries gained independence in the 1960s. Their goal was to design a political economy based on the lived experiences of those in the region. The New World Group sought to develop a model of epistemic sovereignty distinct from other ideologies about development (Beckford 1972; Best and Levitt 1968). The central assumption of Caribbean political economy is that, despite gaining independence, the region remains inherently connected to a history of colonialism and plantation farming (Beckford 1972). The New World Group based its theory on the idea that levels of development in the region were the result of structurally dependent links with European supply chains. To understand the dynamics of Jamaica's food system, today, it is integral to unpack the history of the country's colonial ties to global food supply chains. This dissertation contextualizes Jamaica's contemporary domestic food system in powerful colonial relationships that have a lasting impact today.

Much of Caribbean political economy focuses on the potential role of food and agriculture for regional independence from the global economy. Beckford's plantation thesis states that former colonies that used enslaved labour to grow export crops, such as Jamaica, have a particular dependency on global markets. Caribbean countries, he argues, must find ways to feed themselves in order to have some degree of independence from the global food system (1972). The New World Group focused on designing an economy that propelled itself, scaled down from global markets, promoting regional food trade, nationalization of plantation enterprises, and localization of assets of foreign-owned enterprises (Best and Levitt 1968). They emphasized self-reliance, in particular, through food systems (Beckford and Witter 1982). Self-reliance, as it was adapted to suit the Anglophone Caribbean, is defined by Galtung et al. as

"development on the basis of a country's own resources, based on the potential of its cultural values and tradition" (1980). New World scholars advocated that small-scale, diverse agriculture is the best way to support food security (Beckford 1972; Timms 2008). Their ideas became highly influential to Jamaica's national development policies in the 1970s and are still evident in food and agricultural policy today. The specific policies that the Jamaican government designed and implemented to support the domestic food system as a means toward self-reliance in the 1970s are covered in Chapter Three.

In contrast to literature that recommends Jamaica take a food sovereignty approach, this thesis takes stock of the lived realities of those growing, selling and eating Jamaican food. In this case study, a sustainable food future may not involve an agrarian-based social movement. As McMichael (2014, 947) states in his study exploring the potential for pluralities in food sovereignty scholarship, the future "…may not be about restoring or constructing a Caribbean peasantry, but food sovereignty is not simply about peasants – its salience is universal, but with distinctive local meaning." The 'local meaning' in Jamaica involves people growing, selling, and eating food in ways that simultaneously engage with and circumvent aspects of our globally oriented food system. Recommendations for agricultural development in Jamaica must be made in consideration of this complex context.

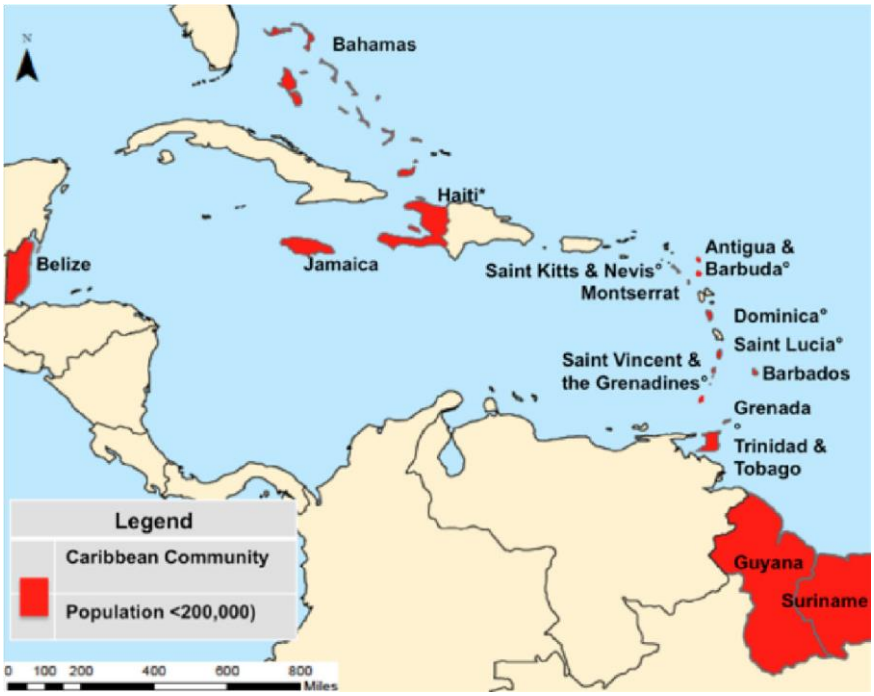
It is essential to analyze the domestic food system in the context of Jamaica's relationships with powerful global processes. Incorporating this important history, and its continued relevance, helps to explain today's food system activities. In a country that is so closely tied to the global economy, there is ambiguous separation between global and local scales, or 'conventional' and 'alternative' food systems. An analytical lens that captures diversity and context is integral to this research. Analyzing the perseverance of Jamaica's domestic food system through Gibson-Graham's diverse economies framework reveals the plural, everyday activities related to growing, selling and eating food. Contextualizing the diverse economies framework alongside Caribbean political economy incorporates the interdependencies between the global economy and food system activities at local and regional scales.

Empirical Context

The Caribbean Region

The research conducted for my dissertation takes place in the broad Caribbean region that includes the geographical area southeast of North American and the Gulf of Mexico, including a vastly diverse set of island nations. Due to the diversity in the Caribbean, I will limit my overview of the region to introducing its formal governing body, the Caribbean Community (CARICOM). CARICOM is an organization of twenty countries, fifteen of which are member states and five that are associate members,[5] supporting economic integration and cooperation. The population of the CARICOM is approximately 18,265,664 people. Under the United Nations Department of Economic and Social Affairs' World Economic Situations and Prospects characterization, all CARICOM countries are classified as developing countries and represent a vast diversity of geography, culture and history.

Figure 1-2: Map of the Caribbean Community (CARICOM) Region



Source: Saint-Ville et al. (2015)

[5] Member states include: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago. Associate Members include Anguilla, Bermuda, British Virgin Islands, Cayman Islands, and Turks and Caicos.

Amidst this diversity, CARICOM countries face similar food security and sustainability challenges. Food security in each country is impacted by declining domestic food production and high dependence on food imports (Beckford and Campbell 2013). Food is widely available; however, access to nutritious food is made difficult because of two compounding reasons: heavy dependency on food imports and environmental change (Barker 1993). Imported food, in many cases, comes in the form of highly processed foods with low nutrients, high calories and high amounts of fat, sugar and sodium. This type of food is associated with higher rates of non-communicable diet-related disease. Large amounts of food imports have, in some cases, led to a reduction in domestic farming for the local market (Beckford and Campbell 2013). On top of this, climate-related disaster and increasingly unpredictable precipitation patterns influence domestic agriculture, food supply chains and market prices (Mimura et al. 2007; Gamble et al. 2010). Beckford and Campbell deem Caribbean food security 'precarious', due to its vulnerability to environmental change, dependence on food imports, and the resulting impacts on countries' respective abilities to produce their own food (2013).

To address social and ecological challenges to food security and agricultural sustainability, countries have responded in diverse ways. Several countries have joined La Via Campesina with their own local counterpart. The global peasant movement is represented in Haiti, Grenada, Dominica, St. Lucia and St. Vincent. Across the Caribbean, countries also prioritize improving self-sufficiency initiatives to reduce dependence on imported food. For example, before Hurricane Irma devastated the island of Barbuda in 2017, the country's backyard gardens and communal livestock sector, supported with water from historic community wells, leavened the country's dependence on imported food (Boger et al. 2014). Each CARICOM country responds to compounding food system challenges in different ways, building on their own diverse context.

Jamaica

While I outline the history of Jamaica's domestic food system and its connections to the global economy in detail in Chapter Three, the island first requires an introduction to its key demographic, economic and geographical details. Jamaica is the third largest island in the Caribbean, the largest of the CARICOM member states. Its population was 2,728,864 in 2017

(STATIN 2017). According to the United Nations demographic data on Jamaica, the population growth rate rested at 0.6% from 2005 to 2019 (2019). However, this figure does not capture accurate population growth rates, because a significant portion expatriate Jamaicans, around 1,070,000, are not included in this measurement (Pew Research Centre 2015). Just over half (56%) of Jamaica's population lives in urban areas, and the average annual urban population growth rate in 2019 was 0.8% (UN Data 2019). Jamaica's population has a high primary education gross enrollment ratio of 96.4% for girls and 96.1% for boys,[6] secondary gross enrollment of 84.8% for girls and 80.1% for boys in 2019, and tertiary gross enrollment reaching 34.2% for women and only 19.8% for men in 2019 (UN Data 2019). Taken together, the islands demographic data indicate low population growth overall, slowly increasing rates of urbanization and high levels of primary education paired with lower levels of tertiary education.

According to UN Data, Jamaica's GDP in 2019 measured US$ 14 827 billion, or US$ 5129.8 per capita (2019). Jamaica's economy centers on its natural resource endowment. Since the 1940s, Jamaica has been an exporter of bauxite, a key component needed to make aluminum. An estimated 22.9% of Jamaica's annual GDP, employing 15.4% of Jamaicans in 2019, came from industry, including the mining and export of bauxite (UN Data 2019). The service industry, including tourism, makes up 69.4% Jamaica's economy and employs up to 66.5% of the labour force (UN Data 2019). The country's productive capacity, however, is constrained by a high debt service; each year, Jamaica pays a percentage of exports, goods, services and primary income to service its debt to the International Monetary Fund. In 2016, the ratio of debt service to exports was 40.5% (World Bank 2019a).

Agriculture remains an important part of Jamaica's economy, contributing 7.7% of the gross value added of GDP in 2019 (UN Data 2019). Jamaica's diverse agro-ecological zones are conducive to growing a wide range of agricultural produce. Jamaica's agricultural extension organization, the Rural Agricultural Development Authority (RADA), reports that an estimated 212,068 registered farmers, making up 7.8% of Jamaica's population produce food, not including an unknown number of unregistered farmers (Rural Agricultural Development Authority (2019). Farming, here, is also shaped by a tragic history of colonialism, slavery and

[6] No new data after 2005.

inextricable links to the global economy that I detail in Chapter Three. One result of this is, as Barker classifies, is Jamaica's 'dualistic' agricultural sector (1993). The country's most fertile, alluvial plains are used to cultivate crops on large-scale for export, particularly of sugar cane, while small-scale farming for domestic consumption is found on rocky hillsides (Barker 1993). This geographical segregation has significant implications for small-scale farmers' productive capacities. A steadily growing body of literature from geographers at the University of the West Indies shows that despite being marginalized to less-desirable land, Jamaica's small-scale farmers are highly innovative, hold significant knowledge and expertise on working with their surrounding environment, are constantly experimenting in the face of constraints (Beckford, Barker, and Bailey 2007; McGregor, Dodman, and Barker 2009; Campbell, Barker, and McGregor 2011). The historical context of food and agriculture in Jamaica is expanded on in Chapter Three.

Jamaica also faces significant food security challenges that parallel other Caribbean countries. Food security in Jamaica surpasses global averages; however, Jamaicans face barriers to food access and nutrition (Beckford and Campbell 2013). The first study of household food security in Kingston shows that food is readily available, but the nutritional content of food is compromised by wide consumption of processed food (Kinlocke et al. 2019). High levels of poverty and unemployment are common barriers preventing access to food (Kinlocke et al. 2019). Today, Jamaica's agricultural sector is subject to mounting climate variability, in particular increasingly unreliable precipitation and increasingly frequent drought conditions (Beckford, Barker, and Bailey 2007; Gamble et al. 2010). Analyzing the impacts of environmental change on Jamaica's domestic food system is beyond the scope of this thesis, but does warrant further research. Like other Caribbean countries, a heavy dependence on imported food imports and increasingly unpredictable environmental change, impact access, nutritional quality and the stability of food supply (Cave 2013; McGregor, Dodman, and Barker 2009).

At the same time that Jamaica's food system is inextricably linked to the global economy, farming for the domestic market is also bolstered by national support. For example, in 2003, the Government of Jamaica, at the time governed by the left-leaning People's National Party, introduced the Eat Jamaica campaign. The campaign's slogan "Grow What You Eat, Eat What You Grow," captures its mandate to boost domestic production of fruit, vegetables and meat and to encourage citizens to eat it. Initiatives under the campaign include targeted support

of crops that can be grown in Jamaica, but are imported from the United States. Curiously, the current government, under the leadership of the right-leaning Jamaica Labour Party that supports free trade, also maintains and applauds the campaign. This dissertation does not evaluate this campaign's impacts. Rather, I consider the political recognition of the domestic food system to serve national development as an indication that it remains an important issue to Jamaican citizens.

Organization of Dissertation

The remaining chapters of this dissertation explain how Jamaica's domestic food system perseveres despite strong, influential connections to the global economy. Chapter Two outlines the methodology grounding the dissertation, including its epistemological foundations in interpretivist research and the conceptual framework that draws largely from literature on diverse economies, contextualized in Caribbean political economy. It further outlines the research methods, based on a household survey and corresponding interviews that stem from this conceptual approach. Chapter Three provides the historical context of the supply chain of food from Jamaica's breadbasket in Southern St. Elizabeth to households in Kingston, beginning with a review of how Jamaica's domestic food system was shaped through colonization. This chapter also establishes the strong and persistent connections between Jamaica's food system and the global economy. This descriptive data forms the base from which I explore the domestic food system's important functions.

Chapters Four, Five and Six are organized according to the three embedded functions of the domestic food system that emerged from the data and my analysis, and the factors that lead to their ability to withstand pressures from the country's connection to global agricultural import and export markets. Each of these three functions became clear by employing the diverse economies framework that is contextualized in the specific political economic context of the region. First, Chapter Four establishes how the domestic food system fills key access gaps not adequately served by global supply chains, specifically for Kingston residents. The data shows that the domestic food system is an important source of accessible food that is distributed across Kingston. Chapter Five shows the historical and contemporary significance of informal employment in the domestic food system for financial independence and social mobility. Lastly, Chapter Six provides evidence on how the domestic food system enables a sense of place for

food producers and consumers that connects Jamaicans to their surrounding environment and national cultural identity, notably, in the context of a brutal colonial history and strong ties to the global economy.

Chapter Seven draws together my analysis on how the domestic market persists today, despite facing compounding challenges. Applying the diverse economies approach, contextualized in Jamaica's political economy, reveals the everyday food system activities that interplay with the global, industrial food system. People involved in growing, selling and eating this food draw a mix of strategies that at once reproduce and resist elements of the global food system. These activities are represented by neither food sovereignty literature that builds on peasant-led resistance to a globalized food system, nor AFN scholarship that, with its Northern bias, seeks out food systems that explicitly aim toward transforming the food system. The theoretical contribution of my work is to offer some case-based nuance to these dominant bodies of critical food studies. I suggest that the diverse economies approach, when it is properly contextualized, helps to understand the realities of those involved in Jamaica's food system and can elucidate the complexities of what food access, work or place means in a small island state and lead to meaningful suggestions for the country's current efforts to build food self-reliance. Rather than pointing out the potential irrelevance of Jamaica's domestic food system, my hope is to highlight the quotidian, yet remarkable ways that people living on the island continue to feed themselves despite centuries of compounding threats.

Chapter 2: Conceptual and Methodological Framework

I designed this research to assess how Jamaica's domestic food system perseveres despite strong, lasting connections to global import and export markets. The previous chapter establishes Jamaica's domestic food system as all food production, distribution and consumption relationships within national boundaries. It is difficult to capture the particularities of the food system in this case study with existing conceptual framings offered by critical food studies literature, represented by food sovereignty and AFN scholarship. Instead, this dissertation characterizes food Jamaica's domestic food system as part of a diverse economy shaped by a particular colonial context. To understand the functions and dynamics of the domestic food system, I rely on Gibson-Graham's diverse economies framework (Gibson-Graham 1996, 2006; Gibson-Graham, Cameron, and Healy 2013), contextualized in the specific political economy of the Caribbean region (Best 1968; Beckford 1972; Levitt and Best 1975). The diverse economies framework proved useful to analyze food systems that simultaneously connect to and challenge aspects of global markets, bringing to light three key roles that Jamaica's domestic food system serves today. This second chapter outlines the concepts underlying my research approach, the methods of data collection, and the selection of the sample, the research process, the type of data analysis, ethical considerations and research limitations.

First, this chapter provides background on the diverse economies framework, including background information on its ontological roots, and where it fits into broader food systems research. It is particularly applicable to food systems in low- and middle-income countries that sit outside of, yet intersect with, global supply chains. Next, this section includes necessary context of Jamaica's colonial history. Jamaica's domestic food system is deeply influenced by a particular political-economic context, especially that related to its role as a former plantation colony. This chapter addresses recent calls by scholars applying the diverse economies framework and those looking at AFNs in Southern case studies, to focus on context. To understand the unique production-consumption relationships that make up the domestic food system, this research draws on literature that puts Jamaica's history at the forefront.

This chapter then moves on to apply the conceptual framework through an interpretivist case study I designed to understand the complexities shaping the domestic food system that help it endure significant challenges posed by the country's close integration with global markets.

Taking a case study approach permits comprehensive contextual analysis of Jamaica's domestic food system activities. An interpretivist approach "begins with a puzzle…and then seeks to explicate it by identifying the conditions that would make [it] less perplexing and more of a 'normal' or 'natural' event" (Schwartz-Shea and Yanow 2012, 27). Because of its focus on 'contextuality', rather than 'generalizability', interpretivism is a useful way to conduct case based research where historical, social and environmental context shapes research results (Schwartz-Shea and Yanow 2012). Chapter Two outlines the specific research methods associated with interpretivism, in this case, an explanatory sequential mixed-methods approach that pairs a household survey with qualitative triangulation (Creswell 2014).

Introducing the Diverse Economies Framework

In this dissertation, I frame Jamaica's domestic food system as part of a diverse economy to analyze its enduring roles. A diverse economy expands the notion of economic activity beyond formal markets, wage labour and profit motivations (Gibson-Graham 2013), departing from a viewpoint that equates all market-related activity with capitalist properties. A diverse economy presents a nuanced view of economic activity that includes a range of different kinds of exchange, labour arrangements and types of enterprise (Gibson-Graham 2006, 71). The framing pictured in Table 2-1 draws on Gibson-Graham's work with their[7] scholar and practitioner group called the Community Economies Collective. The framework is based on the assumption that economies inherently involve a range of market relations, non-market relations and alternative market relations. Table 2-1 details examples of each category that I use as an analytical frame to understand the complexities of Jamaica's domestic food system throughout this thesis. Market relations involve monetary transactions, wage labour and capitalist social relations more generally, such as relations of production, appropriation and accumulation of surplus value. Alternative economic relations involve both market transactions and practices outside of purely capitalist transactions: local trading systems, barter and transactions in an informal market, and labour activities such as self-employment or reciprocal labour. Non-market relations involve exchange through means other than cash, such as giving gifts or gleaning, and unpaid labour that may happen within a community. This framework usefully encompasses the

[7] I use 'they' as a singular pronoun when referring to Gibson-Graham. Katherine Gibson and Julie Graham publish under a singular name.

complexities of food production, sale and consumption in Jamaica, which characteristically straddle conventional markets, alternative and non-market labour practices, and complex exchange relationships.

Table 2-1: A Diverse Economy Framing

Transactions	Labour	Enterprise
Market Transactions Examples: • Cash purchase	**Wage Labour** Examples: • Hourly wage	**Capitalist** Examples: • Family firm • Public company • Multinational company
Alternative Market Transactions Examples: • Local trading systems • Barter • Informal Market	**Alternative Paid Labour** Examples: • Self-employed • Reciprocal labour • In-kind labour	**Alternative Capitalist** Examples: • State enterprise • Non-profit • Co-operatives
Non-market Transactions Examples: • Gift giving • Gleaning • Theft, poaching	**Unpaid Labour** Examples**:** • Neighbourhood work • Self-Provisioning • Enslaved labour	**Non-capitalist** Examples: • Communal • Feudal

Source: Adapted from Gibson-Graham (2006, 71)

The diverse economies framework results from the overarching goal of Gibson-Graham's scholarship: to challenge the discursive power of capitalism and discover alternative economic possibilities. In *The End of Capitalism,* Gibson-Graham spell out how both advocates and critics of capitalist market development have led to a powerful "capitalocentric" discourse. Capitalocentrism refers to framing all economic activities "fundamentally the same as capitalism, or as being deficient or substandard imitations; as being opposite to capitalism; as being the complement of capitalism; as existing in capitalism's space or orbit" (Gibson-Graham 1996, 6). Capitalocentric discourse emerged during the early days of mercantile capitalism (Gibson-Graham 1996). Examples of this discourse include theories of economic organization that strengthen capitalist relations in scholarship, including "…the enclosure of common

property, proletarianization, marketization, commodification, the accumulation of capital, and neoliberal privatization of state resources" (Gibson-Graham 2014b, 148). These processes are widely analyzed in critical political economy (Harvey 2005; Peck and Tickell 2002).

Capitalocentrism can lead to assumptions about the trajectory of capitalism and its impact on people's everyday lives and the environment. Economic geographers who employ the diverse economies framework suggest that capitalism, in particular, neoliberal capitalism[8], is given too much power in critical scholarship and is constructed as falsely hegemonic, inevitably dominating different types of labour arrangements, practices of exchange and enterprises (Gibson-Graham 1996; Gibson-Graham 2006; Leyshon, Lee, and Williams 2003). In a related argument challenging the way that Marxist scholars contribute to a capitalocentric discourse, Ferguson discourages using neoliberalism as a "kind of shorthand for the world economy and its inequalities" (2010, 171). Equating neoliberalism with all economic activities, he argues, gives neoliberal capitalism a discursive power representing an "…abstract causal force that comes in from outside to decimate local livelihoods" (Ferguson 2010, 171). Placing economic activity in a separate analytical box to other activities is, as Lee states, "extremely limiting" to map out ways to support positive social or environmental change (2006, 428). As such, studying alternatives that do not represent a radical, transformative reckoning to neoliberal capitalism seems fruitless. Guthman, who draws on Gibson-Graham to study food activism in California, extends this argument, stating "…it is difficult to know what something outside of neoliberalism might look like when all is seen as neoliberalism" (2008, 1181). Further, Fickey and Hanrahan note that studying diverse economic practices that may not represent transformative change has been "…harshly reduced within a binary framework of capitalism/non-capitalism, limiting both our understanding of economic geographies and our ability to adapt practices to meet changing economic needs" (2014, 397). The diverse economies framework counters capitalocentric discourses.

Gibson-Graham designed the diverse economies framework to challenge the idea that capitalism is an "obdurate structure or system" and would inevitably render other activities

[8] Neoliberalism refers to, "…the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade" (Harvey 2005, 2).

powerless (2008, 615). Once Gibson-Graham establish the obstinate power of capitalocentrism as a discourse, they seek to analyze the diverse practices that make up economies (2008, 620). Their aim is to get beyond the parochial focus on radical transformations to capitalism, which risks obfuscating instances of agency, opportunity and everyday acts of resistance[9] (Gibson-Graham 2014). They draw on a wide range of disciplines including economic anthropology and sociology and studies of informal economies to develop a framework of analysis "to repopulate the economic landscape as a proliferative space of difference" (Gibson-Graham 2008, 615). The narrative of "inescapable global capitalism" is compelling and pervasive (Holloway et al. 2007, 6). At the same time, this point of view is static, and does not take into account the dynamism of food systems. Global capitalism is open to challenge, and is not as pervasively hegemonic as some political economists suggest (Leyshon and Lee 2003; Gibson-Graham 2006). Instead of charting how capitalism dominates diverse patterns of labour, exchange and enterprise, Gibson-Graham look at interactions between economic practices and a wide range of social relations[10].

Gibson-Graham suggests that one tries "reading for difference rather than dominance" and avoid conflating capitalism with all practices associated with the economy, with the hope that new possibilities to support positive social and ecological change come to light (2008, 623). When less discursive power is given to the global economy, alternatives are brought to light that look like "…a variegated non-capitalist economic landscape" detailed in Table 2-1 (Gibson-Graham 2002, 32). The diverse economies framework is unique in the way it can highlight and value the quotidian ways that people engage with, challenge, and in some cases, subvert market systems to eat, work and live. As Guthman asserts, "…even though actually existing alternatives and resistances seem minute in comparison, that they exist at all is important" (2008, 1181). This framework is particularly applicable to the case of Jamaica where it has been predicted that small-scale farmers may become irrelevant because of the influence of global food markets, or

[9] "Everyday resistance" is a theoretical concept introduced by James C. Scott, based on his research with Malaysian rice farmers to conceptualize acts of resistance that are not necessarily transformative, revolutionary, collective or confrontational (1985, 1989, 1990).

[10] The range of social relations includes, but is not limited to, "trust, care, sharing, reciprocity, cooperation, divestiture, future orientation, collective agreement, coercion, bondage, thrift, guilt, love, community pressure, equity, self-exploitation, solidarity, distributive justice, stewardship, spiritual connection, and environmental and social justice" (Gibson-Graham 2014, 151).

that the trading system will be subsumed by supermarkets, or that Jamaican diets will become Westernized due to the expansion of global food supply chains that rely on price efficiencies.

At the core of Gibson-Graham's framework is the assumption that economic activities are embedded in a particular context. For example, that a small-scale farmer's decision to use a specific input, like fertilizer, is made in consideration of economic factors such as price, but also social norms around input use, environmental realities, and relationships with input suppliers. This assumption is rooted in a substantive view of the economy, anchored by Polanyi's concept of embeddedness (1944). Polanyi's conceptualization of embeddedness is a direct critique of the neoclassical idea that was spreading at the time he was writing: that the economy, where cash transactions are based on rational behaviour, could be understood outside of its social context (1944). Polanyi critiqued a purely positivist view of the economy, where supply, demand and price mechanisms are assumed to be universal categories that can be measured and compared, independent of their wider social context. Instead, Polanyi asserts that "The human economy…is embedded and enmeshed in institutions, economic *and* non-economic" (1957, 250) (emphasis added). Polanyi suggests that exchange is made up of different "forms of integration", including reciprocity, redistribution and market exchange. Reciprocity and redistribution are considered non-economic actions related to social relations, and are particularly prevalent in what he calls primitive or tribal societies (1944). Actions involving market exchange rely on cash transactions and rational, utility-maximizing behaviour theorized by neoclassical economists. Polanyi predicted that as capitalism proliferates, market exchange would replace embedded forms of integration.

Embeddedness has proven to be a suitable concept to understand the complex relationships between food systems, the economy and society. Notable studies on agriculture analyze the impacts of "exposure to capitalism" on rural, small-scale farming and the personal relationships that persist (Hyden 2006, 3). Hyden's research on the economy of affection in East Africa builds on Polanyi's understanding of reciprocity in agricultural societies, analyzing how peasants retain some separation from capitalism with reciprocal networks of exchange (1980, 1983). Hyden states that Polanyi's work on embeddedness was a key inspiration grounding his own understandings of reciprocal obligations that people felt to one another in the communities he studied (2006). Polanyi's assertion that there are different forms of integration aside from market principles was formative for Scott's *Moral Economy of the Peasant* (1976, 5). Scott

analyzes the ways that norms around subsistence agriculture can challenge capitalist market tendencies in peasants societies in Southeast Asia (1976; 1985). Hyden's study of the economy of affection in East Africa (1980) and Scott's moral economy in Southeast Asia (1976) highlight how personalistic elements in pre-capitalist food systems transform as global capitalism expands. Sidney Mintz also drew on Polanyi's concept of embeddedness in his early studies of food markets across the Caribbean and Latin America, including Jamaica, to understand the dynamic relationships between noneconomic activities and supply and demand (1959).

Hyden and Scott's work was, as Polanyi's, responding to other studies that presuppose a linear, universal trajectory of capital markets based on universal ideas of human behaviour. Hyden directly challenges hypotheses like that put forward by Bates (1981), who suggests that, given the right economic incentives, peasants could participate more fully in capitalist agriculture and solve sub-Saharan Africa's agricultural crisis. Hyden's counter-argument, that non-economic components, such as customs and informal institutions, matter in African peasantries, challenge the idea that the peasantry is ripe for purely capitalist expansion. Similarly, Scott's work challenges assumptions surrounding the universal rationality applied to peasants in Southeast Asia (1976; 1985). For example, Popkin's theory that peasantries in Southeast Asia are comprised of rational individuals, as prescribed by neoclassical economy theory notably rebuts Scott's work (1979). Both Hyden and Scott draw on the concept of embeddedness to articulate the everyday ways that they saw an expanding capitalist economy intersecting with social relations in small-scale agriculture in the 1970s and 1990s.

The concept of embeddedness surged in scholarship throughout the 1980s and 1990s, in response to the widespread implementation of neoliberal economic policy that conceptualized social and ecological elements, including, but not limited to food, as commodities to be traded through global supply chains (Granovetter 1985; Block 1990; Mingione 1991; Lie 1991; Swedberg 1997). Neoliberal economic policy, as it related to food and farming, involved a rolling back of state services supporting agriculture and trade liberalization in LMICs (Busch 2010; Peck and Tickell 2002; Harvey 2005). McMichael characterizes this period as a fundamental shift in food and agricultural governance away from the state and toward corporations, where food markets were disembedded from their social and ecological context (2009). The same period saw a corresponding interest in local food systems as part of a 'double movement', a term coined by Polanyi to conceptualize the implementation of economic

liberalism and the subsequent resistance to economic liberalization (1944). Holt- Giménez and Shattuck document different ways that food could be re-embedded in society and nature, placing a normative emphasis on movements that represent radical challenges to the global, industrial food system (2011). The idea that the expansion of capitalist market principles would disembed local food systems follows Polanyi's initial assumption discussed earlier, that non-economic forms of integration would recede as market exchange proliferates, and that the spread of capitalist markets is "homogenous and continuous" (Lie 1991, 228).

Alternative to Polanyi, Granovetter suggests that, even as societies become more integrated into global capitalism, embeddedness remains (1985, 482–3). All economic actions are embedded in non-economic social relations. Markets are not isolated from the context in which they operate, but "rather fully social institutions, reflecting a complex alchemy of politics, culture, and ideology" (Krippner 2001, 782). Research on economic sociology extends Polanyi's concept of embeddedness into the market economy (Lie 1991). The idea that all markets are embedded is useful to understand the persistent interplay between markets and social relations in the contemporary food system, including supply chains closely linked to global capitalism. Economic behaviour is embedded in relationships, and all markets ought to be conceptualized as "social structures" (Swedberg 2004, 317). Economic activity is, in this way, framed as embedded in a particular social setting that is dynamic, constantly influenced by a range of factors (Ettlinger 2003; Winter 2003). If all market activity is considered embedded in social relations, then, as Lie suggests, the social relations of market activities "…become primary objects of analysis" (Lie 1991, 227). Studies applying the diverse economies framework rest on the assumption that all markets are embedded, as explained in the following quote by Wright: "The geographies of our economic lives are at once deeply saturated with capitalist relations and full of values and practices that go beyond and beneath capitalist exchange." (2010, 298). Embeddedness is a natural conceptual fit to study food issues in Jamaica, where food and farming are ostensibly linked to capitalist markets, yet, as I depict throughout this thesis, are rife with alternative and non-economic modes of exchange, alternative and unpaid labour arrangements.

Throughout the 1980s to 2000s, feminist scholars applied the concept of embedded markets to highlight the importance of otherwise invisible social relations to the broader economy (Folbre 2002; Vaughn 1997; Henderson 1991). Folbre studies how actions of nurture

and care intersect with the expansion of capitalist principles into domestic spheres (2002). Vaughn depicts the persistence of non-reciprocal gift-giving in societies around the world (1997). Wider social and natural processes, such as altruism, family values and citizenship that exist alongside capitalist growth and development are encapsulated in Henderson's layer-cake model of our whole society (1991). These studies are examples applying a universal notion of embeddedness that helped to form the basis of Gibson-Graham's conceptualization of a diverse economy (2008). A diverse economy incorporates such economic and non-economic activities as family care, gift giving and other values, irrespective of the degree to which they are integrated with global capitalism.

Alongside Gibson-Graham's three cornerstone publications (1996; 2006; 2013), literature on diverse economies has expanded significantly. Leyshon, Lee and Williams' (2003) work applies the diverse economies framework to chart the myriad ways capitalist economic principles intersect with other types of alternative economic and non-economic relations at various scales in developed countries. Scholars also refine Gibson-Graham's central ideas by adding more nuance, careful to avoid false dichotomies between the formal and informal economy, or between 'alternative' and 'mainstream' economic spaces (Allen et al. 2003; Samers 2005). Samers critiques studies employing the diverse economies framework for romanticizing small-scale, local economic activities (2005). In response to this critique, studies expanded to look at both the empowering and potentially harmful ways that diversity can occur within a community's economy (Gibson-Graham 2009; Carnegie 2008). Other studies employing the diverse economies framework are more mindful of power relations in diverse economies (Smith and Stenning 2006; Fickey and Hanrahan 2014). In their examination of capitalist development in post-socialist countries, Smith and Stenning examine the entrenched power relations that enable and constrain both economic and non-economic practices (2006). Wright studies how people use a diverse range of economic activities to transform power relations in a farming village of Puno in the Philippines (2010). The literature applying Gibson-Graham's framework has helped to refine it in many ways that reflect the complex reality of people's interactions with the economy. These place-based studies provide an analytical starting point to understand the complex, close relationships between food, markets and society in Jamaica that are not measured by purely economic value.

Another gap in diverse economies literature, pointed out by Fickey and Hanrahan, is the significance of historical-geographic context (2014). With its focus on contemporary economic relationships, the diverse economies framework risks an ahistorical perspective that may lack contextual depth. Gibson-Graham developed the diverse economies framework in a high-income country context that does not necessarily apply universally. Yeung and Lin (2003) study economic geographies across Asia and suggest that the field of study ought to evolve with specific attention paid to local context. A handful of studies that situate diverse economies in their particular historical and geographical context are emerging. For example, Bryson and Taylor connect contemporary alternative economic behaviour in the United Kingdom's housing market that has persisted despite a transition from cooperative housing to private ownership (2010). In a different context, McKinnon charts the historical relevance of political organization in northern Thailand in the 1900s that became the root of 21st century alternative economic practices supporting the indigenous rights movement (2010). My contribution to emerging diverse economies studies is to contextualize the framework in the Caribbean region. Taking an historical perspective that accounts for geographical specificities can add significant contextual depth to studies on diverse economies, in particular the ways in which alternative and non-economic practices are shaped and maintained over time. As I discuss in the next section, literature that directly applies the diverse economies framework to food systems also notes the need to appropriately contextualize each study. To understand the persistence of Jamaica's domestic food system, I similarly suggest that history must be acknowledged, specifically, the history of agricultural development in the Caribbean region.

Diverse Food Economies

Framing a food system according to Gibson-Graham, as part of a diverse economy, is a useful way to understand unique, plural relationships between food producers and consumers. The initial connection between literature on diverse economies framework and food was inspired by scholars debating the transformative potential of AFNs against a global food system governed by neoliberal economic policy (Renting, Marsden, and Banks 2003; Goodman 2004; Watts, Ilbery, and Maye 2005b). This debate, introduced in Chapter One, weighs whether or not activities deemed 'alternative' ought to present a radical challenge to a capitalist-oriented food system. Introducing the diverse economies framework helps to get beyond the false dichotomy

of pitting ‘alternative’ food systems against ‘conventional’ ones. Hughes (2005) explores the complementarity of diverse economies and AFN literatures: both look at spaces of exchange that imbue various unquantifiable aspects such as quality, fairness and sustainability alongside price mechanisms. Sarmiento (2017) characterizes diverse economies research on food systems as a new subset of AFN research that encompasses the heterogeneity of economies. Without the diverse economies framework, food system activities that straddle conventional and ‘alternative’ spaces may be hidden from scholarly views.

The application of the diverse economies framework to agri-food research is especially useful to analyze food systems that straddle ‘alternative’ and ‘conventional’ spheres (Holloway et al. 2007; Little, Maye, and Ilbery 2010; Sarmiento 2017). Case studies draw on Gibson-Graham’s framework to critique the dualistic nature of AFN studies that dichotomize food systems that challenge global supply chains and those that do not. Scholars conduct applied studies to look at the complexities between markets and society, allowing space to understand the plurality of activities that make up food agricultural systems (Machado 2018). For example, Little et al. apply the diverse economies framework to study collective food purchasing arrangements, such as consumer cooperatives, as strategies to regain control in the food system (2010). Without the diverse economies lens, commercially-oriented food cooperatives, because they are not explicitly local or anti-capitalist, may be dismissed from the scope of AFN research (Little et al. 2010). Through the diverse economies lens, we can see the benefits of collective buying arrangements that involve alterative enterprise arrangements that exist alongside capitalist market mechanisms of exchange. Relatedly, Harris (2009) looks at the potential of the 100 Mile diet, a market-oriented activity aiming to support food systems sustainability by shortening food supply chains, to create positive change. He argues that if scholars dismiss food system activities that do not present a radical challenge to capitalist market mechanisms, like the 100 Mile diet, the ability to recognize new political openings for food systems is limited (2009). Initiatives like consumer cooperatives and the 100 Mile diet do not fit within the narrow boundaries of some AFN research or food sovereignty scholarship seeking structural change to the global, industrial food system. The diverse economies framework opens up analytical space to address the complexity of food systems and opportunities to challenge established power relations, support food security and secure livelihoods. Gibson-Graham’s idea of a diverse economy, recognizing complexity, also matches emerging research taking a more plural view of food systems.

Methodologically, applying this framework means understanding producer-consumer relationships that stretch across a food supply chain. Sarmiento (Sarmiento 2017, 488) points out the usefulness of applying the diverse economies framework to AFN research in the following passage:

> …this technique can sharpen the researcher's ability to recognize and examine social relations across a nuanced spectrum of power dynamics. It also serves to reframe AFNs as widespread components of food systems (and economies more broadly) that are in fact constituted by an array of relationships, rationales, and social values. This enables researchers to avoid approaching AFNs as the quixotic, vestigial, or doomed Other to conventional, i.e., capitalist food systems understood as monolithic and singular.

Studies applying the diverse economies framework rely on a range of methods to analyze the ways that markets are embedded. Holloway et al. study the diversity of three food systems in Scotland, England and Italy by applying an heuristic framework that appreciates complexity and moves beyond an alternative-conventional dualism found in earlier AFN studies (2007). They characterize food systems according to seven descriptive categories to demonstrate the heterogeneity of production-consumption relationships. The categories span sites and methods of food production, supply chains, arenas of exchange, producer-consumer interactions, motivations for participation, and the constitutions of individual and group identities (2007). Through their heuristic framework, Holloway et al. (2007) are able to examine the characteristics of food systems that help shift disproportionate power relations, and opportunities to challenge the status quo. Alternatively, Veen and Dagevos (2019) conduct a case study that pairs desk research with semi-structured interviews to analyze economic diversification in the Netherlands' food system. Cameron and Wright (2014) note the importance of working directly with communities and conducting interviews with people in addition to quantitative surveys. This dissertation builds on such methodological recommendations, using Gibson-Graham's initial framework to articulate the range of activities that make up Jamaica's domestic food system, and includes the perspectives of those who gain their livelihoods from selling and growing food to triangulate a household survey, as I explain later in this chapter.

Like the broader applications of the diverse economies framework discussed in the previous section, understanding the contextual components of food system, such as history and geography, is integral to this emerging body of research. Studies on diverse food economies, as Jarosz insists, food systems "…are not static objects or sets of relationships. They emerge from political, cultural and historical processes" (2008, 242). Gritzas and Kavoulakos (2016), in their review of emerging literature on diverse economies and food systems agree, stating that studies should be situated alongside a concrete understanding of 'external constraints' facing food security and agriculture. The particularities of a diverse food economy in a North American community, where Gibson-Graham developed their framework, will be vastly different from one in rural or urban Jamaica. Hughes (2005) calls for more research the perspectives of people participating in diverse economies in LMICs. Heeding that call, Wright looks at the diverse ways that people in a small agricultural community in the Philippines use nonmonetary and monetary exchange and formal and informal employment to secure their livelihoods (2010). Here, the introduction of capitalist agricultural markets to the area did not lead to the subsuming of subsistence farming or reciprocal labour arrangements; they persisted as part of people's livelihood strategies. Wright's study of the diverse economic relationships that support an agricultural community in the Philippines led her to conclude that not only is important to incorporate LMICs into analysis, but also that "…the most vibrant alternatives can be found there" (2010, 299). Emerging research on diverse economies contextualizes and historicizes it, and my case study adds to this literature. As I will describe in Chapter Three, the domestic food system represents economic alterity that has significant historical context, based on Jamaica's colonial and post-colonial history. A contextualized form of the diverse economies framework can, as I show in my research, draw out the ways that the embeddedness of food system is expressed in particular roles, in this case, providing people with access to food, work and a sense of connection to their surrounding environment and culture. I use this conceptual framework to analyze how embeddedness is expressed, specifically articulating the roles that the domestic food system plays in Jamaican society: providing people with access to food, opportunities to earn an income and as a means to cultivate a sense of connection to their surrounding environment and culture.

Contextualising Diverse Food Economies in the Caribbean

In *Taking Back the Economy*, Gibson-Graham conceptualize the economy as an iceberg; the visible tip represents economic activity and the part that is underwater are all the social relations that underpin transactions (2013). However, the economy is also embedded within a particular historical, political, social and ecological context. In response to scholars calling out the need to contextualize the study of diverse economies to avoid romanticizing them (Fickey and Hanrahan 2014; Gritzas and Kavoulakos 2016), I situate the domestic food system as the product of Jamaica's particular social and ecological context, building on a complex history. My dissertation focuses mainly on Jamaica's social context, although I touch on ecological particularities in Chapter Six. While the diverse economies framework helps to articulate the embeddedness of Jamaica's domestic market in a present context, it does not address influential global processes that shape food systems. Contextualising the diverse economies framework alongside a second body of literature that articulates the complex history of former plantations in the Caribbean helps to ameliorate a gap in literature.

Incorporating Caribbean political economy to provide historical context draws on a distinct body of scholarship that charts the influence of colonialism on food and agriculture in former plantation economies. An assembly of scholars called The New World Group wrote this body of scholarship that investigates the interdependencies between the global economy and Jamaica's efforts toward national sovereignty. The New World Group came together as Caribbean countries gained independence in the 1960s to design a political economy based on the lived experiences of those in the region. These scholars sought to develop a model of epistemic sovereignty for the region. The foundational texts that suggest contextualized suggestions for the Caribbean include Beckford's *Persistent Poverty* and Best and Levitt's *Character of the Caribbean Economy*, both articulating the economic dependency that the region has due to the legacy of plantations (Beckford 1972; Best and Levitt 1968). Subsequently, Beckford, alongside Trinidadian economist Lloyd Best, helped to found and edit *New World Quarterly*, a journal that contributed to a wide body of literature concerning Caribbean development from 1963-1972.

Caribbean political economy, as conceptualized by the New World Group, arose as a response to Caribbean countries' national development strategies that emerged after World War II. At the time, several nearly-independent Caribbean nations pursued an agenda largely based

on St. Lucian economist Arthur Lewis's industrialization-by-invitation model to kick start national development (1955). Lewis's work, based on classical approaches to economic development, including Ricardian trade models, recommended countries like Jamaica accept foreign investment to develop its mining sector and maintaining international links to support large-scale agriculture for export[11] (Girvan 2005). However, the application of Lewis's model resulted in a heavy dependence on foreign capital, export markets and imported goods, and jobs were not created as expected (Timms 2008; Girvan 2005). In contrast to Lewis's expectations, Caribbean countries remained dependent on foreign investment in mining and export agriculture and imported food because of its history with colonialism and plantation farming (Beckford 1972). The New World Group's central ideology responded to this ongoing dependency with a different take on the role of foreign investment. Rather than being a necessary engine of economic growth, foreign investment in export agriculture and mining enabled dependency to persist (Girvan 2005).

The New World Group was inspired by related theories of dependency from Latin American countries' experiences with international development (Prebisch 1950). The New World Group rooted its work in the main idea of dependency theory; that the lack economic development in the region resulted from structurally dependent links with high-income countries and multinational corporations. However, the theory was tailored to the Caribbean region's specific history with plantations, slavery and colonization (Best 1968; Levitt and Best 1975; Beckford 1972). The New World Group's foundational texts note that the brutal and specific ways that plantation agriculture was established on the region's small islands had lasting impacts that shaped the potential for change after countries gained independence. Short of cutting ties to export markets completely, former plantation economies like Jamaica would never experience structural transformation (Levitt and Best 1975, 57). Locally generated development alternatives would always be interconnected with Caribbean countries' strong ties to the global economy.

One key theme of Caribbean political economy is that the region requires its own homegrown theories and practices for each country's national development. In the New World Group's early days, Best detailed how neither Western-style capitalism nor Soviet-style Marxism were appropriate for Guyana's national development (1963). Instead, Best necessitates

[11] This development trajectory is expanded on in more detail in Chapter Three.

a locally designed development model that reflected Guyana's particular colonial history (1963). Similarly, Beckford states the sentiments of Caribbean political economy in the following statement: "Too often we view our problems through the eyes of metropolitan man; and our analyses of these problems depend too inordinately on analytical constructs developed for, and appropriate to, North Atlantic society but which may be inappropriate for the Third World" (1972, vi). Best and Levitt recommend that economic decision-making shifts down to a national scale (1975). The need to contextualize development theory in the Caribbean parallels calls to situate the diverse economies framework in the respective place where it is applied.

The homegrown solutions recommended by Caribbean economists differed from both Lewis' ties to classical economic theory and purely socialist recommendations, like other movements in Cuba happening at the time. Caribbean political economists did not problematize the role of markets; they problematized dependency. The institutional structure that initially supported plantation economies, resulting in dependency on foreign markets had changed little since colonization (Beckford 1968; Levitt and Best 1975). As such, Caribbean economies remained inherently connected to market systems and the global economy. Any alternative development model, or resistance, must start from a place that acknowledges already proliferated markets. To reduce dependency, local development solutions did not involve strengthening nor cutting ties to foreign markets entirely, rather they promoted self-reliance in some sectors, acknowledging that imports would also be necessary. In this way, Caribbean political economy shares an additional link to Gibson-Graham's diverse economies framework, in its attempts to seek out solutions that do not hinge on the role of capitalist markets, rather, the complex, contextual realities facing those living in the region.

In the early 1970s, the New World Group's ideas became highly influential as they were operationalized by a newly elected democratic socialist political government, with significant implications for Jamaica's food system. Much of Caribbean political economy's policy recommendations focus on the potential role of the domestic food system to boost independence from the global economy. Beckford saw food imports as one of the most problematic, though solvable ways that Caribbean economies were placed in a cycle of perpetual dependence on international markets (1972). Caribbean countries, Beckford argues, can find ways to feed themselves in order to have some degree of independence from imported food and global export markets (1972). Beckford and others saw the region's small-scale farmers as crucial for self-

reliance, specifically their productive potential and ability to produce diverse food products efficiently (Beckford 1972; Timms 2008)[12]. The region's small-scale farmers were seen as inherently connected to capitalist markets through the plantation system and local trading systems. Newman and Le Franc articulate the inherent link between small-scale farmers and capitalist markets as follows: "…in the Caribbean the small farmer has always had a close relationship with, and involvement in the market systems. [They] have long been accustomed to, and no doubt make excellent use of the fuzzy and flexible line between…subsistence production and commercial and market production" (1994, 119). Because the domestic food system straddled market and subsistence spheres, acknowledging the role of capitalist markets in boosting domestic production became part of plausible paths to self-reliance. The New World Group sought to design an economy that propelled itself, scaled down from global markets, promoting regional food trade, the nationalization of plantation enterprises, and the localization of foreign-owned enterprises' assets (Best and Levitt 1968). The New World Group's suggestions did not focus on the positive or negative role of capitalist markets in Caribbean countries food system, but on local and regional markets that would reduce dependency on export earnings and food imports (Beckford and Witter 1982). The proposed measures for food self-reliance in the Caribbean, as the food systems studied using the diverse economies framework outlined in an earlier section of this chapter, do not necessarily represent radical challenges to capitalist development.

Two key themes from Caribbean political economy articulate with the diverse economies framework that are relevant to this dissertation. First, the body of literature is grounded in place, matching the call from emerging diverse economies literature to be more contextual. Adding an historical perspective provides the contextual depth that scholars call for in research studying diverse economies. A second theme of Caribbean political economy that intersects with diverse economies literature is its search for solutions that get beyond problematizing the role of capitalist markets. In the case of Jamaica, Caribbean economists recommended development policies for the food system that acknowledged its close ties to global markets and pursued an agenda to decrease economic dependency. The New World Group's close ties to the democratic socialist People's National Party led to the institutionalization of their ideas. The translation of

[12] Chapter Three details the specific policies that the Jamaican government designed and implemented to support food self-reliance in the 1970s.

the New World Group's ideas into policy, specifically as it relates to Jamaica's food system, is detailed in Chapter Three. Recommendations centre on the idea of self-reliance, or localizing agricultural markets and nationalizing the industrial sector. These solutions are not anti-capitalist, but rely on domestic food markets that, as I discuss in Chapter Three, emerged as early as the 17th century and draw on a range of economic, non-economic and alternative economic activities. The solutions supporting food self-reliance proposed by Caribbean economists in the New World Group appreciate the diversity of the domestic food system and the potential it has to help sustain national development. Like many other diverse economic systems, in Jamaica's domestic food system, diverse economic practices "are shown to be not new but enduring" (Fickey and Hanrahan 2014, 400).

In this dissertation, I incorporate perspectives from Caribbean political economy by situating the diverse economy that makes up Jamaica's domestic food system in its historical context. While this theme weaves throughout the dissertation, it is most substantively included in Chapter Three that charts historical developments of the domestic food system that happened at the same time that Jamaica's economy more broadly maintained persistent connections to import and export markets. Including Caribbean political economy as a core part of this dissertation connects the way that the food system expresses itself today to a historical perspective, where links between local activities and global processes of change are common and persistent.

Research Methods

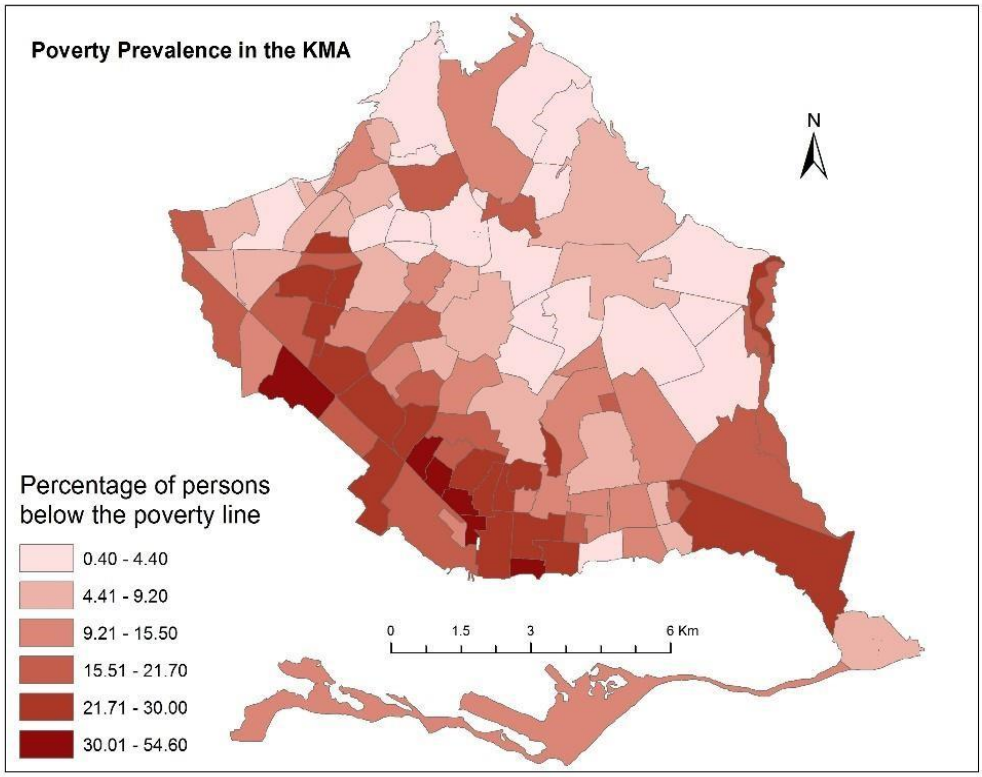
The hybrid conceptual framework that contextualizes the diverse economies approach in Caribbean political economy helped to shape the research methods employed in this study. Thus far, studies of diverse economies applied to food systems draw on case studies (Holloway et al. 2007; Wright 2010; Cameron and Wright 2014; Veen and Dagevos 2019). Like Veen and Davegos's study on meal sharing and community gardening in the Netherlands (2019), this research focuses on one case to understand complex food system dynamics. To understand the production-consumption relationships particular to the domestic food system, I designed a case study that relies on an iterative, exploratory approach. Case studies are useful to answer research questions that explain complex phenomenon, in particular, happening today, in a specific context (Yin 1994).My research is designed to draw on multiple research methods, including a household survey and qualitative data collection, related to Cameron and Wright's use of mixed

methods in diverse economies research (2014). Triangulating trends in survey data with in-depth qualitative research methods helps to contextualize food system activities. My study began with a comprehensive literature review of Caribbean political economy and Jamaican agricultural development as a starting point to understand the complex history of the domestic food system, here. Before detailing the epistemological foundations of the research and associated mixed methods approach, I will provide some background information on the two research sites involved in the study. I chose to work in Kingston to conduct research in accordance with the Hungry Cities survey data, also collected in Kingston, on people's food purchasing patterns. I collected data at Kingston's markets, in relation to the survey data, instead of other markets across the island. Food markets across Jamaica are crucial for people's access to food, however Kingston's markets are most geographically relevant to the survey data I worked with. My choice to conduct research on domestic agricultural production in Southern St. Elizabeth, as I explain in Chapter Three, came as a recommendation from key informants who described it in parallel to broader literature, as Jamaica's bread basket. In the next section, I describe details about Kingston, Jamaica's capital city with the island's largest food markets and urban consumer base. Then, I give some background on the rural field site in Jamaica's most prominent small-scale agricultural area, in the Southern region of the parish of St. Elizabeth before moving on to discuss the specific research methods I used.

Field Site: Kingston, Jamaica

Kingston is Jamaica's largest city and its capital, with a population of 670,323, or 25% of Jamaica's population (Thomas-Hope et al. 2017). The Kingston Metropolitan Area (KMA) spans two parishes: Kingston and St. Andrews. Kingston plays an important role in Jamaica's national economy. It is the country's financial and administrative centre. Kingston's population growth rate is slow, measuring 0.51% per year between 1970 and 2011, while Jamaica's smaller cities experience relatively higher rates of growth (STATIN 2011). Income inequality is a major issue in Kingston; Figure 2-1 shows socio-economic differentiation between the city's Northern and Southern neighbourhoods according to the prevalence of poverty.

Figure 2-1: Poverty Prevalence in the Kingston Metropolitan Area



Source: Thomas-Hope et al. (2017)

Kingston is a particularly relevant study site for my analysis because is such an integral distribution site for food. The key trading point for fresh produce is Coronation Market, located downtown. Seepersad and Ennis estimate that between 60% and 70% of fruit and vegetables arriving at Coronation Market are re-distributed through other wholesale markets in and around Kingston (2009). Despite the importance of the city in distributing food, there is a dearth of research on issues surrounding food-related issues. Most studies on food-related issues are place based studies that look at the dynamics of agriculture in specified communities (Beckford, Campbell, and Barker 2011; Campbell, Barker, and McGregor 2011). However, this focus obfuscates the demand side of the domestic food supply chain. Kingston citizens, who purchase and eat what small-scale farmers grow every day are thus far missing from existing research.

My decision to conduct this study in Kingston is because of my affiliation with the Hungry Cities Partnership, a research program filling the gap in literature on food security in Kingston. The Hungry Cities Partnership is a research program building policy-relevant

knowledge of food security in cities across LMICs, including Kingston. This dissertation research leverages household-level data from the first study on urban food security in Kingston (Kinlocke et al. 2019). My association with the project permits me to use this data to understand current trends in the domestic food system from households' perspectives. The paucity of existing food systems in Kingston paired with the availability of survey data through my research partnership created a unique opportunity to conduct this case study. My project partners, including the University of the West Indies and the large network of researchers in the Hungry Cities Partnership, will benefit from the scope of my study. It is intentionally designed to widen the reach of the survey data collected through the Partnership, and serves to strengthen their research results.

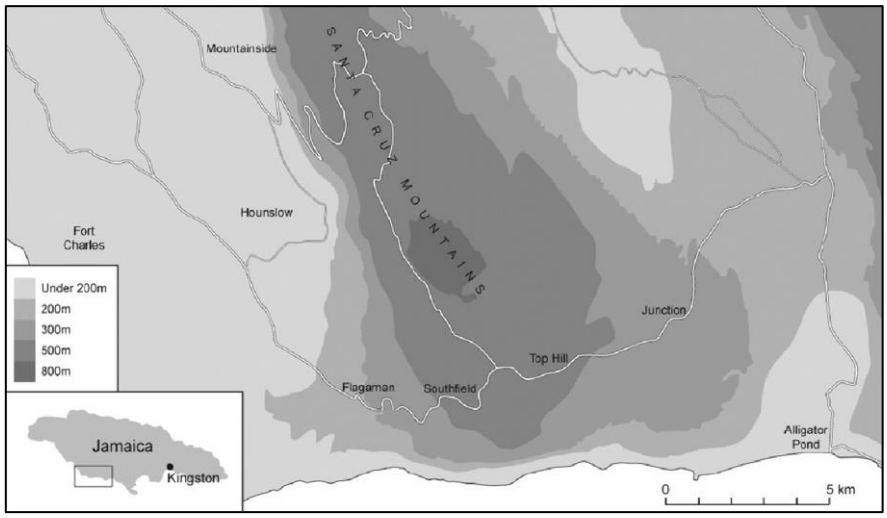
Field Site: Southern St. Elizabeth, Jamaica

To gain small-scale farmers' perspectives, I also conducted research in Jamaica's breadbasket, the parish of St. Elizabeth. This area is located on Jamaica's southern coast, noted in Figure 2-2. In 2017, just over 5% of Jamaica's population, 151,691 people, lived in the parish, (STATIN 2017). Southern St. Elizabeth is a rain-shadowed coastal plain, with high temperatures and low rainfall, and annual precipitation ranging from 650 to 800 mm. This climate translates into high rates of evapotranspiration, and the country's classification as a semi-arid region (Beckford, Barker, and Bailey 2007; Beckford and Campbell 2013). The main dry season lasts four to six months followed by two or three months of a dependable growing period (McGregor, Dodman, and Barker 2009). The parish's key industries include bauxite mining, fisheries and, most pertinent to this study, agriculture.

St. Elizabeth, in particular, its Southern region, is an integral agricultural area supplying fresh produce to the domestic market. Beckford et al. (2007) report that, since the early 1990s, St. Elizabeth has been the highest, or second highest grower of food for the domestic market as compared to other parishes. Remarkably, small-scale farmers in this area show tremendous persistence in the wake of structural adjustment and trade liberalization, the specifics of which are explained in Chapter Three. The parish is very diverse with respect to elevation, as indicated in Figure 2-2. The uneven landscape is not conducive to large-scale agricultural production because mechanized farming on rocky hillsides is difficult. Rather, the landscape is suited for small-scale farming. Farms range in size from 0.1 to 30 acres, with the average farm size

between 2-4 acres, spread over multiple locations (Spence 1996; Gamble et al. 2010). Southern St. Elizabeth in particular is suited to growing a range of crops including tomatoes, melons, cruciferous vegetables, yam, cabbage and crops deemed 'condiments', like scallions. These crops suit people's food preferences in Kingston, as determined by my preliminary analysis of the Hungry Cities household survey data I explain in Chapter Two. Urban markets and, increasingly, hotels stock fresh produce from Southern St. Elizabeth's small farms (Rhiney 2009).

Figure 2-2: Southern St. Elizabeth



Source: Campbell et al. (2011)

The two key vulnerabilities that affect agriculture, here, are environmental and political in nature. Campbell et al. (2011) collected data on farmers' stressors to production from 20062008 in Southern St. Elizabeth. The key stressors that farmers' disclosed included: the lack, and high cost, of water in the area, the high cost of inputs, including chemical pesticides and fertilizers, seeds and guinea grass used for mulching, unreliable and erratic markets for produce and increased competition from imported food. A related study of the main challenges faced by farmers in the region reveals similar trends, with a specific focus on marketing challenges such as poor roads, expensive transportation, poor conditions in local markets and generally unreliable buyers (Beckford and Bailey 2009). Farming in Southern St. Elizabeth is characterized by increasingly unreliable precipitation and increasingly frequent drought conditions (Beckford et al. 2007; Gamble et al. 2010).

The importance of Southern St. Elizabeth as an agricultural centre, specifically producing food on a small scale for the domestic market despite the country's dependence on imported food, makes it an ideal case study for this dissertation. I chose to conduct research in Southern St. Elizabeth because of the area's important role in growing food that supplies the domestic market. Other parishes also grow produce for the domestic market, however, key informant interviewees who I interviewed in Kingston prior to choosing a research site overwhelmingly recommended Southern St. Elizabeth as the most suitable place for my research. Further influencing my choice to conduct research in Southern St. Elizabeth are the existing studies that were conducted there. These studies determine that small-scale farming in the in the area can also be characterized by resourceful adaptation to change and resilience in farming despite significant challenges (Beckford, Barker, and Bailey 2007; McGregor, Dodman, and Barker 2009; Beckford and Campbell 2013). My study's focus connecting small-scale farming for the domestic market to urban food system dynamics presented a unique opportunity to build on existing research in this particular region of Jamaica.

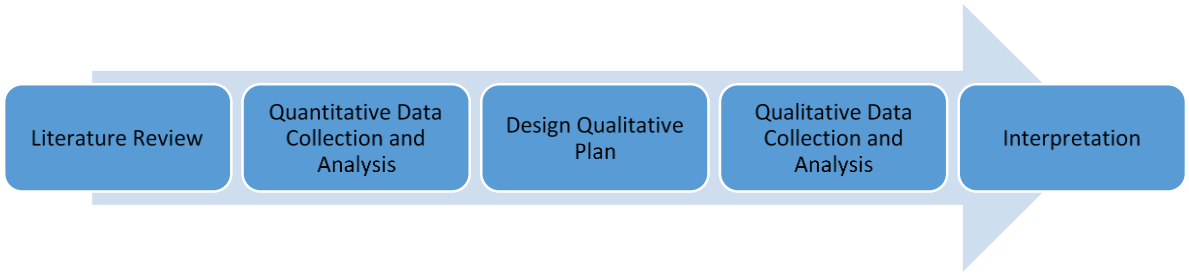
The specific areas where I conducted interviews are broadly representative of Southern St. Elizabeth, on the recommendation of key stakeholders. I conducted research based out of the town of Junction, interviewing participants around towns including Santa Cruz, Southfield, Treasure Beach and Flagaman. These communities feature agricultural production that is typical in Southern St Elizabeth, with farmers growing fruit and vegetables on a small scale is sold on the domestic market. Additionally, the areas selected for the study are hubs for community organizing around small-scale farming activity, including farmer demonstrations put on by the Rural Agricultural Development Authority, and meetings with the St. Elizabeth cooperative group. I worked with both groups to include small-scale farmers who work both with and without state support. The drawback of this snowball-sampling approach, that I detail in Chapter Two, is that is may exclude farmers who are not connected to state support nor the cooperative society, or those who work in areas that are difficult to access by road. Weighing the logistical constraints of my research schedule, I chose to work in and around the select communities in Southern St. Elizabeth.

Methods

The data collection for this thesis was iterative, following the central tenets of interpretivist research. Interpretivist research is based on the assumption that multiple, socially constructed realities exist that require interpretation, and subjectivity is valued (Mertens 2007; Willis 2007). As such, it is integral to understand the context in which research takes place (Willis 2007). Interpretivism is also recommended by other scholars analyzing economic diversity (Krueger, Schulz, and Gibbs 2018; Sarmiento 2017). Krueger el al. (2018, 583) recommend that the study of diverse economies, in general, be conducted with an interpretivist epistemological tradition, because it elucidates the existence of diversity in a larger system of capitalist dynamics.

Interpretivist research relies on what Schwartz-Shea and Yanow (2012) call 'methodological pluralism', where quantitative and quantitative research both explain complex phenomena. The application of interpretivist research that I employ in this thesis is an explanatory sequential mixed-methods approach (Creswell 2014). This approach incorporates diverse perspectives and situates research results in their broader historical, social and ecological context. The approach requires a preliminary analysis of quantitative data to determine a purposeful qualitative sample and relevant interview questions. Qualitative components are then designed in a general and open-ended manner, and associated results are used to provide depth and insight (Creswell 2014). Explanatory sequential mixed methods research can be particularly useful to provide a deeper, contextual understanding of quantitative analysis (Mertens 2007), or, as Hodgkins states, "… mixed methods are preferred to highlight issues of need (quantitative data) and to give voice to these issues (qualitative data)" (2008, 299). I used an explanatory sequential mixed-methods approach to understand the unique production-consumption relationship of Jamaica's domestic food system.

Figure 2-3: Explanatory Sequential Mixed-Methods Approach



Source: Adapted from Creswell (2014).

In accordance with an explanatory sequential mixed-methods approach, I designed research methods that built on each other, adding context and garnering multiple perspectives on food and farming in Jamaica. The timeline of data collection is included in Table 1 below and explained in detail throughout this section. First, hosted as a visiting scholar at the University of the West Indies, I was able to use the library's special collections to conduct a review of Caribbean literature on small-scale farming and food security. I also worked with literature at Jamaica's National Library. Using both libraries provided access to a wide range of literature, including grey literature, written by Caribbean scholars and international academics specifically studying food and agricultural issues in the region. The literature review was crucial to understanding the Caribbean context and rationalizing the incorporation of Caribbean political economy into my conceptual framework, discussed earlier in this chapter. I was able to refine my research methods in relation to a long lineage of Caribbean and international scholars committed to amplifying experiences of those living in former plantation economies. I continued to review literature throughout the research process.

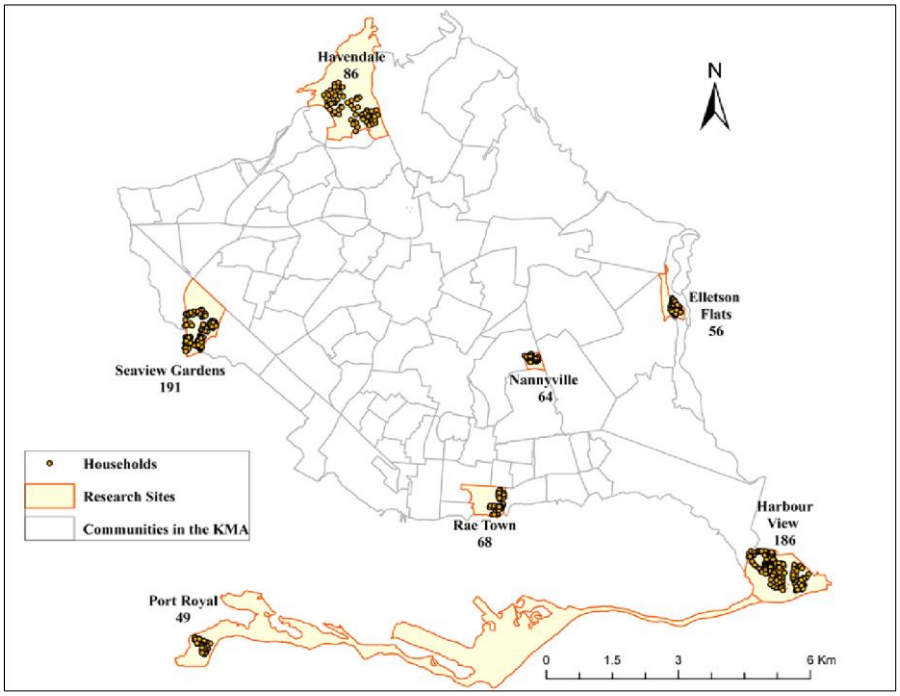
Table 2-2: Timeline of Research Methods

Research Method	**Date**
Quantitative Data Collection (n=702)	July-September 2015
Literature Review at UWI	May-June 2016
Quantitative Data Analysis	June 2016; October-December 2016
Design of Qualitative Plan	June 2016

Qualitative Data Collection: • Key Informant Interviews (n=17), Kingston and St. Elizabeth • Direct Observation, Kingston • Semi-structured interviews (n=45), Kingston & St. Elizabeth	June-October 2016 July-August 2016 July-August 2016 September-October 2016
Qualitative Data Analysis • Transcriptions • Data Review, Coding	October-December 2016 January – August 2017

The next stage in the research process involved a preliminary analysis of a household survey to examine current trends in the domestic food system from the perspective of urban households. This step was essential to understand the role of the domestic food system in Jamaica drawing on current empirical evidence, contributing to the first objective of my research. My research is situated within a larger research project studying food security in seven cities in LMICs. The Hungry Cities Partnership is a research program building policy-relevant knowledge of food security in cities across LMICs, including Kingston. My institutional connection with the University of the West Indies (UWI) and research affiliation with the Hungry Cities Partnership provides access to an extensive household survey assessing food security in Kingston collected by a team of researchers from UWI's Department of Geography and Geology. In June of 2016, I conducted a preliminary analysis of a survey collected by the team of researchers on the state of food security in Kingston. A team of enumerators collected household survey data from July to September 2015 to analyze food security across the city. The survey includes questions about demographics, socioeconomic information, and experiences with food insecurity, food purchasing patterns and attitudes toward various food system components. The team from UWI employed a two-tiered sampling approach to survey 702 households. First, they chose seven neighbourhoods to represent socioeconomic conditions across Kingston, pictured in Figure 2-4. Second, the team used systematic random sampling to select households in each of the seven neighbourhoods. Enumerators administered questionnaires to adult household members. I analyzed this data using SPSS software, and calculated cross tabs to determine what food products are important to urban households' food security and tend to be grown domestically.

Figure 2-4: Spatial Distribution of Surveyed Households in Kingston, Jamaica



Source: Kinlocke et al. (2019)

My preliminary analysis of the household survey helped design the next stage of my research: qualitative data collection that included direct observation, key informant interviews and in-depth interviews. The purpose of this qualitative data collection was to gain a deeper understanding of the factors that explain how and why domestically grown food remains important to Jamaican's food basket, today, further contributing to my first research objective.

I conducted 19 key informant interviews with individuals involved in non-governmental, governmental, and private sector institutions involved in policy arrangements revealed through my literature review and discussions with members of the Hungry Cities Partnership at the University of the West Indies. I conducted interviews throughout the fieldwork period, mostly during June-July 2016. I targeted interviews specifically to gain a deeper understanding of the national, regional and local level policy environment affecting domestic agriculture for food security in Jamaica. During these interviews, which lasted between 45-90 minutes, I kept comprehensive notes in a fieldwork journal that complemented further analysis. A list of these interviews is included in Appendix A.

Based on the household survey and key informant interviews, I conducted direct observation in sites that were deemed important for food access in Kingston (Figure 2-4). Direct observation is a key research method to provide insight to a case study (Yin 1994). It involves observing specific situations, considering that the researcher is separate from the everyday context they are analyzing (Trochim 2006). The objective of this exercise was to gain a basic understanding of the everyday activities involved in distributing and purchasing domestically grown food items in Kingston. Based on the survey data, I visited supermarkets, markets, and sites where informal vendors operate. A list of observed sites is included in Appendix B. Observing people at the places where the survey indicated they most commonly accessed food gave me further insight into the distinct ways that people use urban markets, informal vendors and the supermarket. Direct observation helped me to understand the ways that the domestic food system manifests in Kingston, today, from a demand perspective. During observations, I kept comprehensive notes on customer and vendor practices, noting behaviours around transactions, exchange, and purchasing patterns, specifically noting the presence and absence of Jamaican-grown food. Direct observation lead to targeted, contextualized questionnaires for key informant and in-depth interviews. This method also offered the opportunity to gain context of the details people would reference during semi-structured interviews, to make contacts and to build rapport with potential interviewees.

Naturally, my positionality and language barriers shaped my observations. Positionality is defined as "…the stance … of the researcher in relation to the social and political context of the study—the community, the organization or the participant group" (Coghlan and Brydon-Miller 2014, no page). A researcher's positionality affects the entire research process; my positionality as a white Canadian scholar in Jamaica was clear in the way I approached, collected and analyzed fieldwork data. For example, I approached designing fieldwork in consultation with key stakeholders in Jamaica, rather than designing the program of fieldwork on my own. When conducting interviews in Kingston's markets, my whiteness, accent and lack of understanding of Patois made it obvious that I was not a local shopper. Many market vendors were skeptical of my work, and in some cases, chose not to participate in the study.

To mitigate the limitations of my status as an outsider, I relied on clarifying discussions with my research assistant. At the time, she had recently completed an undergraduate degree in the Department of Geography and Geology at the University of the West Indies. She was instrumental in logistical planning and translating between Patois and English. Additionally, she

assisted tremendously in articulating aspects of Jamaican culture that I did not understand as a Canadian. My research assistant and I conducted all direct observation visits and in-depth interviews together. I recorded all interviews and my research assistant kept comprehensive notes. Following each day of interviews or observations, my research assistant and I met to debrief and go through all our notes. At this time, we discussed inconsistencies, contradictions and aspects of Jamaican culture that manifested in each interview.

The next step in data collection was to conduct in-depth interviews with people working in Jamaica's domestic food system to understand its complex, enduring role in Jamaican society. Interviews examining contemporary domestic food system activities took place in two areas: the Kingston Metropolitan Area and Southern St. Elizabeth. Altogether, I interviewed 45 market vendors and small-scale farmers. An anonymized list of interviewees is included in Appendix C. The interviews built directly on the preliminary analysis of survey data and insights gained from direct observation. Before I began sampling interviewees, I consulted with my colleagues at the University of the West Indies who had conducted related research to understand the most respectful and acceptable ways to proceed with interviews. They recommended getting additional support from officials at the Ministry of Agriculture and Fisheries. I consulted with an official from the Ministry of Agriculture and Fisheries on potential field sites to interview small-scale farmers. This official recommended that I conduct interviews through a list of contacts at the Rural Agricultural Development Authority (RADA) based out of Santa Cruz, St. Elizabeth, due to the high volumes of agricultural production in the surrounding area.

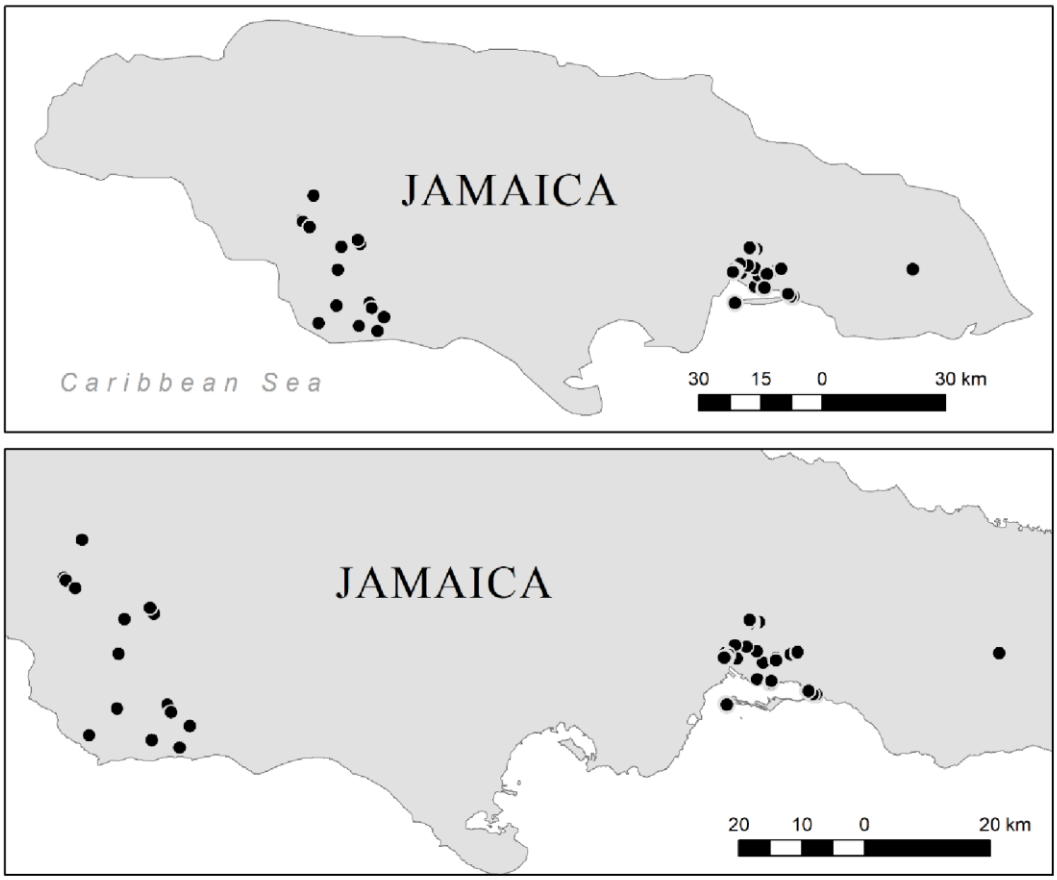
My sampling strategy, in accordance with an explanatory sequential approach, was purposeful. The purpose of the interviews was to understand the functions and dynamics of the domestic food system from the perspective of those working in it, rather than to test a hypothesis, answering my research question and contributing to my first research objective. Through the interviews, I sought to analyze the domestic food system's specific roles. Contributing to my first research objective, I also investigated how and why Jamaica's domestic food system endures despite high levels of food import dependence and the emphasis placed on agricultural exports. The diverse economies perspective that sought to determine the embedded roles of the food system informed my investigation of this research question. These interviews were semi-structured in nature; targeted in their content, with significant flexibility for interviewees to discuss issues that were important to them. These interviews, done between July

and August 2016, ranged from 30-60 minutes and took place where it was most convenient for interviewees.

I first conducted interviews in Kingston, for logistical reasons. At this time, I was also working at the University of the West Indies, meeting with key stakeholders and conducting direct observation in food access sites. The in-depth interviews that I conducted in Kingston took place at produce markets. I met research participants at the market and conducted interviews at times that suited their schedule. Customers visiting market vendors frequently interrupted interviews, and I stopped recording conversations to accommodate vendors' business transaction. Each interview focused on a range of topics, with some specific questions designed to prompt discussion. There was ample time in each interview for participants to discuss issues that were important to them.

As previously mentioned, I chose to conduct in-depth interviews with small-scale farmers in the parish of St. Elizabeth, on the South coast of Jamaica, pictured in Figure 2-4. Southern St. Elizabeth, detailed in the section describing my field sites, is considered Jamaica's breadbasket, producing the majority of agricultural products for local markets. Interviews took place in association with two local institutions, the Rural Agricultural Development Authority (RADA) of St. Elizabeth, and the St. Elizabeth Farmers' Cooperative. The rationale behind working with both groups was to glean diverse perspectives on farming in association with, and apart from, the Ministry of Agriculture. This fieldwork was based out of the town of Junction, St. Elizabeth. Interviews took place on farms across the parish, at the recommendation of RADA staff, and my own desire to obtain diverse perspectives of small-scale farmers. I did not remunerate interviewees, after consulting with local researchers and officials involved in the pre-interview period of my study.

Figure 2-5: Map of Interview Locations



Source: Author

I conducted interviews in person, with my research assistant, between June 2016 and October 2016. The interviews lasted between 30 – 60 minutes. I met research participants at locations convenient to them: at the market, on farms, or at participants' homes. Interviewees were selected purposefully, through recommendations from my contacts at the Rural Agricultural Development Authority and the St. Elizabeth Cooperative Association. I also used snowball sampling and gathered recommendations from interviewees on potential participants. Each interview focused on a range of topics, with some specific questions designed to prompt discussion. There was ample time in each interview for participants to discuss issues that were important to them. The number of interviews that I conducted was based on time constraints and saturation. By the time I had met with 40 interviewees, I was beginning to hear similar themes in each discussion.

Sarmiento suggests that research on diverse economies use an interpretivist approach to acknowledge the role of the researcher in the reality they study (2017). Interpretivist research

considers power dynamics, including those held by the researchers themselves (Mertens 2007). Being aware of power dynamics (i.e. social, political, cultural, racial, gender-specific) includes acknowledging my own role and influence in the research process, that may place me in a position of power in relation to those being researched (Wolf 1996). My positionality as a researcher influenced the research process, interpretation of data and results of this study (Muhammad et al. 2015). This is my first research project in the Caribbean region. My previous work, while topically relevant, considers agricultural issues in other tropical areas. The way I interpreted data is shaped by this previous work. My race, class and gender also significantly influenced this research in immeasurable ways. Working as a white Canadian woman, in a country with a long history of racial segregation gives me a particular positionality that is not shared by all Jamaicans. To reconcile my positionality, I did extensive reading about Jamaican history. I also drew on a range of diverse perspectives of those involved in the food system (Creswell 2014). I designed my research in consultation with Jamaican scientists and food system stakeholders. For example, before selecting field sites, I consulted officials at MICAF and my colleagues at the University of the West Indies on the appropriateness of locations. Their input led me to collect data at particular markets in Kingston and with research partners with the Rural Agricultural Development Authority in Southern St. Elizabeth. I also spent time building rapport with, and accommodating community members. During interviews, I allowed interviewees to set their own pace and met them at their convenience, both in terms of time and location.

Data Analysis

Representing the diverse voices of those involved in Jamaica's domestic food system is a near impossible task; the subjective experiences that people have growing, selling and eating food are infinitely plural and complex. My goal in analyzing the household survey, my field notes and interview transcripts was to gain an understanding of trends in Jamaica's domestic food system, today, and to explain the factors that allow it to endure despite compounding economic and ecological challenges. In line with interpretivist research, I looked for trends and patterns and interpreted them in light of broader conceptual literature on food systems. The period of data analysis lasted from October 2016 through 2018 and included statistical analysis

of survey data and coding interview transcripts through a four-step, inductive process that allowed themes to emerge through the analysis (Blackstone 2012).

After returning to the University of Waterloo in October 2016, I revisited the household survey data for a deeper analysis of the ways that urban households use the domestic food market. I continued using SPSS, because I was simultaneously working with colleagues at the University of the West Indies on a report measuring household food security based on the same data (Kinlocke et al. 2019). To complement the earlier work I had done calculating basic summary statistics of the household survey, I calculated crosstabs to analyze the ways people interact with their surrounding food system. I analyzed the different ways that people shop for food according to their income levels using statistical tests for correlation. The household survey provided novel insight into the consumption patterns of people living in Kingston that I would otherwise not have been able to access. My analysis of this data was crucial to understand the contemporary relevance of Kingston's urban markets and what makes up people's food purchases.

My interview data effectively triangulated the household survey and added new perspectives. I worked with a private business to transcribe my interviews while in Kingston. This business specializes in transcribing interviews for social science research that take place in Jamaica. The staff has expertise translating from Patois into English, with translations between Jamaican Patois included in each transcription text. I worked with the transcriber and translator to ensure each recording matched its corresponding transcribed text. I received the complete set of transcriptions in January 2017. When I received the complete transcripts in January 2017, I checked to ensure each file accurately reflected its corresponding recording. Next, I transferred each transcription into qualitative analysis software, specifically NVivo 11, to begin analyzing the data. The choice to use computer-assisted qualitative analysis was inspired by Seale (2010) who notes that the ability of programs like NVivo to organize large amounts of qualitative data allows the researcher more time to think about emerging research themes. I chose NVivo, specifically, for two pragmatic reasons: it is accessible in my research lab and I was trained to use an earlier version.

My approach to coding was thematic. A thematic approach is a generic method of analysis suited to interdisciplinary research (Ryan and Bernard 2000). Thematic analysis involves discovering and interpreting patterns in qualitative data that are integrated into themes

that can help answer a research question (Joffe 2012). My analytical coding process took place in four exploratory steps to categorize themes and understand their connections (Saldana 2012). First, I noted expected codes related to people's activities in and perspectives on the roles of Jamaica's domestic food system. After reading through each transcription, the second coding step involved an initial coding exercise to map out the supply chain of domestically grown food. I coded each activity across the supply chain, noting inputs, agricultural production activities, information on food distribution and eating habits. This second step allowed me to become familiar with the transcribed data and the scope of the domestic food system as people reported on them in their interviews. I inductively reorganized the expected codes to map out the domestic food system's key supply chain activities. Next, I began the third coding step: line-byline coding, to begin categorizing the domestic food system's key *functions*. It was during this step that key themes began to emerge. The interview transcripts indicated that the domestic food system serves three distinct functions: it supports people's access to food, informal employment, and gives Jamaicans a sense of social and ecological place. I triangulated this information with notes from direct observation and key informant interviews. Understanding and clarifying these three functions helped me design the structure of the subsequent thesis chapters.

In the fourth and final stage of my coding process, I sought out the factors underlying each of the three key functions of the domestic food system. At this point, it was clear that people were able to participate in the domestic food system (as food producers, traders and consumers) because of its complex structure, in particular, its non-market and alternative market characteristics as defined by Gibson-Graham (2006). This coding stage involved capturing and categorizing the key emerging themes to understand the factors that enable the domestic food system to endure the significant challenges it faces in Jamaica. A comprehensive list of code hierarchies is included in Appendix D.

Research Ethics

Throughout the research process, I followed ethical guidelines in accordance with the University of Waterloo's Office of Research Ethics, the Tri-Council Policy on Ethical Research, and Mintz's personal manifesto on research ethics. In the introduction to *Caribbean* Transformations, Mintz idealistically states that he has done his best to "…do…no harm; if in any way at all, what I have learned can do [people] some small good, so much the better" (1974,

x). While I anticipated minimal risks to participants, I prioritized principles of consent, privacy and confidentiality throughout the research process. Maintaining privacy of the household survey data was simple: the survey data was de-identified when I received it, in order to conceal participants' names and other identifying details. Throughout my primary data collection, I used multiple strategies to maintain participants' consent, privacy and confidentiality. We provided all interviewees a consent letter prior to the interview. We read the letter at the beginning of each interview, giving the interviewee the opportunity to ask questions. If participants felt at risk due to the nature of their responses, I encouraged them to decline to answer any questions, request information be removed from the record, or withdraw from the study at any point. The interview structure did not rely on any means of deception. I recorded each interview, and at various points, interviewees requested the recording device to be turned off. All requests were obliged, and we kept this information off the record. I offered participants the opportunity to comment on or ask questions about the use of any information collected during interviews. We gave participants the opportunity to remove any information from the record, and comment on transcriptions, and final products.

I interviewed select key informants in their professional capacity, as representatives from government, business, civil society organizations, and as academics. I maintained confidentiality and anonymity to protect interviewees who may have felt at risk due to their professional affiliation. Other individuals, such as farmers and food traders, were approached in their professional capacity, but do not represent a particular institution. Small-scale farmers who represent marginalized populations may face minimal risk participating in the study, due to their vulnerable social position. This potential risk was mitigated by interviewing farmers in a private setting, at their convenience. The majority of interviews took place on farmers' plots. At the end of the fieldwork period, I removed all identifying information from my database of interviewees. In the written findings pseudonyms are used in place of real names and no identifying information is included.

Limitations and Challenges

This study is limited by various factors, both inherent and external to its design. An explanatory sequential mixed methods approach has unique limitations around validity.

According to Creswell (2014), the researcher might focus too narrowly on quantitative data that suits the research question at hand, overlooking other data. A limitation of this study that relates to Creswell's concern is that the qualitative follow-up sample size may be small (2014). At 45 semi-structured interviews, the qualitative interviewee sample is not necessarily representative of small-scale farmers and food traders across Kingston and Southern St. Elizabeth. Food traders in Kingston are a very diverse group of people; some traders carry a small amount goods to market daily and lack other assets, while others have their own vehicle, and trade food in large quantities supplemented by imported goods. As I mentioned previously, the small-scale farmers I interviewed came through snowball sampling in consultation with the Rural Agricultural Development Authority and the St. Elizabeth Cooperative Association. While there were significant benefits to working through these organizations, some farmers were inevitably left out of my research and may have different farming backgrounds and practices with no connections to the state or civil society groups. More broadly, the sample size is not representative of the entire island; each parish has their own food trading traditions and farming specialities. For example, yam farming in Trewlany parish drawn on longstanding traditions that are unique to that specific region of the island, where climate patterns greatly differ from the semi-arid plains of Southern St. Elizabeth. Time and resource constraints limited my period of data collection to focus on two study sites.

External to the research design, there were many challenges in this period of data collection. When I arrived in Kingston, there was an upsurge of gang violence targeting the city's most important source to buy domestically produced food, Coronation market. I opted against collecting data in Coronation Market and relied on other markets across the city. Market vendors in Jamaica are particularly sensitive to outsiders' scrutiny (Brown-Glaude 2011). In fact, researcher scrutiny could put people at risk. As such, I took particular consideration in speaking directly with food traders and ensured that they were willing participants in the study.

When I conducted interviews in Southern St. Elizabeth, a hurricane warning significantly affected my timeline. Hurricane Matthew was expected to hit Jamaica as a category five storm, and the island took emergency preparations very seriously. Several days were lost to disaster preparedness measures. After experiencing minor impacts of the storm, which changed course, I was able to modify my interview timeline.

Conclusion

This chapter describes the methodological underpinnings I used to understand the ways that the domestic food system endures in people's everyday lives through the ways that people produce, distribute and eat Jamaican grown food. Analyzing these everyday activities necessitates a conceptual framework that can capture the subjectivities of small-scale farmers, food traders and people's food purchasing behaviours. The conceptual framework I used helps to situate Jamaica's unique domestic food supply chain into broader critical food studies, including food sovereignty and alternative food networks scholarship. Applying the diverse economies framework to Jamaica's food system represents a contribution to broader literature exploring the applications of Gibson-Graham's theorizations and applications of their model (Wilson 2013; Holloway et al. 2007; Little, Maye, and Ilbery 2010). According to Sarmiento, research on diverse food economies produces studies that are "quite pragmatic and grounded" (Sarmiento 2017, 489), thus a suitable way to represent the diverse voices of Jamaicans who participate in the domestic food system. The diverse economies framework, when contextualized in literature on Caribbean political economy, illuminates the integral functions and dynamics of a food system that are often framed as anachronistic, doomed to irrelevance in the face of proliferating global food supply chains. Instead, as I discuss in the next three chapters, my research findings show that the domestic food system has demonstrated a consistent contribution to food access, jobs and a sense of place for Jamaicans. Each of these respective functions are explained in the following three chapters, followed by the dissertation's concluding chapter that circles back to the usefulness of this conceptual framework to develop contextualized recommendations in line with Jamaica's national campaign to support food self-reliance based on the realities facing those involved in its food system.

Chapter 3: Jamaica's Domestic Food System and the Global Economy

George Beckford, the Jamaican economist who developed the Plantation Economy Thesis, suggests that one cannot understand the present state of the Caribbean without understanding its colonial past (1972). Understanding Jamaica's colonial past, Beckford asserts, reveals the lasting, inextricable connections between this small island and the global economy (1972). The purpose of this chapter is to assess Jamaica's contemporary food system in the context of its persistently strong links to the global economy. The domestic food system has continued to play a role feeding the country. Enslaved West Africans created the domestic food system at the same time that they produced sugar cane for global markets. The domestic food system then became an important engine for national development. In this chapter, I draw on scholarly and grey literature to outline the history of Jamaica's domestic food system and the ways that it presents itself today, in the context of its strong connections to the global economy. This chapter provides important historical context to Chapter Four, Five and Six that explain the ways that the domestic food system persists today, despite the ostensibly dominant influence of international finance and global food supply chains.

This chapter covers the evolution of Jamaica's domestic food system in connection with the island's strong global connections by focusing on three distinct historical periods of change for Jamaica's food system. The first section looks at the time leading up to British colonization in 1655 until emancipation in 1838 and shortly thereafter, when the British Crown structured the Jamaican economy to become its most profitable colony through sugar exports. It was also during this time that enslaved people created the domestic food system. Between 1838 and World War II, import and export channels remained largely unchanged. Next, I outline the period after World War II through Jamaica's independence in 1962 until the late 1970s, when imported food flooded the island, and then a subsequent influx in domestic agricultural investment helped to boost the existing, informal domestic food system. Following an analysis of domestic agricultural policy in the 1960s and 1970s, I discuss the impact of structural adjustment on the domestic food supply chain since it was introduced to Jamaica in 1978. The period from 1978 to through the 1990s brought Jamaica into a global political landscape of austerity and trade liberalization that reshaped the country's food system. This time period generated Marxist-inspired studies that fall in line with the critiques of global capitalism generated by food sovereignty scholars (Holt Giménez and Shattuck 2011; McMichael 2014),

specifically focusing on the vulnerability, and potential irrelevance of the country's small-scale farmers (Weis 2003; 2004b; 2006). This chapter ends with an outline of the Government of Jamaica's latest suite of initiatives to support the domestic food system that are limited by global trade restrictions, and an introduction to the ways the domestic food system endures today despite deep and lasting connections to the global economy.

Colonization and Jamaica's Food System

As previously indicated, the strong links between Jamaica's food system and the global economy were established after the island was colonized in the 15th century. Spanish colonization brought significant and devastating changes to indigenous agricultural practices. Prior to colonization, the Taino population were self-sufficient in food production. At the time the island was colonized, the indigenous Taino population grew crops like cassava and sweet potatoes using a specific agroecological practice called *conuco* gardening. Conuco gardening involved growing root crops in large mounds of soil and leaves to prevent soil erosion and improve drainage (Rouse 1992). The Taino population also relied on some hunting and fishing for their diet (Higman 2008). Spanish colonizers, after finding no gold on the island, introduced livestock, with detrimental ecological consequences. Both genocide and disease, part of Spanish colonization, killed most of the Taino population.

The British Crown's subsequent colonization of the island in 1655 formalized the brutal and tragic regime of human enslavement for profit. British colonizers introduced sugar cane to Jamaica from Barbados and institutionalized enslaved labour for its cultivation (Witter and Beckford 1980). The British Crown cemented connections between the island's food system and global trade through substantial capital investment into sugar production on Jamaica's flattest, most arable land. The British Crown also set up protected markets for the international trade of sugar. Jamaica's experience with slavery happened at a formidable scale; while four hundred thousand enslaved people were captured to work in North America, approximately six hundred thousand were sent to Jamaica to work on sugar plantations (Cep 2020). Because of the strong connections between sugar plantations, enslaved labour and export markets, Jamaica became Britain's most profitable colony in the 18th century (Kidd 2016).

As the British Crown established deep connections to a global network of trade through sugar and the trade of enslaved people, the foundations of Jamaica's domestic food system

emerged. At this time, working conditions were particularly oppressive and violent, and enslaved people experienced exceptionally high mortality and undernutrition rates. The average number of years an enslaved person was expected to live after arrival on the island was just seven years (Cep 2020). British colonial officials and plantation owners faced a dilemma of how to feed the population they had enslaved in order to maintain their unpaid labour force. With the Taino's subsistence agricultural traditions in ruin, the island was largely dependent on an unreliable and expensive imported food supply. Plantation owners were responsible to pay for food for people they enslaved and often provided insufficient amounts of food for an adequate diet. To supplement their diets, plantation owners allocated small plots of land to enslaved people in areas around their homes that they deemed unsuitable for plantation crops, a practice unique in the region. This marked the first documented evidence of Jamaica's domestic food system after British colonization (Higman 2008). The interdependence of imported and domestically produced food began in the 17th century and created a legacy of food and agricultural traditions that continues today. The key characteristic of food and agricultural traditions that emerged in Jamaica in the 17th century was the consistently evolving combination of imported staple foods complemented by domestically grown produce. British colonial officials opted to support a degree of food self-reliance, still importing staple items, including wheat, wheat flour and saltfish, products that have lasting importance in Jamaica's present food culture, but also permitting enslaved people to grow their own food. Enslaved people kept two types of food plots, growing fruit and vegetables that would continue to be important symbols of the struggles of slavery and the long road to emancipation for many generations to come. The first, kitchen gardens, also called *polinks*, were located beside their homes to grow a range of polycropped fruit and vegetables. Enslaved people also cultivated corn, yams, plantains, beans and sweet potatoes on collectively managed plots, called 'provision grounds' on nearby land. Kitchen gardens and provision grounds differed significantly from plantation agriculture that exclusively used land to grow non-food crops for export. Plantation crops on the collectively managed provision grounds were grown on the Corbusian-shaped areas in Figure 3-1, while kitchen gardens are represented by cartoon-like trees drawn next to homes. The foundations of Jamaica's post-colonial domestic food system were established on polinks and provision grounds (Mintz 1974, 190). People built on their subsistence farming skills that were common in West Africa, applied to Jamaica's geographical conditions (Sherlock and Bennett 1998). The persistence of West African agricultural practices is particularly notable given plantation

owners' deliberate suppression of cultural practices, tribal relationships and language (Witter and Beckford 1980). This type of food system has characteristics particular to Jamaica, however similar versions are evident across former Caribbean colonies, including Barbados, Grenada, Guadeloupe and Martinique (Kelly and Wallman 2014; Handler and Wallman 2014; Brierley 1985).

Figure 3-1: Early Depiction of Kitchen Gardens, St. Mary, Jamaica 1818

Source: Reproduced from Higman (1988)

The way that Jamaica's domestic food system looks today was borne out of the dehumanizing conditions of slavery, relying on enslaved people growing and distributing fresh produce to towns and cities. Mair (1986, 10-11) describes how, since its inception, the domestic food system was interdependent with plantation farming and export markets:

> It was the plantation system itself which inadvertently gave [people] the main resource [to grow their own food]; for the priority which the macro-economic system placed on cash crops for export to the exclusion of food crops for local

> consumption resulted in slaves having to assume responsibility for feeding themselves. [Enslaved men and women] enjoyed… entitlement to their provision grounds. And there they put to their own and their family's use the chief expertise which the economy allowed them…

A scholarly debate on this topic considers whether enslaved people's small-scale farming initiatives gave them a sense of autonomy. Anthropologists studying kitchen gardens and provision grounds suggest that both types of agricultural plots were rare spaces where enslaved people were able to exert their own sovereignty (Mintz 1974; Sherlock and Bennett 1998; Beckles 1989; 1999). Sherlock and Bennet (1998, 170) call provision grounds: "…the only places in Jamaica where Africans were free to make their own decisions." Beckles (1989; 1999) extends this analysis to suggest the emergence of small-scale farming on plantations as spaces for sovereignty and resistance for enslaved people. Parry (1955) suggests that not only are provision grounds a crucial part of Jamaica's social history, they also provided enslaved people with the same agency that fueled rebellions toward emancipation. Conversely, Thomas (2011) argues that provision grounds simply gave enslaved people the illusion of freedom. Further, a false sense of autonomy weakened ties between enslaved people and further entrenched planters' powerful societal standing (Thomas 2011). This dissertation does not make claims about the emancipatory potential of enslaved people's gardens, rather, charts the history and development of the domestic food system in light of significant forces working against it.

Enslaved people established highly productive kitchen gardens and provision grounds across Jamaica and were able to grow more vegetables, roots and tubers than they needed to subsist. Clarke (1975) describes how, as kitchen gardens and provision grounds became more established, people began to sell the excess produce they grew, developing the foundations of a trading system that brought food from farms to sell to people who had settled in towns and cities, especially Kingston. In her doctoral thesis, Bates presents an archaeological study that shows that, as enslaved people earned more money on their provision grounds, they bought increasingly valuable ceramics, indicating that provision grounds provided enslaved people with monetary agency that they would otherwise not have (2015). Kitchen gardens and provision grounds represented a rare means for enslaved people to earn money and participate in Jamaica's early markets.

Enslaved women took on the important role of distributing produce; each Sunday[13], they carried fresh produce, on foot, to urban areas that became the sites for Jamaica's first markets (Brown-Glaude 2011). These women are called 'higglers'[14], an English and Jamaican term for hawkers or peddlers of provisions (Wong 1996). Higglers' practice is referred to as 'higglering', a Jamaican term. Although higglers are a now a heterogeneous group of traders and vendors, selling different types of food and household goods, their work was originally associated explicitly with one's class and race, including enslaved, then after emancipation, low-income black women. Higglering was a rare opportunity for enslaved or formerly enslaved women with severe restrictions on educational opportunities and social mobility to earn cash. In some cases, higglers worked with their farming husbands to take food to market. In other cases, single or widowed women built relationships with those growing food and sold it for cash. The higgler system parallels West African (specifically, Yoruba) food trading traditions, to an extent, but split from building on principles of kinship, relying more on market mechanisms and non-familial relationships to sell produce as the trade of enslaved people broke kinship ties (Sherlock and Bennett 1998). Business relied on personal relationships between farmers, higglers, plantation owners, and market patrons; however, goods were sold for cash (Beckford and Witter 1982). This combination of competitive market activity and personal relationships is an important way that the internal marketing system sustains itself and is illustrated in more detail in Chapter Four and Five.

Higglers helped to establish Jamaica's first urban markets by coming together to sell surplus produce, ranging from vegetables grown in kitchen gardens to yams, sweet potatoes and other root crops grown on provision grounds. They gathered produce and transported it, often on foot, to Jamaica's original capital, Spanish Town. Simmonds's study of early domestic food system activities describes the internal marketing system as "…a well-entrenched part of the Jamaican economy, dominated by rural slave provision producers and urban slave hucksters" (1987, 32). Higglers sold food at the first legal market in Jamaica in Spanish Town, in 1662 (Blome 1672, 32 in Mintz 1974). The 'legal' distinction is important: when the internal marketing system started, it was illegal. Enslaved people were punishable, by law, for selling

[13] Sunday was the one day of the week that enslaved people did not work on plantations, and tended to their farms and produce trading.

[14] Higglers' work is detailed in Chapter Five.

food with "31 lashes" (Long 1774, 486-7 in Mintz 1974). Around 1735, colonial officials amended this law to permit the sale of ground provisions, fruit, fresh milk and poultry with the permission of plantation owners, representing further formal institutionalization of Jamaica's domestic food system (Long 1774, 486-7 in Mintz 1974). Institutionalizing the sale of goods grown by enslaved people was a remarkable development that took place alongside growing discontent between enslavers and the enslaved and recurring, violent confrontations between the two groups (Brown 2020).

By the end of the 18th century, enslaved people, while still bound to unpaid work on plantations, held a monopoly on the domestic food market, selling produce at fluctuating prices based on supply and demand (Mintz 1974). Higglers established several market sites across the island (Clarke 1975, 38). At this time, there was a clear interdependency between plantation farming for export and the domestic food system, which helped to feed the enslaved labour still working on plantations (Mintz 1985; Witter and Beckford, 1980). Following formal emancipation on August 1, 1838, Jamaica's food system remained similar in structure. At the domestic scale, people continued to grow produce in their gardens and on provision grounds, and higglers continued distributing food to urban markets for sale. People continued complementing domestically grown food with imports in their diet, especially wheat and saltfish (Higman 2008). However, the domestic market expanded in size as formerly enslaved people became farmers, without the explicit oppressive, inhumane restrictions of slavery. The distinct ways that small-scale farming for the domestic market developed in the period between colonization in the fifteenth century and emancipation in 1838, still exist, in modified forms, today.

Formerly enslaved people had few employment options both on and off plantations. Between 1845 and 1917, around 700,000 East Indian indentured labourers migrated to the Caribbean to fulfill a shortage of labour willing to work on plantations (Sohal 1980). Beckford and Witter argue that the low wages that plantation owners paid after emancipation represented little difference to formerly enslaved workers (1982). Watts describes farming and higglering as "…the only viable and acceptable choice[s] of lifestyle, superseding by far the other alternatives of estate work" (1987, 506). Many people opted to grow food for the domestic market and sought their own land. Some formerly enslaved people benefitted from post-Emancipation land reform, where church leaders bought former plantation estates and sold them in an act of reconciliation (Mintz 1974). People bought this land with the money they earned selling food in

the internal marketing system. However, the British Crown restricted land ownership; policies implemented after emancipation were used to stifle the rise of a mobilized peasantry (Beckford and Witter 1982; Weis 2007). For example, Beckford and Witter discuss how the Crown did not permit formerly enslaved people from owning land[15], and at the same time enacted laws to persecute landless farmers (1982). The English governor, their colonial executive and those who ran plantations put these policies into place.

Despite a distinct lack of institutional support, the trading system for domestically grown food expanded on existing marketing channels, with small changes. Throughout the late 1800s and early 1900s, small-scale farmers and higglers continued to supply food to the island through the internal marketing system. Imported food, including wheat and fish, complemented domestically grown products in people's diets. Market days shifted from Sunday to Saturday to accommodate Sunday church services. The market system blossomed as an important source of urban development, especially for formerly enslaved people in Kingston at a time when emancipation negatively impacted external trade relations, in particular with countries who still endorsed the buying and selling of enslaved people (Clarke 1975).

As the domestic market expanded into the 20th century, connections to global markets persisted due to consistent international demand for sugar. New connections formed with global markets that would reshape Jamaica's food system, parallel to colonial patterns of patronage. In particular, after 1900, the United States, vis-à-vis the United Fruit Company, began investing in banana production. Witter and Beckford note how this was a crucial development that fostered new links between Jamaica's small-scale farmers to the global economy (1982, 49). Bananas were not only grown on plantations, but also by the island's small-scale farmers. American investment supported infrastructural development, funded agricultural inputs, and, perhaps unintentionally, resulted in the islands' first tourists, transported on banana boats. Tourism would become one of Jamaica's core industries after this introduction. After the Depression, Beckford and Witter note that the small-scale farming economy had established itself "side by side with the former slave plantations" with many crossovers: more small-scale farmers

[15] For a comprehensive review of land tenure for Jamaica's small-scale farmers, see Beckford and Witter (1982), Le Franc (1994), Besson (1974) and Besson and Momsen (1987). Evaluating the complexities of land tenure in Jamaica is beyond the scope of this dissertation.

continued growing bananas, while others worked on sugar plantations at the same time that they grew other produce for the domestic market (1982, 57).

After the British Crown ceased to govern the island in 1944[16], two political parties ran in the first general elections that would chart the course for the future of the food system. The Jamaican Labour Party (JLP) established themselves as the conservative, capitalist party, while the People's National Party was founded based on the labour movement, associated with trade unions. Despite their different platforms, Beckford and Witter (1982, 63) classify both as "…capitalist parties, with one being a little more liberal than the other," because both sought to maintain connections to international capital investment. Sugar was exported to Britain through a protected market, still playing a prominent role in the way the Jamaica's economy stayed connected to the global economy (Weis 2006). Further, banana farming required consistent infrastructural financing from the United States, as did the country's developing bauxite mining sector. Parallel to the ways that American capital came support the banana trade beginning in the 1900s, after World War II, American capital was re-introduced to spur bauxite mining and tourism (Beckford and Witter 1982). This investment included the importation of raw materials and expertise, and exported alumina through American-owned enterprises. The state's focus on sugar, bananas and bauxite came at the recommendation of St. Lucian economist Sir Arthur Lewis, who advocated for the prioritization of agricultural and natural resource exports followed by industrialization as part of a model of import substitution (Timms 2008). This was a time when post-World War II theories experimented with recommendations for LMICs to develop their economies (Timms 2008).

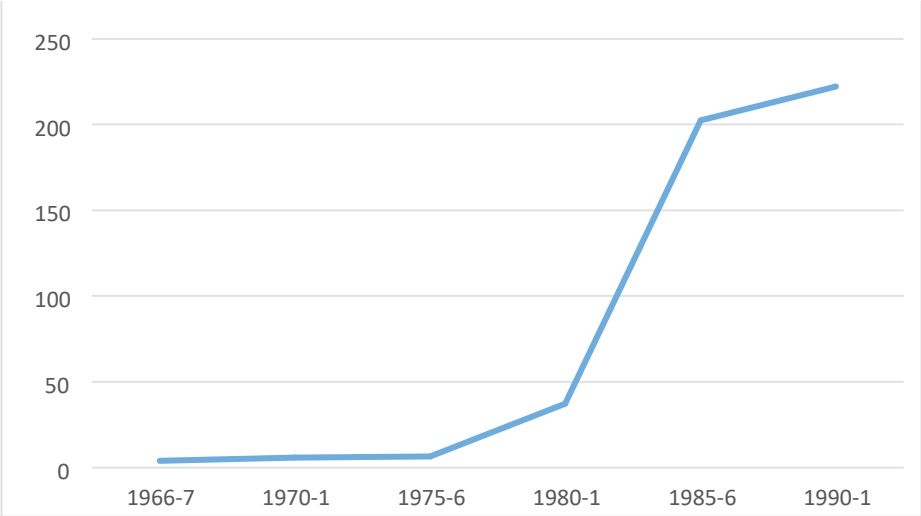
On top of the connections to export markets solidified in the first half of the 20th century, more connections to international markets emerged through imported food. At this time, imported food was already common to Jamaican's diets due to colonial influences that brought products such as salted cod, wheat and, accompanying the earlier influx of indentured Indian and Chinese workers, rice. The 1950s brought new products in higher quantities, in the form of food aid. In 1954, the United States implemented Public Law 480 (PL480), their food assistance program. The American government designed PL480 with the intention to boost food security in

[16] Jamaica did not achieve constitutional independence until 1962; however, the process of self-government began much earlier. The British Crown's retreat from governing the island was a response to people's demands, including riots, for self-governance that were happening across the West Indies since 1938 (Foner 1973).

low-income countries by selling American food surpluses in local currencies. Talbot's study of food imports to Jamaica in the 1950s onwards analyzes the dramatic influx of imported food, namely wheat and, to a lesser extent, powdered milk, introduced to the Jamaican market through PL480 (2015).

In the early 1950s, people's diets included fresh fruit, vegetables, roots and tubers produced on the island and imported staples such as salted fish, rice, wheat and wheat flour. Then, from 1955 to 1971, wheat and wheat flour imports doubled as the United States sold grain surpluses to Jamaica under PL480 (Talbot 2015). After the 1970s, cereal imports to Jamaica continued to rise exponentially. Hopkins reports the exponential rise in Jamaica's cereal imports after the 1970s, displayed in Figure 3-2, when cereal imports rose from 4,000 metric tons in 1966 and 1967 to 2,221,000 metric tons in 1990 and 1991 (1992, 245). The marked increase in wheat imports included new, processed wheat products that would become common to Jamaicans' diets.

Figure 3-2: Cereal Food Aid Allocated to Jamaica by Donor Countries (000s of metric tons), 1966-1991



Source: Adapted from Hopkins (1992).

Prior the influx of wheat imports, wheat and wheat products were already familiar to Jamaican's eating habits, building on dietary traditions from British colonialism. However, the exponential growth in cereal imports pictured in Figure 3-2 also resulted from significant policy shifts that are explained later in this chapter. Before the Jamaican economy was inundated with cereal imports as part of PL480, the country's constitutional independence brought in a strong focus on the domestic food system that must be explained. The Government of Jamaica explicitly addressed food import dependence after the country gained constitutional independence in 1962. The period after this was important for Jamaica's domestic food system, when the state saw domestic farming as an engine for national development and sovereignty. Jamaica's food and agricultural policy space in the 1970s shapes the way that the state supports the domestic food system, today.

The Institutionalization of Food Self-Reliance in Jamaica

Jamaica's constitutional independence in 1962 ushered in a marked focus on the role of domestic farming as a means towards national sovereignty. This period is characterized by the institutionalization of farming for the domestic market as a potential catalyst for national development, opposing the expanding role of imported food seen in the 1950s. The emphasis that the Government of Jamaica placed on domestic farming connects to a particular development model of self-reliance that spread across the Caribbean region, most notably, in Cuba and Grenada (Brierly 1985). Efforts to promote a more self-reliant food system would counter the influx of cereals imported through PL480. Further, the Government of Jamaica saw self-reliance as one important way that that the country could develop its own unique national and cultural identity while also holding a degree of independence from global markets (Timms 2008).

After Independence, Jamaica's two established political parties, the People's National Party (PNP) and the Jamaican Labour Party (JLP) sought to support the domestic agricultural sector to spur national economic development, but in different ways. The JLP, Jamaica's first

party to govern the independent nation[17], oriented policy toward boosting domestic agricultural production while holding close ties to international investment channels. The JLP provided support to all farmers to increase overall agricultural output, including farmers producing for the domestic market and the export market. The support that the JLP-run state provided came in the form of infrastructure and fertilizer subsidies. In 1963, the JLP established the Agricultural Marketing Corporation (AMC) to act as a buyer for domestically produced food under state determined pricing. The AMC primarily sold to government agencies, urban supermarkets, and hotels. The JLP did not provide specific support to small-scale farmers growing food for the domestic market.

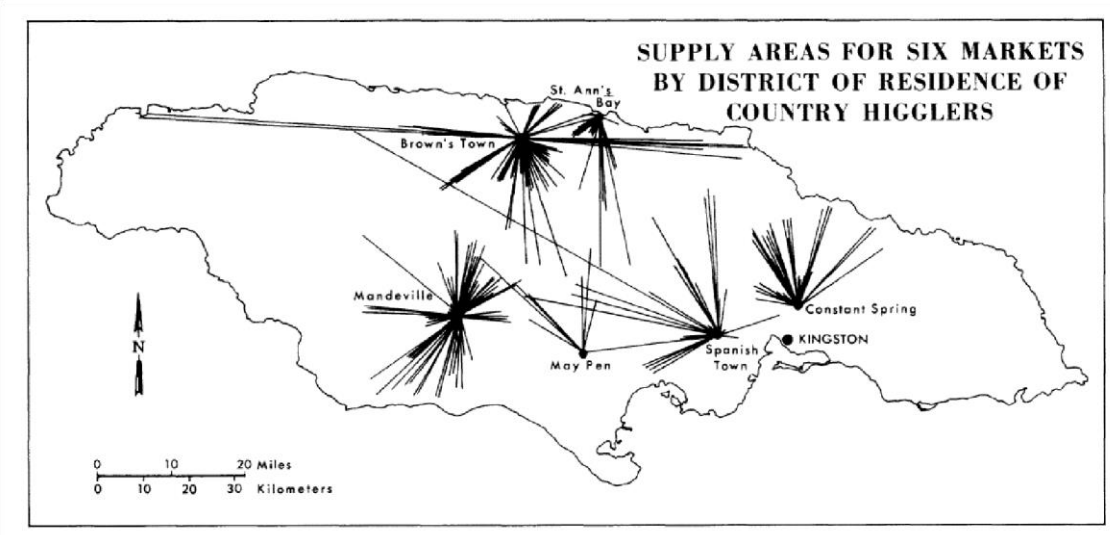
Food self-reliance became an explicit policy target in 1972, when the PNP formed government under their democratic socialist leader, Michael Manley. From 1972 to 1980, the PNP rolled out several programs designed to directly support small-scale production of food for the domestic market, overtly challenging the country's dependence on imported food. The PNP designed and implemented a suite of policy prescriptions that included: land reform, and tenure security, irrigation and soil conservation programs, extension services, marketing and distribution improvements, credit, with some focus on non-traditional exports (Newman and Le Franc 1994). For example, the PNP rolled out Operation Growing and Reaping our Wealth, that involved a land redistribution initiative, Project Land Lease (Pollard and Graham 1985; Augustin 1992). Project Land Lease enabled 49,000 small-scale farmers to access land, capital and infrastructural investments (Pollard and Graham 1985). The program divided large farming plots into smaller, parcels, leased by the state. The impetus behind leasing land, rather than creating selling land privately is to be inclusive of poor individuals and families who want to engage in farming, without perpetuating existing inequities in land tenure (Weis 2004b). Participating farmers were given access to capital to invest in farm infrastructure. As a result of the PNPs agricultural policies, the domestic food sector grew at an average annual rate of 3.21% between 1972 and 1980 (Pollard and Graham 1985).

The PNP maintained the AMC to ensure small-scale farmers could retain access to a stable, predictable market for their produce. Under a PNP government, the AMC branched out to retailing, with the aim to provide customers with clean, safe and accessible spaces to purchase

[17] Jamaica's first election was held in 1944 after the island got its first constitution, ending the rule of the British Crown colony.

food. The AMC purchased produce, including vegetables, roots and tubers, fruit and eggs from small-scale farmers, bulked it in 23 warehouses across the island, and sold it to various food outlets (Norton and Symanski 1975). The state provided subsidies to farmers, and to consumers who could buy produce at a lower cost. This is the time at which Norton and Symanksi (1975) predicted that establishing AMC retail outlets would lead to the demise of the traditional, higgler system, including the ties between higglers and markets pictured in Figure 3-3, below. However, rather than replacing the higgler system, the AMC simply became another option for farmers to sell their produce. Higglers and small-scale farmers continued to work inseparably. Higglers expanded into selling produce that the AMC did not buy, and at times offered farmers premium prices (Spence 1996). In her study of Jamaican root crop markets, Meikle finds that farmers' overall impression of the AMC was positive; farmers valued having a diverse set of marketing options and the AMC's reliability, but they also received higher prices from higglers (1992). Contrary to Norton and Symanski's prediction, the higgler system outlasted the AMC, which closed down in 1981 due to "reasons of inefficiency and unprofitability" (Spence 1996, 65).

Figure 3-3: Supply Areas for Six Parochial Markets in Jamaica, by district of relevance of Country Higglers, 1970



Source: Norton and Symanski (1975)

The AMC was not the only initiative helping to curb Jamaica's ties to global market integration that suffered in the following decade. The PNP's suite of policies supporting food

self-reliance were severely compromised, and in some cases, reversed, when the country experienced a financial crisis and was required to sign onto its first conditional loans from the International Monetary Fund (IMF) in 1977. Jamaica's experience with structural adjustment throughout the late 1970s, 1980s and 1990s would firmly connect the country's economy to international financial markets and profoundly harm on its state-led efforts toward food self-reliance.

Structural Adjustment, Trade Liberalization and Jamaica's Food System

Jamaica's economy was one of many destabilized by the global oil price crisis in 1973-4 that dramatically increased the cost of imports, including food. At that time, the Manley government attempted to deal with the crisis by maintaining their self-reliance agenda (Weis 2004b). However, the oil price crisis left a lasting mark on Jamaica's economy; the state was unable to rectify payment imbalances, and reluctantly looked to international financial support (Timms 2008). The Government of Jamaica signed onto its first loan to rectify its balance of payments in 1977, borrowing US$74 million from the IMF (Weis 2004b). This loan was Jamaica's introduction to structural adjustment that would establish new, influential connections to the global economy and limit the state's ability to support food self-reliance. The conditionalities of loans from the IMF and, later, the World Bank, paired with an increasingly liberal global trading system would reshape Jamaica's food system, deepening dependence on imported food and weakening the domestic farming sector.

Structural Adjustment and Declining State Support

Structural adjustment policy was part of a broader trend to apply neoliberal economic policy across LMICs throughout the 1970s and 1980s (Commander 1989). This suite of policies, characterized by requirements to reduce government spending, liberalize trade and accompanying devaluations of countries' currency, were designed with the short-term goal to reduce or eliminate deficits in national balance of payments. Longer-term goals were to increase overall economic growth and to prevent future stabilization issues (Streeten 1989, 4). To adhere to loan conditions, many countries targeted their respective agricultural sectors as potential sources for economic growth and stabilization by increasing farm productivity for export. The

process of structural adjustment in Jamaica, involving reductions in agricultural spending, currency devaluation and trade liberalization, mirrored other countries across Latin America (Rezende 1989; Thomas 1989) and sub-Saharan Africa (Commander et al. 1989; Clapp 1997).

Jamaica was one of the first countries where structural adjustment policies were rolled out, and the policies implemented were harsh and swift (Le Franc 1994, Weis 2003). Le Franc categorizes Jamaica as "intensely adjusting" between 1977 and the early 1990s, due to the punitive nature of loan conditions (1994, 2). The country's second loan, taken from the IMF in 1978, necessitated fiscal austerity. Agricultural spending would decline to account for overall budget cuts; when the JLP was re-elected in 1980, they designed a new agricultural support program to effectively replace Manley's food self-reliance agenda with a private-sector led, export oriented plan (Weis 2004b). The program entailed decreases to credit and input support for the beneficiaries of Project Land Lease, and cuts to subsidies that kept food prices at AMC stores low (Weis 2003). At the same time that the Government of Jamaica divested from the domestic food system, the country's currency was devalued in attempts to boost exports and make domestically grown food cheaper relative to imports that had been purchased at a discounted price through PL480 (Weis 2003; 2004b). Although this was not the first time that the Jamaican dollar, historically tied to the British sterling and subsequently pegged to the US dollar, was devalued, its application in combination with reduced agricultural spending "…marked a retreat…from the commitment to a democratic socialist strategy of development" (Witter 1983: 25). This retreat included a significant departure from Manley's food and agricultural strategies that supported Jamaica's self-reliance.

The 1980s saw the Jamaican economy become more closely integrated into global markets with fewer resources provided to small-scale farmers. The JLP-run state pursued a new agenda to open Jamaica's economy to foreign investment, reduced agricultural spending and shifted remaining support to export crops. The state adopted three new World Bank Structural Adjustment Loans, in addition to the stabilization loans from the IMF, accompanied by further, consistent declines in agricultural spending (Weis 2003). Agricultural spending as a percentage of GDP declined fourfold between 1981 and 1985 (Weis 2004b, 468). Agricultural extension services, previously public, were made semi-autonomous from the government through the Rural Agricultural Development Authority. Out of a shrinking budget, the state earmarked an even smaller portion to small-scale farming in favour of large-scale production for export (Weis

2006). The Ministry of Agriculture focused its support on agricultural development for international trade, providing technical assistance focused on Jamaica's two major traditional export crops: sugar and bananas. Sugar and banana plantations benefitted from infrastructural improvements, readying them for export (Weis 2003, 156). Despite gains in export production between 1960 and 1991, the contribution of agriculture to GDP declined from 12% to 5.2% (Newman and LeFranc 1994). Altogether, state support "virtually disappeared" for small-scale farmers who grew food for domestic consumption (Weis 2004: 469).

Currency devaluation, which was intended to make domestically grown food cheaper relative to imports, had the opposite effect than was intended on Jamaica's agricultural trade deficit. One reason behind this was the steep decline in agricultural spending that happened at the same time (Le Franc 1994; Weis 2004). When small-scale farmers lost a significant amount of state support, some were unable to purchase necessary agro-inputs and could no longer afford to farm. Additionally, the Jamaican diet had long depended on imported staples like rice, wheat, and wheat products, which quickly became more expensive and led to a decrease in household's real income levels (Handa and King 1997). Barriers to domestic production would be exacerbated by deepening connections to global markets, as Jamaica took on more loans and was introduced to a new global order of trade throughout the 1990s.

New Connections to Global Markets: Trade Liberalization and Agricultural Market Shifts

Before 1990, the Government of Jamaica adhered to the conditions of IMF loans by implementing austerity measures on its agricultural sector and adjusting macroeconomic conditions. Despite having less funding to support the domestic food system, the state was still able to protect domestic agricultural markets with tariffs and non-tariff barriers charged to imported agricultural and agro-industrial products. This shifted after 1990, when a new phase in Jamaica's structural adjustment began that liberalized the agricultural sector, specifically through structural adjustment loans signed with the World Bank, and new global trade agreements with the WTO after it was founded in 1995. Agricultural trade liberalization would bring Jamaica's food system even more closely intertwined to global markets, specifically through a larger trade deficit and heightened dependence on imported food.

Jamaica's first Agricultural Sector Adjustment Loan (ASAL) from the World Bank in 1990, followed by an Adjustment Programme Loan (APL) in 1992 were also the first to

incorporate the agricultural sector into a liberalized trade landscape, requiring reductions in tariffs and non-tariff barriers (Weis 2003). Previously, the Government of Jamaica judiciously used tariff and non-tariff barriers to protect domestic agricultural crops from their less expensive imported counterparts. The state could charge tariffs, or require import licenses for agricultural imports, such as onions and tomatoes. The APL adopted in 1992 required the liberalization of milk and meat imports (Weis 2004, 471). Then, in 1993, a Private Sector Development Adjustment Loan from the World Bank required the elimination import tariffs. In some cases, charges on imports were reduced from reducing duties from over 100% to 0% (Weis 2003). Conditions of World Bank loans restricted these protections to less stringent stamp duties, imposed on consumers (Weis 2004b). This shift hindered the Government of Jamaica's ability to use price supports for domestic agriculture.

The ASAL in 1990 also required the removal of subsidies and controls of Jamaica's Agricultural Credit Bank (ACB). The ACB provided accessible finance to small-scale farmers, who faced barriers accessing commercial credit. The state followed a stipulation from the World Bank, commercialized agricultural credit, it became effectively inaccessible to small farmers (Weis 2004b; Newman and Le Franc 1994). Without credit, farming, in some cases, became prohibitively expensive. The commercialization of agricultural credit and decreases in trade barriers represented the beginning of a shift toward liberalized agricultural markets that would be exacerbated by a broader opening of the global food markets to international trade in 1994.

The 1994 Uruguay Round Agreement on Agriculture (AoA), the biggest global trade treaty since the General Agreement on Tariffs and Trade (GATT) was initially established, sought to promote free trade in agriculture around the world. The WTO administered negotiations to design the AoA to improve access to markets and modify domestic support and export subsidies to limit distortions to free trade in agriculture (Clapp 2006). However, the AoA's application was highly uneven, permitting high income countries like the United States to continue heavily subsidizing agricultural production, while LMICs received stringent directives (Weis 2004b). Countries like Jamaica had already been liberalizing their economy and reducing spending on domestic farming, further contributing to an uneven playing field for small-scale farmers.

The two key agricultural policy prescriptions that stemmed from the AoA had further harmed the domestic food system. They involved a continuation of tariff reductions to stimulate

market access, and tighter stipulations around domestic support. Although the restrictions imposed by the AoA to stimulate market access still permitted bound tariffs and stamp duties on agricultural imports, these protective options was rarely used (Campbell 2003, 361). Jamaica, as a small island developing state, had limited institutional capacities for monitoring and enforcing such barriers. Weis (2003) also indicates that the state's reluctance to bind tariffs at ceiling rates was inseparable from political motivations, both to secure voters and to maintain relationships with international trading partners.

After 1994, the only remaining interventions that the Government of Jamaica could use to support the domestic food system had to fit into the WTO's Green Box[18], a category of domestic support that the WTO had deemed would not create inefficiencies for international trade. The Green Box stipulated that countries could provide public support for: research, pest and disease control, infrastructure, food aid for domestic consumption, inspection services, market promotion, stocking, disaster relief, payments under environmental protection programs, crop insurance, decoupled income support and long-term development programs in developing countries (Josling 1998; Newman and LeFranc 1994). The WTO's new domestic support rules would limit the Government of Jamaica's ability to support small-scale farming for the domestic market as it once had. By the mid-1990s, the state's role had shifted from the early 1970s, when it was directly involved in marketing, land redistribution and production, to a facilitative role connecting the agricultural sector to global markets.

Structural Adjustment, Food and Farming

Altogether, policy shifts liberalizing Jamaica's agricultural sector exacerbated the combined, complex impacts of agricultural spending cuts and shifting macroeconomic conditions on the domestic food system. Newman and Le Franc frame the harmful effects on small-scale farming as an overall increase in the sector's vulnerability (1994). Currency devaluation in the 1980s had an effect that was the opposite of its intent to boost exports and

[18] Developing countries negotiated heavily against the uneven terms of agricultural trade liberalization involved in the Uruguay Round Agreement on Agriculture throughout the Doha Round of World Trade Organization trade talks throughout the 1990s and 2000s (Clapp 2006). Jamaica has participated heavily in the critical response to the AoA and continues to advocate special and differential treatment for agricultural products in the international trade order (Campbell 2003).

food's affordability; without agricultural subsidies, inputs became, in some cases, prohibitively expensive, and farmers could not afford to produce food at previous levels (Weis 2004b). After 1994, the commercialization of agricultural credit and liberalized trade of food imports exacerbated farmers' struggles (Talbot 2015; Barker 1993).

Reductions in the country's ability to protect its agricultural sector from imported food through tariff and non-tariff barriers, in combination with heavily subsidized export markets in high-income countries like the United States led to an influx of imported food. In the 1990s, Jamaica's food imports grew significantly. The value of imports correspondingly increased and is depicted in Table 3-1. From 1990 to 1998, the value of cereal imports increased by more than 100%. Meat imports doubled, and fruit and vegetable imports increased by nearly four times. The majority of imports were still represented by cereal and cereal preparations, which made up over 80% of imports, while fish and meat made up 12% and dairy products made up 3% (Campbell 2003, 373).

Table 3-1: Food Import Values in Jamaica (US$000), 1990-1998

Import Value (US$000)	**1990**	**1994**	**1998**
Cereals	74423	79935	153007
Meat Products	33873	43756	69573
Dairy Products	37378	31566	48791
Vegetables & Fruit	8809	14593	41949

Source: Adapted from Weis (2003, 167)

The influx of imported food influenced both small-scale farming for the domestic market and Jamaicans' overall diets. Several studies document the harm that structural adjustment had on Jamaica's small-scale farming sector (Weis 2004; Newman and Le Franc 1994; Handa and King 1997). Weis provides an extensive analysis of how food (depicted in Table 3-1) displaced local production of dairy and select fruit and vegetables that small-scale farmers could grow domestically (2004). Jamaica's dairy sector, which once produced fresh milk consumed on the island, was "decimated" (Campbell 2003, 366). It was no longer economical to raise dairy cattle after powdered milk imports were liberalized in the 1980s and 1990s. Small-scale dairy farmers, in turn, resorted to dumping their milk stocks in public demonstrations. Weis echoes this pattern in his analysis of fresh produce markets: before the 1990s, fruit and vegetable markets were

"…virtually the sole domain of small farmers", as compared to the late 1990s, when "…fruit and vegetable imports had overtaken exports, and the domestic production of some crops, such as Irish potatoes, onions and red peas, was largely replaced by imports" (2004, 479). Small-scale farmers were left with a glut of vegetables that they could not sell, outcompeted by imported food subsidized by the United States and other high-income countries.

Notable dietary shifts also resulted from the increase in imported food, with consequences for people's health. Weis presents a comprehensive collation of the impact of structural adjustment on Jamaican diets (2000; 2003; 2004). Between 1980 and 1998, Jamaicans' per capita meat consumption increased by more than 50% (Weis 2003). Imported meat products increasingly outcompeted local production, especially in the form of substitutable processed meat products that provided more affordable options for lower-income households (Talbot 2015). Parallel to global trends in diets and nutrition, there is evidence that higher imports of processed food, milk and meat led to a rise in diet-related chronic disease in Jamaica (Sinha 1995). Handa and King estimate that adjustment policies, especially the liberalization of Jamaica's exchange rate, harmed children's short term nutritional status (2003). The increase in non-communicable, diet-related diseases match health outcomes across LMICs more broadly (Popkin 2001).

Compared with small-scale farming and diets, there is relatively little data analyzing the impacts of structural adjustment and trade liberalization on food distribution. Brown-Glaude notes that the 1990s were a period of adaptability for higglers who resold produce grown by small-scale farmers (2011). Facing unreliable and declining production from small-scale farmers for reasons explained in the previous section, some higglers diversified into selling imported food and other products (Brown-Glaude 2011). The 1990s also saw the maintenance of a "merchant-importing class", Jamaicans who are able to import large quantities of food and sell it on the domestic market, adding competition to the higglers' market (Weis 2004b, 472). The harm that structural adjustment and trade liberalization caused Jamaica's higglers remains a significant gap in research, in particular relative to the literature covering small-scale farmers' vulnerabilities.

While food imports grew by 134% between 1990 and 1998, exports crops only grew by 28%, leading to a mounting trade deficit that widened from 1996 to 2000, growing from US$127 million to $226 million (Campbell 2003, 367). Traditional exports of bananas and sugar

remained important to the Jamaican economy, contributing 65-70% of export earnings from 1995 to 2000 (Campbell 2003, 367). Sugar maintained its important role in Jamaica's export earnings through protected trade quotas to the EU and United States (Weis 2003). Bananas still made up the second most important agricultural export in terms of export earnings and GDP, also sold through protected markets. Coffee also contributed positively to agricultural exports, increasing in its average export value by more than 80% between 1990 and 2000 (Campbell 2003, 369). Unlike small-scale production for the domestic market, Jamaica's agricultural exports benefitted from state support.

The suite of sweeping policy changes that occurred in Jamaica from 1977 to the mid-1990s significantly reshaped the food system, as indicated by the examples stated in the previous section. It was because of the ascendance of neoliberal policies, and the associated impacts that Weis saw as he conducted research alongside Jamaica's small-scale farmers that he saw the potential for the domestic food system to be rendered irrelevant (2004, 479). For example, Weis conducted his research at a time when small-scale farmers were outcompeted by imported carrots, onions and other vegetables, and dairy farmers dumped their milk stocks in protest of the influx of cheap powdered milk. This section charts the ascendance of neoliberal economic policy applied to Jamaica's agriculture, detailing the ways that state support for the domestic market shrunk, replaced with strong connections to export channels, international financial institutions and imported food.

The ways that neoliberalism shaped Jamaica's food system parallels evidence from other countries presented broader food sovereignty scholarship that charts the harmful impacts of expanding global capitalism on food and agricultural systems, included in Chapter One (McMichael 2006; Desmarais 2008; Holt Giménez and Shattuck 2011). However, Jamaica's domestic food system persisted in important ways. While a neoliberal agenda profoundly hindered Jamaica's ability to feed itself, the domestic food system has persisted to serve important food security and livelihood functions that are outlined in Chapters Four, Five and Six of this thesis. The next section of this chapter describes contemporary connections between Jamaica's food system and the global economy, and the ways that the domestic food system expresses itself, before moving on to explore the persistence of the domestic food system despite these strong connections to the global economy.

Jamaica's Food System Today: Persistent Dualism

In many ways, what Jamaica's agricultural system looks like today mirrors its past, retaining the dualistic character that Barker aptly describes in his studies of small-scale farming (1993). Jamaica's food system remains intertwined with global networks of trade, both through food imports and exports. The domestic market, as I will discuss in subsequent chapters of the dissertation, still plays important roles in terms of people's access to food, livelihoods and their cultural identity. More broadly, the agricultural sector remains important to the Jamaican economy. In 2011, the agricultural sector accounted for 19.7% of the total employed labour force, and 85% of farm holding were small farmers, specifically measuring five acres or less (Ministry of Agriculture and Fisheries 2011). In 2017, the agricultural sector (including forestry and fisheries) contributed 6.6 % of the country's GDP (World Bank 2017). This section details the connections between Jamaica's food system and channels of international trade, specifically through import and export markets, then moves on to detail what the domestic food system looks like today.

As I noted in Chapter One, Jamaica's food import bill is high. In 2007, the island's total food and drink import bill was US$730 million, rising to US$886 million in 2008 (Ministry of Agriculture and Fisheries 2011). In 2011, the FAO reported that Jamaica had the highest food import bill in among CARICOM countries, reaching US$913 million (FAO 2013a). In 2018, the newly renamed Ministry of Industry, Agriculture and Fisheries reported that the import bill had decreased, measuring US$902 million. Agricultural products make up 20.7% of the country's total import bill (Josling et al. 2018). Table 3-2 breaks down what types of food Jamaica imports, based on data from 2015. As indicated below, the most commonly imported agricultural commodities are beverages and tobacco products and cereals, each comprising 3.0% of Jamaica's total imports. Other commonly imported agricultural commodities include goods prepared from cereals and flour and goods prepared from vegetables, fruit or nuts. Meat products, dairy and eggs make up 3.9% of Jamaica's food import bill.

Table 3-2: Main Food and Agricultural Import Commodities in Jamaica, 2015

Commodity	Value in US$ 000	Share of Total Imports (%)
Beverages & Tobacco	148 492.3	3.0
Cereals	148 327.2	3.0
Preparation of Cereal, Flour	73 996.7	1.5

Preparation of Vegetable, Fruit, Nuts	73 995.7	1.5
Meat	72 087.4	1.4
Dairy & Eggs	65 211.0	1.3
Preparation of Meat & Fish	60 622.9	1.2
Fish & Crustaceans	60 138.7	1.2
Sugars & Sugar Confectionary	49 108.3	1.0
Animal/Veg Fats & Oils	42 872.8	0.9
Malt, Starches	24 596.4	0.5
Vegetables, Roots & Tubers	22 006.2	0.4
Coffee, Tea, Mate & Spices	10 170.7	0.2
Cocoa and Cocoa Preparations	10 036.8	0.2
Fruit	7 782.2	0.2
Live animals	1 001.4	0.0
Total	**1 031 244.0**	**20.7**

Source: Josling et al. (2018, 92)

Food products are just one of many commodities that imported to Jamaica. To put food products into a broader perspective, Josling et al. measure the most commonly imported commodities that are displayed in Table 3-3 (2018). The most valuable commodities imported to Jamaica are petroleum products, cars, medical products, and telecommunication materials. Food products are the fifth most valuable commodities that are imported (Josling et al. 2018). The value of petroleum oil and gas products, at US$ 1140.1 million, significantly surpasses the value of imported food products, measured at US$ 70.2 million.

Table 3-3: Top Import Commodities to Jamaica, 2017

Commodity Category	**Value in million US$**
Petroleum oil and gases	1140.1
Motor cars and motor vehicles for transport	199.4
Medicaments	141.9
Electrical apparatus for line telephony or line telegraphy	119.7
Food preparations	70.2

Source: Josling et al. (2018)

Agricultural exports still make up an important part of the Jamaican economy. Agricultural exports contributed to 15.8% of the share of total exports in 2015 (Josling et al. 2018). Jamaica's top merchandise exports in 2017 are listed in Table 3-4. The most valuable merchandise exports produced in Jamaica are crude materials, including bauxite. Food products, including animals, beverages and tobacco, are the second most important category of merchandise exports leaving Jamaica, in terms of their value.

Table 3-4: Merchandise Exports to Jamaica, 2017 (Value in million US$)

Commodity Category	**Value in million US$**
Crude Materials, Animal & Vegetable Oils	624.5
Food, Animals & Beverages, Tobacco	339.8
Mineral Fuels, Lubricants	233.9
Machinery and transport equipment	33.9
Miscellaneous Manufactured Articles	27.1
Chemicals	25.9
Goods Classified Chiefly by Material	23

Source: United Nations Department of Economic and Social Affairs (2017)

The country's food and agricultural exports range from traditional cash crops, like sugar, and Jamaica's main alcoholic export, rum, to tropical fruit and non-traditional exports, such as root crops. A complete list of exports, their export value and their share in Jamaica's totally exports, based on data from 2015, is detailed in Table 3-5. The highest value export crop is still sugar, bringing over US$ 50 million dollars in export earnings, or 4.4% of the share of total exports in 2015. Crops grown on a smaller scale, including yam, ackee, papayas, sweet potatoes, pimento and pumpkins contributed just over US$ 40 million to export earnings, or 3.4% of the share of total exports in 2015.

Table 3-5: Food Exports from Jamaica, Value in US$000 and Share in Total Exports, 2015

Commodity	Value in US$ 000	Share in Total Exports (%)
Sugar	53 913	4.4
Rum	34 988	2.9
Coffee	24 197	2.1
Yams	19 406	1.6
Ackee	13 971	1.2
Sauces	12 743	1.1
Fish, Crustaceans & Mollusks	10 596	0.9
Dairy Products & Bird Eggs	5 805	0.5
Meat & Meat Preparations	4 776	0.4
Papayas	3 843	0.3
Sweet Potatoes	2 576	0.2
Pimento	1 358	0.1
Citrus (fresh)	1 276	0.1
Cocoa	403	0.0
Pumpkins	391	0.0
Bananas	242	0.0
Total	**191 384**	**15.8**

Source: Adapted from Josling et al. (2018)

Where does this imported food come from, and where do exports go? A list of the country's twenty closest trading partners in included in Table 3-7. Jamaica' biggest trading partner is the United States. In 2017, Jamaica sent 45% of its total exported goods, at a value of over US$589 million, to the United States. In turn, the United States supplied 44% of Jamaica's total imports, totaling more than US$2.5 billion (UN Comtrade 2017). Jamaica trades with other CARICOM countries on a lesser scale, including Trinidad and Tobago, Barbados, the Cayman Islands, Saint Lucia and Guyana.

Table 3-6: Jamaica's Top 20 Trading Partners, 2017

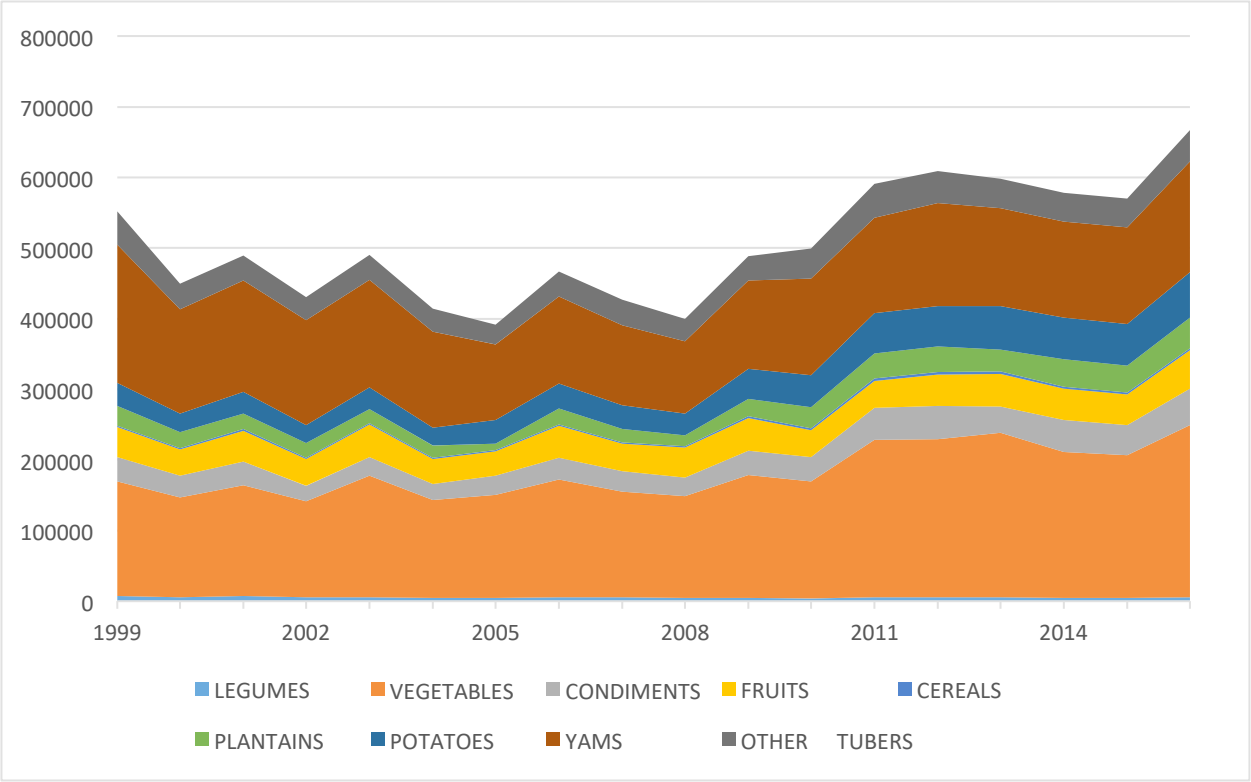
Partner	Export (US$)	Export (%)	Import (US$)	Import (%)	Balance
United States	589,247,961.00	0.45	2,541,777,247.00	0.44	($1,952,529,286)
Netherlands	157,117,812.00	0.12	50,251,809.00	0.01	$106,866,003
Canada	125,610,001.00	0.10	97,978,121.00	0.02	$27,631,880
Iceland	50,797,103.00	0.04	140,801.00	0.00	$50,656,302
Russia	49,068,453.00	0.04	171,880.00	0.00	$48,896,573

France	26,115,298.00	0.02	52,920,684.00	0.01	($26,805,386)
Georgia	20,897,375.00	0.02	4,021.00	0.00	$20,893,354
China	18,615,639.00	0.01	364,573,574.00	0.06	($345,957,935)
Hong Kong	17,639,473.00	0.01	31,705,086.00	0.01	($14,065,613)
Cameroon	17,591,778.00	0.01	NA	NA	NA
Ghana	17,066,369.00	0.01	1,511,844.00	0.00	$15,554,525
Trinidad and Tobago	17,031,339.00	0.01	298,942,058.00	0.05	($281,910,719)
Barbados	14,541,416.00	0.01	26,549,553.00	0.00	($12,008,137)
Cayman Islands	14,442,532.00	0.01	1,204,615.00	0.00	$13,237,917
United Arab Emirates	14,324,990.00	0.01	3,690,441.00	0.00	$10,634,549
Japan	12,311,471.00	0.01	365,945,769.00	0.06	($353,634,298)
Mexico	9,899,055.00	0.01	211,588,366.00	0.04	($201,689,311)
Venezuela	9,733,992.00	0.01	38,776,296.00	0.01	($29,042,304)
Saint Lucia	9,165,810.00	0.01	3,494,117.00	0.00	$5,671,693
Guyana	9,141,968.00	0.01	42,059,465.00	0.01	($32,917,497)

Source: Adapted from globalEDGE (2017), based on UNCOMTRADE (2017)

Today, the domestic food system persists in many ways that are similar to its origins. Producing food for the domestic market is still chiefly in the domain of the island's small-scale farmers. Higglers are still the main distributors of domestic produce. At the same time, as I indicated in Chapter One, agricultural production for the domestic market has increased since 2010. Figure 3-4 breaks this increase down by crop group, also showing a general increase in overall production. The biggest production increases came from production of potatoes, vegetables, plantain, tubers other than yam, condiments and fruit.

Figure 3-4: All-Island Estimates of Crop Production, 1999-2016



Source: MICAF (2016)

The increase in domestic production pictured above has not ameliorated food security issues across the island. Kingston, in particular, faces severe food security issues. The Hungry Cities Partnership's research on the state of food security in Kingston reports that 37% of sampled households are severely food insecure, while 28% are moderately food insecure, according to a measure called the Household Food Insecurity Access Scale (Kinlocke et al. 2019). These measures are comparable to Southern African cities, for example, Cape Town, that share similar challenges of high-income inequality. Additionally, the survey findings show that poorer households lack diversity in their diets, relying heavily on carbohydrates made from grains (Kinlocke et al. 2019). This emerging research in Kingston, paired with the data featured in Figure 3-4, indicates the need to analyze people's access to food, as domestic production increases while overall aspects of food insecurity persist.

The Government of Jamaica still places an important focus on its agricultural sector. The country's current national development plan, Vision 2030, indicates that the priorities are to have a sustainable agricultural sector that is both internationally competitive and supports food

security and safety. Vision 2030 is one example of the Government of Jamaica's consistent commitment to a 'dual' agriculture sector that is at once connected to the global economy, through production of exported agricultural products, and supports national development vis-à-vis production for the domestic market (Barker 1993). The state's emphasis of a dual agricultural sector is a vestige of the tension between political parties' ideas around development after 1962 that supported the domestic agricultural sector for self-reliance, and the export sector as a means to remain integrated in the global economy.

Any food and agricultural policy in Jamaica must adhere to restrictions required by the island's international financial commitments with the WTO's Agreement on Agriculture. As indicated in the previous section of this chapter, structural adjustment programs and shifting international trade regulations constrained domestic policy in Caribbean countries. The AoA left the Government of Jamaica with a specific set of policies that could support its domestic agricultural sector. The agricultural supports that the WTO considers non-distorting, including supports that do not act as barriers to free, international trade are detailed in Table 3-8. Some examples of the suite of policies left, according to the FAO, include "research and development relating to particular products: livestock research and improvement, crop research and plant protection" and "extension and advisory service primarily to rural farmers" (2000: no page). The restrictions imposed by Jamaica's loans with international financial institutions left little room for the Government of Jamaica to support food self-reliance as explicitly as had in the 1970s.

Table 3-7: Green Box Policies in the WTO's Agreement on Agriculture

General Services - Research	**Direct Payments**	**Food Stocks**	**Domestic Food Aid**

• Extension • Training • Pest and Disease Control • Inspection • Marketing and Promotion • Infrastructural Services	• Income Insurance • Safety Net Programs • Disaster relief • Retirement schemes • Structural adjustment policies • Environmental programs • Regional assistance	• For a National Food Security Program	• Nutritional programs • Food programs for poverty relief

Source: Josling (1998)

Despite the Government Jamaica's limited ability to support domestic agriculture, Josling (1998) suggests that the remaining policy options can be used creatively to increase the competitiveness of domestic farming with imported food and support poverty alleviation and food security. Today, select policy initiatives indeed fit within the restrictions and constraints required by the WTO, outlined in the previous section. Barker (2012) notes the ways that the state has found ways to support domestic food security since 2007. In particular, he references former Minister of Agriculture Christopher Tufton's opening plenary address at the 2009 Conference on Food Security and Agricultural Development in the Americas, where he spoke about the Ministry's strategic plans to support the domestic food system (Barker 2012). When Tufton was the Minster of Agriculture and Fisheries from 2007 to 2011, his Ministry made inroads to support domestic food security in line with the WTO's allowance to protect vulnerable agricultural sectors, by identifying food crops that are imported, but Jamaica's small-scale farmers can feasibly grow. At the time that I conduced fieldwork for this dissertation in 2016, the Rural Agricultural Development Authority was implementing this work on the ground through an initiative called the Onion Development Programme. The Programme identified onions as a crop that is imported, but Jamaican farmers can grow. The Programme offers extension, training, efforts toward pest and disease control and marketing services for farmers who are available and willing to participate. An earlier, related program targeted Irish potatoes; Jamaica once imported 90% of the overall amount of Irish potatoes consumed by its citizens.

Today, Jamaican farmers produce close to 95% (NationNews 2016). Jamaican egg producers have also had significant success in reclaiming the domestic market for their products.

The Government of Jamaica, through a partnership with the Jamaica Agricultural Society also supports the 'Eat Jamaica' campaign, mentioned in the introductory chapter of this thesis. Jamaica's Governor General initially launched this program in 2003, which the Jamaica Agricultural Society chiefly runs today. The campaign was designed to promote Jamaicans to "Grow what we eat and eat what we grow" (its slogan), encouraging Jamaicans to grow food for themselves and the domestic market, and to eat domestically produced food.

The campaign's goals are detailed below.

1. To re-establish the fact that Jamaica is an agricultural country; that our richest heritage accrues from rural farming communities; that all our best attitudes and values are to be found in the traditional Jamaican 'country life'; and that central to our Jamaican culture is the food that we produce and the ways in which we prepare them.
2. Provide information on the dimensions of Jamaica's farming sector, from the small subsistent farmer to the large farming operations; the economic importance in terms of jobs and income generation; the success stories, as well as the struggle for survival.
3. To lift the morale of our farmers and their communities, re-awaken their appetite for production, while, at the same time, attracting new and young farmers to the sector.
4. To be repositioned as the viable and relevant farmers' organization adding value to its membership by helping to create an atmosphere where wealth can be generated for all through the influencing of policies that will benefit the sector.
5. To celebrate the glories of Jamaican cuisine culture, many examples of which are the heart and soul of Food Festivals.
6. To promote the linkages between the agricultural and tourism sector (Ministry of Agriculture and Fisheries 2014).

The *Eat Jamaica* campaign falls under the allowable Green Box Policy of marketing and promotion. For example, to promote more people to eat Jamaican grown food, supermarkets across the island carry local produce that is embellished with the campaign's logo. The Jamaica Agricultural Society also promotes 'Eat Jamaica Month' each November, the same month that they host the annual Denbigh Agricultural and Industrial Show to market and promote Jamaican farming. The campaign has consistent publicity because national politicians laud it. Both the JLP and the PNP support the Eat Jamaica Campaign. Former Minister Tufton celebrated policies that support the domestic food system. Roger Clarke, appointed as the PNP's Minister of Agriculture in 2012, also supported the Eat Jamaica campaign during his tenure. Both former Minister's celebration of the Eat Jamaica campaign highlights the importance of the domestic food system in Jamaica's political landscape.

Jamaicans' opinions of the Eat Jamaica campaign are mixed. The press reports that Eat Jamaica campaign has been a success, based on interviews with staff at the Jamaican Agricultural Society and the Ministry of Agriculture. Evidence of the campaign's success, according to interviewees, include membership in 4H Clubs of Jamaica, a shift in household purchasing patterns, and an increase in domestic food production. In 2012, domestic food production grew from 491,473 metric tonnes to 610,138 tonnes (Jamaica Gleaner 2013). Norman Grant, president of the Jamaica Agriculture Society (JAS), reports that since 2003, the weighted average annual food import bill has decreased by US$60 million (NationNews 2016). Data presented by the FAO tells another story: the overall food import bill increased from US$503 million in 2001 to US$913 million in 2013 (FAO 2013). While Jamaican citizens tend to agree with the principles behind the campaign, interviewees for this thesis stated they do not see any impact in their everyday lives. Woo (2015) interviewed citizens about the Eat Jamaica campaign, and the majority of people interviewed did not see the same positive impacts that the media reports The overall impact of this campaign on the domestic food system is difficult to attribute or quantify. While Jamaicans debate the success of the *Eat Jamaica* campaign and no formal evaluation has taken place, it represents an instructive entry point to study the persistence of food self-reliance as a national priority.

Another initiative that supports the domestic food system and fits within the WTO's agricultural restrictions is a nutrition program administered by the United Nations Food and

Agricultural Organization. It builds on existing school meal plans and is modelled on the successful program rolled out in Brazil (Sidaner, Balaban, and Burlandy 2013). The project, *Strengthening of School Feeding Programmes in the Framework of Latin America and the Caribbean without Hunger 2025 Initiative* is part of Brazil's south-south development cooperation (FAO 2016). The modifications to the program in Jamaica involve providing locally sourced produce to schools, prepared in healthy ways. At the time of my field research, this program was just beginning.

The joint Ministry of Agriculture and Fisheries and Ministry of Health's National Food and Nutrition Security Policy, released in 2013, also operationalizes allowable agricultural policies as per WTO restrictions. The policy's official report echoes Manley's food self-reliance agenda implemented in the 1970s, framing self-reliance as its overarching goal, as illustrated by this excerpt:

> The basic philosophy under-pinning food and nutrition security and the development of food production and allied services in Jamaica is defined as the achievement of the optimum degree of self-reliance through a strategy of feeding, clothing and housing the population, utilising to the greatest extent possible and feasible, indigenous raw materials and human and natural resources (Government of Jamaica 2013, 4).

The passage above indicates the Government of Jamaica's central food and agricultural policy goals: to confront support Jamaicans' food security and contributes to national economic development through agricultural self-reliance.

Conclusion

This chapter established that Jamaica's food system, from colonization until the present day, has been consistently connected to global food and agricultural import and export markets, and at the same time, has distinctive and lasting local elements. Since Spanish and British colonization eroded the island's indigenous agricultural traditions with plantation agriculture, Jamaica's food system has been firmly linked to the global economy. At the same time, domestic farming for domestic consumption has been supported by the state to varying degrees. This

chapter lays out the context through which small-scale farming emerged to feed people across the island, at the same time that the country's economy remains connected to global markets.

Conditions of plantation agriculture and slavery continued foreign investment in sugar and banana production and food aid shaped Jamaica's food system in in ways that remain influential today. Then, the adoption of structural adjustment loans and adherence to a free international trade order exposed Jamaica's domestic food system to significant vulnerabilities. The ways that Jamaica's domestic agricultural sector is made vulnerable by food import dependence and international trade rules are well documented, and parallel studies of the devastating impacts of neoliberal economic policy on food and agricultural systems that food sovereignty scholarship documents. However, the ways that the domestic food system still serves important functions are less-researched. The Government of Jamaica's consistent commitment to food self-reliance is indicative of a long-standing commitment to the principle of self-reliance as an underlying national development principle. The state's ability to enact this commitment is severely limited by its indebtedness and trade restrictions. Given this context of declining state support and unsympathetic trade environment, how has the domestic food system persisted? The ways that domestic food system has endured to serve crucial functions are explored in Chapter Four, Five and Six. Employing the diverse economies framework contexutalised in the particular political economic context of the Caribbean, the next three chapters show how Jamaica's domestic food system persists to support food security outcomes in Kingston (Chapter Four), provide rural and urban livelihoods for small-scale farmers, higglers and their families (Chapter Five) and give a sense of place for Jamaicans (Chapter Six).

Chapter 4: The Embedded Dimensions of Food Access in Kingston's Markets

The first objective of my dissertation is to explain the reasons that Jamaica's domestic food system, encompassing the production and distribution of food that people eat on the island, perseveres. Applying the diverse economies framework that is contextualized in the particular political and economic context of the Caribbean, this chapter establishes the first reason: the domestic food system makes food accessible. My conceptual framework illustrates the ways that this food system is embedded to serve people's access to food. The purpose of this chapter is to show the lasting connections between the domestic market and food access, today, despite the strong links to import and export markets. In particular, this chapter evaluates how Kingston's urban markets remain an important way for residents to access food despite the proliferation of Western-style supermarkets. I focus specifically on food access in Kingston, not Jamaica's smaller cities and towns nor rural areas because of data access; the data presented in this chapter drawn from the Hungry Cities Partnership's household survey data. In Chapter Three, I indicated how this data shows that people living in Kingston face food insecurity, including hunger and a lack of dietary diversity at the same time that domestic fruit and agricultural production has increased, highlighting a need to investigate people's access to food.

As I established in Chapter Three, Jamaica's higgler system and its urban markets have been crucial for distributing Jamaican grown food from farm to table since British colonization. Yet scholars, in particular in the 1970s, predicted that the strong connections Jamaica had with global markets would eclipse traditional food sources (Mintz 1974; Norton and Symanski 1975). For example, Mintz predicted that Western-style supermarkets, as they expanded in other countries, would spread across Jamaica, too, and render urban markets and higglers obsolete (1974, 222). Mintz saw that the domestic market persisted throughout the 1950s and 1960s to serve Jamaicans with irregular or inconsistent income (1974). He hypothesized that as the Jamaican economy developed and people's incomes stabilized, it would be profitable for investors to develop a network of supermarkets. Similarly, Norton and Symanksi predicted local markets would "break down" as the Government of Jamaica set up their state-led marketing program, the Agricultural Marketing Corporation, and Western supermarkets developed on the island in the 1970s (1975, 475). At this time, the authors witnessed deteriorating conditions in Jamaica's urban markets, including a rise in food safety issues and in some cases, market closures (1975). The AMC was expanding their retail outlets in a "more efficient" way, and the

island's supermarkets began carrying domestically grown food and provided a higher level of customer service, for example, parking and air conditioning (Norton and Symanski 1975, 475). These predictions were based on assumptions that the Jamaican economy would follow a linear trajectory of economic development, where the informal market for food would be formalized.

Today, supermarkets have indeed established themselves as important places where people living in Kingston access food. At the same time, the island's urban markets have shown resilience as compared to the state-supported AMC, which, as I indicated in Chapter Three, was dismantled in 1981. Kingston's markets are vital, thriving spaces for people to access fresh, domestically grown produce. The data presented in this chapter shows that the domestic market provides access to food that is affordable, meets people's food preferences and is distributed in an inclusive manner. The findings show that, in Jamaica, the domestic market supports food access because of its embeddedness. Here, I characterize the domestic market according to Gibson-Graham's understanding of a diverse economy. This food system relies on principles of economic exchange, including cash transactions for food; however, it is the particular way that the market is socially embedded that enables it to support people's access to food in Kingston. The domestic market involves judicious use of alternative economic and non-economic transactions. Further, the complex nature of the domestic market is inextricably linked to Jamaica's history and culture, as well as food import channels.

Food access, or "the ability of households to obtain food" (Webb et al. 2006, 1405) has been an important component of food and agricultural research since the 1980s, when Amartya Sen (1981) critiqued a parochial focus on the availability of food in understanding how famines occur. Sen asserted that food must not only be available, but also accessible to all in order to prevent or overcome famine conditions. Food access is now widely accepted as a critical component of food security (FAO 2006). According to Ericksen (2008), food is accessible when it fulfills three requirements: when it is affordable, well allocated, and appropriate to one's food preferences. Allocation involves the mechanisms governing food distribution. Appropriateness refers to preference for particular food, or social or cultural norms and values that influence consumer demand. Affordability refers simply to the purchasing power of households or communities relative to the price of food. Despite Jamaica's high levels of imported food and lasting connections to export markets outlined in Chapter Three, the domestic food system still supports people's access to food.

The diverse economies framework is useful for evaluating overlaps between the domestic market, global supply chains and local food system dynamics. This framework usefully encompasses the complexities of Jamaica's domestic food system that characteristically straddles conventional markets, alternative and non-market labour practices, with complex relationships of exchange. As I outlined in Chapter One, analyzing food distribution remains a notable gap in dominant food sovereignty scholarship. Emerging scholarship is only beginning to articulate its position on what distribution might look like in a sovereign food system (Wittman and Blesh 2017; Pimbert 2018). Wittman and Blesh (2017) call for more research on food markets and distribution opportunities. However, the anti-capitalist stance of food sovereignty scholars leaves little analytical space to study localized food distribution activities that are enmeshed with capitalist market principles and global food supply chains. In this case, I suggest that the diverse economies framework is necessary to understand local market dynamics are not necessarily anti-capitalist, but rather embedded in context, especially in light of recommendations to bring the food sovereignty movement to Jamaica.

Jamaica provides an ideal case study to posit the role of embedded markets in supporting people's access to food. However, some historical context regarding the emergence and role of urban markets is essential to understand the current state of access to food in Kingston. Here, the domestic food system uniquely organized to interact with imported food and global supply chains to provide the wide range of products that comprise the Jamaican diet. The domestic market's structure is the product of a complex history, which I explained by drawing on Caribbean political economy literature. The domestic food market's structure is tied to the country's experiences with colonization and the persistence of links and dependencies to the global economy established in the previous chapter.

This chapter shows how the unique, embedded structure of Jamaica's domestic food market enables it to deliver accessible food. To analyze connections between domestically grown food and one pillar of food security, food access, for urban dwellers, I draw on a triangulation of survey data collected at the household level in 2015 and direct observation and interviews conducted from May to October, 2016 that analyze the supply chain for domestically grown food. The outline of this chapter is as follows: first, I review notable literature on food access. This study fits in line with emerging literature on the diverse, dynamic nature of AFNs that enable food access in urban areas of LMICs. Next, the chapter introduces Jamaica's diverse

set of food sources. Kingston residents access food at various sources, including the market, supermarkets, community corner shops and wholesalers. The chapter then presents how the domestic market provides affordable, preferred food distributed across income levels, contributing to my first research objective, to explain the role that the domestic food system serves today. This is followed by a discussion of how the embedded, contextual nature of the domestic food system helps to serve the important role of delivering food access, defying obsolescence. The data presented in this chapter provides further insight into AFNs in a Southern context based on Jamaican's unique history. Additionally, the persistence of Jamaica's urban markets raises important insights relevant to food sovereignty scholarship addressing gaps in research on food markets and distribution.

Food Access in Low- and Middle- Income Countries

Amartya Sen's seminal book, *Poverty and Famines*, introduced the concept of food access as a way to counter a narrow focus on increasing agricultural productivity to deal with famine (1981). At the time, the Sahel was experiencing a drastic increase in famine conditions with no corresponding decline in food output. Sen argued that famine relief and prevention efforts should center on stabilizing people's entitlements[19], including their real income levels, and not simply focus on increasing agricultural output (1981). The United Nations Food and Agricultural Organization subsequently incorporated the important role of access to food in their definition of food security developed in 1983, which is, "ensuring that all people at all times have both physical and economic *access* to the basic food that they need" (FAO 1983). Drèze and Sen's *Hunger and Public Action* builds on Sen's work, arguing that increasing food production will not solve world hunger if people cannot access it (1991).

Scholars looking at the complex relationships between urbanization, agriculture and food security note the importance of access to food in cities (Haddad, Ruel, and Garrett 1999; Satterthwaite, McGranahan, and Tacoli 2010). Aside from those who practice urban agriculture cities[20], people living in cities rely heavily on purchased food for their diets. Ruel and Garrett

[19] Entitlements are defined as the "set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces" (Sen 1984, 497)

[20] Mougeot (2005) offers a comprehensive study of the important contributions of urban agriculture across cities in Argentina, Botswana, Côte d'Ivoire, Cuba, France, Togo, Tunisia, the UK, and Zimbabwe.

(2003) found that people living in cities are likely to buy more than 90% of their food rather than grow it themselves[21]. As such, research considering people's access to food in cities commonly focuses on purchasing patterns and where people buy food (Si, Scott, and McCordic 2019; Reese 2018; Crush and Frayne 2011). Cohen and Garrett (2010) determine that the 2007/8 food price crisis was an indicator of the inseparable influence that price has on urban dwellers' ability to access food. There were spikes in food prices that led to increases in child malnutrition and food insecurity, resulting in widespread, at times violent, protest (Cohen and Garrett 2010). The strong links between hunger and food access that Sen hypothesized are particularly evident in cities.

A key debate in literature studying food access and cities in LMICs revolves around the changing ways that people access food. In particular, scholars analyze the expanding role of modern, Western-style supermarkets in LMICs (Weatherspoon and Reardon 2003). Some scholars have similar predictions as those studying Jamaica's food system: that the expansion of supermarkets will replace informal food markets (Reardon et al. 2003; Reardon and Hopkins 2006; Reardon, Henson, and Berdegué 2007; Gorton, Sauer, and Supatpongkul 2011). Reardon and colleagues frame the spread of Western-style supermarkets throughout Latin America, Asia and Africa as linear and inevitable (Reardon et al. 2003; Reardon, Henson, and Berdegué 2007; Reardon and Timmer 2012). In their analysis of the rise of supermarkets in Africa, Asia and Latin America, Reardon et al. anticipate that economic development in urban areas will displace local, informal food markets with larger, centralized supermarkets (2003, 1140).

The reasons behind the assumed proliferation of supermarkets are twofold. First, supermarkets are expected to multiply throughout LMICs as they have in high- income countries, both through the expansion of North American and European chains and also emulation by other countries (Altenburg et al. 2016). Secondly, according to this body of literature, supermarkets are more competitive and efficient, and can suit emerging dietary trends of an increasingly urban population in LMICs better than traditional retail outlets (Tschirley et al. 2015). Reardon and Gulati (2008, 17) address one assumed implication of the diffusion of supermarkets, stating, "the mirror image of the spread of supermarkets is the decline of the traditional retail sector" across LMICs. Like the studies in Jamaica in the 1970s predicting that

[21] By contrast, Ruel and Garrett note that people living in rural Peru purchase 58% of their food and 29% in rural Mozambique (2003).

Jamaica's domestic food system, including the higgler distribution system, would become obsolete, contemporary scholars predict that the spread of Western-style supermarkets implies a corresponding decline in food markets (Kennedy, Nantel, and Shetty 2004; Louw et al. 2007).

Contrary to these predictions of supermarkets replacing local food sources, case studies exploring AFNs in LMICs show that, while supermarkets indeed offer an additional means of accessing food, local markets remain competitive (Abrahams 2007; 2010; Peyton, Moseley, and Battersby 2015; Si, Scott, and McCordic 2019). These studies analyze people's purchasing patterns in sub-Saharan African and Asia to show that both markets and supermarkets contribute to people's strategies to access food. The reasons behind the endurance of local or domestic markets are contextual, yet speak to this chapter's findings: local and domestic markets provide food that is affordable, appropriate and well allocated. Peyton argues that South Africa's informal urban food markets are compatible with the consumption strategies of all citizens, while supermarkets can exclude poor customers (2013). Food markets in Lusaka, Nairobi and Cape Town provide a range of food products, including healthy options that suit the diverse consumption patterns of urban residents (Abrahams 2010; Freidberg and Goldstein 2011; Peyton, Moseley, and Battersby 2015). Windhoek's informal food sector has carved out a niche for products that supermarkets do not sell, like offal (Nickanor et al. 2019). In Nanjing, China, state-supported wet markets are crucial for people's access to fresh produce (Si et al. 2019). In each case, local markets defy assumed obsolescence because they enable access to food in an inclusive, contextual manner.

The growing number of case studies charting the lasting relevance of food sources in LMICs also show how supermarkets can be exclusive for people with low or irregular incomes. Si et al's study in Nanjing shows how supermarkets are unequally allocated across urban spaces, in particular when compared with ubiquitous wet markets (2019). Peyton et al.'s (2015) study shows that although supermarkets have indeed proliferated across Cape Town's economically diverse neighbourhoods, they can exclude low-income customers. South Africa's informal urban food markets are more compatible with the strategic ways that people access food when they have precarious employment (Peyton 2013; Haysom 2017). The findings presented in this chapter contribute to this emerging body of literature complicating Reardon's underestimation of embedded food markets in the wake of supermarket expansion.

The place-based studies of AFNs in LMICs highlight the importance of contextualized research to analyze the food access in urban spaces. Peyton et al. (2015) note the need for

context-specific research to understand the complex relationship between the expansion of supermarkets and food systems in low- and middle-income countries. The results presented in this chapter build on studies across low- and middle-income countries, and are contextualized in the Caribbean, a region that receives less attention on this topic. Jamaica provides an interesting contribution to this literature because of its diverse range of food sources, including a wellestablished informal market system and a wide selection of Western supermarkets. While Jamaica has 'modern' food sources, the Kingston's markets are crucial to people's food access.

Food Access in Kingston

Kingston residents access food in many ways.[22] Table 4-1 lists Kingston's most frequently used food sources, as indicated by survey respondents. This chapter narrows in on two food sources, specifically Kingston's markets and supermarkets. As discussed in Chapter Three, Kingston's urban markets were established as the key institution to sell fresh, Jamaican produce grown by enslaved people. Today, they remain important distributive institutions supporting the domestic food system, selling Jamaican produce to Kingston residents. The markets have several features that make food particularly accessible. Supermarkets, on the other hand, were established to distribute imported food. Before analyzing the specific features that underpin people's consistent use of markets, this chapter describes each of Kingston's unique set of most frequently used food sources, focusing on markets and supermarkets.

Table 4-1: Retail Food Sources by Frequency of Access

Food Source	**% of respondents who use food source**
Market	**75.8**
Wholesale (grocer, café, butchery, small shop)	72.8
Corner Shop	65.8
Supermarket	**64.8**

[22] People living in Kingston rely on purchased food. Only 17.66% of sampled households in the study reported growing their own food in the city. When asked why they do not practice urban farming, respondents replied that they expect any produce will be stolen (70.2% of the sample felt this way), and that growing their own food is inconvenient (60.3% of the sample felt this way). Over half of respondents (59.4%) lack access to land to cultivate.

Fast Food, Takeaway	43.7
Restaurant	34.0
Street Vendor	28.6

Source: Household survey data

Kingston's Markets

Kingston's six urban food markets represent the central institutions distributing domestically grown produce in the city. As discussed in Chapter Three, these markets originated as early as 1672. Today, urban markets across Jamaica remain vital sites for higglers to distribute domestic produce from rural, small-scale farms. Overall, higglers are an extremely diverse group of people who buy and re-sell various amounts of locally produced and imported food and household goods. However, Chapters Four, Five and Six narrow in on higglers that buy and re-sell food in Kingston's markets. This subset of higglers tends to be made up of low-income black women who exclusively trade food, supplementing domestic produce with imported food. This sub-set of higglers are closely tied to the practices of the island's original higglers, although they tend not to be spouses of small-scale farmers households as they were historically. Today's higglers who trade Jamaican grown food vary in age and, as in the 17th and 18th century, have limited educational opportunities and lack options for social mobility. Higglering is a unique economic opportunity to earn an independent salary.

Kingston's markets are major hubs for the procurement of domestically produced food. Formal markets also serve as wholesale food distribution sites, where traders, retail vendors, restaurants and hotels purchase fruits and vegetable in bulk for resale. Seepersad and Ennis estimate that 80% of Jamaica's domestically grown produce pass through markets (2009). These food products include fresh fruit and vegetables, starches such as roots and tubers, green bananas and breadfruit, and some fish and meat. The survey data indicates that markets are the most frequently accessed food sources where people to buy food, accessed by 75.8% of survey respondents. The majority of survey respondents visit markets weekly (58.3%, or at least once per month, 35%). Markets are open from Tuesday to Saturday, with Saturday being the most popular day to shop. Markets are large, covered structures with vendors selling goods at rented stalls. Others informal sellers work outside the covered structure, on tarps on the ground, or on wooden carts with wheels. While the majority of vendors sell food products (both domestically produced and imported), other vendors sell clothing, herbal remedies, and other household

goods. The Kingston and St. Andrew Corporation (KSAC) governs Kingston's markets. KSAC officials have offices in each market space and collect stall fees from vendors. Registered vendors pay between JMD 3,000-6,000 annually, through the Vendor Registration Programme. Informal sellers working outside the covered structures do not pay market fees.

Urban markets are important sites to access food across the island. Each town and city have their own respective market that is similar to those found in Kingston. Markets are similar in their structure; there is a covered, stone building with regular vendors selling food inside, and informal sellers outside the building. Markets across the island are also substantially busier on weekends when households do their weekly shopping. One key difference between markets in Kingston and smaller urban areas in Jamaica centres on Kingston's largest market, described in the next section. Coronation market is much larger in size that all other markets and acts as a key distribution centre for the majority of the island's fresh produce.

Coronation Market

Coronation Market, the largest market in the English-speaking Caribbean, is the most important redistributor of domestic produce in Jamaica. It is estimated that between 6,000 and 8,000 people visit the market each day (Brooks 2010). Coronation Market is more than simply a food source for urban residents, however. It is a key distribution point for domestically grown food, in particular, for parochial markets across the island (Norton and Symanski 1975). Between 60% and 70% of fruit and vegetables that arrive at Coronation Market are distributed through other markets across Kingston (Seepersad and Ennis 2009). Trade to and from Coronation Market comes through dynamic flows, rather than specific, predictable paths. Because of Coronation Market's importance providing food to Kingston, it is commonly targeted by gang violence. In 2010, the market was subject to arson as part of a reclamation of territory following the extradition of Christopher "Dudus" Coke. At the time of field research in 2015, Coronation Market was inaccessible due to gun violence. During these periods of violence, the market remains open; however, a curfew may be used to impose restrictions on access. Patrons continue to shop at Coronation market despite significant threats of violence and theft, highlighting the importance of this market as a source of food.

Supermarkets in Kingston

Supermarkets are the third most common food source for Kingston residents.

Supermarkets began to spread across Jamaica in the 1970s. Supermarkets are distinct from other food sources due to their size and selection of products; supermarkets are significantly bigger and carry a range of products, arranged in the style of a Western shop. The number of supermarket locations is indicated in Table 4-2. Kingston has a range of locally-owned supermarkets in higher-income neighbourhoods. A Jamaican family owns Loshusan supermarket, located in the high-income neighbourhood of Barbican. At the time this research was conducted, there were 13 HiLo Foods stores across the island, which are owned by Grace Kennedy, a Jamaican food processing company. The Jamaican-run consortium Progressive Grocers have 34 stores across the island, and Jamaican-owned General Foods has two stores in Kingston and Ocho Rios. Supermarket buyers work with local, regional and American suppliers to source a range of imported and domestically grown produce, non-perishable food items, meat and dairy products and household goods. There are also several membership-based supermarkets, such as Jamaican-owned MegaMart and Price Smart, an American warehouse chain located across the Caribbean and the US, four of which are in Jamaica, where customers can buy goods in bulk.

Table 4-2: Supermarket Chains in Jamaica, 2017

Name of Supermarket Chain	**Number of Outlets**
Progressive Grocers of Jamaica	34
Hi-Lo (Grace Kennedy)	13
Mega Mart	4
Super Plus	3
General Foods	2
Loshusan	1

Source: Adapted from USDA Foreign Agricultural Service (2017b) and author's direct observations

When supermarkets were established in Jamaica in the 1970s, they did not sell domestic produce (Norton and Symanski 1975). Domestic produce was the sole domain of Kingston's markets,

and supermarkets sold imported goods. Today, supermarkets are branching out to sell some Jamaican-grown produce in addition to a wide array of imported goods. Seepersad and Ennis (2009) estimate that supermarkets sell only 5% of the produce grown in Jamaica for sale on the domestic market. Supermarkets buy their stocks of domestically grown produce from traders and wholesalers who purchase it at formal markets, or they may have formal contracts with farmers, marketing associations and cooperatives.

Other Food Sources in Kingston

Kingston residents also access food at wholesale shops, corner shops and at restaurants. Wholesale outlets are the second most commonly used food source in Kingston. These small shops are located throughout the city, in both low- and high- income neighbourhoods, selling a wide range of household items, non-perishable and perishable food products. They are common places for people to buy non-perishable food items such as pasta, cereals, powdered milk, oil, sugar and rice, as well as frozen meat. Wholesalers are located throughout the city, including lower-income neighbourhoods. Corner shops are also important food sources across the city. These shops are small wooden structures that sell a range of goods such as snacks and small amounts of kitchen basics, much like a bodega or small convenience store. Considered the "poor man's supermarket," corner shops are abundant throughout Kingston (Reid 2010, no page). Takeaway shops, restaurants and street vendors are also common places where people access food on a regular basis

Domestically grown food reaches Kingston through the internal marketing system described in Chapter Three. The majority of domestically grown food is bought and sold through Kingston's markets, while some is re-distributed from the market through supermarkets, corner shops and street vendors. After establishing the significance of urban markets to distribute domestically grown food, this chapter narrows in on markets and supermarkets to show the specific characteristics of the domestic food system, as a whole, that make food accessible.

The Domestic Market and Food Access in Kingston

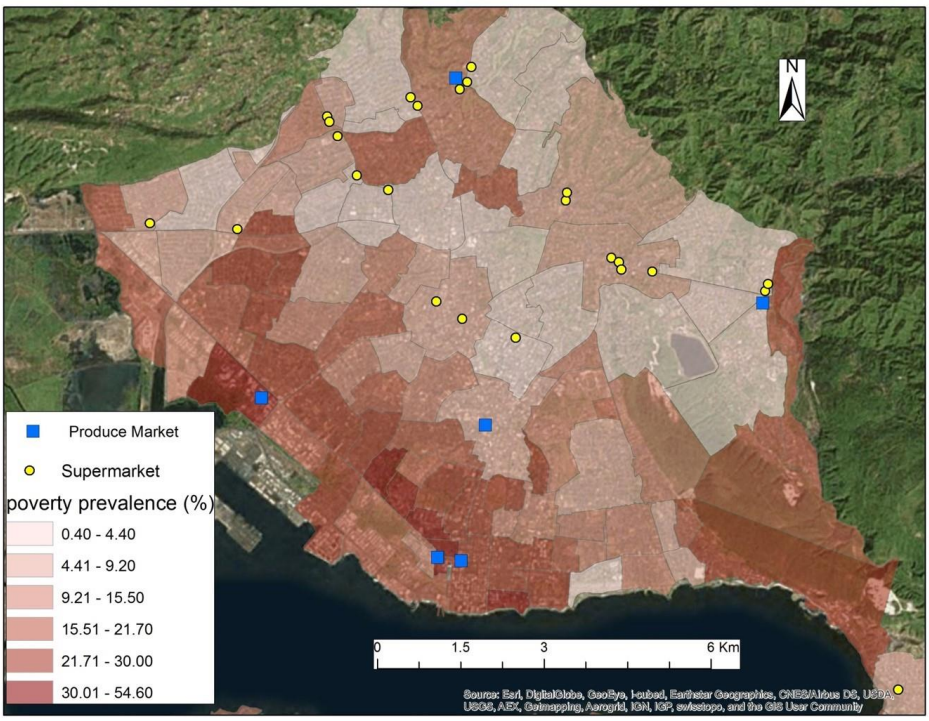
Allocation

Today, supermarkets have indeed established themselves as important places for Kingston residents to buy food. However, urban markets continue to redistribute the food grown

on Jamaica's small-scale farms to Kingston's diverse neighbourhoods. One reason that supermarkets have failed to replace urban markets is that they have yet to spread into low-income neighbourhoods. The geographic location of places to shop is one factor that determines the accessibility of food for many of Kingston's residents. This section draws on data showing the diverse ways people in Kingston access food, and how it is distributed across the city, in particular, the ways that Kingston's markets, the key distributive institutions of Jamaican grown products, allocate food to reach low-, middle-, and high-income neighbourhoods. Figure 4-1 shows the spatial distribution of Kingston's six urban markets and supermarkets. The map also gives an indication of where these two food sources are located with respect to levels of socio-economic status in Kingston. The locations of markets and supermarkets are layered on top of data depicting the level of poverty prevalence in each of the city's neighbourhoods. Kingston's markets, indicated by blue squares, are located across diverse socioeconomic areas, where the prevalence of poverty is measured as low, at 0.4% to 4.4% of the population as well as neighbourhoods with a high (30% to 54.6%) prevalence of poverty.

Supermarkets, indicated by yellow dots, are located across the Kingston's upper-class neighbourhoods, in New Kingston. According to Figure 4-1, supermarkets are generally located in neighbourhoods with a low prevalence of poverty.

Figure 4-1: Locations of Supermarkets, Produce Markets in Kingston according to Poverty Prevalence



Source: Thomas-Hope et al. (2017)

In the household survey, enumerators asked respondents about their attitudes toward patronizing supermarkets. One reason that people cited as why they opted not to shop at supermarkets is that they are simply too far away from their home. The survey findings show that 55.5% of respondents who did not use a supermarket in the month prior to the survey agree that it was too far away. On the other hand, produce markets are located in higher-income neighbourhoods, such as the northernmost market in Kingston in Constant Springs. Coronation Market serves Kingston's lower-income communities downtown. The survey findings show the inclusivity of urban markets in providing access to food, based simply on their geographical location.

Preference

Another way that Kingston's urban markets are not sidelined by supermarket expansion is that they remain a key place where people buy fresh produce. Of course, people's food preference are constantly in flux, determined by a range of factors that I analyze in more depth in Chapter Six. The scarce research analyzing Jamaican diets notes their heterogeneity, and the

continued importance of fresh produce. Samuda et al. (1998) conducted an island-wide analysis of food purchasing patterns that provides a basic understanding of commonly consumed foods, included in Table 4-3. Samuda et al.'s (1998) list is representative of a household food basket combining domestic produce (oranges, cabbage, ripe banana, carrot, peas, callaloo, yellow yam, tomato, green banana and lettuce), with imported products (rice, sardine, tinned mackerel, corned beef). In a more recent study, Abdulkadri (2014) classify the following domestically grown food as 'staples' in the Jamaican diet: calaloo, escallion, green banana, gungo peas, green sweet pepper, scotch bonnet pepper, tomato, watermelon and yellow yam. The Jamaican diet is a representation of the country's diverse cultural components and combines a range of imported goods with domestically grown food. Some food products are both produced domestically and imported to Jamaica, and this relationship shifts over time. Poultry is a particularly notable example of this. Following independence, Jamaican was self-sufficient in poultry production. When import restrictions on agricultural products loosened because of an Agricultural Sector Adjustment Loan, the poultry market was flooded with chicken backs and necks, imported from the United States. Jamaica has since reclaimed some sovereignty over its poultry market (Gleaner 2018), highlighting the dynamism of Jamaica's efforts toward food self-reliance.

Table 4-3: Rank order of top 15 most commonly consumed foods, Jamaica and Kingston Metropolitan Area

Food	Jamaica	Kingston Metropolitan Area
Orange	1	1
Cabbage	2	2
Ripe Banana	3	3
Carrot	4	7
Chicken	5	5
Rice and peas	6	7
Callaloo	7	3
Sardine	8	4
Tinned mackerel	9	6
Plain rice	10	5
Yellow yam	11	9

Corned beef	12	8
Tomato	13	11
Green Banana	14	11
Lettuce	15	12

Source: Adapted from Samuda et al. (1998, 82)

The household survey data shows similar results about the importance of produce as part of household food purchases in Kingston. The survey collected data on the frequency of food purchased, based on a list developed through consultations with Jamaicans about their typical diet. Table 4-4 represents the frequency at which households purchased food items in the month before the survey. Parallel to literature studying Jamaican diets, there is a distinct combination produce, staple grains and meat products in people's typical food purchases.

Table 4-4: Frequency of Food Purchases

Food Item	**% of households that purchased item (in the month prior to the survey)**
Rice	87.0
Sugar	84.0
Cooking oil	81.8
Frozen chicken	66.5
Vegetables	65.5
Roots and tubers	64.5
Brown bread	63.1
Green bananas, breadfruit	59.8
Eggs	59.3
Snacks	54.3
Fruit	54.3
Canned meat	53.8
Powdered milk	52.6
Tea/coffee	50.9
White bread	48.0

Source: Household survey data

Analyzing where people living in Kingston purchase various food items gives insight on the importance of urban markets and supermarkets for accessing different types of food items. Table 4-5 indicates where people buy the most commonly purchased food items. Rice, the food item purchased by the highest percentage of surveyed households is most commonly purchased at the supermarket (44.4%), wholesale stores (44.2%), or corner shops (28.2%). Similar trends are evident for other products, such as sugar and cooking oil. Notably, this trend shifts for produce. Fresh and cooked vegetables, purchased by 67.5% of surveyed households, are most often purchased at the market. Out of the households involved in the survey, 69.6% purchase vegetables at the market, compared to 26.3% at supermarkets. Roots and tubers, that include starchy staples such as potato, sweet potato, yam, cassava, were purchased by 66.2% of respondents. Nearly three-quarters of surveyed households (74.2%) buy roots and tubers at markets, contrasted to 10.15% at supermarkets. Most respondents, 66.1%, buy fruit at the market, while only 27.3% buy fruit at the supermarket. Of the surveyed households that purchase green bananas and breadfruit, 69.5% buy them at the market. The survey data indicates that while the supermarket is a common food source for imported food, the market is an important source for produce.

Table 4-5: Frequency of Food Purchases by Food Source

Food Item	% of households purchasing	Supermarket	Wholesaler	Market	Corner Shop	Street Vendor
Rice	87.0	44.4	44.2	0.8	28.2	0.3
Sugar	84.0	44.1	43.6	0.2	28.8	0.3
Cooking oil	81.8	44.8	43.2	0.4	26.5	0.5
Frozen chicken	66.5	31.5	32.1	1.7	27.2	1.3
Vegetables	65.5	26.3	3.7	**69.6**	6.5	2.8
Roots and tubers	64.5	10.2	1.3	**74.2**	8.8	7.5
Brown bread	63.1	51.0	22.1	0.2	28.2	2.5
Green bananas, breadfruit	59.8	7.4	1.9	**41.6**	6.3	5.3
Eggs	59.3	39.2	26.9	3.1	23.8	10.1

Snacks	54.3	52.5	32.8	-	27.8	1.3
Fruit	54.3	27.3	2.9	**66.1**	3.4	10.0
Canned meat	53.8	44.7	43.1	0.5	31.2	0.5
Powdered milk	52.6	49.6	41.7	-	24.4	0.3
Tea/coffee	50.9	58.3	32.0	0.8	16.8	0.6
White bread	48.0	40.7	23.7	0.9	40.7	2.4

Source: Household survey data

The data presented in this section illustrates the diversity of food people buy and where they buy it, and the importance of domestically grown food and its distribution. The domestic food system is an established way that people can access this integral part of their diet in Kingston. Kingston's market are preferred spots to buy fresh produce, like fruit and vegetables, root crops, green bananas and breadfruit. Kingston residents buy other staples at wholesale shops, supermarkets and corner shops. Kingston's markets and supermarket, selling both domestically grown and imported food in different ways, exist alongside each other a hybrid relationship. In each case, including Kingston, local markets defy assumed obsolescence because they enable access to food in a way that urban residents prefer.

Affordability

The domestic market supplies food that is not only appropriate, but also affordable. While food's affordability is most commonly associated with low prices relative to household income, the survey data, paired with interview data, shows that affordability, here, is more complex. Affordability is maintained through what Gibson-Graham classify as alternative and non-market transactions (2014a). Specifically, households can afford food through informal credit that vendors offer their customers in food markets. Framing the domestic food system as a diverse economy helps to tease out some of its integral non-market components that contribute directly to food's affordability, in particular when I pair the household survey data with interview data and direct observation in Kingston's markets.

Surveying people's attitudes toward supermarkets provides insights into preferences on where they shop. Survey respondents reported that one reason they choose to shop at supermarkets is the good variety of products that are of high quality. Out of surveyed households who patronize a supermarket, 93.4% responded that supermarkets have a greater variety of foods

than other options. Other supermarket shoppers appreciate the ability to purchase products in bulk at the supermarket (71.0%). Alternatively, a portion of sampled households had not shopped at a supermarket in the month prior to the survey, and where asked why this was the case. Further data analysis shows the exclusivity of supermarkets income brackets. Table 4-6 below breaks down the use of markets and supermarkets by households' monthly income quintile.

Table 4-6: Household Monthly Income Quintiles and Use of Markets and Supermarkets

Income Quintile (JMD)	Income Quintile (CAD)*	Households that use the Market	Households that use the Supermarket
<10 000	<110	80.3%	54.9%
10 001 - 25 000	1 10.01-275	81.3%	58.3%
25 000 - 50 000	275.01-550	74.2%	63.6%
50 001 - 100 000	550.01-1 100	72.2%	79.6%
100 001+	1 100.01+	85.5%	89.1%

Source: Household survey data

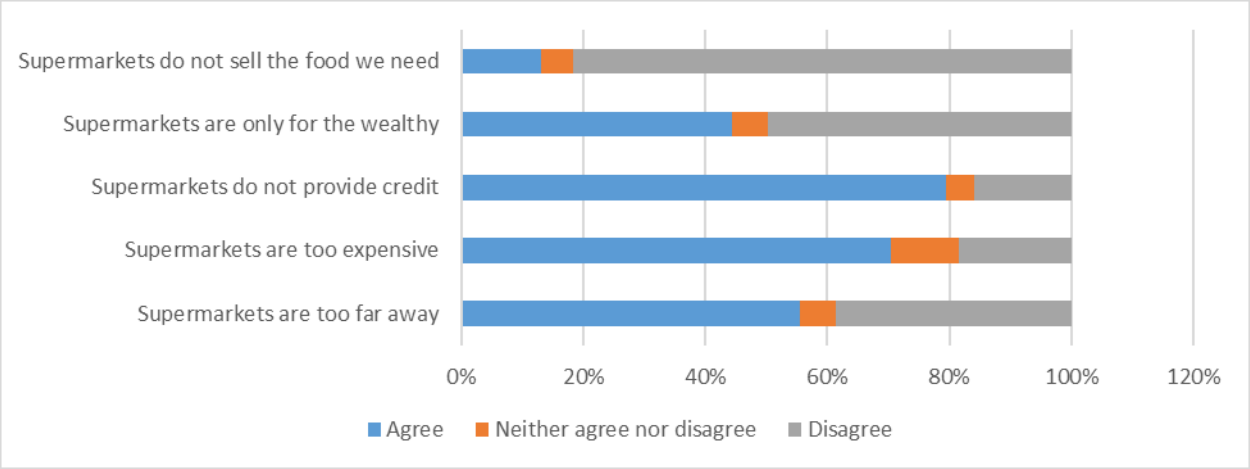
*Exchange rate from JMD-CAD was calculated as an average between July and October 2015 (0.011) when the data was collected.

This table shows that within the lowest income quintile of surveyed households, 80.3% use the market, while 54.9% use the supermarket. Compare this to 85.5% of the highest income quintile using the market, and 89.1% using the supermarket. The relationship between a household's income quintile and market use is not statistically significant (Pearson Chi-Square = 3.903; p=0.419 at a=0.05), while the relationship between a household's income quintile and supermarket use is statistically significant (Pearson Chi-Square = 22.935; p=0.000 at a=0.05). There is a significant correlation between household income and use of the supermarket as a source of food. On the other hand, there is no significant correlation between a household's income and using the market as a food source. Higher-income households included in the survey tend to patronize supermarkets more than lower income households. The use of Kingston's markets does not depend on one's income, while using supermarkets does.

Survey respondents reported that price is a factor in their attitude toward shopping at a supermarket. Respondents' reasons for not shopping at supermarket are details in Figure 4-1.

Out of the households surveyed, 70.3% said that they abstain from shopping at supermarkets because prices are too high. However, price was not the most prohibitive factor for people to shop at supermarkets. Instead, 79.4% of respondents who did not shop at a supermarket stated that it is because supermarkets do not provide credit. At the supermarket, patrons must pay for their purchases up front. By contrast, people can rely on informal credit in markets, doled out at the discretion of market vendors. This is a point of contrast with markets: in the market, one can access food and pay later. This informal exchange is encapsulated by the Patois concept of ‘trust’, defined as purchasing something with the expectation that one will pay at a later time.

Figure 4-2: Attitudes toward Kingston's supermarkets (from non-patrons)



Source: Household survey data

I classify informal credit, or trust, according to Gibson-Graham's definition of alternative market transactions. Informal credit is one way that the domestic food system is able to serve people's needs through its embeddedness in Jamaican society. Informal credit is a common alternative market practice among vendors, street sellers and those working in corner shops. All of the market vendors interviewed for this study reported instances of providing goods on credit. Vendors use trust as a way to build and maintain relationships with all types of customers. Market vendors and customers alike consider trust to be a decent practice to support those who may temporarily be unable to pay. In some cases, vendors give informal credit based on longterm personal relationships developed between customers and vendors over years of service. Customers stated that their families have bought produce with the same market vendor for decades. In other cases, credit is given to customers with whom a vendor has a shorter personal history. Papine Market provides an interesting example of vendors disbursing informal credit to students living in the community for a short time. Papine Market is located near the University of the West Indies' Mona campus, frequented by students who temporarily live in the area, coming from outside Kingston and across the Caribbean. Market vendors, here, recognize that flexible payment agreements are important for temporary customers on fixed incomes and offer trust to students.

An interview with a market vendor illustrates the concept of *trust* in an exchange between herself and a hypothetical customer. The hypothetical customer does not have a consistent stream of income and cannot afford to pay for food upfront.

> You have to remember that some people get paid every 2 weeks and they don't have the money, so they will ask, 'Mum, trust me something because I'm broke.' And I trust people because I know that on Friday, when the fortnight comes, you're going to pay me... I say alright, I'm not leaving that lady, I'll support her.[23]

Later on, the same market vendor clarifies that customers can come to the market to buy food with informal credit, but will not receive the same courtesy at the supermarket.

> They can't go over to the supermarket and trust…, so they have to come to the market where they can get it. You definitely have to have your money to go to the supermarket, so that's why they turn to the market here where they can get what they want.

Trust is a context-specific component of alternative exchange that helps people afford food. Providing informal credit is one way that the internal marketing system makes food affordable and, thus, accessible to Kingston residents.

The time of payment is not the only flexible thing about shopping at the market. In Kingston's markets, one can purchase a variety of quantities of food and negotiate price accordingly, through non-market transactions. Price is fluid, based on a range of factors including supply, demand, and customer profile: different prices based on socio-economic status: those who are poor, middle class, upper class or tourists (Katzin 1960). Vendors also provide customers with *brawta*, the Patois term for a baker's dozen. Giving brawta means giving customers a bit more than what they purchase (Norvell and Thompson, 1968; Besson, 2010). Brawta helps to build and maintain good relationships with customers and manage supply of goods for sale, particularly in periods of market glut. Katzin (1960: 317) provides another example: "The judicious giving of "brawta" is a mark of the successful higgler. She considers it a good investment in customer relations, saying: "That's why they come back to me," or "I give brawta to encourage them," (to make it profitable for the customer to continue to deal with her". Throughout periods of direct observation in Constant Springs Market, Papine Market and

[23] Interviewee 3, September 15, 2016.

Crossroads Market, I witnessed vendors giving their customers brawta. In particular, vendors would disburse fruit and vegetables they had in excess; whatever was in season or ripe.

The flexible nature of the domestic market leaves space to provide alternative and nonmarket exchange arrangements like trust and brawta that serve a dual purpose of helping customers who may not be able to pay upfront, and helping vendors build and maintain a strong customer base. Exchange, here, incorporates both market transactions and other elements based on relationships, market conditions, or factors other than price. These alternative and nonmarket mechanisms allow vendors to sell food at affordable prices. Gibson-Graham's diverse economies framework reveals how the plural, everyday ways that the domestic market is embedded in Jamaican society help people access food. Vendors use market transactions, like in supermarkets, where customers pay cash for a particular quantity of goods, and price is determined by market supply and demand. However, vendors also use informal credit, trust, and additional quantities in times of excess supply, brawta. The way that market vendors can use relational measures like trust and brawta, can determine the accessibility of food, in particular, for customers with low or unpredictable income. Kingston's markets, the institutions that are key to distributing small-scale, Jamaican grown produce, are spaces where all residents, irrespective of income, come to shop.

The diverse economic relationships that support the persistent relevance of markets in Kingston is evident in other cities. For example, in sub-Saharan African cities, although supermarkets have expanded into lower-income areas, they are not accessible to people with low or unpredictable incomes (Vorley 2017; Peyton et al. 2015). The informality in markets across sub-Saharan Africa is unique to each context, but what it has in common is its inclusivity. Friedberg and Goldstein's work in Nairobi suggests that, for this reason, food markets are "…promising sites for promoting the causes of just, safe and sustainable food." (2011, 31). There is a need to conduct further research to recognize and leverage the inclusive strategies that market vendors use to provide customers with access to food when their incomes are limited.

Policy Reflections

The key policy recommendation that stems from this chapter's findings is to acknowledge and support the integral role of Kingston's urban markets. Markets in Kingston have a history of being targeting by gun violence and arson. In 2010, Coronation Market was

firebombed as part of violent uprisings in neighbouring Tivoli Gardens. In October 2017, a vendor was shot at Coronation Market because of an uprising of violence in West Kingston. In May 2018 a fire burned down a part of Papine Market. One interviewee I worked with in Southern St. Elizabeth explained the reason that Coronation market is targeted by violence is its political relevance as a food source. Quoting Kissinger, he stated, "…who controls the food, controls the people."[24] Market conditions are not ideal, yet, as the household survey indicates, people still buy a significant amount of food there.

The KSAC can take clear measures to improve market infrastructure. Other case studies show how cities such as Hong Kong, Belo Horizonte and Lusaka have had success with improving market infrastructure to strengthen local food supply chains (Ho 2005; Rocha and Lessa 2009; Abrahams 2010). Wet markets in Hong Kong benefitted from state support that allowed them to remain competitive with supermarket chains (Ho 2005). In Lusaka, targeted upgrades at the municipal level since 1997 have dramatically improved markets (Abrahams 2010). For example, market managers are trained to diffuse situations where political cadres harass market vendors, water systems have been installed, and there is support to develop cold chains for vegetables and dairy products (Abrahams 2010). Based on a case study in South Africa, Marumo and Manuza (2018) have similar recommendations for policy to protect informal produce sellers, recommending that policy interventions improve the working circumstances of vendors and support the quality of produce sold. Anku and Ahorbo (2017) study wet markets in Ghana and suggest specific ways to improve people's shopping experiences in markets to keep them safe, to give tax concessions to vendors who sell local produce, and to allow vendors to co-exist alongside more modern retailers, like supermarkets. Dealing with gang-related violence, however, is a systemic issue that requires local solutions that are beyond my scope to suggest, instead requiring bottom-up solutions.

Conclusion

This chapter shows how the embeddedness of Kingston's markets effectively support people's access to food. In the 1970s, scholars predicted that Jamaica's domestic market system that brought food from small-scale farms to urban markets would be rendered obsolete as household incomes stabilized and supermarkets were established across the island (Mintz 1974;

[24] Interviewee 21, October 5, 2016.

Norton and Symanski 1975). Narratives about supermarkets expanding and overtaking local markets are not unique to Jamaica, but rather represent a larger body of literature on food access (Reardon et al. 2003; Reardon and Hopkins 2006; Reardon, Henson, and Berdegué 2007; Gorton, Sauer, and Supatpongkul 2011). The findings presented in this chapter challenge such narratives, instead depicting a more complex relationship between markets and supermarkets over time.

Despite the expansion of Western-style supermarkets in Jamaica, the domestic market system defies predictions of obsolescence. Conversely, Kingston's markets, the domestic food system's key distributive institutions, have distinguished themselves as lasting, key sources for urban residents to access food. At the same time, supermarkets are important places where people in Kingston buy food. The findings presented in this chapter highlight the importance of Jamaica's domestic food system to food access, matching related studies on the persistence of local markets in other low- and middle-income countries. Like the research coming out of sub Saharan Africa and Asia, local markets in Jamaica remain important places to access food in the wake of supermarket expansion (Abrahams 2010; Peyton, Moseley, and Battersby 2015; Si, Scott, and McCordic 2019). Parallel to case studies in sub-Saharan Africa, Jamaica's domestic market provides a range of food products that suit the diverse purchasing patterns of urban residents (Abrahams 2010; Freidberg and Goldstein 2011; Peyton, Moseley, and Battersby 2015). Markets in Lusaka and Cape Town are important spaces for urban residents to access food that fits local consumption demands and existing local supply chains (Abrahams 2010; Peyton, Moseley, and Battersby 2015). Akin to Chinese wet markets, the persistence of the domestic market can be attributed, in part, to its ability to fill gaps in food access underserved by the global food supply chains in an inclusive manner. Taken together, these finding suggest an important, lasting role for the domestic market in the provision of food access, challenging expectations that supermarkets will render it irrelevant.

The diverse economies framework is necessary to understand local market dynamics that are not necessarily anti-capitalist, but rather embedded, especially in light of recommendations to bring the food sovereignty movement to Jamaica. Throughout this chapter, the framework helps to show the particular way this food market is embedded in context is key to its ability to serve people's access to food. Framing a food system as a diverse economy is a useful way to understand lasting, plural relationships between food producers and consumers. As such, my

conceptual framework helps to fulfill my research objective to explain the persistence of the domestic food system despite supermarket expansion and strong connections to food imports. In turn, this chapter establishes the importance of analyzing the ways that people access food as a key component of a diverse economy. Future studies exploring embedded food systems as part of diverse economies may look at the different ways that people access food in the particular context in which they live.

My conceptual framework also adds theoretical nuance to critical food studies literature. Both food sovereignty scholarship and North American AFN studies tend to seek out structural transformations to our global food system that will make it more socially and ecologically sustainable. However, the ways that people access food through the domestic market do not exemplify radical challenges. Instead, food access is served through contextual relationships including formal, informal, reciprocal and non-economic exchange. The diverse economies framework, especially when contextualized in Jamaica's political and economic history, is useful for evaluating hybridities between the domestic market, global supply chains and local food system dynamics. This framework usefully encompasses the complexities of Jamaica's domestic food system that characteristically straddles conventional markets, alternative and non-market labour practices, with complex relationships of exchange.

The ontological orientation of food sovereignty scholarship expertly points out the contradictions that are inherent to capitalist-oriented food systems (Jarosz 2014). However, the same anti-capitalist stance does not leave much space to analyze the role of markets that are crucial for distributing local or regionally grown food. Studying embedded food systems, in place, may provide useful ideas to food sovereignty scholars beginning to explore ways to articulate food distribution into its conceptual framing (Wittman and Blesh 2017; Pimbert 2018). Jamaica's domestic market provides an interesting case study to posit the role of embedded markets in supporting people's access to food.

Similarly, AFN studies seek out food system activities that can be classified as explicit challenges the global orientation of our food system (Allen et al. 2003; Goodman 2004; DuPuis, Goodman, and Harrison 2006). In the search for explicit alternatives, this literature risks missing AFNs that draw on market principles and also serve people's access to food. The findings in this chapter contribute to a growing body of case studies from LMICs that challenge the binary distinguishing 'alternative' food networks from 'conventional' ones, looking specifically at the

ways people access food in cities (Abrahams 2007; Haysom 2017). Jamaica's urban markets, like those across sub-Saharan Africa, allow people to access food in ways that fit their diverse diets and purchasing behaviours. The persistent role of Kingston's markets is one example of a 'weak' AFN that supports people access to food but does not pose a transformational challenge to the food system.

The diverse economies framework, paired with an explicit acknowledgement of Caribbean political economy, helps to get beyond the search for explicit, transformational challenges to the global, industrial food system. The framework instead illustrates the embedded ways that Jamaica's domestic food system maintains the ability to serve people's food access despite the seemingly efficient delivery of imported, and increasingly, domestically grown food in supermarkets. This chapter established that Kingston's markets remain integral to residents' access to food through diverse economic transactions. The domestic food system's embeddedness is essential to people's ability to access preferred and affordable Jamaican grown food.

Chapter 5: Embeddedness and Livelihoods in the Domestic Food System

A second key embedded function of the domestic food system in Jamaica that emerged from my data and analysis is its provision of livelihoods. In addition to the important contribution to food access outlined in the previous chapter, the domestic food system, because of its embedded features, creates opportunities for thousands of Jamaicans to make a living. This chapter explores connections between the domestic food system activities and work opportunities, specifically, small-scale farming and higglering. The findings presented in this chapter show how diverse labour practices as conceptualized by Gibson-Graham's classification

of labour and exchange in a diverse economy sustain small-scale farming and higglering as work opportunities. The aim of the chapter is to not only to amplify the importance of these work opportunities, but also to analyze how they help to uphold the domestic food system. Both small-scale farming and higglering depend on people's ability to draw on a diverse range of activities that connect the market, relationships and history in complex, dynamic ways. Analyzing work associated with the domestic food system is inclusive of Jamaica's small-scale farmers and higglers who are, and have always been, firmly linked to a capitalist market in a myriad of ways, yet also embedded in the informal economy. This chapter makes the case that it is *because* of these diverse connections that the domestic food system remains a mainstay for thousands of Jamaicans to earn a livelihood.

Scholars evaluating structural adjustment policies implemented in Jamaica from the late 1970s to 1990s reported a grim reality for people who earned their livelihoods from the domestic food system, specifically small-scale farmers (Beckford and Witter 1982; Barker 1993; Weis 2003, 2006). As I introduced in Chapter Three, structural adjustment policies implemented from the late 1970s throughout the 1990s indeed significantly harmed those who practiced small-scale farming for their livelihood. Small-scale farmers lost state support, including access to credit, and what they were still able to produce was outcompeted by imported food (Witter 2000; Weis 2003). Based on his observations of farmers dumping their milk when they could no longer compete with cheaper, powdered milk imports, Weis predicted that food imports would overwhelm the same domestically produced foods, commenting that farming for the domestic market "now verges on irrelevance" (Weis 2004b, 483). At the time, neoliberal economic policy was at a peak level in Jamaica and other LMICs grappling with integration into a liberalized global market. Based on the devastating consequences of neoliberalism on the domestic agricultural sector, scholars advocate Jamaica take a food sovereignty approach to strengthen its 'peasantry' as a potential revolutionary source in the country (Talbot 2015; Weis 2004; Richardson and Ngwenya Richardson 2013). Their recommendation links to broader food sovereignty theories that a peasant-led social movement is needed to reclaim and strengthen agricultural livelihoods.

Today, 16.7% of the population, or over 455,000 people, still work in the agricultural sector (World Bank 2019b). Farmers make up 47.5% of this group, while remaining 52.5% includes higglers and farm labourers. Food traders are not typically included in research on

shifting dynamics in Jamaica's food system, yet they fulfill the essential and challenging role of getting food from farms to markets. This chapter considers the ways that people continue working in the domestic food system – as not only small-scale farmers, but also higglers to explain the endurance of agricultural livelihoods despite the devastating consequences of neoliberal economic policy.

In this chapter, I analyze how the diverse economies approach, when nested within the context of Jamaica's specific political economy, offers a reinterpretation of food and agricultural work based on the lived experiences of small-scale farmers and higglers. Centering small-scale farming and higglering as part of a diverse economy broadens a dichotomy constructed by food sovereignty scholarship, between capitalist agriculture and the peasantry. Bernstein illustrates how food sovereignty scholarship tends to narrow in on the work of peasants, a vaguely circumscribed category of people that may include poor small- or medium scale farmers and indigenous groups (2014). Peasants are constructed as cooperative stewards of the environment that challenge "the forces and capital of the market" (Bello and Baviera 2010, 74). Those practicing food sovereignty in its affiliated social movement seek to expand this narrow conception "not only for farmers, but for people" (Wittman, Desmarais, and Wiebe 2010, 7). This chapter contributes a broader focus that includes people who are not necessarily peasants but nonetheless grow and sell food for the domestic market.

Jobs related to domestic food production and distribution in Jamaica are commonly framed as part of the informal economy (Torero et al. 2006; Vuletin 2008). Broadly, the informal economy is defined as "a process of income generation characterized by one central feature: it is unregulated by the institutions of society, in a legal and social environment in which similar activities are regulated" (Castells and Portes 1989, 12). A growing body of literature studies the growing relevance of informal food retailers (Peyton, Moseley, and Battersby 2015; Crush and Frayne 2011; Skinner and Haysom 2016) and food producers (Weng 2015) across low- and middle-income countries. This literature advocates for a shift from framing informal work as peripheral to formal economic activity to normalizing it as an integral and basic component of any economy (Chen 2007).

In Jamaica, informal work contributes significantly the national economy. Vuletin defines the informal economy in Latin America and the Caribbean as follows: "…those economic activities that circumvent the costs and are excluded from the benefits and rights

incorporated in the laws and administrative rules" (2008, 3). The informal sector's value is not formally captured as part of Jamaica's gross domestic product (GDP). Peters collates several estimates of the value of Jamaica's informal economy and quantifies a range from 35 to 44 percent of GDP (2017, 38).[25] Jamaica's informal sector is not only large; it is growing (Torero et al. 2006). Small-scale farmers and higglers make up a large part of Jamaica's informal economy. Torero et al. find that the majority of the people involved in Jamaica's informal economy are working at micro- and small-scale enterprises that are labour intensive, including farming and food trade (2006). In 2003, Vuletin estimated that around 60% of Jamaicans in the informal sector work in wholesale trade, retail trade, or agriculture (2003, 3). This literature successfully establishes food-related informal work as important, but what factors contribute to its persistence as a viable livelihood opportunity? Building on the various studies that highlight Jamaica's informal economy, in this chapter I investigate how the domestic food system sustains livelihoods through its diversity. The findings presented in this chapter show how informal employment is sustained, in part, through diverse labour practices that related to Gibson-Graham's classification of labour and exchange in a diverse economy. According to Gibson-Graham, working in a diverse economy may include engaging in some capitalist market transactions and labour relations, but also alternative and non-capitalist activities. At the same time, working in the domestic food system must be understood in its historical context: those working in the domestic food system have done so in risky and precarious situations that should not be romanticized.

Some scholars consider informal work, like Jamaica's domestic food market as a whole, to be an anachronism; Watts describes one important form of informal work in Jamaica, small-scale farming, as "occupying the interstices of the economic mainstream" (1987, 506). This chapter challenges Watts' notion, in line with Chen's (2007) recommendation to include informal work as an integral component of the Jamaican economy. This perspective falls in line with Conway's framing based on his work in the region that informal work, specifically that which relates to food, plays a "central role in the day-to-day struggle of the Caribbean poor, and not-so-poor, to make ends meet" (1997, 19). I argue that informal work in Jamaica, in particular related to growing and distributing food, is not only central to the economy, but also supports

[25] Peters includes studies by Schneider et al. (2010), who estimate Jamaica's informal sector at 38 percent of GDP, Vuletin (2008), who estimates it at 35 percent in 2001, and Torero et al. (2006), who estimate its size at 40 percent of GDP.

marginalized people because it is an integral source of work and income. In other words, "…the informal economy is here to stay" (Brown-Glaude 2011, 2). Small-scale farming and higglering are two important, lasting ways that thousands of Jamaicans support themselves and their families.

After situating informal work in Jamaica's domestic food system within my conceptual framework, this chapter provides background information on two of the domestic food system's income-generating livelihood options: working as a small-scale farmer and higgler. Next, the chapter evaluates the specific, contextual factors that allow the domestic food system to provide jobs, over time, drawing on direct observation in Kingston's markets and interviews with market vendors, small-scale farmers and key informants. The central argument of this chapter is that the domestic food system provides important livelihood opportunities through its diversity and embeddedness within Jamaica's context and, in some cases, with the global economy. Rather than being rendered irrelevant by structural adjustment and trade liberalization, those working in Jamaica's domestic food system are more than an interstice, they are essential to the economy. The particularities of working in small-scale farming and higglering have important historical and contemporary relevance, which must be understood prior to designing any food system interventions.

Informal Work in a Diverse Economy

Applying Gibson-Graham's diverse economies framework to analyze the complexities of working in the domestic food system matches the recommendations of informal worker advocates. The global advocacy group Women in Informal Employment: Globalizing and Organizing (WIEGO) is at the forefront of securing rights for the world's informal workers. Based on their work since forming in 1997, they suggest that any academic framing of informal work must value its complexity (WIEGO 2018). They suggest "a hybrid economic model that embraces the traditional and the modern, allowing the smallest units and least powerful workers to operate alongside the largest units and most powerful economic players" (WIEGO 2018). I suggest answering WIEGO's call by applying Gibson-Graham's diverse economies framework that has a similar goal to uncover the pluralities of economic activities (2006). In Gibson-Graham's case, particular attention is paid to de-emphasize purely capitalist economic activity, to illuminate alternatives (2006, 78). This chapter frames work within the domestic food system in a related, hybrid manner. Growing and trading food are considered parts of a diverse

economy, revealing the complex labour practices and transactions that people rely on to make a living. The added conceptual layer that grounds this analysis in Caribbean political economy shows how small-scale farmers' and higglers' activities are inseparable from global markets, a trademark of former plantation economies.

Gibson-Graham's diverse economies analytical framework relies on the assumption that labour practices are inherently plural and complex, drawing on a range of capitalist practices and alternative and non-capitalist labour exchange. They state: "…to include all this work in a conception of a diverse economy is to represent many people who see themselves (or are labelled) as 'unemployed' or 'economically inactive' as economic subjects, that is, as contributing to the vast skein of economic relations that make up our societies" (2006: 63). Gibson-Graham, Cameron and Healy categorize diverse forms of labour according to three groups: wage labour, alternative paid labour and unpaid labour (2013). According to Gibson-Graham et al.'s model, wage labour includes salaried, unionized and non-unionized, seasonal, family and part-time paid work (2013). Alternative paid labour includes remunerated work apart from a wage contract, such as self-employment, worker cooperatives, reciprocal labour exchange, relationships based on trust, in-kind payment, indentured labour, or work for welfare (Gibson-Graham et al. 2013). Unpaid labour includes family and community-related work such as housework, family care, neighbourhood work, volunteering, self-provisioning and enslaved labour (Gibson-Graham et al. 2013). Additionally, people working along the domestic food supply chain rely on alternative market transactions within the informal produce market; transactions are highly relational. Literature applying the diverse economies framework to food workers is limited (Turner and Schoenberger 2012; Linares and Roever 2019). The framework nonetheless suits the complexity and embeddedness of Jamaica's domestic food system.

Along the supply chain for domestically grown produce, small-scale farmers sell their goods to higglers for a price that is based on the supply of each item, paired with market demand. In many ways, exchange and distribution of domestically grown produce exemplifies the conditions of a perfectly competitive market. Prices are influenced by the supply and demand of produce, there are low barriers to entry into the market, and buyers are not able to influence market price with their individual actions (Mintz 1959, 24). Katzin (1960) was the first to

describe Kingston's Coronation Market as having these characteristics, which still exist today[26]. With a more general focus on Jamaica's internal marketing system, Mintz notes "near perfect competition", with a "price system based largely on the operation of supply and demand but backed up by a strong personalistic element which affects the nature of internal marketing activity" (1959, 25). Business relied on personal relationships between farmers, higglers, plantation owners, and market patrons, as well as market transactions (Witter and Beckford 1980; Mintz 1985). Today, the distribution of domestically grown food from farms to urban markets is still a competitive market that also relies on strong relational elements.

The domestic food system's 'strong personalist elements' include factors that Gibson-Graham classifies as 'alternative' to the market, too (2006). Alternative economic relations involve both market transactions and practices outside of purely capitalist transactions: local trading systems, barter and transactions in an informal market, and labour activities such as self-employment or reciprocal labour. The relationships between small-scale farmers and higglers are complex and dynamic, resting on a combination of market and alternative market-related components of exchange and labour relationships. I employ Gibson-Graham's conceptualization of a diverse economy to analyze the integral alternative and non-market components that enable small-scale farmers and higglers to earn money by working in the domestic food sector. The flexible, relational structure of the domestic food system allows small farmers and higglers to earn their livelihood.

Alternative labour practices and diverse methods of exchange are crucial for ensuring that those growing and distributing food across Jamaica can make a living. Jamaica's small-scale farmers and higglers rely on both market transactions and also practices that fall outside of purely capitalist ones. These include reciprocal labour and trade, relationship-based exchange and flexible credit arrangements. The diverse economies framework usefully frames the mix of market and non-market activities because this framing assumes that an economy blends both. Market relations involve monetary transactions, wage labour and capitalist social relations more generally, such as relations of production, appropriation and accumulation of surplus value commonly associated with capitalism (Gibson-Graham, 2006; Gibson-Graham et al. 2013). Nonmarket relations involve exchange through means other than cash, such as barter and gifts,

[26] Though this is disputed by Norvell and Thompson (1968), who argue that the market is not perfectly competitive due to price-setting behaviour.

and unpaid labour such as care. In a diverse economy, exchange is framed in a usefully plural manner, capturing the way that small-scale farmers and food traders use market dynamics and relationships to make money. Before delving into the specific ways that Jamaica's small-scale farmers and higglers navigate the domestic food system to earn income, this chapter provides some background information on both types of work.

Informal Work in the Domestic Food System

Small-Scale Farming in Jamaica

Working as a small-scale farmer in Jamaica involves planting, growing and harvesting food for the domestic market[27]. The size of cultivated plots determines the classification of farmers as 'small-scale'. Jamaica's most accessible, fertile farming areas were initially reserved for plantation farming, and are still used to grow large-scale export crops like sugar today. Small-scale farmers are left to find arable spots on rocky slopes and hillsides. A typical small-scale farmer in Jamaica works on several fragmented plots of land. The mean number of fragments per farmer is 2.05 (Spence 1996). Land holdings are, on average, 1.2 hectares in total (D. Campbell, Barker, and McGregor 2011). During his fieldwork in the early 1990s, Spence found that while 80% of small-scale farmers in his study reported owning their land, 70% did not hold a legal deed to prove it (1996). Land tenure among Jamaica's small-scale farmers is complex and outside the scope of this chapter.

Jamaica's small-scale farmers grow seasonal fruit and vegetables. There are, of course, distinct differences in production across Jamaica's diverse ecological zones. In the study area of Southern St. Elizabeth, small-scale farmers practice mixed cropping of cash crops, including tomatoes, cucumber, escallion, melons, broccoli, cauliflower, cabbage, carrots, and sweet peppers. Farmers cultivate crops seasonally, determined by expected precipitation patterns and market conditions, as well as other factors such as available seeds. Farm inputs range from locally sourced organic fertilizer and traditions of organic pest management, for example using garlic and oil, to imported chemical pesticide, insecticides and fertilizers[28]. Small-scale farmers

[27] Small-scale farmers invariably grow food that is exported. They face challenges growing food in predictable quantities and of a consistent quality to fulfill contracts for export markets.

[28] Small-scale farmers' diverse use of organic and chemical inputs is explored further in Chapter Six.

depend on higglers to buy their products at their farm gate. Spence (1996) found that 85% of farmers sampled in his research sold their goods to higglers, and all of the small-scale farmers I interviewed for this study worked with higglers.

In terms of demographics, the small-scale farmers I interviewed for this study range in age and educational background. Aside from five female farmers, forty interviewees are men. Interviewees reported that small-scale farming in Southern St. Elizabeth remains a male-dominated profession. Small-scale farmers ranged in age, from new farmers who attended agricultural programs in technical schools on the island, to middle aged farmers and elder farmers who had benefitted from Manley's state support for small-scale food production in the 1970s. Elder small-scale farmers were not formally educated, but rather learned their skills through intergenerational knowledge and their own practices.

Higglering in Jamaica

Small-scale farmers are able to maintain their cultivation practices as a livelihood source because of the market created and maintained by Jamaica's higglers. Higglers are the domestic food system's intermediaries, who perform a range of tasks to get produce to the market, including transportation, bulking and storage (Mintz 1959, 24). Generally, higglering is a gendered and racialized activity; higglers tend to be black women, though not exclusively (Brown-Glaude 2011). Higglers selling food have low formal educational backgrounds and in many cases have other female family members who are sell food. Higglers involved in this study and those who work with the small-scale farmers I interviewed tend to live in urban areas and will travel from Kingston as far as Southern St. Elizabeth to pick up food each week. Higglers, as a whole, tend to be private and elusive, exemplifying traits of those who work in the informal economy more broadly. There is a crucial distinction between producers and distributors in Jamaica's internal marketing system; higglers and farmers tend to be mutually exclusive (Mintz, 1959). A defining characteristic of higglering in Jamaica is its heterogeneity. Those studying higglering offer some attempts to typologize this diverse group. Katzin (1960) makes a distinction between rural higglers and those living in Kingston. Within those two categories, she makes further distinctions:

Table 5-1: Higgler Typology 1

Rural Higglers	Urban Higglers
Country Higglers: women who sell produce grown by someone in their own households	Tray Girls; women who carry their total stock on a tray or flat basket.
Weekend Country Higglers; women from areas within 25 miles of Kingston, who buy wholesale in Coronation and sell there at retail	Weekend Town Higglers; women who buy wholesale in Coronation and sell there at retail on Thursdays, Fridays and Saturdays.
Country Higglers; women who buy produce from growers near their rural homes and sell it in Coronation	Town Higglers; women who rent market stalls for which they pay a weekly fee that entitles them to sell at any time the market is open.
Planter Higglers or Speculators; mostly men who may grow part of their stock and cover wider distances to buy a large quantity of one commodity and transport it to market.	Vendors; town higglers who rent several stalls and specialize in one item, such as tomatoes.

Source: Katzin (1960)

Norton and Symanski update this typology in 1975, making a similar distinction between the "country higgler" and the "town higgler", the former picking up food directly from farmers and bringing it to market, and the latter shopping at markets in cities and towns and distributing elsewhere (1975). Seepersad and Ennis suggest the following typology of higglers based on a more recent study:

Table 5-2: Higgler Typology 2

Type 1	Buy fresh produce from farmers for sale to wholesale markets
Type 2	Buy fresh produce from farmers or other higglers for sale to wholesalers, supermarkets, hoteliers or processors
Type 3	Buy fresh produce at market for re-sale
Type 4	Hedge purchase and sales on the time of day consumers prefer to purchase goods (often based on risks and safety)

Source: Seepersad and Ennis (2009)

This chapter focuses on what Brown-Glaude refers to as 'traditional' higglers, marketers who specialize in the sale of produce[29] (2011), which includes both of Norton and Symanski's categories. This group of higglers buys, transports and sells domestically grown produce and may supplement their sales with imported food products. This group of higglers is distinctly different from what Brown-Glaude (2011) calls 'informal commercial importers', who re-sell imported goods such as clothing and other household items. The remainder of this chapter focuses on higglers trading food.

Unemployment and the Domestic Food System

A notable reason that Jamaica's domestic food system persists is that it provides an integral, accessible opportunity to make an income in a country with a large unemployed population. The informal work opportunities that the domestic food system offers are crucial for many households' livelihoods, but not captured by national employment measurements. The Statistical Institute of Jamaica's estimate of its unemployed labour force in October 2017 was 140,900, or 10.4% of the population (STATIN 2017). Youth unemployment is significantly higher, measured at 25.4% (McIntosh 2018). Unemployment also differs by sex; in 2017, the unemployment rate for women was 14.1% and 7.3% for men (STATIN 2017). Since Jamaica's enslaved population was emancipated in 1838, the domestic food system has been an important source of income for Jamaicans, in particular, for those marginalized by their race, gender and class (Brown-Glaude 2011). While small-scale farming and farm labour became key livelihood sources for men, higglering is an important means to gain a livelihood for racialized women (Brown-Glaude 2011).

People start growing food for the domestic market, in some cases, when they are unable to find other work. My interviews with small-scale farmers generated data on how and why they started working in agriculture. For example, one farmer I interviewed came to Southern St. Elizabeth from a neighbouring parish, around age forty, with no job prospects. He states, "I…farm because you can't go to the roadside and just sit down, you have to just do something." [30] He was able to access a small plot of land to begin farming and now grows dasheen, peanuts,

[29] In contrast to 'modern' higglers, often called informal commercial importers, who trade imported goods such as clothing, furniture and appliances transnationally and are outside the scope of this study (Brown-Glaude, 2011). [30] Interviewee 40, October 13, 2019.

corn, sorrel, sweet pepper, plantain and banana on three different plots totaling five cultivated acres. In Southern St. Elizabeth, farming is a relatively accessible livelihood option for those facing employment barriers.

Higglering is another way to earn money for those who cannot access formal employment. Some people sell food out of necessity, in particular, women who cannot find more stable work. Katzin comments on the difficulty women had finding employment in the 1950s in Jamaica, stating "…women…as productive workers, are redundant in Jamaica" and higglering, at the time, was one of the only ways for them to earn their own money (1960, 330). Similar trends came up throughout my fieldwork, although today, women have also branched out to sell other goods, for example, imported clothing. A vendor I interviewed at Constant Springs market, a smaller urban market in one of Kingston's upper class neighbourhoods, started selling food because she could not find other work. Upon realizing she would have to find her own way to make a living, she opted to sell food, because it is accessible and easy to earn cash quickly. She commented on her choice to sell food over goods, stating, "…the food is easier to get along with; it's faster to get along with. Because clothes don't move that fast, but the food, food is a must; people want food to eat so it moves much faster."[30] Her experience mirrors thousands of un- and under-employed Jamaican women, mostly black women, who start selling food when they cannot find formal employment. Katzin warns that modernizing the food system to replace informal food trading, for example, by formalizing food distribution and introducing supermarkets, would have detrimental effects on Jamaica's economy, because most higglers "…would swell the numbers of the unemployed" (1960, 330). Like farming, higglering is a relatively accessible way for people to earn their livelihood in the context of high unemployment.

Independence and the Domestic Food System

The domestic food system does not simply provide jobs for Jamaica's unemployed; small-scale farmers and higglers, in some cases, opt for these livelihood opportunities because they afford independence. With many exceptions, the gendered nature of working in the domestic food system holds here, too; men find a sense of independence through farming, and, to an extent, women in higgerling. People prefer to work as small-scale farmers or higglers

[30] Interviewee 1, September 15, 2019.

because the jobs are not tied to the regulations and bureaucracy of the formal economy. Small-scale farmers who I interviewed repeatedly mentioned that this is one of the best things about their work. One interviewee who has been farming for over 35 years noted the satisfaction that comes from his independent work, equating farming to "the good life." [31] Another farmer growing watermelon, hot pepper, pumpkins and potatoes for sale, and legumes, cassava and corn for his family comments that the financial autonomy of farming is worth the risks of a poor growing season. [32] After 55 years of farming, he feels secure having his own crops to sell and eat and prefers the independence of farming relative to working for his previous boss in construction.

Small-scale farming can also be an important means for parents to provide their children with their own independence, through education. Farmers interviewed reported that, through growing food for the domestic market, they are able to support their children's social mobility; their children benefit from a choice between farming and education, and work in a wide range of occupations. While some of their children chose to get education related to agriculture and start farming on their own, more studied other topics and left the countryside. The same farmer who formerly worked in construction and has now been growing food for 55 years saw the opportunity to send his (now adult) children to university though selling his produce on the domestic market, commenting that, "all of [my children] got A's in Agriculture in high school, but they don't stay on the farm." Growing food gives farmers' children a choice to pursue education and their own career path.

Women gain a similar sense of independence through higglering, but also face barriers. Early studies on Jamaica's higglers highlight how trading food is a rare opportunity for women, in particular black women, to have entrepreneurial independence (Durant-Gonzales 1976; LeFranc 1989). Katzin, documenting the day-to-day life of a woman who worked as a domestic servant and restauranteur before she began higgerling, writes, "She prefers higglering to her previous occupations because she earns more money in less time and is free four days each week to care for her 10-year-old daughter" (1960, 318). Durant-Gonzales argues that higgerling is important for women's economic participation and self-fulfillment, for building a wide range of

[31] Interviewee 10, September 27, 2016.
[32] Interviewee 34, October 10, 2016.

skills and knowledge, for individual achievement and social recognition (1985). Unlike small-scale farming, higglering does not necessarily foster the same opportunities for social mobility. Vendors who I interviewed for this study reported that they took over selling food from older women in their family, and expect their children to help, indicating a lack of intergenerational social mobility. Their experiences are similar to other studies that include higglers' perspectives (Durant-Gonzales 1985; Brown-Glaude 2011). In her comprehensive examination of contemporary higgerling in Kingston, Brown-Glaude states, "…female microentrepreneurs have failed to achieve the economic success that was predicted and continue to live in poverty" (2011:21). Scholars attribute higglers' stagnated social mobility to racialized and gendered barriers (Durant-Gonzales 1976; Brown-Glaude 2011). While women gain independence from higglering, it does not offer the same benefits and opportunities over a longer term.

The independence that keeps people working in the domestic food system is not new. Historically, small-scale farming and higglering represented rare opportunities to distance oneself from the oppressive working conditions on plantations. Scholars suggest that the kitchen gardens, provision grounds and local food markets that originated prior to Emancipation were some of the few spaces where enslaved people were able to exert their own sovereignty (Sherlock and Bennett 1998; Beckles 1989, 1999). Sherlock and Bennett call provision grounds "…the only places in Jamaica where Africans were free to make their own decisions", drawing on the ways people applied inherited West African agricultural traditions to their provision grounds and kitchen gardens (1998, 170). Beckles also frames the emergence of enslaved people who farmed as a form of resistance to slavery (1989; 1999). My interviews with people working in the domestic food system included parallel conversations. People valued the sense of independence and security of relying on growing and trading food themselves, rather than working for someone else. The independence afforded by working in the domestic food system keeps people entering this line of work.

Diverse Economic Relationships in the Domestic Food System

The domestic food system continues to serve as an important role in people's livelihoods because of its flexibility and embeddedness in relationships between farmers, higglers and their customers. The domestic produce market relies on diverse, complex relationships between small-scale farmers and higglers, described as the 'alternative market' and 'alternative labour'

elements of a diverse economy (Gibson-Graham 2006). This interaction between market and non-market activities is crucial for people working as small-scale farmers and higglers to earn a livelihood. There is consistent evidence of the importance of alternative and non-market activities based on studies in the 1950s and 1960s (Mintz 1959; Katzin 1960). This section draws on these early studies as well as my qualitative research with farmers and market vendors to explore how non-market exchange and alternative labour relationships enable small-scale farmers and higglers to earn money, first looking at transactions between higglers, their customers and small-scale farmers, and then turning to farmers' use of temporary labour.

In their early studies of everyday activities in Jamaican's urban markets, Katzin (1960) and Mintz (1959) note the importance of relationships for higglers sustaining viable income levels. Mintz explains the complexities of the domestic food system, a competitive market steeped in relationships:

> Behind the operation of supply and demand…there is a network of person-to-person dealings which persist over time and outlast any single transactions…[For example] there is slight but significant variation in the quantities given by certain buyers, extension of credit, and the dispensing of other services, which tie particular intermediaries and their customers together. This personalistic background is not remarkable…but in the internal marketing systems … these small distinctions based on personal relationships loom more importantly…In fact, the use of personalism in their transactions is economically sound and simply reflects awareness of the general social and economic characteristics of the societies in which they carry on their activities (1959, 24).

Around the same time, Katzin conducted extensive interviews with higglers throughout the 1950s to determine that the biggest determinant of profit over time is their ability to maintain relationships with a large selection of farmers, other traders, and their customers (1960, 315). In some cases, higglers would sacrifice immediate profit for an opportunity to uphold relationships with regular customers. For instance, Katzin states, "…when goods in her line are scarce, she knows that she could sell her load to almost any town higgler, but she makes no effort to do so, but rather, takes the opportunity of cementing her relations with her regular customers" (1959,

317). In this way, higglers stabilize profits over time. Further, Katzin details how higglers carefully maintain trading relationships with farmers, other higglers and customers:

> She deals with them with sympathy and understanding, seldom hesitating long to accept a little less than the agreed price…. If any of her regular buyers do not come to her place soon after she arrives in the market, she will send to let them know that she is there and keeps the goods that they usually buy until she hears from them, even if others who are not regular buyers clamour to take them (1960, 316).

When I conducted direct observation at three of Kingston's markets, I saw similar trends, more than fifty years after Mintz and Katzin's studies. While transactions of cash for food dominate market exchange, each exchange helps higglers build relationships with their customer base. Some vendors offer a chair for customers to sit and visit while their grocery list is whisked away to be packed. Other vendors receive calls from regular customers with a grocery list, then will prepare a bag and have it ready for customers to pick up. One vendor selling organic produce including carrot, banana, dasheen, coco and okra spoke about keeping a loyal customer base: "It's like in any other work --- you have to buy your customer…And show love – sympathy and maybe sometimes you give something you have; make it more than what they buy."[33] My observations and interview data show the diverse ways that higglers help maintain the domestic food system: higglers build relationships with their customers and rely intensely on the personal elements that interlink with economic transactions in order to sell food.

The importance of building and maintaining relationships extends across the supply chain between small-scale farmers and higglers too. A small-scale tomato farmer I interviewed summarizes his typical interactions with higglers who arrive at his farm when his crop is ready for sale:

> The word goes out, one will call and say this guys has tomatoes… and that's how they come, and they keep spreading the word. This one might come and she's sorted out with her portion, so then she might tell her friend, alright, she can get some

[33] Interviewee 6, September 16, 2016.

> tomatoes here, and then maybe she will come, and she might tell her friend again where she got tomatoes. [34]

My interviews with farmers gave insights into the complex word-of-mouth network among higglers. Generally, small-scale farmers do not have to advertise when their crops are ready for sale, higglers simply show up and inform each other where they can find suitable food to buy and re-sell. As the tomato farmers described his typical interactions with higglers, several of them arrived on his farm to pick up tomatoes that were ready for sale. The farmer and higglers negotiated a price based on the current availability of tomatoes and their knowledge of current market prices. Then, the higglers began picking tomatoes. This instance describes one of many types of interaction between higglers and small-scale farmers that rely on interpersonal relationship and a strong personal network. One young farmer who I interviewed in Southern St. Elizabeth said, "…the closest relationship you will have is between the farmer and the higgler."[35] He explained how his ability to earn money from his farm depends on building trusting relationships with higglers.

The most common alternative market transaction that takes place between small-scale farmers and higglers mirrors the exchange of informal credit that I explained in the previous chapter. Trust, the act offering goods on credit without a formal guarantee of payment, is a critical feature of the domestic food system that exists not only in urban markets, between vendors and their customers, but also between small-scale farmers and higglers. When higglers arrive at a farm to purchase produce, they will negotiate a quantity and price based on market conditions for each particular item. They typically ask the farmer to 'trust' them the produce, and will return later when they have cash. Katzin (1959, 431) initially described small-scale farmers' choice to use informal credit or cash transactions when selling their produce to higglers in the following vignette of an interaction between someone selling carrots and thyme and several higglers:

> As she sold to each of the higglers in turn, they agreed upon the price, but she only took the money from those whom she did not know well…All the rest took the

[34] Interviewee 13, September 29, 2016.
[35] Interviewee 8, September 27, 2016.

> goods on credit with the understanding that payment would be made by ten o'clock Saturday morning.

The exchange of informal credit that Katzin describes is still common along the domestic supply chain. The transactions that happen between small-scale farmers and higglers expand beyond a purely economic sphere. All of the small-scale farmers interviewed for this study had experience offering produce on informal credit.

Small-scale farmers who grow food for the domestic food system acknowledge the need to "trust" higglers. However, in many cases, they consider this alternative economic transaction to be bothersome. My interviews with small-scale farmers in Southern St. Elizabeth, show a consensus among farmers that, while giving higglers informal credit and waiting for payment is necessary, it is challenging. Small-scale farmers consider higglers to be a nuisance: they can be unprofessional when they come to buy produce, and the working relationship can be unreliable when higglers look for the best price. Farmers have little control over the price that they can charge, while higglers hold substantial knowledge about market prices in Kingston. Some higglers neglect to pay farmers after they sell the produce. However, the relationship between small-scale farmers and higglers is more complex than this. In most cases, famers prefer to receive cash up-front, however they recognize that not all higglers can manage this expense, and offer credit so they can still sell their produce. At the same time that small-scale farmers consider higglers a nuisance, they recognize that selling them produce is a form of informal community support. Two small-scale farmers in separate areas of St. Elizabeth talked about the responsibility they feel in supporting higglers. They intentionally sell smaller amounts to more higglers, rather than selling a large amount to one buyer as a way to support community economic development. For example, one describes the strong, trusting relationship he has developed with one buyer, but does not sell all of his produce to this person. When asked why he refrains from selling everything to one buyer, for convenience, he replied:

> …[you]…help others because it benefits others taking the stuff as well. So you help the other person to earn and we work with that system. We work with both systems

based on what is happening at a particular moment. And you benefit other people as well, so you don't just think about yourself.[36]

Further down the supply chain, 'country' or 'traditional' higglers sell to the range of other food traders who ultimately sell produce in Kingston's markets. This wide network of traders who use alternative methods of exchange are able to maintain the dynamic, adaptable internal marketing system that suits the nature of Jamaican small-scale farming.

Small-scale farmers interviewed for this study agree that higglers will always be around. For example, a long-standing member of the St. Elizabeth Cooperative Association I interviewed states, "Modernization has a way of making some jobs redundant…but there will always be the need for the better [higglers]"[37]. He went on to explain how small-scale farmers require higglers' flexibility is crucial for them to sell what they grow. This complex alternative market transactions along the domestic food supply chain build on "…a historical process which was to give Jamaican women, as food producers and distributors, a pivotal role in the domestic economy" (Mair 1986, 10–11). Small-scale farmers and higglers could not continue their work without the relational aspect of this market: both farmers and higglers are dependent on each other's flexibility and adaptability to sustain their livelihoods.

Hiring Farm Labour in a Diverse Economy

The labour required to produce food for the domestic market also relies on activities that are embedded in Jamaican society and distinct from purely market-based labour arrangements. To grow food, small-scale farmers in Southern St. Elizabeth rely on extra help that they remunerate through a combination of wage labour, meals and reciprocal labour. This combination is representative of Gibson-Graham's classification of diverse labour relationships that include a range of market-based, alternative market and non-market components. The domestic food system is a key source of temporary employment for farm labourers. It is common practice for Southern St. Elizabeth's farmers to hire community members, in general, young men, to help plant and harvest crops. According to Spence, 51.7% of sampled farmers used various forms of reciprocal labour arrangements for hired labour, often with meals provided

[36] Interviewee 11, September 27, 2016.
[37] Interviewee 44, October 14, 2016.

(1996, 154). Interviewees unanimously reported that there is never a shortage of temporary labour; "…extra hands are always around," remarked one small-scale farmer who grows sorrel, peanuts and other vegetables for the domestic market and requires help with various farm tasks.[38] Farmers advertise work opportunities through existing social networks and word-of mouth. Generally, farmers hire labourers from the community, however during peak harvest or planting times, they may have to reach out to other groups. Farmers expressed sentiments that hiring community members is an important social act; as employment can be so precarious; hiring workers is a way to support others in their community.

The flexibility afforded to farmers to remunerate labour in diverse ways allows them to grow and harvest food while also supporting their community. Small-scale farmers can temporarily hire labour and pay them by the day or amount of produce they pick. Some labourers specialize in their task, such as cutting mulch, while others are available for general tasks. Farm labourers prefer to work on small-scale farms rather than the alternative: working on sugar cane fields. Working on cane fields is difficult and pays as little as JMD 500 (under CAD 5) per day. On the other hand, labourers can earn JMD 1500 to JMD 2000 (under CAD 15 to CAD 20) working for a small-scale farmer in their community. Including all of these forms of labour who are paid in diverse ways "…expands access to economic identities that fall outside the limited scope of valorized identities, such as employer, employee and entrepreneur" (Gibson-Graham 2006, 65). The domestic food system is an important source of work for an immeasurable number of Jamaicans, in particular, those who may find difficultly finding other work, or those who may face structural barriers to getting other work. The ability to draw on diverse labour practices allows small-scale farmers to continue producing food for the domestic market.

Conveniences and Constraints in the Domestic Market

Alternative methods of exchange suit the unique constraints faced by people working in the domestic food system. Small-scale farmers in Jamaica typically orient their production toward the informal domestic market, as opposed to growing food for sale under a formal contract with hotels, supermarkets or exporters. They grow produce that suits domestic consumer tastes and their surrounding agroecological conditions (Weis 2006, 72). In Spence's

[38] Interviewee 26, October 5, 2016.

dissertation research, 85.2% of vegetable and legume farmers he surveyed reported selling their produce to higglers in the domestic market and this trend was consistent across crops (1996, 234). While my study does not quantify the number of farmers selling their produce on the domestic market, all of the farmers I interviewed in Southern St. Elizabeth sell the majority of their produce to higglers, only occasionally selling part of their crop to hotel and supermarket distributors. Small-scale farmers' livelihoods, specifically those in Southern St. Elizabeth, hinge on higglers buying and distributing their produce. At the same time, higglers are dependent on farmers' produce to sell. The nature of trading domestically grown food, like farming, also depends on higglers ability to use alternative methods of exchange. Because of their ability to draw on both economic and alternative economic modes of exchange, small-scale farmers and higglers can benefit from notable conveniences that also suit the specific constraints they face. The following section explores the unique, contradictory ways that people constrained to, and benefit from engaging in the domestic market.

Higglers offer farmers a convenient, flexible market for their produce that suits particular production constraints in Southern St. Elizabeth. When Mintz conducted his research with small-scale farmers in the 1950s, he saw the persistent relationship between small-scale farmers and higglers as necessary, stating, "…the higgler provides the essential link between producer and consumer in the whole process of local distribution because no one, at least in present-day Jamaica, no one is willing to take her place" (1974, 221). Indeed, the small-scale farmers I interviewed for this study confirmed that the role of higglers remains essential, today, to provide ready access to a market for fresh produce. Small-scale farmers are typically averse to sell their own produce in urban markets. Small-scale farms in Southern St. Elizabeth are remote; the majority are accessible by roads that vary in quality. Transporting produce on poor-quality roads is difficult and expensive. Small-scale farmers, by virtue of working chiefly on the farm, also have limited expertise to navigate complicated urban markets. They lack knowledge about prices dynamics in urban markets, and generally do not have established customer base.

Higglers, by contrast, take on the complex, challenging role of food distribution from farm to market. Higglers arrive at the farm gate with their own vehicle or a hired car to negotiate with farmers. They also help farmers avoid the drudgery of selling their produce at the market, with expert knowledge of price dynamics. Higglers hold substantial knowledge about both the available supply of, and market demand for, fresh produce. Higglers' ability to develop and maintain loyal customer bases through informal credit and other services helps them to sell

small-scale farmers' produce. My interviews with small-scale farmers helped to uncover the convenience that higglers offered them that were not immediately obvious as they focused on the challenges of the informal credit system and .On his five acres of cultivated land spread over three plots difficult to access by road, a farmer summarizes the convenience higglers arriving at his farm:

> You don't have to go out. You don't have to call anybody. The higglers tell each other that [a farmer] has certain amount [of produce] and every day they will drive with their vans or call – they get our number. You're frightened to see how they know your number – they get it, they come.[39]

An instance like the one described above is common across Southern St. Elizabeth, where small-scale farmers prefer to remain on the farm rather than engage in food distribution to the city.

The higgler system is also suited to farmers' production constraints, helping farmers to access a guaranteed, flexible market. As indicated earlier in this section, small-scale farmers typically sell the majority of their produce to higglers on the domestic market, a trend that has persisted since enslaved people started growing food for sale. Today, a range of production constraints hinders small-scale farmers from selling their produce anywhere but the informal market. The alternatives to selling produce to higglers are to sell food to a formal distributor, who may then sell produce to the supermarket, a hotel, a food processing entity, or on the export market (Rhiney 2009). This type of arrangement often involves a formal contract. Southern St. Elizabeth's small-scale farmers most frequently stated that they do not engage in contract farming because it poses a risk: they face difficulties growing enough produce of a predictable quality and distributing it to fulfill contractual obligations. Their small plots of land restrict overall production capacity, and increasingly unpredictable climate patterns only exacerbate production uncertainties. For instance, changing precipitation patterns and potential destructive storms or hurricanes may compromise farmers' ability to fulfill a contract.

Production constraints make it difficult to commit to formal contracts with hotels, supermarkets and other larger buyers. The potential risk of not fulfilling a contract is enough to dissuade small-scale farmers from formalizing their relationships with buyers. The constraints

[39] Interviewee 34, October 10, 2016.

that small-scale farmers face around contracts was particularly evident in my interviews. On his three-acre plot, this farmer, who grows dasheen, peanut and cabbage and raises cattle and bees, explains the production and distribution barriers he faces engaging in contract farming:

> We're not into the contracts as yet because most of the time we don't have enough to do that. And to do a contract like that you have to have a vehicle and…when you're finished paying the vehicle person you have nothing left… And the procedure you have to go through with the packing house and packaging for export and all of that, it takes a lot out of you so if you don't have it you have to just stay on the local market.[40]

Even farmers who work with larger buyers, for example, those who supply hotels and supermarkets, continue working with higglers because they may get a better price by hedging between large and small buyers. For example, one farmer who was harvesting a crop of scotch bonnet peppers as we spoke sells to both hotel buyers and higglers without a formal contract, depending on market conditions:

> [Who you sell to] depends on the amount that you have and the price. Because sometimes the hotel man (a middle man buying from farmers and selling to hotels) isn't paying you more than the [higgler] and sometimes the [higgler] can't pay; for example, when the melon goes up to JMD 60 per pound, the hotel men who are buying [are] reselling it for JMD 120. [Then] when you sell to the [higgler] now they complain that they can't pay so much because [they can only] resell it for JMD 80 or JMD 100.[41]

Farmers who sell to formal buyers also rely on higglers to purchase produce that does not match the quality grades necessitated by formal contracts, in particular, those with hotels that demand a specified amount produce to look a certain way to please their clientele. Higglers, on the other hand, are willing to buy small quantities of produce, or varied amounts that a farmer may end up growing. Small-scale farmers' specific production and distribution constraints match higglers'

[40] Interviewee 41, October 13, 2016.
[41] Interviewee 20, October 5, 2016.

expertise, flexibility and strategic use of market- and alternative- market methods of exchange, steeped in relationships they develop over time.

The flexible, relational structure of the domestic food system elucidated through direct observation of small-scale farming and food trading and interviews with those working in the domestic food system helps producers to grow food and traders to distribute it, according to the unique constraints they face. The way that people navigate and rely on diverse relationships and transactions enables them to earn their livelihoods from the domestic food system. Gibson-Graham's conceptualization of a diverse economy elucidates the integral alternative and nonmarket components that enable small-scale farmers and higglers to earn money by working in the domestic food sector, such as the relationships between farmers, farm labourers and higglers. The framework is suited to analyze the complexities of working in the domestic food system, matching the recommendations of informal worker advocates to study informal economies in their hybridity (WEIGO 2018).

Risks and Reflections for Policy

While small-scale farming and higgerling are important livelihood options in Jamaica, they are risky and precarious jobs. Scholars caution against romanticizing informal work as a catchall development strategy (Samers 2005; Leyshon, Lee, and Williams 2003). Both farmers and higglers face significant ecological and social vulnerabilities and take on significant risks to do their work. The informal nature of small-scale farming and higglering in Jamaica demands tremendous resilience and adaptability to deal with change, with little external support.

The increasingly unpredictable burden associated with environmental change in Jamaica, discussed in Chapter Three, falls heavily on small-scale farmers and, indirectly, higglers. For example, at the time that the data for this dissertation was collected, Hurricane Matthew was approaching Jamaica at a Category Five level. Across Southern St. Elizabeth, small-scale farmers prepared for the storm, and preparation and past environmental disasters were popular topics of conversation. When interviewed, small-scale farmers unanimously mentioned that they are responsible for all disaster-related costs. There is no farmer insurance, and state-level support following environmental disasters is patchy. Geographers at the University of the West Indies show that, in the face of environmental change, small-scale farmers demonstrate tremendous ingenuity and adaptability despite inconsistent and insufficient support (Campbell et al. 2011). Environmental change has downstream impacts, too, although there is a paucity of literature

documenting the impacts of environmental change on food distribution in Jamaica. Higglers must adapt to an increasingly inconsistent supply of produce, and to the impacts of increasingly unpredictable precipitation, including travel upsets.

On top of ecological threats, small-scale farmers and higglers face a range of social vulnerabilities. A key issue facing farmers across Jamaica, popularly covered by major news outlets, is praedial larceny, or farm theft. In 2016, the Jamaica Information Service reported that praedial larceny cost farmers up to JMD$6 billion (CAD$60,660,000.00) annually, and would subsequently be deemed organized, rather than petty, crime (2016). More relevant to higglers, Kingston's markets are common targets for gang-related violence and petty crime. Coronation Market, located in downtown Kingston, is a particularly vulnerable site for gang violence (Schwartz 2011). Key informants commented that the market's significance as a food distribution site for the entire island is the reason it is commonly targeted by gangs.

Those working in the domestic food system demonstrate tremendous knowledge and adaptability in an unpredictable and risky sector. Policy interventions ought to take the lived realities of small-scale farmers, farm labourer and higglers into account, given the importance of these jobs to assuage Jamaica's high unemployment levels and, in some cases, provide meaningful employment. Expert labour advocates at WIEGO recommend moving beyond measuring the size of the world's informal labour force to extending social protection to informal workers and having more representation of their specific experiences in policymaking processes (2018). Based on the findings presented in this chapter, special attention ought to be paid to small-scale farmers specific vulnerabilities related to environmental change, and higglers' safety in markets.

Conclusion

The second embedded function of the domestic food system that the diverse economies framework shows is to serve Jamaicans' livelihoods. The domestic food system creates and maintains opportunities for thousands of Jamaicans to make a living Whether people opt to work in the domestic food system out of choice or necessity, their work is integral to production and distribution along the supply chain of domestically grown food. The domestic food system creates accessible jobs in an economy with high unemployment and affords financial independence for many who may otherwise go without. While a significant body of literature

measures informal work in Jamaica, including jobs in the domestic food system, this chapter explores how this subset of informal work in the domestic food system, including small-scale farming and higglering, has persisted over time.

Small-scale farmers and higglers are at once constrained to and convenienced by the domestic market. Their work depends on their ability to draw on a diverse range of activities tied to the market and relationships that is rooted in a complex history. The ability to hedge their activities inside and outside of the market, across various scales, parallels the general experience of Caribbean plantation economies: simultaneously challenging and inextricably linked to the global economy. It is precisely because of these diverse and seemingly contradictory connections that the domestic food system remains a mainstay for thousands of Jamaicans to earn their livelihood. The findings presented in this chapter add nuance to recommendations to support Jamaica's peasantry and explicitly transform agricultural markets, (Talbot 2015; Weis 2004; Richardson and Ngwenya Richardson 2013). These recommendations are based on predictions that Jamaica's domestic agricultural sector will become increasingly irrelevant as influxes of imported foods displaced local production. However, they do not take into account the complex ways that small-scale farmers and higglers hedge between market-based and alternative or non-market activities to make a living.

Analyzing the work of Jamaica's small-scale farmers and higglers, who are distinctly embedded in a diverse economy, offers a re-interpretation of agricultural work that extends beyond the circumscribed peasantry defined in food sovereignty scholarship, where peasants are framed as challenging capitalist markets (Bello and Baviera 2010). Incorporating the contemporary roles of small-scale farmers and higglers in Jamaica's domestic food system who do not necessarily resist capitalist markets, but nonetheless perform the essential work of growing and distributing food offers an alternate perspective. Jamaica's small-scale farmers and higglers are not organized in mobilized resistance in a social movement like those involved in *La Via Campesina*. A broader scope that includes small-scale farmers and higglers brings new insights to food sovereignty literature that is seeking to expand its focus beyond peasants, to all people (Wittman, Desmarais, and Wiebe 2010). Small-scale farmers' and higglers' have unique experiences working in the domestic food system that are closely tied to capitalist market activity, specifically through cash transactions, while also drawing on strong alternative economic activities, bringing potential new insights to food sovereignty scholarship. Looking

outside the social movement, specifically to embedded labour arrangements may help food sovereignty scholarship to articulate its position on labour outside of the peasantry.

The unique, informal ways that people work in order to make a living in our contemporary world provide a rich landscape to further refine the diverse economies framework. Informal work, as established with the example of small-scale farming and higglering in Jamaica, is highly relational and largely reliant on alternative economic and non-economic transactions and labour that are distinctly embedded in context. Focusing specifically on the embedded relationships that allow people to earn an income helps to enrich the emerging body of literature applying Gibson-Graham's framework.

The findings in this chapter also contribute to literature on AFNs exploring the roles of informal work in food systems. I contribute further evidence of the growing relevance of informal food-related work in AFNs across low- and middle-income countries (Peyton, Moseley, and Battersby 2015; Crush and Frayne 2011; Weng 2015; Skinner and Haysom 2016). Informal work in Jamaica, in particular related to growing and distributing food is central to the economy and supports marginalized people as an integral and accessible source of income. Small-scale farming and higglering are two important, lasting ways that thousands of Jamaicans support themselves and their families. Analyzing the longstanding, persistent role of small-scale farming and higglering Jamaica, particularly in its historical context, brings important insights to this literature from the Caribbean region. Altogether, this chapter contributes key insights from LMICs to AFN literature that has historically focused on North American and European contexts.

The diverse economies approach, when nested within the context of Jamaica's specific political economy, offers a reinterpretation of food and agricultural work based on the lived experiences of small-scale farmers and higglers. The findings presented in this chapter support existing literature advocating to shift a narrative that informal work is not simply interstitial, to recognizing it as foundational to Jamaica's economy (Conway 1997; Chen 2007). As such, this chapter establishes that the domestic food system remains integral as a core component of the economy. The diversity and embeddedness of the domestic food system is integral to sustaining higglering and farming as livelihood options and the sector ought to be supported in its informality.

Chapter 6: The Embeddedness of Place in the Domestic Food System

A third key embedded role of Jamaica's domestic food system gleaned from applying a diverse economies approach to this case study is that it provides people with connections to their surround place and national identity. The culture surrounding Jamaican food is known globally. Despite its modest population, people around the world are familiar with Jamaican food culture that is accessible in any modern metropolis: jerk chicken, curried goat, Jamaican roti, among other popular dishes. Yet scholars predicted that strengthened integration with the global economy would render Jamaican food traditions, including both agricultural practices and dietary trends, obsolete as Western food was imported in high volumes (Weis 2004b; Talbot 2015). As stated in Chapter One, Weis (2004b, 483) predicted that food imports, especially those that flooded Jamaican markets in the 1990s and 2000s, would overwhelm the same domestically produced foods found in local markets, commenting that farming for the domestic market "now verges on irrelevance". The application of neoliberal principals to food trade, according to Talbot (2015, 54), led to the erosion of "cultural traditions" in Jamaican diets, replaced by "the global standardization" of Western consumption patterns." Lamming (in Weis 2007, 114) considers imported food, in particular American fast food a "crisis of cultural sovereignty…when patterns of consumption bear no relation to basic needs and cannot be supported by the productive base of the society" where people "have surrendered their very palates to foreign control." Weis, Talbot and Lamming made these claims at a time when neoliberal economic policy was at a peak level, when LMICs like Jamaica were grappling with integration into the global economy. These scholars charted the ways that Jamaica's close connections to global import and export markets influences food culture, small-scale production and the domestic food market.

In this chapter, I draw on household survey results, direct observation and interviews to analyze the ways that place-based agricultural practices and food culture persevere today despite international trade relationships. I argue that, in addition to the significant contributions to food access and livelihoods outlined in the previous two chapters, the domestic food system endures by supporting an integral part of Jamaicans' national identity, helping to foster citizens' connection to their surrounding physical and cultural environs. In Southern St. Elizabeth, small-scale farming remains a prominent way of life. Across the study sites, interviewees still find tremendous cultural value in "Jamaican food." I conceptualize these subjective qualities by

drawing on literature exploring the concept of place. This chapter analyzes associations between the domestic food system and Jamaican residents' connection to place, first looking at farmers' place-based strategies at the production level, and then at the consumption level, evaluating Jamaican food culture. Analyzing subjective qualities like the connections people draw from growing and eating food is a key methodological component of Gibson-Graham's diverse economies framework (2006). The ways that small-scale farming and diets are embedded in Jamaican society and history help to create a sense of place and, in turn, contribute to an enduring, dynamic domestic food system. Jamaica's domestic food system has distinctive characteristics that allow it to support people's connections to place. It is embedded in unique, contextual relationships to history and the ecological realities of a small island developing state. The traditions involved in Jamaican food and farming are nuanced and dynamic and result from the island's complex colonial history and struggles for sovereignty.

The complexities of Jamaica's domestic food system are not easily analyzed with critical food studies literature. In Chapter One, I articulate how dominant strands food sovereignty scholarship and AFN studies prescribe specific solutions for producing and consuming food. Food sovereignty scholarship is highly prescriptive about agriculture, necessitating a shift toward agroecological food production (Francis et al. 2003; Altieri 2009; Gliessman 2015). The importance of eating locally produced food was explicitly included into the movement's scope at the Nyéléni International Forum on Food Sovereignty, held in February 2007 (Wittman et al. 2010). AFN literature based on case studies in high-income countries also prioritizes shortened supply chains and the consumption of 'local' food. Both these dominant strands of critical food studies literature privilege place-based food systems that contrast global supply chains.

In Jamaica, the concept of a traditional or local food system is more complex than a localized supply chain or 'traditional' diet. In this chapter, I apply the diverse economies framework and draw on the specificities of culinary history in Jamaica to highlight the complexity of food and farming. Agricultural and dietary customs draw on a range of local dynamics and those adopted from elsewhere. The domestic food system also has a long history of adapting to shifts in the global economy. The ways that the domestic food system helps to support people's sense of place, including their national identity are not new. Food self-reliance, historically, has been one way that Jamaicans have honed their identity and place as a distinctive, independent nation. In particular, the Government of Jamaica institutionalized self-

reliance after the country gained independence in 1962, grounded by research connecting food and agriculture, self-reliance and the creation of national identity in the Caribbean. As introduced in Chapter Three, food self-reliance was an explicit policy agenda that fostered a Jamaican national identity and manifested in communities all across the island. Jamaican citizens derive place identity from daily interactions growing and eating local food in an interdependent relationship with global food supply chains. In this chapter, I argue that the strong place identity supported by the domestic food system is deeply embedded, while also adaptable to shifts in global food system dynamics and unlikely to be rendered obsolete any time soon. Understanding the connections between food and place helps to explain the domestic food system's endurance and brings new insight on the significance of embedded markets in our contemporary food system.

People-Place Relations

Place is a complex and elusive concept, proliferating scholarly fields spanning environmental psychology, natural resource management, human geography, urban planning, political science and other disciplines (Lewicka 2011). The way that place is conceptualized in this literature takes many forms. For instance, 'place attachment' refers to "the emotional relation between an individual and a given place" (Hinojosa et al. 2016, 308). Alternatively, Tuan (1977) defines the foundational idea of a 'sense of place' as the meanings and attachment to a setting held by an individual or group. A sense of place emerges from people's interactions with their surrounding physical environment. Ardoin states, a "sense of place describes the complex cognitive, affective, and evaluative relationships people develop with social and ecological communities" (2006, 118). Place identity, another subjective and complex configuration of values, focuses "on how place contributes to overall self-identity and creates feelings of belonging and purpose" (Fresque Baxter and Armitage 2012, 253). People's connection to a particular place is multidimensional and complex, encompassing connections to physical (Stedman 2011; Hinojosa et al. 2016) and social (Hidalgo and Hernández 2001) dimensions. Lewicka (2011, 213) similarly notes that analyzing place requires an understanding of both cultural processes and the ways that people are rooted in a particular ecological landscape.

The value of studying place stems from the hypothesis that a strong connection to it can support resilience, environmentally responsible behaviour and adaptation, in particular, to environmental change (Solin 2017; Masterson et al. 2017). The empirical evidence that people's sense of place contributes to environmentally responsible behaviour is mixed, showing clear interrelations between people's sentiments around place and engagement in environmentally responsible behaviour, but no clear causation (Ardoin 2014; Brehm, Eisenhauer, and Krannich 2006; Walker and Chapman 2003). Based on research on community food systems, Solin (2017) claims that the visceral, vividly experiential connections to farming and eating that one gets from a strong connection to their surrounding place can lead to greater engagement in food systems. Claiming whether or not the place attachment people get from growing or eating Jamaican food has transformative potential is beyond the scope of this chapter. Rather, I analyze the ways that people remain connected to place through the domestic food system in Jamaica. Specifically, I consider the ways that farmers connect to the physical aspects of place, vis-à-vis the ecological landscape of Southern St. Elizabeth, and the cultural place fostered by eating Jamaican grown food. The findings presented in this chapter show that Jamaica's domestic food system endures, in part, because it roots people in place.

As I reviewed in Chapter One, from the late 1990s-2000s, a body of literature emerged to chart how food systems were becoming increasingly placeless as a result of globalization, and what to do about it (DuPuis and Goodman 2005; Morgan, Marsden, and Murdoch 2006). The literature evaluating this shift, including the dominant grouping of AFN scholarship, typically frames food systems as either embedded in place, or disembedded and placeless (Morgan et al. 2006). Those positioning place-based food system activities against placeless ones argue that placeless food systems reproduce the harmful social and ecological consequences of neoliberalism (Allen et al. 2003; Guthman 2007). Placeless food systems, for example, have significant ecological consequences (Pretty et al. 2001; Morgan, Marsden, and Murdoch 2006a) and have influenced a dietary convergence, or "nutrition transition" toward Western eating patterns (Popkin 2001). Scholars called for food to be re-embedded in communities that would lead to more equitable, sustainable outcomes as compared to conventional food systems (Watts, Ilbery, and Maye 2005; Sonnino and Marsden 2006). Feagan's (2007) review of place in food systems outlines that re-localization would translate into shortened food supply chains (Renting, Marsden, and Banks 2003) and stronger ties within communities that could direct activities in

food initiatives (Allen 2004). Evaluating food import dependency in Jamaica, Talbot (2015, 54) recommended that only an adoption of the food sovereignty movement in the Caribbean could help preserve local knowledge, produce crops that are more "traditional" and "cultural traditions based on consuming certain kinds of local foods." Talbot's recommendations exemplify the dichotomy constructed between place-based and placeless food system activities. In this chapter, I argue that, in Jamaica, the distinction between place-based and place-less food systems is not as clear.

Instead of distinguishing Jamaica's food system as either place-based or placeless, framing the domestic food system as a diverse economy can elucidate the complexities of what place means in a small island state. In the introduction to *Alternative Food Geographies*, Maye et al. (2008) discuss how dichotomizing 'place-based' alternative food systems and 'placeless' conventional food systems is too simplistic and can obfuscate the complex ways that they both interact to serve important goals. In cases where local food systems and global markets are interdependent, Hinrichs (2003) suggests that there are limits to localization or reterritorialization. Jamaica's domestic food system is a clear example to highlight some of the limits of localization; foods that are dietary staples, like wheat and rice, are not grown domestically. As I illustrate later in this chapter, small-scale farmers growing food for the domestic market also depend on imported inputs, such as fertilizer and, especially, seeds. Instead of looking for ways that globalization displaces local food traditions, Gombay (2005) recommends looking instead at interconnections between the expansion of food systems to a global scale and local food system activities. As I evaluate the persistent connections between Jamaica's domestic food system and place-based dynamics, I also explicitly acknowledge their interconnectedness to global supply chains.

Select applied studies analyze the interconnections between food, place and global markets. Cheshire et al. (2013) find that despite globalization and increasingly stronger links between Australia's food system and the global economy, farmers remain attached to the physical and social place where they work, simultaneously connected to the local environment and the global economy. Analyzing the impact of modernization on the city of Gaborone's food system in Botswana, Legwegoh and Hovorka (2016) find that, despite predictions that people's diets would merge with Western habits, people still ate a significant amount of traditional food in combination with imports. In Gaborone, "urban residents were found to be appropriating

aspects of diverse food cultures to produce their own" (Legwegoh and Hovorka 2016, 89). Friedberg's (2003) historical analysis of the introduction of European food in Burkina Faso during and after colonization similar results: place-based food traditions endure generations of external influence. According to Friedberg (2003), this evidence provides an alternate perspective to research that focuses on cultural loss associated with the expansion of global food markets. Instead of looking at ways that food systems are displaced by colonialism, post-colonial trade relationships and neoliberalism, these studies and the remainder of this chapter look at the ways that food systems adapt, in place, in a hybrid relationship with global food system dynamics.

Not simply applied to food systems but place-based economic activities more broadly, Pieterse (1994) asserts that globalization does not necessarily mean Westernization, rather, there is an enduring hybrid relationship between global markets and local manifestations. Place is a persistent element of our everyday lives that and shapes how globalization manifests at a local level (Pieterse 1994; Massey 1997). Associating the expansion of global markets with hybridization answers Goodman et al.'s (2012, 24) call for an "inclusive and reflexive politics in place" where "local food systems…[are] the outcome of mutually constitutive, imperfect political processes in which the local and the global make each other on an everyday basis." Place-based food systems are not necessarily rendered irrelevant by the expansion of global markets, rather, they adapt in dynamic ways (Joassart-Marcelli and Bosco 2017). This relates more closely to Doreen Massey's (1997) concept of a "global sense of place", where places are certainly affected by, but not homogenized by processes of globalization. Massey's understanding of place is mirrored by Pascual-de-Sans's (2004, 349) assertion that "…in a world that some would like to consider globalized, the presence of place in people's lives persists unyieldingly". The findings presented in this chapter suggest that Jamaica's food system is connected to global markets, but holds distinctly place-based elements that shift over time.

Place in a Diverse Economy

Identifying the highly subjective values, like people's connection to place, that are associated with particular economic activity is a key methodological component of Gibson-Graham's diverse economies framework (2006). The connection to place that people gain from interacting with Jamaica's domestic food system fits into Gibson-Graham's classification of

values not associated with capitalist elements of an economy, but rather immeasurable, context specific values that are classified as non-market or non-capitalist, yet are essential components of a diverse economy (2014). The diverse economies framework creates analytical space to consider the ways that non-market or non-capitalist social relations persist. They list a selection of these social relations as follows: "trust, care, sharing, reciprocity, cooperation, divestiture, future orientation, collective agreement, coercion, bondage, thrift, guilt, love, community pressure, equity, self-exploitation, solidarity, distributive justice, stewardship, spiritual connection, and environmental and social justice" (2014, 151). Gibson-Graham's overall goal is not to romanticize the persistence of these complex social relations, but rather to "investigate and name the interdependence they enact and thus to expand a workable economic vocabulary" (2014, 149).

Select studies draw on Gibson-Graham's framework to analyze the persistence of place in a globalized economy. Escobar notes the usefulness of the diverse economies framework in offering "an alternative language…for addressing the economic meaning of local practices, … conceptions of locality, place, and place-based consciousness" that may otherwise be considered irrelevant in the wake of capitalist expansion (2001, 155). McKay and Brady (2005) apply the diverse economies framework to analyze how people remain connected to place in the Cordillera regions of the Philippines, an area with the world's largest number of overseas migrant workers. Here, local conceptions of place are increasingly inseparable from national and international market dynamics (McKay and Brady 2005). The insights from literature on diverse economic relations helps interpret my research findings studying the ways that Jamaica's domestic food system is embedded in place, first analyzing small-scale farmers' connections to place in Southern St. Elizabeth, then turning to consider the role of place in people's demand for Jamaican grown food.

Place and Small Scale Farming in Southern St. Elizabeth

To grow food in Southern St. Elizabeth requires sophisticated, place-based knowledge of ecological conditions. This section documents the specific, lasting connections that Southern St. Elizabeth's small-scale farmers have to their surrounding environment that sustain food production for the domestic food system. Quinn and Halfacre (2014) suggest that the world's small-scale farmers have particularly strong connections to physical landscape because of their

daily interactions with their natural surroundings. In this section, I do not aim to romanticize the connections that Jamaica's small-scale farmers have to nature, but rather point out the knowledge and expertise they have with their geographical and environmental surroundings that supports domestic production. Farmers' knowledge of place is based on generations of labour intensive farming methods and relying almost exclusively on rainfall for irrigation (Barker 1993). Farmers' knowledge and practices, here, are uniquely suited to the opportunities and constraints of the region.

Small-scale farmers in Southern St. Elizabeth work with an uneven, challenging landscape to grow food. Floyd's research on agriculture in Jamaica (1983) details the specific geographical and environmental constraints facing Jamaica's small-scale farmers. Floyd (1983, 213) notes that "…a little more than half of Jamaica is being actively utilized…because of environmental factors. The rest…comprises areas of difficult terrain, poor soils, and excessive or deficit rainfall; it is covered with degraded forest or woodland, scrub, or is lying ruinate." Jamaica's most fertile, easily accessible farmland has historically been reserved for export oriented, plantation agriculture (Barker 1993). The remainder of arable land tends to be sloped, rocky and of varying soil quality requires strenuous work to be productive (Floyd 1983). In my interviews with small-scale farmers, they detailed how they deal with such challenging agroecological conditions. In the words of one small-scale farmer, "You asked how we survive, and I think it's because of this type of farming why we survive."[42] Small-scale farmers have found ways to grow food because they work *with* environmental constraints. Jamaica's agroecological zones are so diverse, and the arable land is so fractured, that scaling up into bigger farms is not feasible (Rhiney, pers. comm). This land is not suited to large-scale mechanization, but instead requires labour intensive farming. It is on this uneven landscape that Jamaica's small-scale farmers have, over centuries, developed strategies to work with the natural environment to grow food.

A range of research documents small-scale farmers' experiences in Southern St. Elizabeth (Beckford, Barker, and Bailey 2007; McGregor, Dodman, and Barker 2009; Campbell, Barker, and McGregor 2011). This body of literature demonstrates that small-scale farmers, who grow food chiefly for the domestic market, are highly innovative, hold significant knowledge and expertise on working with their surrounding environment, are constantly experimenting in

[42] Interviewee 44, October 14, 2016.

the face of serious financial constraints. Gamble et al. demonstrate that farmers' sophisticated perceptions of shifting precipitation patterns mirror data on environmental change, for example, changes in precipitation patterns (2010). While Jamaica's small-scale farmers are efficient and extremely knowledgeable, they also mitigate risk in ways that are "survival and results oriented" (Beckford et al. 2007, 282), constantly adapting to shifting demand for food and environmental change. As stated in Chapter Two, farmers reported the high costs of inputs, especially water, marketing challenges and competition from imported food to be their biggest stressors (Beckford and Bailey 2009; Campbell et al. 2011).

Even as small-scale farmers face a range of stressors, farming remains an important cultural practice, or way of life in Southern St. Elizabeth. As I established in Chapter 5, small-scale farming is an important livelihood opportunity that is accessible to many people. In addition to the monetary, income-generating benefits of small-scale farming, growing food on a small-scale has a strong non-market value that literature related to people's sense of place, or attachment to place, helps to articulate. This attachment to place comes in two forms. First, farmers hold strong connections to ecological dimensions of farming that link them to Southern St. Elizabeth's diverse agroecological landscape. Second, farmers use place-based farming methods that draw upon their connection to land and longstanding agrarian traditions. However, at the same time that small-scale farmers base their practices on local agro-ecological conditions, they also use imported inputs. There are distinct local agricultural practices that are supplemented with inputs supplied by global agricultural supply chains. On Jamaica's small-scale farmers, local conditions and global markets that cannot be separated.

Small-scale farmers in Southern St. Elizabeth continue growing food under challenging geographical circumstances because of the strong connection gained from their work. Aside from income-generating benefits, farming provides people with a connection to their surrounding place. The small-scale farmers interviewed for this study commented on their grounded connection to Southern St. Elizabeth's landscape. For example, standing in a tidy, sloped, 3.25 acre farm, picking tomatoes for a higgler, a farmer told me his work is a "fulfilling thing" because he can "watch plants grow…from a small stage until they come with fruits…it's a good life, it's beautiful out here….[I am] one on one with God."[43] He goes on to discuss the

[43] Interviewee 10, September 27, 2016.

process of farming, stating, “When you plant something and it grows; the time you took to nurture it and you see it come to perfection, that’s my love.” In another discussion with a group of vegetable farmers, they unanimously agreed that they value the “peace and contentment” that they get from farming. Farmers sought out this connection to their surrounding place; it was one key reason that they continued growing food despite the challenges it poses.

The strong attachment to place that emerged from my interviews with small-scale farmers is the culmination of generations of farming in the area. With the exception of one farmer who had moved to the area to start a new livelihood through farming, all interviewees have family connections to farming in Southern St. Elizabeth. As explained in Chapter Five, nearly all the small-scale farmers interviewed for the study got into farming because it is part of their family’s traditional livelihood. The trend of intergenerational farming in Southern St. Elizabeth is somewhat exceptional to the area. In other parishes and regions, the tradition of farming is not as strong. There are indeed farms and farming families across the entire island, however small-scale farming as a tradition is less common as it is in Southern St. Elizabeth. For example, one farmer[44] states that people in the area “just take on a love” for farming because of family traditions. Small-scale farmers included in this study commonly spoke of the culture of farming in Southern St. Elizabeth. For example, a small-scale cauliflower farmer[45] I interviewed asserted that the human-environmental connection in Southern St. Elizabeth is also a result of the culture of farming in the area. He saw his father’s ability to care for the family through his connection to the land and it influenced him to start farming himself. The connection to place that small-scale farmers reported helps people to start farming, gain knowledge of what works and grow food for the domestic market, despite difficult farming conditions.

Jamaica’s small-scale farmers use cultivation techniques honed over generations that suit the ecological context in which they work. Place-based agricultural practices, here, help small-scale farmers to consistently grow food for the domestic market. Studies conducted in the Department of Geography and Geology at UWI have long documented the sophisticated and innovative ways that small-scale farmers across the island use place-based strategies to deal with complex agroecological conditions (Barker 1993; Beckford 2002; Beckford and Barker 2007;

[44] Interviewee 11, September 27, 2016.
[45] Interviewee 9, September 27, 2016.

Campbell, Barker, and McGregor 2011). Beckford and Barker (2007) contribute a case study from the parish of Trelawney to document the innovative ways that small-scale farmers work within geographical and environmental constraints to efficiently grow yam, a crop important to many Jamaican's food culture. Farmers use yam sticks, or long wooden poles, staked in the ground to maximize crop productivity (Beckford 2002). Beckford and Barker's study notes the hybrid nature of farming practices that mix agroecological methods with 'modern' science; this hybridization is also characteristic in Southern St. Elizabeth, where farmers blend place-based techniques they learned from previous generations with chemical inputs (2007).

The place-based practice common in Southern St. Elizabeth help to mitigate specific environmental conditions in the area, especially related to water. Irrigation was the most commonly cited ecological challenge that interviewees saw to growing food in Southern St. Elizabeth. The parish is generally dry and also subject to increasingly unpredictable precipitation, higher frequency of droughts and drying winds (Gamble et al. 2010). In 2015, drought conditions severely affected crop yields. Small-scale farmers in the area rely chiefly on rainfall for irrigation. Most small-scale farmers in Southern St. Elizabeth do not have access to a reliable, affordable supply of water for irrigation and manage water on an individual basis (McGregor, Dodman, and Barker 2009). Less than half of all residents in the parish have access to piped water through the National Water Commission (Myers 2015). People can purchase water that is delivered to farms on trucks; however, this can be prohibitively expensive. Access to water, in dry conditions, is heavily dependent on one's access to capital. For the majority of small-scale farmers who do not have ready access to capital to purchase water, food production depends on the ability to conserve a declining and increasingly unpredictable amount of rainfall.

Farmers honed drought-mitigation strategies over generations that are widely used today, including labour-intensive irrigation techniques, and a place-based mulching technique. Farmers use one of two irrigation methods: the first, hand watering, is particularly laborious: farmers collect water in a large drum or tank, and then water each plant, by hand, with a small tin. While labour-intensive, this approach has its benefits: farmers can apply the minimum amount of water that a plant needs to grow, conserving their water reserve. Other farmers use drip irrigation, where a long, perforated tube hooked up to a water tank irrigates plants more quickly. Farmers who use this method note its benefits in managing the drudgery of irrigation. However, drip irrigation requires some capital to invest in a rain barrel and tubing. Drip irrigation is increasing

in popularity due to an initiative by the Jamaica Social Investment Fund (JSIF) to deliver water tanks and tubes to farmers. When connected to drip irrigation hoses, these tanks provide significant relief – in terms of both labour and time - to farmers who previously irrigated by hand.

A notable place-based agricultural technique to conserve water in Southern St. Elizabeth is to mulch crops with guinea grass (*panicum maximum*) or cow grass (*Paspalum conjugatum).* A typical application of guinea or cow grass is pictured in Figure 6-1. This practice is very common across the parish; all farmers interviewed for this study use guinea grass or an alternative form of mulch on their crops. Plastic mulch is also available, but farmers prefer guinea grass because it provides a nutritional benefit to the soil over time. Farmers use guinea or cow grass for many purposes: chiefly, to retain moisture, but also for soil management, helping to curtail soil erosion, to combat weeds and to help fertilize the soil (McGregor et al. 2009). A man who has been farming for more than thirty years explains the person-place interaction behind mulching: "there's a thing in your head that tells you with mulching your plants do better…because you were born and grow with it and you see your people do it."[46] Another farmer, a former social worker who is now an advocate for cooperative farming in the area explains that mulching with guinea grass is simply commonplace, stating, "Once you're in St. Elizabeth, it's cultural."[47] He uses mulch to help grow vegetables, mostly broccoli, as a cash crop and sweet potatoes and other root crops on a longer term. The use of guinea grass as mulch is one example of how farmers in Southern St. Elizabeth work with the landscape and environmental conditions to grow food.

Figure 6-1: Guinea grass used to mulch between plants

[46] Interviewee 34, October 10, 2016.
[47] Interviewee 35, October 11, 2016

Source: Author

Some farmers grow their own grass, while others purchase it from community members, or in times of scarcity, from those who grow it outside the parish. Farmers place on top of the soil by hand themselves, or hire others to help. In their survey in 2006 to 2008, Campbell et al. (2011) found that the cost of guinea grass for mulch was a major stressor to farmers in Southern St. Elizabeth. The price of guinea grass fluctuates significantly. Beckford et al. measured the cost of one truckload to be JMD 10 000 (CAD 96), but interviewees estimated that it can reach as much as JMD 70 000 (CAD 678) per truckload (2007). As drought conditions become more frequent, water conservation strategies such as mulching become ever more relevant. One farmer stresses, "After studying and watching what has happened over the years, I've come to understand…if it wasn't for mulching, we wouldn't have anywhere left down here to farm."[48] The application of guinea or cow grass is one context-specific example of farmers using place-based knowledge to continue growing food in Southern St. Elizabeth for the domestic market.

While the application of guinea grass to conserve soil moisture has been common in Southern St. Elizabeth for generations, it has direct connections to Jamaica's history as a plantation economy. Guinea grass is not native to Jamaica. It was introduced there as early as the

[48] Interviewee 21, October 5, 2016.

17th century, carried on the same ships that brought enslaved West Africans to the region for sugar cultivation (Parsons 1972; Ormrod 1979). Guinea grass was initially brought to the Caribbean region to feed birds, then was found to be useful as cattle fodder (Parsons 1972). Eventually, it spread widely across the Caribbean and United States. It is not clear when small-scale farmers started using the grass as mulch; however, the farmers interviewed for this study note that people used it for generations. The use of guinea grass as mulch is one example of how farmers in Southern St. Elizabeth work with the landscape and environmental conditions to grow food while also drawing on particular aspects of export markets, in this case, vestiges from the plantation economy.

Small-scale farmers pair irrigation and mulching with crop rotation techniques to suit the area's dry conditions. Farmers will plant crops that require more water during the island's longer rainy season, lasting from October to November, and crops that require less water in dry seasons. Two young male farmers who I interviewed after they completed a farmers' field school rotate between tomatoes and sweet peppers, and cruciferous vegetables to maximize crop yields according to rainfall patterns. One farmer describes the process of decision making on what to farm based on water availability:

> On the south side, we do mostly sweet peppers and tomatoes in the fall time, the rainy season. So apart from that time, because you know that we have water problems on this side, we're not going to have any running water, so when we don't have that much water, we do broccoli and cauliflower that can be maintained with the little water that we have. So because the tomatoes and the pepper take so much water, we tend to go with these kinds of crops in the fall.[49]

Crop rotation, common across Southern St. Elizabeth, allows small-scale farmers to maximize multiple growing seasons per year with varying amounts of rainfall. This is another example of how farmers' connections to their surrounding environmental allow them to continue producing food for the domestic market.

Place-based Farming and Conventional Inputs

While place-based farming practices are common across Jamaica's breadbasket, small-scale farmers also rely on more modern, imported farming inputs. The two young farmers who

[49] Interviewee 11, September 27, 2016.

mentioned above use place-based agricultural practices like crop rotation and at the same time experiment with chemical inputs. In their case, they experiment with water-soluble fertilizer that is added to drip irrigation, a simple way to save labour and fertilize crops. Their experience using both place-based knowledge and synthetic fertilizer is common across the area. Most farmers blend agroecological techniques with conventional, purchased inputs. One member of the St. Elizabeth cooperative association says, "…most of us generally mix" organic and chemical inputs. Other farmers noted their preference to combine scientific advancements in agriculture with intergenerational farming knowledge.

Farmers' preferences for inputs are complicated and different in each case. They generally prefer organic inputs to chemical ones, although they still see a role for both. Several interviewees commented on the risks associated with chemical inputs, including both environmental risks like nutrient depletion in the soil, and potential health risks to themselves. The organic methods that small-scale farmers in Southern St. Elizabeth use are most commonly for pest control, maintaining soil nutrients, and saving money. These inputs range from kitchen items such as garlic, cooking oil and molasses, to neem, Epsom salts, bitter wood, and cerasse (bitter melon). Farmers use various combinations of chemical inputs, including pesticide, herbicide, fungicide and fertilizer to help mitigate risks from pest and fungus. Farmers purchase inputs cash at farm stores that are peppered throughout rural Jamaica. An input company that is popular in Southern St. Elizabeth, First Hand, is based out of the Dominican Republic. A Canadian company supplying organic, synthetic fertilizer has recently entered the Jamaican market, and at the time of my study, many farmers' interests were piqued. Some had begun experimenting with it on their farms, with the hope to lessen their dependency on chemical inputs. For some lower-income farmers, it is a privilege to experiment with natural and organic fertilizers and pest management options. One interviewee[50], who began farming after retiring from social work, says that the area's poorer farmers "…do not believe that by not using the conventional chemicals they will be able to make enough. So they are just eager to use it to get good results." Small-scale farmers depend on imported inputs to varying degrees, indicating a persistent dependence on global agricultural input markets to grow crops for the domestic market.

[50] Interviewee 35, October 11, 2016.

Another way that small-scale farmers rely on global agricultural markets is for seeds. Currently, there are no Jamaican seed companies; rather, farmers purchase seeds like any other synthetic input, for cash at farm stores. Several farmers noted the lack of quality and variety of imported seeds. For example, Irish potato seeds imported from the United States are chemically treated in such a way that saving them over time does not result in a quality crop. Alternatively, many farmers who travel abroad as Temporary Foreign Workers in Canada and United States bring seeds and seed catalogues back to Jamaica. In order to import their own seeds, farmers must get a letter of special permission from the Ministry of Agriculture for a fee. Small-scale farmers in Jamaica remain highly connected to agricultural supply chains through both seeds and imported, synthetic inputs that complement their place-based practices.

In Southern St. Elizabeth, the separation between 'traditional' farming and the use of 'modern' farming inputs is grey. Small-scale farmers indeed hold a strong connection to the place in which they work. Farmers have developed place-based farming techniques over time that are passed down through multiple generations. McGregor et al. (2009) suggest that the reason St. Elizabeth 'works' is that farming systems are finely tuned to the environment. Based on decades working in agricultural areas, Barker (2012, 56) states, "…traditional knowledge has allowed Caribbean farmers to survive and adapt to change and adversity throughout the region's turbulent past and problematic present." At the same time, small-scale farmers rely on imported inputs, including chemical pesticides and seeds, in order to produce food for the domestic market. Jamaica's small-scale farmers have, over centuries, developed strategies to work with the natural environment to grow food that are not necessarily 'traditional' or 'modern' but have built on tradition and adapted with ideas from around the world.

Small-scale farmers' practices in Jamaica's domestic food system raise important questions for proponents of structural transformation to agricultural systems. Critical food studies scholars exploring transformative solutions to our food system are prescriptive about what farming ought to look like in a sustainable world. Food sovereignty scholarship prescribes agroecological food production that cuts ties with external inputs, specifically those that are synthetically produced and globally traded (Altieri 2009; 2010; Holt-Giménez and Altieri 2013). AFN scholars advocate for reterritorialized food systems that are delinked from global markets, in contrast to a deterritorialized food system (Morgan, Marsden, and Murdoch 2006b). Food sovereignty and AFN scholars' recommendations stem from decades of research to expertly

address social and ecological injustice. However, the place-based farming techniques that scholars of ‘strong’ alternative food networks and proponents of food sovereignty celebrate, in the case of Jamaica, are used in concert with other inputs. Farmers’ blended use of purchased inputs and place-based strategies cannot be separated and challenges ideas around the prescriptive changes to the food system necessitated by critical food scholars. This flexible, dynamic relationship is also found further down the domestic food system supply chain: in the ways that Jamaican diets adapt over time.

The Persistence of Jamaican Food Culture

While people living in Kingston frequently buy and eat imported, often Western, food, domestically grown produce is a key component of diet, despite a significant amount of food import dependence. Contrary to scholarship on the inevitable hegemony of Western diets, the Jamaican diet, is not fully Westernized, rather is a blend of local, regional and globally-traded products. The persistence of the domestic food system can, in part, be attributed to its ability to support people’s connection to place. In Jamaica, domestically grown food has historically been a way that the state has fostered people’s connection to a national identity since the country gained independence.

Throughout the 2000s, studies analyzing the impact of globalization on diets in LMICs (Popkin 2001; Hawkes 2006; Rayner et al. 2006; Kearney 2010). The central argument of this body of literature that spans geography, global public health and international development studies, among other disciplines, is that globalization results in a distinct shift in dietary patterns. The FAO warned of “dietary convergence”, defined as an "increased reliance on a narrow base of staple grains, increased consumption of meat and meat products, dairy products, edible oil, salt and sugar, and a lower intake of dietary fibre" (Kennedy et al. 2004, 9). Kennedy et al. (2004) note that one result of dietary convergence is the potential erosion of food culture. Indeed, analysis by Hawkes (2006) shows that across LMICs, policies and processes associated with globalization resulted in dramatic increases in consumption of foods that are high in fat, sugar and other sweeteners. This nutrition transition altered agri-food systems and lead to increased prevalence of non-communicable diseases (Hawkes 2006).

In Jamaica, Weis refers to the nutrition transition as part of a "First World grain-livestock complex" (2004, 484), where rolled-back trade restrictions, described in Chapter Three, led to the dumping of wheat and meat onto the Jamaican market, shifting dietary patters. This process that was happening after Jamaica's experience with structural adjustment and trade liberalization led Lamming to proclaim the "crisis of cultural sovereignty" he saw where the island could not meet people's basic dietary needs (in Weis 2004, 484). Throughout the second half of the 21st century, wheat was indeed imported into Jamaica as a result of PL-480, the American food aid program described in Chapter Three (Talbot 2015). Meat was imported at the same rate from the 1970s onward (Talbot 2015). At the time that Weis was conducting his research on threats to Jamaica's food system, food culture on the island looked rather Western. To suggest a counternarrative to this literature, this section investigates the ways that Jamaican food culture has endured despite strong ties to import markets by looking at purchasing patterns in Kingston and interviews about people's dietary preferences.

The Enduring Role of Jamaican-Grown Produce

What does the Jamaican diet look like today, and what role does the domestic market play? As indicated by the household survey results, the top 15 foods that respondents purchased in the month prior to the survey include a range of items that are imported and domestically grown. Table 6-1 below outlines each food according to the frequency at which households purchased each item in the month prior to the survey, paired with the origin of each food item, based on grey literature and key informant interviews.

Table 6-1: Origin of Food Items According to Frequency of Purchase

Food Item	**% of households that purchased food item (in the month prior to the survey)**	**Origin of Food Item**
Rice	87.0	Imported
Sugar	84.0	Both
Cooking oil	81.8	Imported
Frozen chicken	66.5	Both
Vegetables	65.5	Both

Roots and tubers	64.5	Domestically grown
Brown bread	63.1	Imported
Green bananas, breadfruit	59.8	Domestically grown
Eggs	59.3	Both
Snacks	54.3	Both
Fruit	54.3	Both
Canned meat	53.8	Imported
Powdered milk	52.6	Imported
Tea/coffee	50.9	Both
White bread	48.0	Imported

Source: Household survey data and author's review of grey literature

Staple foods like rice and bread, commonly purchased by survey respondents, are imported. Jamaica imports approximately 100,000 metric tons of rice, a staple grain important in national cuisine, annually from Guyana, the United States and Suriname (CropSite 2012). In 2010, just under half of rice was imported from Guyana under a preferential trade arrangement (CropSite 2012). Wheat is imported to the island, and then ground into flour at Jamaican Flour Mills to make various bread products. Cooking oil is imported to Jamaica in an edible form, as opposed to crude. There is limited capacity to refine crude vegetable oil into its edible form on the island. Approximately 80% of imported edible oil is made from soybeans, supplied by the United States (Micronutrient Initiative 2007). Various meat products are imported and processed into canned; Jamaica imports 99% of its corned beef (Jamaica Gleaner 2017). Powdered milk is imported from the USA, New Zealand and the Netherlands (Pemberton et al. 2016). Jamaica has a limited capacity to produce staple items like rice, wheat, cooking oil and powdered milk and is unlikely to become self-sufficient in their production. As such, these products will be consistently imported to meet consumer demand.

Many of the food items that households reported frequently buying are both domestically produced and imported. For example, Jamaicans consume domestically grown raw sugar, but refined sugar is also imported for manufacturing use in the non-alcoholic beverage and bakery industries (USDA Foreign Agricultural Service 2017). Eggs are other examples of products that are domestically produced and imported. Jamaica currently produces nearly enough eggs to suit

consumer demand and then receives some imported eggs from the United States (Davis 2018). In 2016, Jamaica imported 4.3 thousand tons of eggs (Josling et al. 2018). Table 6-2 illustrates the production surpluses and deficits of thirteen other products common in Jamaicans' diets. As indicated in the Table 6-2, in 2016, current levels of domestic production leave Jamaica selfsufficient in some areas. For example, the country produced enough coffee, sugar (in the form of sugar cane), oranges and bananas to meet domestic demand. Select vegetables and fruit are imported to satisfy people's diverse tastes and demand from tourists. The biggest production surpluses are in sugar, Jamaica's biggest agricultural export, and bananas.

Table 6-2: Production and Consumption of Selected Commodities in Jamaica, 2016 (000 tons)

Food Product	Production	Consumption	Production Surplus/Deficit
Sugar Cane	142.4	67.9	74.5
Bananas	64	32.0	32.0
Coffee	13.7	0.6	13.1
Yams	78.6	71.0	7.6
Sweet Potatoes	27.5	26.2	1.3
Oranges	106.9	105.7	1.2
Cacao	0.6	0.2	0.4
Tomatoes	23.1	23.5	-0.4
Pigmeat	7.4	8.8	-1.4
Beef	6	8.2	-2.2
Pineapples	20.5	23.4	-2.9
Eggs	6.3	10.6	-4.3
Poultry	104	125.5	-21.5
Milk	15	95.9	-80.9

Source: Adapted from Josling et al. (2018)

Domestically grown roots, tubers, banana and breadfruit also contribute to Kingston residents' monthly food purchases. Table 6-2 illustrates that, in 2016, Jamaica produced a surplus of yam and sweet potato above what people consumed. Altogether, they survey data shows that domestically produced food still makes up important parts of what Kingston residents purchase to eat, in combination with imported food. The empirical data included in this section adds complexity to the narrative that imported food will displace dietary trends toward Western patterns. Next, I present findings from select interviews that I designed to investigate how domestically produced food remains relevant in Jamaican diets.

Despite an increasing availability of imported food, the domestic food system remains an important source of fresh produce, including fruit, vegetables, roots and tubers, green bananas and breadfruit in people's diets. What explains the persistence of domestic produce in people's diets? In his analysis of threats facing Jamaica's domestic agricultural production, Weis notes that his interviewees and informants "believe that Jamaican produce has a competitive advantage over imports in terms of quality, consistently describing it as being 'healthier', 'more fresh', having 'less chemicals' and 'much nicer taste-wise'. But this quality advantage is often trumped by concerns with price, inconsistent supply and variable quality" (2004, 479). Weis goes on to suggest that these price, supply and quality concerns lead to buy imported substitutes. In some cases, people certainly opt to purchase imported products if they are priced lower than Jamaican grown ones. However, people also make with non-market considerations in mind. Interviews with small-scale farmers, vendors and key informants reveal that Jamaicans still hold a strong preference for produce grown on the island that links to values of place and national identity.

Perceptions around the higher quality of Jamaican produce as compared to imported fruit and vegetables came up consistently in interviews with vendors and key informants. Interview data suggests that the perceived advantage of Jamaican produce is an important deciding factor in the type of produce people buy. Market vendors commented that their customers held strong preferences for Jamaican grown produce. At the time that I interviewed a fruit and vegetable vendor[51] for this study, she had a range of imported produce at her stall, but little domestic food left for the day. She indicated that Jamaican grown produce "goes faster than the foreign stuff. If

[51] Interviewee 1, September 15, 2016.

they can't get [Jamaican produce] well they will use [imported produce], but otherwise, if they can get it, they will pass over and say, 'I don't want the foreign Irish [potatoes], I want the local Irish'. So if you have foreign Irish and that person over there has local Irish, they will leave you and buy local stuff." Another market vendor[52] who sells exclusively organic fruit and breadfruit comments, "The Jamaican quality is better…[customers] always come and check me for some of the breadfruit and the nice organic things." Farmers interviewed for the study confirmed their preference for Jamaican produce in their own diets. Some refused to buy American fruit because of concerns over chemical residue, one measure that exporters must take so produce stays fresh.[52] Interviewees perceive that imported produce has a lower quality because of chemical use, in particular, when it is used to making fresh juice. Simply put by one market vendor[53], "we prefer our local things. That's why they say we are to eat what we grow." Whether people chose domestically or imported produce was not, in these interviews, necessarily trumped by price.

As I established in Chapter Four, the household survey data showed that Kingston residents most often access their produce at the city's markets. Table 6-3 revisits where survey respondents reported buying produce, showing that people purchase their produce at a higher frequency as compared to the supermarket. Aside from the availability of produce at the market, the market itself is an important cultural institution where people prefer to shop. Katzin's (1959) research on Jamaica's food markets in the 1950s and 1960s describes the sense of connection and social place that Coronation market gave to those who congregated there. Higglers from the countryside would meet at the market with produce to sell, turning it into an important place of business and social gathering (Katzin 1959). Today, my findings show that the market still serves this important function beyond its purpose as a centre of economic activity. One interviewee contrasts the experience of shopping for produce at the market as compared to a supermarket, "Jamaica is unique in many ways, in that not many people buy fresh fruits and vegetables from the supermarket, we prefer the market…We like going to the market and we take up and we squeeze and we question and ask…"[56] People's weekly market visits allow them to participate in the shared experience of this important, lasting cultural practice that is certainly not unique to Jamaica.

[52] Interviewee 2, September 15, 2016.
[52] Interviewee 26, October 5, 2016.
[53] Interviewee 3, September 15, 2016.

Table 6-3: Kingston Residents' Purchasing Patterns for Fresh Produce

Food Item	% who buy at the market	% who buy at supermarket
Vegetables	69.6	26.3
Roots and Tubers	74.2	10.2
Green Bananas, breadfruit	41.6	7.4
Fruit	66.1	27.3

Source: Household survey data

People's preference for domestic produce arises, in part, out of a sense of duty to support the place where they live. Vendors selling produce in Kingston's markets feel a sense of responsibility to sell Jamaican produce. One vendor selling a combination of imported and local fresh produce[54] states, "…you're supposed to support your country" by selling Jamaican goods. She says, "It's better for you to sell your own product than to sell foreign products. If you sell foreign products you are not supporting Jamaica." From the customers' perspective, another interviewee[55] boasts, "I always eat Jamaican food…If I go to the market and they haven't got Jamaican onions I'm offended." As I interviewed those working in the domestic food system and key informants, people's pride over domestically grown food emerged as an underlying reason they preferred buying Jamaican grown food.

It is important to understand people's preference for domestically grown produce alongside the realities Jamaica's dependence on imported food. In discussion with two young farmers, they indicate that although Jamaican produce is in higher demand than its imported equivalent, imported food plays an important role in filling gaps in production. A farmer[56] states, "When it can be, we would prefer local at all times. Because you get it fresher, it has more nutritional benefits to you at that time and the exchange stay within the country. And other times now when you have drought, like at one time we had a severe drought, we weren't able to produce, so you have to work with [imported alternatives]." His colleague responds, "You can't really cut [imported food] off. As soon as you hear the drought has started in St. Elizabeth…it's

[54] Interviewee 1, September 15, 2016.
[55] Interviewee 19, September 29, 2016.
[56] Interviewee 11, September 27, 2016.

a problem. The prices of the things go sky high, and even though it's gone up sky high, they're still not getting the amount. So the nation will be hungry, so you still have to get it from overseas…even we who complain still see that we need it." Once again, the domestic food system interacts with imported goods, in this case to smooth out Jamaica's food supply. Throughout my interviews, people who depend on trading food for their livelihood echoed this response. Vendors' stalls displayed a combination of imported and domestically produced produce to ensure that they could earn enough income each day. Inconsistencies in the supply of Jamaican grown produce mean that they must supplement what they sell with similar from elsewhere to maintain their customer base. For example, one vendor at Constant Springs Market[57] sells chiefly domestically grown produce, but when it is in short supply, she supplements with imported goods. On the supply side, domestically grown food remains important, however there are distinct interdependencies with imported food, and limits to localizing the food system without addressing production inconsistencies.

On the demand side, centuries of dependence on imported food has naturally led to their incorporation into Jamaican diets. Interviewees note that, while they prefer Jamaican grown produce, imported food is necessary to round out their diet. A market vendor[58], commenting on her dietary preferences, states, "I can't eat what I grow all the time, sometimes I'll want something else to eat. I can't eat only yam; I can't grow rice, and we eat rice; I can't grow flour and I eat flour. Sometimes I want dumplings; sometimes I want rice - so I don't grow only what I eat." While the previous section highlights the connections that interviewees have with Jamaican-grown food, people also have a strong preference for imported items. Immediately after he lauded the benefits of Jamaican grown produce, one interviewee noted, "I think some of us Jamaicans, we just like foreign things."[59] Similarly, after referring to herself as a "patron of Jamaica" because of her preference for buying Jamaican food and other products, another interviewee acknowledge the general pride that Jamaicans have when they buy imported goods, or items purchased abroad. Additionally, some Jamaican have a similar class-related disinterest in shopping at Kingston's markets; one interviewee[60] mentioned that some people refuse to "go

[57] Interviewee 3, September 15, 2016.
[58] Interviewee 1, September 15, 2016.
[59] Interviewee 19, September 29, 2016.
[60] Interviewee 44, October 14, 2016.

below Crossroads" to shop, meaning they buy their food at supermarkets within Kingston's high- and middle- income neighborhoods.

A strong dietary preference for Jamaican grown food and imported goods is characteristic of Jamaican culture. Jaffe explains this seemingly contradictory phenomenon by exploring the concept of "ital chic", a dietary trend among middle-class Jamaicans. The word ital is based on wordplay with the idea of vitality and select aspects of Rastafarian culture including "beauty, health, spiritual wellness, and cultural pride" (Jaffe 2010, 40). Ital cuisine is generally vegan, although some ital food may include locally sourced fish, and uses chemical-free, Jamaican grown produce. "Ital chic" draws on select aspects of Rastafarian culture, providing "middle-class Jamaicans with a currently fashionable way to embrace a locally rooted lifestyle without sacrificing a cosmopolitan orientation in terms of comfort and style" (Jaffe 2010, 40). Ital chic is one way that Jamaicans can exercise their preference for local food without committing entirely to a local diet. Jaffe's analysis of ital chic is one example of Jamaican's simultaneous preference for domestic and imported food. Jaffe notes that a key characteristic of Jamaican food culture is its straddling of "externally-oriented, cosmopolitan consumer habits…an outward orientation [as a] marker of class distinction" and at the same time "Through ital chic the middle classes' external, global, high-tech consumer orientation loses ground to simpler, locally rooted lifestyles" (Jaffe 2010, 34).

Ital chic is one example of the complex intersections of food, culture and history in Jamaica. Joassart-Marcelli and Bosco discuss how food, globally, is "a form of cultural representation…food is constitutive of a culture conceptualized more dynamically as ways of seeing and being in the world" (2017, 16). In Hannah Garth's edited collection about food and identity in the Caribbean, she stresses the multi-scale nature of Jamaican food culture, stating, "Even when production is no longer local but becomes transnational, corporate, or global, consumption, can remain grounded in local identities" (2013, 10). The complex relationships between local-level activities and global trends are clear in Jamaica, where food culture has been significantly influenced by its strong links with the global economy since Spanish colonization.

The contradictory global-local nature of Jamaican cuisine is related to longstanding food traditions that link cuisine traditions from across the world. Creating culinary traditions from imported crops started shortly after Spanish colonization. In fact, there a few cultivated crops that are indigenous to Jamaica. One example is cassava, cultivated by the Taino population.

Tainos taught Spanish and British colonizers and enslaved West Africans to suitably prepare cassava, getting rid of its poisonous elements (Higman 2008). The Taino population prepared cassava as *bammy*, a cassava flatbread that is fried or baked and still eaten in Jamaica today (Higman 2008). Another influence of Taino cuisine is the use of pimento, or the endemic Jamaican allspice. Pimento is a key ingredient in jerk seasoning, used by Taino people to add flavor to meat. Jamaica's Maroons, West Africans who escaped slavery and created autonomous communities in the country's central, mountainous region, later appropriated jerk. Anthropologist Zora Neale Hurston (1939) wrote some of the earliest texts on jerk, commenting that the way the Maroons prepare it is superior to American barbeque. Aside from pimento and cassava, there are few other examples of indigenous food culture in Jamaica. The near-complete extinction of the indigenous population also eroded food culture.

Colonization established Jamaica's connections to the global food system and brought a range of new culinary practices from many other cultures. People creatively re-appropriated imported food to suit local palates. For example, one relic of Spanish colonization in Jamaican food culture is escovitch, a Caribbean style of preparing fish, especially mackerel and kingfish that traces back to Spain's *escabeche*, where fried fish is served with quick-pickled vegetables. British colonization brought wheat-based snacks, like buns with currants, patties (based on British pasties) and saltfish, brought from Canada. People now eat buns and patties as daily snacks as a midday meal. West African culinary traditions have had strong influences on Jamaican food culture. Ackee, a tree fruit in the same family as lychee and longan, is an integral ingredient in many Jamaican dishes, including ackee cooked with salted cod. Like guinea grass, ackee was brought to Jamaica on ships carrying enslaved West Africans in the late 18th century (Rousseau and Rousseau 2018). Plantain and breadfruit, essential components of Jamaican's diets, were also carried on ships around this time. These food products were integrated into Jamaican cuisine by enslaved black women who were responsible for cooking for their families on top of plantation work (Rousseau and Rousseau 2018). Between 1845 and 1916, approximately 37,000 people from India came to Jamaica as indentured servants to take over work of those who were emancipated. There was a distinct influence on Jamaican cuisine, in particular, curry goat and roti (Shepherd 1986). Today, people laud meals like ackee and saltfish, curry goat, patties as Jamaica's signature dishes, exemplifying food culture that has long drawn

on international influences, re-appropriating them to suit specific palates. At the same time, Jamaicans feel a strong place-based connection to food grown on the island.

The dynamic, sophisticated development of food culture over time is not unique to Jamaica. Wilson (2013) documents the localization of global dietary trends across the Caribbean, drawing specifically on examples from her work in Trindad. She documents how young Trinidadians consider imported food "…as essential to their very identity as Trini" (Wilson 2013, 108). Similarly, Caldwell studies how Russians re-appropriate food from McDonalds into their gustatory culture (2004). Paradoxically, the localization of McDonald's food in Moscow happened at the same time that citizens began turning toward domestically produced foods that evoked their cultural heritage (Caldwell 2004). Just like multinational food corporations in Russia, Jamaicans have embraced aspects of the global food system and repackaged them as essential components of culture, from breadfruit in the 17th century, to Kentucky Fried Chicken today. At the same time, fresh produce grown on the island for centuries holds a special place in people's diets. This dynamic complicates the idea that any component of Jamaican cuisine is traditional, negating the need to return to a nostalgic, more authentic past and brings important questions to scholars recommending that Jamaica preserve their traditional food culture. What does "tradition" mean for food culture in a plantation economy?

Both food culture and place-based agricultural practices provide Jamaicans with connections to place that, in turn, manifest as persistent links to the domestic food system. At the production level, small-scale farmers practice place-based strategies to produce food in challenging conditions. They also interact with global agricultural supply chains to access inputs that are not produced in Jamaica. At the consumption level, people hold strong connections to Jamaican grown food and purchasing it at urban markets. At the same time, imported food is an integral part of Jamaican food culture. The unique ways that place-based agricultural practices and food culture persevere, here, happened organically over time and were part of the state's self-reliance model that was institutionalized in the 1970s. Before concluding this chapter, I outline the ways that the domestic food system not only to fosters individual's sense of place, but was also used as a means to cultivate a new country's national identity as it gained independence.

Food Self-Reliance and Institutionalized Embeddedness

In the years leading up to, and shortly after independence, Michael Manley, who would become the leader of the PNP and the country's second prime minister after independence in 1962, created a set of policies to support Jamaica's domestic food system, building on the ways it was already situated in place. Manley's political agenda drew on the New World Group's emerging ideas of Caribbean political economy, centred on the concept of self-reliance. I outlined these ideas and the application in Chapter Three. As defined in Chapter One, self-reliance refers to "development on the basis of a country's own resources, based on the potential of its cultural values and tradition" (Galtung et al. 1980). Manley's proposed suite of policies to spur food self-reliance, or the country's ability to produce a desired level of its own food and purchase the rest with export earnings (Herdt 1998).

The Jamaican government's intention was not to reach a level of complete food self-sufficiency, rather, to support and promote as much self-reliance as possible. Manley openly acknowledged that Jamaica had limits to its agricultural productive capacity (Manley 1987, 82). His party instead saw self-reliance as one important way that that the country could develop its own unique national and cultural identity and gain a degree of independence from global markets (Timms 2008). Policies such as land reform, irrigation provision and establishing agricultural credit banks built on the existing domestic market that relied on economic exchange and relational, non-market and alternative market elements at the production level. At the consumption level, Jamaicans could foster their sense of nationality through eating food grown in their own country. Self-reliance initiatives did not present a structural challenge to the food system; rather they were designed to support the domestic food system. Ties to import and export markets were maintained in ways that would better serve Jamaica's national development.

In Jamaica, diets and food culture is dynamic and diverse. Beckford describes how the diversity of Jamaican food culture is tied to the country's plantation history: "The plantation introduced new crops to many countries and the cultivation of many of these still represents the chief means of livelihood (however tenuous) of high percentages of the populations in these countries. In short, it has fashioned the whole environment which the people of these countries have inherited" (1972, 3). Rather than looking at today's version of the Jamaican diet as

susceptible to Westernization, my aim here is to shift to a narrative that highlights diversity and the way that people draw their sense of place from what they eat. Drawing on Caribbean political economy literature and the way the concept of self-reliance was applied to agricultural development helps to explain how Jamaica's domestic food system persists in ways that are interlinked with import and export markets, translating into a food culture whose 'place' is constantly evolving.

Place in Policy Reflections

Reflecting on the Government of Jamaica's policy initiatives to promote the country's national identity through food self-reliance is a useful starting point to put together recommendations to support the domestic food system. The state's goal was always to reduce dependency on the global economy while also helping to build a sense of national identity in a newly independent nation. Today, the state's efforts to support its domestic agricultural sector are hindered by the WTO's AoA. As Josling (2018) outlines, the remaining policy options are indeed limited, but leave some potential for creativity.

The Ministry of Industry, Agriculture and Fisheries is still permitted to support farming through extension and training. Their extension arm, the Rural Agricultural Development Authority, uses this window to train farmers to grow crops through self-reliance initiatives such as the Onion Development Programme. The program trains small-scale farmers to grow crops, like onions, that can be grown on the island but are imported. RADA's programming, however, uses external and synthetic inputs and could benefit from working *with* small-scale farmers to understand their place-based techniques and knowledge.

To support the country's efforts to support people's sense of national identity vis-a-vis food, while also reducing dependence on global markets, the findings in this chapter reveal an opportunity to focus on agricultural inputs. As indicated earlier in this chapter, small-scale farmers depend on imported inputs, in particular, seeds. Small-scale farmers bring seeds back to the island after working temporarily on farms in the United States and Canada. RADA's agricultural development programs could expand to train farmers to save onion seeds, while still adhering to the WTO's Green Box restrictions to support domestic agriculture. Select small-scale farmers that I interviewed for this study practice seed saving, while others prefer to buy them each growing season. Strengthening Jamaica's seed market presents a unique and

meaningful opportunity to both increase self-reliance and supporting place-based agricultural production.

In terms of dietary trends, the *Eat Jamaica* campaign supports marketing and promotion activities that laud Jamaican grown food. Given people's strong preferences for food that is grown on the island, and the sense of place people get from Jamaican grown food, there is a significant role for such programming. In particular, the *Eat Jamaica* campaign could work with other organizations that are boosting people's access to Jamaican grown food in marginalized communities, as well as through nutritional programs at schools, like the FAO's School Feeding Program, both of which fit under the purview of allowable activities under the AoA.

Conclusion

In this chapter I identify a range of instances where place remains an integral embedded factor in Jamaica's domestic food system. It is overly simplistic to predict that neoliberal economic policy will render place-based agricultural practices and dietary complexity obsolete, or as Talbot (2015) implies, that globalization will erode Jamaican's "traditional" diets in a linear fashion. A narrow focus on analyzing the ways that small-scale farming practices are threatened, or how diets will be inevitably Westernize overwrites agency at local levels, as well as diverse practices associate with people's attachment to the place in which they live. I argue that one crucial reason the domestic food system remains relevant is the subjective, immeasurable ways that it provides people with a connection to place. At both production and consumption levels within the domestic food supply chain, people remain connected to place-based practices. At the same time, Jamaica's food system remains strongly tied to global food and agricultural supply chains. Farmers' select of inputs and farming methods that draw on place-based techniques and modern developments in farming, and people's seemingly contradictory connection to imported and local food.

To conclude this chapter, I return to Friedberg's study on the complicated role of green beans in Burkina Faso's food culture, where she states that the "…overwhelmingly negative portrayal of modern African foodways…obscures a much more complex alimentary history" (2003, 448). This quote can also apply to Jamaica, where foodways are described as falling victim to imported products (Lamming in Weis 2004; Talbot 2015). The notion that alimentary histories are complex suits Jamaica's food system, where colonial power structures and global

markets consistently shape culinary and agricultural traditions, but at the same time, do not obfuscate longstanding practices. The same can be said for Jamaican foodways, both from a dietary perspective and in terms of what is cultivated for the local market.

The findings presented in this chapter raise important questions for scholarship on food sovereignty by articulating a complex food system that is intertwined with global markets. How can food sovereignty scholarship include food cultures that draw heavily on both local and global farming practices and dietary patterns? Food sovereignty scholarship is prescriptive in its promotion of agroecological food production, shifting away from globally-traded, synthetic inputs (Altieri 2009; 2010; Holt-Giménez and Altieri 2013; Gliessman 2015). Additionally, since 2007, food sovereignty scholars and the movement as a whole has been more explicit about localizing diets (Wittman et al. 2010). Referencing Jamaica, scholars recommend that dietary traditions under food sovereignty ought to represent "traditional" or "local" agriculture and dietary patterns (Talbot 2015, 54). AFN scholarship is less prescriptive about agricultural practices, however, strongly recommends shortening food supply chains through the consumption of local food. Analyzing the ways that the domestic market remains grounded in place, using the diverse economies framework, complicates recommendation that Jamaica localize its food system, neglecting to incorporate the interdependent relationships between the domestic food system and global markets.

The diverse economies approach, when nested within the context of Jamaica's specific political economy, help show how the diversity and embeddedness of the domestic food system is crucial to provide a sense of individual belonging and to contribute toward Jamaica's national identity through its food culture, despite inextricable links the global economy. Jamaican citizens find a sense of place in growing and eating food within the domestic market. However, this people-place connection is more than simply a romantic one; place-based techniques that are specifically suited to shifting agroecological conditions are necessary to produce food for the domestic market. Diets and food culture are constantly changing, drawing on international influences and a dynamic conceptualization of what 'Jamaican food' means. The domestic food system remains relevant because it established and maintains embedded functions of place for Jamaicans, both ecologically for farmers, and for all citizens who eat Jamaican grown food. The paradox in Jamaica's domestic food system is that local dynamics, including people's

attachment to place, are both connected to global markets and also persists in a uniquely local manner.

Caribbean anthropologist Deborah A. Thomas documents how Jamaican culture draws on a colonial and post-colonial history, and inextricable links between global dynamics and their local manifestations (2011). Applying the diverse economies lens, while also drawing on Caribbean history creates analytical space to acknowledge the complexities of food culture in a former plantation economy, where 'traditional' farming and diets have been shaped by global food and agricultural markets since the 17th century. Thomas's work mirrors Feagan's study documenting the importance of analyzing food systems and place more broadly (2007). Feagan describes how "…localism in food systems is dialectically and relationally tied to the global in diverse ways". Framing the domestic food system as a diverse economy allows me to categorize place attachment as a non-market value that is apparent alongside market-based dynamics. In turn, this analysis in this chapter helps to enrich the diverse economies framework by offering another category of analysis where alternative and non-economic factors warrant further research. Future applications of the diverse economies framework to food system dynamics ought to focus on the complexities of food and farming culture. The domestic food system endures, today, because of people's place attachment that works adaptively and dynamically in ways that are enmeshed and inseparable from the global food system. There is no dichotomy between traditional and modern farming methods or consumption strategies, rather, they are all part of 'place' in Jamaica's food system.

Chapter 7: Conclusion

Since colonization, through the application of structural adjustment policies in the late 1970s to 1990s, Jamaica's food system has been firmly linked to the global economy as an exporter of sugar and bananas and importer of staple foods. Given this long history in association with the global food system, scholars predicted that Jamaica's domestic food system would lose its relevance. Throughout this thesis, I have shown that Jamaica's domestic food system complicates these predictions and continues to serve important embedded roles that go far beyond market-related functions of the food system, and in ways that are not readily explained by existing food studies frameworks. Instead, the diverse economies approach can explain the specific functions of Jamaica's domestic food system because of its focus on embeddedness. The diverse economies framework, in particular, when it is contextualized in the specific political and economic context of former plantation economies, can not only reveal the domestic food system's lasting roles, but also makes important contributions to critical food studies literature. The concluding chapter of this dissertation revisits the overall objectives of this research and reflects on the study's theoretical and applied contributions. I end by discussing the limitations of the study, potential areas for future research and some reflections.

Review of Research Question and Objectives

My dissertation answers a central research question, is to explain the enduring relevance of Jamaica's domestic food system. The objectives of my research are as follows:

1. To explain three specific roles that Jamaica's domestic food system serves today. Specifically, I analyze how the domestic food system continues to support people's access to food, people's livelihoods, and their place and identity. Further, I investigate how and why Jamaica's food system continues to serve these important roles despite facing compounding challenges posed by the country's role as an agricultural exporter and food importer.
2. To bring insights to critical food scholarship, specifically, food sovereignty and alternative food networks (AFN) scholarship by applying a conceptual framing, the

diverse economies approach, that examines the ways that the domestic food system is embedded in its particular social, ecological and historical context.

3. To provide reflections on policies that could support Jamaica's current efforts to support its domestic food system, based on the realities facing those involved. This research contributes to the Government of Jamaica's ongoing programming to support domestic agriculture for domestic consumption.

I will outline the findings related to my first objective by answering the central question to my research. Next, I will outline the theoretical and practical contributions of my research, fulfilling the second and third research objectives.

This dissertation centres on the question: **What explains the endurance of Jamaica's domestic food system despite the country's role in the global economy?** In Chapter Three, I show how Jamaica's food system has been inextricably linked to the global economy since colonization. At the same time, an internal market for food rose and persisted as ties to global markets ebbed and flowed over time. The first objective of my dissertation is to explain how Jamaica's domestic food system endures compounding challenges posed by the country's strong connections to the global economy. Using an interpretivist, mixed-methods approach, I show that the domestic food system in Jamaica remains relevant because it serves three important, deeply embedded functions in society. My conceptual framework brings these embedded functions to light. Chapter Four shows how the domestic food market's embeddedness supports access to food. People buy food at a range of places, and Western-style supermarkets are important spaces to access food. Yet, Kingston's markets are still the most frequently used food sources. Markets are particularly important for people to access fresh produce. My interview and observational data shows how markets are spaces where people can readily access food through alternative economic arrangements with vendors, specifically through informal credit. Chapter Five details how the domestic food system creates and maintains informal livelihood opportunities to the country's large un- and under- employed population. In its informal and embedded state, the domestic food system provides income-earning opportunities that rely on alternative exchange and reciprocal labour. Working as a small-scale farmer or higgler in the domestic food system hinges on the ability to build and maintain interpersonal relationships in

addition to economic elements such as market prices for food. Chapter Six analyzes how small-scale farming and diets in Jamaica make up an integral part of a historical and cultural identity of self-reliance and place, despite an influx of imported agricultural inputs and food. Jamaican grown food retains an essential, lasting quality for people to hone a sense of place and national identity, at both production and consumption levels. The combination of household survey data, semi-structured and key informant interviews and direct observations helped to show both the important roles served by the domestic food market, and also *how* the market creates a niche for itself. In each of the important functions, there are contextual relationships, formal and informal, reciprocal economic and non-economic, that make the system work even in the face of capitalist tendencies that can threaten the system.

The domestic food system is a part of a diverse economy: to remain vibrant, it relies on economic market principles, such as cash transactions, wage labour, and principles of capitalist enterprise, and at the same time draws on contextual, relational dynamics to serve these three functions. The ways that the domestic market provides access to food, jobs and a sense of place, today, are not new. They are the product of a long history of people striving for independence from global markets, yet also fully enmeshed in the global economy. The orientation of former plantation colonies in the Caribbean involves a long history of self-reliance initiatives to counter strong ties to global markets and support independent food and agricultural systems. Due to the important functions that the domestic food system serves, its embeddedness and strong ties to a history of Caribbean self-reliance politics, it is unlikely to be rendered obsolete by the island's strong connections to the global economy any time soon. Jamaica's domestic food system parallels Feagan's complex, nuanced view of food systems: it "[expresses] agency in…ways can confront neoliberal and economistic rationales with more comprehensive formulations of food production and consumption decisions…while also attending to the realities of interdependence with other spatial scales (2007, 35). Jamaica's domestic food market is both embedded in society, relying on a combination of economic, alternative and non-economic practices, and is also interdependent with global food supply chains.

Jamaica's domestic food system serves people's food access, livelihoods and their identity by navigating centuries of contact with agricultural import and export markets. Higglers distribute food through a competitive market, yet because their work is informal, they can provide flexible payment arrangements so people can buy food without ready access to capital.

Alternative economic arrangements are also crucial for small-scale farmers to earn a living on their small plots. Excluded from formal contracts, Jamaica's small-scale farmers rely on the diverse economic relationships of the domestic food system to sell their food. Ever-changing agricultural methods and dietary trends draw on a bricolage of local and global influences that mirror Jamaica's history as a plantation economy that is inseparable from the global markets.

The findings in this dissertation contributes to literature on food security and sustainability in Jamaica that focuses on small-scale farmers and food production (Campbell, Barker, and McGregor 2011; McGregor, Dodman, and Barker 2009). As my study shows, farmers are still heavily dependent on higglers to sell their produce, yet, since Mintz and Katzin's work in the 1950s and 1960s, distribution is largely absent from literature looking for ways to support Jamaica's food system. Chapter Five in particular shows how Jamaica's small-scale farmers depend on higglers to buy, transport and re-sell their produce to make a living. In general, there is a dearth of scholarship on the entire supply chain of domestically grown food in Jamaica. My study of urban trends in food access in Kingston shows that demand for domestically grown produce remains high; Kingston residents have a strong preference for Jamaican grown produce. My research adds a broader view on the domestic market, including rural-urban linkages and the unique ways in which they function, to existing literature on the persistent relevance of small-scale farming in Jamaica. Strengthening links between small-scale farmers and Kingston's markets can help the domestic food system to thrive despite Jamaica's high levels of food import dependence.

Theoretical Contributions

My conceptual framework was not only useful to reveal the domestic food system's lasting roles, but also makes important contributions to critical food studies scholarship. The second objective of this work is to contribute to critical food scholarship by situating Jamaica's domestic food system activities into broader critical food studies, adding contextual nuance to food sovereignty and AFN scholarship. My dissertation contributes to critical food studies literature by situating Jamaica's domestic food system in broader literature exploring ways to challenge the global, industrial food system.

Scholarship on food sovereignty literature and AFNs represent two central bodies of literature that seek out explicit challenges to the global, industrial food system. Both bodies of

literature are important to articulate the harms caused by the global, industrial food system and ways to design alternatives. Yet, as I outlined in Chapter One, dominant strands in both bodies of literature do not easily explain the puzzle presented in this case study. In their search for explicitly structural challenges to the capitalist orientation of our food system, scholars studying food sovereignty and AFNs risk glossing over cases like Jamaica's, where local production and distribution channels are inseparable from economic activities and interdependent with the global food system. Studying the endurance of Jamaica's domestic food system contributes to new food sovereignty scholarship that is starting to explore possibilities for food distribution, and a growing body of literature on the complexities of AFNs in LMICs.

As I indicated in Chapter One, select scholars recommend that Jamaica's food system be re-oriented to follow the food sovereignty movement's core principles in response to the harmful consequences of structural adjustment and trade liberalization (Weis 2007; Richardson and Ngwenya Richardson 2013; Talbot 2015). Food sovereignty scholarship, in its critique of neoliberal economic policy reforms applied to our food system, is helpful in articulating the harm caused by structural adjustment in Jamaica, particularly Weis's scholarship. However, the recommendations of food sovereignty scholarship do not altogether match Jamaica's agri-food context. Shifting toward the food sovereignty principles would undoubtedly serve national goals of self-reliance in Jamaica. For example, efforts toward land reform and targeted research and development for agroecology production could support small-scale farmers' production for the domestic market. However, at this point, the country lacks the social mobilization to spur the grassroots social movement that Altieri (2010) deems foundational to achieving food sovereignty. Nonetheless, my case study shows how Jamaica's domestic food system has long challenged aspects of global, industrial agricultural markets. Those involved in Jamaica's food system could indeed learn from the food sovereignty movement, but I also suggest that food sovereignty scholars can glean insight from Jamaica's efforts toward self-reliance.

The food system that enslaved people created in the 17th century distributed food from small-scale, polycropped farms through an efficient and embedded market and still exists today. In this case, the market that distributes small-scale farmers' produce is embedded, drawing on a range of economic principles like supply, demand and cash exchange, and alternative economic principles like informal credit, and non-economic principles like reciprocal labour exchange. The essential role of embeddedness in allowing Jamaica's domestic market to persist raises

important questions for food sovereignty scholarship that could delve into embeddedness in peasant movements across the world. As embeddedness is a contributing factor the domestic food system's persistence in Jamaica, what role does it play in food distribution in the food sovereignty movement? What do existing food distribution mechanisms look like within the food sovereignty movement, today? In what ways is food distribution embedded in context and what can be done to leverage embedded markets within specific, place-based food sovereignty movements to strengthen links between food producers and people seeking access to food? How would this approach differ from the common vision of a sovereignty food system laid out in the accompanying scholarship? My dissertation highlights the role of embedded markets in distributing food that can help food sovereignty scholarship better articulate its position on food distribution. I suggest that studying embedded food systems, in place, provides useful ideas to food sovereignty scholars who are just beginning to explore ways to articulate food distribution into its conceptual framing (Wittman and Blesh 2017; Pimbert 2018).

Food sovereignty scholarship's advocacy for starkly anti-capitalist food future risks obfuscating market-based activity related to food production, distribution and eating. Because food sovereignty necessitates a radical transformation from the global industrial food system (Desmarais 2017), it becomes difficult to analyze the ways that food systems that indeed provide a semblance of sovereignty may interact with economic market activities often associated with capitalism. Pimbert's (2018) recommendations for market arrangements under food sovereignty include efforts to shorten food supply chains that resemble 'weak' AFNs: short(er) supply chains that do not necessarily present transformational challenges to our food system. He also states that distribution in a sovereign food system could rely on "the re−localization of plural economies that combine both market oriented activities with non−monetary forms of economic exchange based on barter, reciprocity, gift relations, and solidarity" (2018, 787). This description aptly describes the activities that take place in Kingston's urban markets that I analyze in Chapter Four, where cash transactions, based on the supply and demand of fresh produce are also deeply embedded in people's relationships to one another and rely on informal exchange. In Chapter Five, I suggest that the domestic market also relies on similarly complex transactions between small-scale farmers and higglers. Pimbert concludes his analysis by stating, "There is no consensus yet within the food sovereignty movement as to what kind of economic arrangements … are needed. More than ever, food sovereignty transformation depends on a

creative re−imagination of economics" (2018, 788). My dissertation offers one such reimagination by exploring Jamaica's food distribution system that evolved over centuries to serve important roles in people's diets and livelihoods, relying on embedded economic arrangements.

My dissertation also contributes to Wittman et al.'s (2010) recognition that food sovereignty scholarship ought to represent and serve not only peasants, but all people. A large portion of food sovereignty scholarship focuses on the global peasant movement (Bello and Baviera 2010; McMichael 2006; Weis 2006; Desmarais 2008). In the absence of a peasant movement in Jamaica, I included small-scale farmers, higglers and eaters in this study who do not necessarily resist capitalist markets, but nonetheless perform the essential work of growing and distributing food. Small-scale farmers' and higglers' play crucial roles in maintaining the domestic food system in the wake of structural adjustment that I analyze in Chapter Five. In this case, small-scale farmers and higglers help the domestic food system persist by negotiating the changing conditions of the domestic market and working interdependently and informally. As I indicate in Chapter Six, Jamaica's small-scale farmers who are largely responsible for supplying the domestic food system do so by drawing on a range of agricultural practices that are sometimes place-based, but also rely on globally-sourced agricultural inputs. Looking outside the social movement, specifically to embedded labour arrangements can help food sovereignty scholarship to articulate its position on labour that exists outside of the peasantry, but is nonetheless essential to food systems. Food sovereignty scholarship ought to expand to incorporate small-scale farmers and traders in its efforts to include a broader range of people. What is the role of food traders in the food sovereignty movement? How do small-scale farmers, who do not necessarily identify with the peasant movement, fit into the landscape of food sovereignty scholarship?

Pimbert's (2018) recommendations to study plural economies parallel my findings as well as evidence from emerging literature on AFNs in LMICs (Abrahams 2009; Friedberg and Goldstein 2011; Haysom 2017). This sub-set of AFN literature challenges North American and European studies that falsely dichotomize food system as either 'alternative' or 'conventional' based on the degree to which they present a transformational challenge to a globalized, industrial food system (Goodman et al. 2012) . My dissertation contributes this subset of AFN scholarship that seeks to move beyond categorizing AFNs as 'weak' or 'strong' and instead explores their

diversity in LMICs. Studies on AFNs from sub-Saharan Africa and Asia evaluate how place-based food systems are serving people's dietary needs and livelihoods in ways that intersect with and sometimes subvert global food supply chains. I offer a case study located in the CARICOM region to add to studies that largely focus on sub-Saharan Africa, East Africa and China.

This Jamaican case study parallels other studies' findings looking at AFNs in LMICs: that Southern AFNs are unique and work alongside shifting dynamics of the global food system (Abrahams 2009; Friedberg and Goldstein 2011; Haysom 2017). Chapter Four analyzes how Jamaica's urban markets, like those across sub-Saharan Africa (Peyton et al. 2015; Nickanor et al. 2019), allow people to access food in ways that fit their diverse diets and purchasing behaviours at the same time that they use Western-style supermarkets. People do not choose between Kingston's 'alternative' urban markets or 'conventional' supermarkets, but rather use both to suit their dietary preferences and income levels. Jamaica makes a particularly interesting case study, as the people who initially cultivated the domestic food market did not seek to subvert global supply chains explicitly, rather, to supplement their diets and earn an income independent from forced work on plantations. Later, throughout the 20th century, the domestic food system served Jamaica's national development and self-reliance. Jamaica's domestic food system is an example of a 'weak' AFN that supports people's access to food but does not pose a transformational challenge to the global food system. Chapter Five analyzes livelihoods in the domestic food system, contributing an additional case study to others that highlight the importance of informal work in AFNs in other countries (Peyton, Moseley, and Battersby 2015; Crush and Frayne 2011; Weng 2015; Skinner and Haysom 2016). Jamaica's small-scale farmers and higglers are not outwardly resisting or challenging the global, industrial food system, rather they seek to make a living and support their families. The growing body of case studies across LMICs, now including my dissertation research from Jamaica, make a compelling case that challenges a distinct characterization of food systems as 'alternative' or 'conventional, or valuing 'strong' versus 'weak' AFNs. Case studies necessitate the need to avoid broad claims about AFNs and instead analyze the way that people access food, earn an income and maintain ever-changing agricultural and gustatory culture in our global food system.

Reflections on Diverse Food Economies

My dissertation contributes a complex, nuanced understanding of food systems. I add theoretical nuance to critical food studies literature by framing Jamaica's domestic food system as part of a diverse economy, allowing me to analyze the unique, complex ways that Jamaica's domestic food system simultaneously circumvents and reproduces global food system dynamics as part of people's everyday lives. Gibson-Graham's complex view of economies, applied to this particular food system, helps to articulate the intricate, overlapping relationships between local and global scales and between 'modern' and 'traditional' ways to grow, buy or prepare food. This framing is particularly relevant in Jamaica, a country where 'traditional' food does not mean indigenous, rather would more suitably refer to a longstanding practice of coping with colonialism in adaptable, dynamic ways to survive and find meaning.

When evaluated through structural analytical frames, it makes sense that scholars would see Jamaica's domestic food system as tending toward obsolescence (Weis 2003; Richardson and Ngwenya Richardson 2013; Talbot 2015). The structural adjustment policies applied to Jamaica throughout the late 20th century epitomized the spread of neoliberal capitalism to the island and wrought devastating consequences for the food system. These harmful global political trends warranted extensive scholarship that reveals the inherent contradictions of neoliberal capitalism and its harmful impacts on people and nature. However, a non-essentialist lens that does not rest on capitalocentric assumptions about the inevitable effects of neoliberalism helps to reveal a counter-narrative, about the domestic food system activities that persisted. Curry (2013, 418) describes the value of applying the diverse economies approach in the context of designing interventions for development purposes:

> By paying closer attention to local, nonmarket socioeconomic practices, we are compelled to think differently about development and how it is represented. Rather than think about development as a process of transformation … it would be more useful to think through other possibilities that may better serve the place-based needs and desires of people who are seeking to maintain and enhance a way of life. Thinking of development as an expanding market economy increasingly dominated by market relations obscures alternatives outside this framework.

A non-essentialist approach that does not rest on assumptions about the trajectory of capitalism to understanding food systems proves useful to conceptualize the enmeshed nature of Jamaica's domestic food system within the global economy, and the embeddedness of the domestic market. Without the diverse economies framework, food system activities that straddle conventional and 'alternative' spaces may be hidden from scholarly views.

However, the diverse economies framework is not sufficient to answer my research question, understand the endurance of Jamaica's domestic food system. I argue that any analysis of a diverse economy must be contextualized. In response to scholars calling out the need to contextualize the study of diverse economies (Fickey and Hanrahan 2014; Gritzas and Kavoulakos 2016), I situate the domestic food system as the product of Jamaica's particular social and ecological context, building on a complex history. Applying the diverse economies framework and an historical perspective on food, incorporating Caribbean political economy, helps to reveal how the people involved in the domestic food system can draw on various strategies to continue growing, trading and eating Jamaican food. Contextualising Gibson-Graham's framework in this way avoids romanticizing non-economic and alternative economic activities, and instead explains the complex historical context from which they arose. While the diverse economies framework helps to articulate the embeddedness of Jamaica's domestic market in a present context, it does not sufficiently address influential global processes that shape food systems. Contextualising the diverse economies framework alongside a second body of literature that articulates the complicated and tragic history of former plantations in the Caribbean helps to ameliorate a gap in literature. Moving forward, applications of the diverse economies framework must be properly contextualized.

At the same time that the diverse economies framework suited my analysis, my research findings also enrich the framework itself. The domestic food system's three important roles that emerged from my analysis, including the provision of access to food, livelihood opportunities and a sense of place, serve as analytical categories for future research on the role of embeddedness in food systems. Indeed, these analytical categories emerged from a context-specific analysis of Kingston's markets and small-scale farming in Southern St. Elizabeth. However, future research applying the diverse economies framework to food systems can use these analytical categories as starting points. People's access to food relies on a range of economic, alternative economic and non-economic transactions around the world. Informal

livelihoods hinge on relational transactions and labour arrangements. The sense of place we feel from food culture and, in the case of those who farm, place-based agricultural traditions, are based on complex connections between local and global factors. Each of these three factors represent analytical categories that worthy of scholarly investigation pursuit in any country's food system using the diverse economies framework to promote sustainability.

Overall, my research shows the usefulness of the diverse economies approach to analyze Jamaica's domestic food system because of the historical interdependencies between small-scale farming, food trade and diets at the local level and global food supply chains. Framing the domestic food system as a diverse economy reveals its integral societal roles that do not necessarily represent structural challenges to our global, industrial food system. The economic, alternative economic and non-economic factors classified by the diverse economies framework help the domestic food system to endure the challenges posed by Jamaica's strong connections to global markets.

Policy Reflections

The third objective of this study is applied: to provide reflections on the policy implications that could support Jamaica's current efforts to support food self-reliance based on the realities facing those involved in its food system. Framing the domestic food system as a diverse economy that is also rooted in the specific orientation of a former plantation economy yields recommendations for policy that are integrated Jamaica's longstanding self-reliance agenda. The findings in this dissertation provide an in-depth, contextualized analysis of the current state of Jamaica's domestic food system that could strengthen the state's efforts reduce dependence on imported food. While initiatives like Eat Jamaica campaign are a good start to supporting the domestic food system, building upon the existing activities of the informal food distribution system could strengthen them. Any policy prescriptions regarding the domestic food system must consider it in its proper context, embracing its heterogeneity. The domestic food system already serves three useful functions and shows tremendous resilience to globalization. The recommendations that I outline in this section are geared toward maintaining these existing functions, while working within the boundaries of what is feasible at a national level, mindful of the boundaries set out by the WTO's Agreement on Agriculture.

Putting together recommendations to develop Jamaica's domestic farming sector, American geographer Floyd asserts, "…it is the Afro-Jamaican peasantry who must be at the very center of a growth-oriented rural development strategy" (1983, 219). Small-scale farmers contribute the bulk of domestic produce that Jamaicans eat, including a range of vegetables, fruit, roots and tubers. Currently, the Government of Jamaica's efforts to support small-scale agriculture for self-reliance target specific crops, for example, onions that are imported but could be produced on the island. As I indicated in Chapter Six, these initiatives could further reduce dependency on imported goods by branching out into inputs, especially seeds, and also working with farmers to understand the diverse place-based practices they use that are based on centuries of adapting to their surrounding environments. As Jamaica's climate patterns continue changing at rapid rates, small-scale farmers' knowledge and adaptability are increasingly important assets. The state's targeting of self-reliance in specific crops has proven useful thus far. I recommend that this type of initiative expand into other food products where self-sufficiency is plausible. Referring back to Table 6-2, consolidated below, suggested crops include tomatoes, that had a production deficit of 4000 tonnes in 2016, pork, with a deficit of 14 000 tonnes, and other crops listed in the table. Based on the findings reported in this dissertation, there are many opportunities to leverage small-scale farmers' existing skills and knowledge to support the domestic food system at the production level.

Table 7-1: Production Deficits of Selected Commodities in Jamaica, 2016 (000 tons)

Food Product	Production	Consumption	Production Deficit
Tomatoes	23.1	23.5	-0.4
Pigmeat	7.4	8.8	-1.4
Beef	6	8.2	-2.2
Pineapples	20.5	23.4	-2.9
Eggs	6.3	10.6	-4.3
Poultry	104	125.5	-21.5
Milk	15	95.9	-80.9

Source: Adapted from Josling et al. (2018)

While I agree with Floyd that small-scale farmers must be at the centre of any development strategy, I would expand the centre to include Jamaica's urban residents, in particular its most marginalized populations, as well as the islands 'country' or 'traditional' higglers. Food traders and urban residents must be included in research and policy initiatives. Currently, the Government of Jamaica's food self-reliance agenda concentrates its efforts on increasing production of foods that are currently imported, but can be produced on the island. Understanding the full supply chain of crops can ensure that food is properly distributed, and that it has a customer base.

Jamaica's informal food distribution networks are highly efficient and rely on higglers' expert knowledge of the food system. Yet higglers are largely absent in the state's initiatives to support food self-reliance. In fact, the Government of Jamaica's largest initiative to support food distribution, through the AMC that I described in Chapter Three, involved designing an entirely new food distribution network to replace the higgler system. After the AMC was dismantled in 1981, the higgler system persisted and, I argue, deserves some attention in discussions surrounding food self-reliance. My recommendations to support the distribution of domestically grown food in Jamaica align with the prominent global advocacy group for women informal workers, WIEGO, to support higglers' work in its informal state, preserving higglers' ability to use alternative and non-economic strategies to distribute food from farm to market. I recommend that initiatives to support food self-reliance in Jamaica include and draw from the insights of those involved in food distribution.

Additionally, there has been little research on the demand side of Jamaica's domestic food system. The findings presented in this dissertation show that domestically grown food is prominent in urban Jamaicans' diets, alongside imported food. The complexities of urban food purchasing patterns and diets, analyzed in Chapter Four and Chapter Six, offer insights into which domestically grown food products remain important to Jamaicans' diets, and why. Ideas around national pride and Jamaicans' sense of place around gastronomic trends lend themselves to the Eat Jamaica campaign's foray into marketing to consumers. The campaign could be strengthened by taking into account trends in urban food purchasing patterns, and target specific food items, including fresh vegetables and fruit, roots and tubers and green bananas and breadfruit, not necessarily harkening back to a 'traditional' diet, but supporting domestic food markets nonetheless.

Lastly, any initiatives to reduce dependency on imported food could be strengthened by supporting Kingston's markets. Markets are essential places where people buy and sell food; they are integral sites for higglers to make their income, for farmers' produce to be sold, and for urban citizens to buy their weekly fresh produce. Historically and at present, markets are important places for social interaction and to access culturally appropriate food. Markets are spaces where people use economic, alternative economic and non-economic transactions judiciously to serve these important functions in the food system. As I suggested in Chapter Four, I recommend supporting market infrastructure, based on the unique ways that people buy and sell food Kingston's markets. However, this would require drawing on community-based perspectives on ways to improve people's safety in markets.

The specific policy reflections included in this section are designed to inform Jamaica's efforts to support self-reliance from global markets, in line with the New World Group's initial conceptual framing of Caribbean sovereignty. Despite mixed reviews of its relevance and success, the Eat Jamaica campaign is one vestige of the country's efforts to hold some independence from global food markets through self-reliance in a social democratic political space. As Conway notes, "the experiments with social democratic regimes were built on firmly held socialist principals among the masses and this legacy has not vanished, even though it has waned" (1997, 18). The original goal of self-reliance was never to completely dissociate from global markets in an autarkic fashion, nor to focus entirely on "traditional" diets. Rather, the goal of self-reliance was to integrate domestic-level food system activity with imported staples that had become crucial to Jamaican's food security and culinary practices. As such, the recommendations and reflections that stem from this research focus on incremental change to reduce dependency.

Concluding Remarks

In her study of the historical geography imported food in Burkina Faso, Friedberg notes that dominant narratives of African food systems rest on themes of "chronic material crisis and cultural loss" (2003, 447). The proliferation of plantation agriculture and subsequent dumping of British and American food, in Burkina Faso and former colonies around the world, have undoubtedly eroded social and ecological sustainability in food systems. In Jamaica, food import dependency looms large, and small-scale farmers lack the necessary support to feed the island

(FAO 2013). Rather than evaluating the ways that globally oriented economic policy weakens Jamaican farming and diets, this study investigates how the domestic food system persists.

Throughout this dissertation, I reframe a narrative about food and farming in a tropical island nation that is inextricably linked to a long history of domination. My hope with this research is that it complements studies addressing the profoundly harmful consequences of neoliberalism and structural adjustment on Jamaica with a perspective that considers the factors that endure. More generally, I hope to contribute to a narrative that is alternative to inevitable dependence, dominance and homogenization in food systems that draws on place-based literature on the crucial roles of small-scale farming in Jamaica (Beckford 2002; Campbell, Barker, and McGregor 2011; McGregor, Dodman, and Barker 2009). It is not my aim to discount the widespread harm caused by colonial and post-colonial power relations in Jamaica. Rather, I aim to build on critical scholarship that charts the impacts of colonialism and neoliberalism on Jamaican society and the environment and, at the same time, contributes to a context-specific solution space. While it is important to analyze the negative impacts of disproportionate power and unequal development on food systems, Jamaica's domestic food system has endured centuries of threats and still serves important roles. To envision a future of food system sustainability in Jamaica in the context of environmental change, we can look to the wealth of knowledge that already exists: in the ways that people, in the past and present, grow, distribute and eat Jamaican food. Rather than pointing out the potential irrelevance of Jamaica's domestic food system, I highlight the quotidian, yet remarkable ways that people living on the island continue to feed themselves.

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Appendices

Appendix A: List of Key Informant Interviews

Professor at the University of the West Indies • Discussed potential partners in rural Jamaica • Obtained tips for conducting effective research in farming communities
Representative of International Institute of Caribbean Agriculture • Discussed key issues facing rural agricultural development in Jamaica • Identified key organizations to contact
Representative of FAO Jamaica • Discussed role of NGOs in Jamaican food and farming • Discussed the FAO's School Feeding Program
Professor at the University of the West Indies • Discussed relevance of Caribbean political economy
Community member, Kingston Metropolitan Area • Discussed food security challenges in Kingston • Discussed perceptions of domestic vs. imported food
Doctoral student at the University of the West Indies • Discussed doing fieldwork in Southern St. Elizabeth
Food Historian • Toured markets in Kingston

- Discussed Jamaican food culture and history

Appendix B: List of Observed Sites

Neighbourhood	Food Source	Description
Constant Springs	Constant Springs Market	• Public market; chiefly fresh produce • Serving middle and high income neighbourhood
	Street vendors	• Informal, behind market structure • Selling food, household products and clothing
Papine	Papine Market	• Public market selling fresh product, bulk goods, meat
	Street vendors	• Informal, behind market structure, mostly fresh produce
Cross Roads	Crossroads Market	• Public market; chiefly fresh produce • Serving middle and low, middle and high income neighbourhoods
	Street vendors	• Informal, behind market structure, fresh produce and clothing
Liguanea	Sovereign Supermarket	• Supermarket serving middle and high income neighbourhood
	General Foods Supermarket	• Supermarket serving middle and high income neighbourhood
	Hi-Lo Supermarket	• Supermarket serving middle and high income

		neighbourhood
Mona	Street vendors Corner Shops	• Informal vendors selling fresh fruit and vegetables • Small wooden structures selling processed food and household items
Downtown	Street Vendors	• Informal vendors selling a range of food products, personal and household items
New Kingston	John R. Wong Supermarket	• Large supermarket selling a range of food and household products

Appendix C: Semi-Structured Interview Guide

The questions in this guide were used to prompt discussion; not all questions were asked to each participant. Additional questions were asked when appropriate.

Interview Guide: Farmers

What types of domestic (not exported) crops do you farm?

Do you produce mostly for domestic or export markets, or a combination of both, and why?

Do you receive support for cultivating domestic crops? What is the nature of this support? If not, why do you think there is a lack of support for domestic farming?

What inputs are important for cultivating your domestic crops? Where do you buy them, and how do you purchase them?

Tell us about your household composition and the nature of their involvement on the farm.

Tell us about the labour you use on the farm; i.e.. Do you use wage labour?

Tell us about your relationship with marketers. Is it mostly through formal contracts, and do you use higglers? What's the nature of your relationship with marketers or higglers? Do you use the same marketing means for all of your crops?

What are the benefits to growing domestic crops as opposed to export crops?

In your opinion, what are the challenges facing domestic food production? Ie climate change, economic policy, food imports, etc.

How do you respond to these challenges? Ie. Do you shift production, do you use technological innovations, do you use traditional knowledge?

Why do you think domestic supply chains persist despite these challenges?

What are the connections between the Eat What We Grow Campaign and your supply chain activity?

How do issues of 'local' food and 'Eat Jamaica' impact your supply chain activity?

Interview Guide: Vendors

What types of domestic (not exported) crops do you buy and sell?

Do you sell mostly for domestic or export markets, or a combination of both, and why?

Do you receive support for selling domestic crops? What is the nature of this support? If not, why do you think there is a lack of support for marketing domestic crops?

What inputs are important for higgling? Where do you buy them, and how do you purchase them?

Tell us about your household composition and the nature of their involvement in marketing.

Tell us about the labour you rely on; i.e.. For support, transportation, etc.?

Tell us about your relationship with farmers. What's the nature of your relationship with other marketers or higglers, or consumers? Do you use the same marketing relationships for all of your crops?

What are the benefits to marketing domestic crops as opposed to export crops, or other items besides food?

In your opinion, what are the challenges facing marketing of domestic crops? Ie climate change, economic policy, food imports, etc.

How do you respond to these challenges? Ie. Do you shift what you sell, do you use technological innovations, do you use traditional knowledge?

Why do you think domestic supply chains persist despite these challenges?

What are the connections between the Eat What We Grow Campaign and your supply chain activity?

How do issues of ‘local’ food and ‘Eat Jamaica’ impact your supply chain activity?

Appendix D: Coding Hierarchies

KINGSTON
ST. ELIZABETH
TRANSPORTATION
CONTRACT FARMING
FOOD IMPORTS
FOOD EXPORTS
FOOD SELF-RELIANCE POLICY
FOOD SELF-RELIANCE
FOOD SELF-SUFFICIENCY
EAT JAMAICA
GROW WHAT YOU EAT
STRUCTURAL ADJUSTMENT
STATE
GLUT
HAGGLING
HIGGLER-FARMER RELATIONSHIP: POSITIVE
HIGGLER-FARMER RELATIONSHIP: NEGATIVE
HIGGLER-FARMER DEPENDENCY
INDIVIDUALISM
INPUTS
INPUTS: CAPITAL
INPUTS: SYNTHETIC
INPUTS: ORGANIC
INPUTS: KNOWLEDGE
INPUTS: LABOUR
INPUTS: LAND
INPUTS: MULCHING
INPUTS: SEEDS
INPUTS: WATER
INPUTS: WATER, DRIP IRRIGATION
PRODUCTION
INTERCROPPING
DROUGHT
HURRICANE
CLIMATE CHANGE
TRADING
PAPINE MARKET
FOOD ACCESS: CROSSROADS MARKET
FOOD ACCESS: CORONATION MARKET
FOOD ACCESS: CONSTANT SPRINGS MARKET
FOOD ACCESS: CORNER SHOPS
FOOD ACCESS: WHOLESALE OUTLET
FOOD ACCESS: RESTAURANT
FOOD ACCESS: STREET FOOD
FOOD ACCESS: SUPERMARKET
FOOD ACCESS: SUPERMARKET ATTITUDES
FOOD ACCESS: BRAWTA
STUDENTS
RISKS
RISKS: PRODUCTION
RISKS: HIGGLERING
RISKS: MARKETS
RISKS: BUYING FOOD
UNEMPLOYMENT
YOUTH IN FARMING
RELATIONAL TRANSACTIONS
PLACE: PREFERRED FOOD
PLACE: JAMAICAN FOOD
PLACE: DIET
PLACE: IMPORTED FOOD
WORK: FAMILY CONNECTION
WORK: FARM WORKER PROGRAMME
WORK: HIGGLER LIFE
WORK: INDEPENDENCE
FARMING: INDEPENDENCE
HIGGLERING: INDEPENDENCE
WORK: INTERDEPENDENCE