"Smallholders, Cooperatives, and Food Sovereignty in Tanzania": Why a Nation of Farmers Cannot Feed its People

By Matthew Jaworski

A Thesis Submitted to Saint Mary's University, Halifax, Nova Scotia in Partial Fulfillment of the Requirements for the Degree of Masters of Arts in International Development Studies

August, 2014, Halifax, Nova Scotia

Copyright Matthew Jaworski, 2014

Approved: Dr. Gavin Fridell

Supervisor

Approved: Dr. Rylan Higgins

Examiner

Approved: Dr. Greg Cameron

Reader

Date: August 14, 2014

Abstract

"Smallholders, Cooperatives, and Food Sovereignty in Tanzania": Why a Nation of Farmers Cannot Feed its People

By Matthew Jaworski

Abstract: Although the world produces more food than ever before, close to one billion people remain hungry worldwide. This problem is especially critical in the Global South, where the majority of the population are food producers. Such is the case for Tanzania, a developing country that is searching for solutions to its food insecurity. One solution involves cooperatives, seen as pro-smallholder, empowering the peasantry to overcome the barriers that impede their development, which equates to a positive effect on the nation feeding itself. Countering this is a modern, market based approach, which dilutes the role of the peasantry in favour of agribusinesses in order to ensure Tanzania's food security. While the government claims to support both, it along with powerful international actors is throwing greater weight behind agribusinesses, opting for a food security based solution to the country's food insecurity, at the expense of the peasantry and ultimately Tanzania's own food sovereignty.

August 14, 2014.

Table of Contents

Chapter 1: Introduction	1
Chapter 2: Methodology	21
Chapter 3: Literature Review	29
Food Security School of Thought	31
Food Sovereignty School of Thought	39
Cooperatives	55
Agrarian Question	62
Agribusiness	66
Chapter 4: Roots of Tanzanian Food Insecurity and the Rise and Fall of the Cooperativ	е
Movement	7 9
The Colonial Period (1884-1960)	80
Post-Independence Period (1961-1981)	87
Period of Structural Adjustment to Present Day (1982-onward)	107
Chapter 5: The Growth of Agribusiness and the Rejuvenation Process of Cooperatives	in a
Liberalized World	118
Food Security Through the Global Market	118
The Rejuvenation Process of Cooperatives and the Rise of Agribusiness in Tanzania	124
Chapter 6: Conclusion	144
Work Cited	154
Interviews	172

Chapter 1: Introduction

Although the world produces more food and wealth than ever before, around 842 million people still go hungry worldwide. During the recent global economic crisis, a rise in food prices caused hunger levels to peak in 2009, as 1.02 billion people could no longer afford the price of food, prompting the international community to search for solutions to the growing levels of food insecurity ("Food Insecurity" 4). This extremely complex problem is especially poignant within the Global South, where in many countries, the majority of the population is, in fact, producers of food themselves. Such is the case for Tanzania, as one of the world's Least Developed Countries has been trying to uncover ways that will improve its peasant dominated agricultural sector in order to eliminate poverty and hunger within its borders.

According to the United Nation's Food and Agriculture Organization (FAO), high food prices are likely to persist, which actually places many peasants in jeopardy because they have been unable to benefit from the increasing price of food due to the rising costs of inputs such as seeds and fertilizer. Price volatility has also had a negative impact, as farmers are unable to plant and predict commodity price fluctuations. Within the free market, global consumer and producer trends can cause a rise or fall in commodity pricing, making food crops either unaffordable for local consumers, or unprofitable for farmers ("Price Volatility" 14-15). One proposed solution that aims to support smallholders within this turbulent liberalized market is put forth by the FAO, who cites recent evidence showing that rural organizations such as cooperatives are able to withstand such price shocks, if they are operating in a conducive policy environment, where access to credit is pivotal to assure the success of these organizations. In this light,

the FAO sees that cooperatives, "...are able to play a greater role in meeting a growing demand for agricultural produce on local, national, and international markets, and they can enable small producers to have some influence over the policy and programs that affect their lives." (Crowley, Tercelli, and Ourabah 7-8).

In Tanzania, a country that has a longstanding history with cooperatives, but is also plagued by food insecurity, recent government initiatives have attempted to revamp the nation's once vibrant cooperative movement by improving the environment in which they operate. In 2000, a Presidential Committee determined that the main constraints that have hampered cooperatives for decades was the liberalized market, followed by poor management within the cooperative sector (CRMP 1). In response, the current Tanzanian administration, led by President Jakaya Kikwete, has implemented policies that attempt to improve the financial standing of cooperatives by creating a cooperative bank, which would make obtaining loans easier, as well as implementing policies that crackdown on corrupt cooperative leaders. The most recent Cooperative Act of 2003, places limits on the tenure of managers, protects whistle blowers who alert authorities of malpractice, and eases cooperative registration all in the hopes of bringing Tanzanians back into the movement. The goal is to convince farmers that cooperatives are mechanisms that they can trust to benefit its members, not government and cooperative administrators ("Kikwete Pushes Coops"; "Coops Under Fire"; Maghimbi 9, 11).

While the government is optimistic that these changes will create a conducive policy environment for cooperatives to function effectively, at the same time, the Tanzanian administration is also encouraging the expansion of agribusinesses. For Kikwete, the country's agricultural sector must undergo a process of modernization if

Tanzania is to rid itself of poverty and hunger. In order to achieve this goal, outlined as the first Millennium Development Goal (MDGs) that aims to eradicate hunger by 2015, the country has embarked on various industrialized agricultural projects, such as AgriSol and the Southern Agricultural Growth Corridor of Tanzania (SAGCOT), in order to achieve greater domestic food production. These projects, supported by the policy initiative Kilimo Kwanza, or "Agriculture First," created in 2009, promote the mechanization and large scale expansion of agriculture, as well as the use and development of improved farming technologies such as seeds, fertilizers, irrigation facilities, and pesticides (Mbatha; UNDP; "Kilimo Kwanza" 4-5). To include the peasantry into this process, "public-private" partnerships are being encouraged in the form of contract farming and out grower schemes, used to bring smallholders further "into the market." This market based model of agricultural production is being promoted not just by the Tanzanian government, but also international development agencies such as the World Bank, wealthy philanthropists, and powerful agribusiness interests (Oya 1; Collier 73; Little 4; Chiwambo; Kikwete).

While the expansion of the agribusiness sector is in its infancy, its growth generates serious questions with regards to how it will affect the rejuvenation process of cooperatives, the status of the peasantry, and Tanzania's food insecurity. Given the current developmental path being pursued within the country, which greatly supports the expansion of agribusiness both financially and through policies laid out by the current administration, it appears that agribusinesses will surpass cooperatives as the most important rural development organization. While some peasants may benefit from participating in the economic model laid out by agribusinesses, such as contract farming

and out grower schemes, overall, due to the expansion of large scale industrialized agriculture that will transform massive plots of land previously cultivated by the peasantry into single mono-crop cultures, smallholder farmers are at a serious risk of losing their lands and livelihoods. Thus, while rhetoric emanating from government circles appears to be encouraging the revitalization of cooperatives on the one hand, it is also, in association with powerful international actors, throwing even more financial, political, and institutional support behind the growth of agribusiness on the other. This could prevent cooperatives from regaining their former position of strength, as they will be unable to compete against these corporate giants. The effects of large scale agricultural expansion could thus adversely impact smallholder farmers, who will lose their place of importance within the development of Tanzania, amounting to greater food insecurity.

On a global scale, the impact of large scale agricultural expansion is illustrated within the food security/food sovereignty debate, which involves a modern, market-oriented solution to food insecurity, pitted against one that is pro-smallholder, environmentally sustainable, and centred on local needs. This study offers an important contribution to this discussion, arguing that as Tanzania continues to strive towards a food security based solution by further commercializing its agriculture sector, its negative effects on local food needs will prevent the nation from being food sovereign, an objective which has been expressed by the country's leaders since independence (Meredith 250). Although cooperatives do not play a significant role within the literature surrounding food sovereignty, other than in perhaps Cuba, cooperatives in Tanzania were central in the country's drive to become self-reliant, and pivotal for first President, Julius Nyerere, to become self-sufficient in food production (Msambichaka 117). In listing the

various goals he wished the newly independent country to achieve, in the article *It's Up* to *Us*: *Uhuru na Kazi*, Nyerere states "...we want to build a country in which no citizen can go hungry while others have food...we believe this can be done through the development of cooperative enterprises..." (5). Although this state centric goal, tied into improving the lives of the peasantry through cooperatives, was not realized, this objective must be revisited through a food sovereignty framework in an effort to provide smallholders with a platform in Tanzania's food policy for the first time in the country's history.

While cooperatives were originally used by the colonial authority and later the Tanzanian state primarily to increase cash crop production, they were also successful in empowering the peasantry, as they enabled smallholders to organize and sidestep exploitative middlemen so members could receive a fair price for their produce, which resulted in a positive effect on production, assisting the nation in feeding itself (Lyimo 40, 46). According to Tanzanian scholar Sam Maghimbi, largely due to the cooperative movement, "between 1954 and 1968 Tanganyika was the only African state that consistently maintained a growth trend in food production higher than that of its population" (8). While it may not be the direct role of cooperatives to assist a nation in feeding itself, as they are primarily formed to improve the lives of their members, they are an organization that encompasses and supports the peasantry. As such, this thesis argues that cooperatives need to be examined through a food sovereignty lens, as this view champions the role and importance of the peasantry within a country's food system. This food sovereign, pro-smallholder cooperative solution to food insecurity counters a food security based one, which limits the role of the peasantry as it is more dependent on

modern technologies and the mechanization of agriculture, amounting to a reduced role of the peasantry within the developmental process of the country, thus forfeiting local food needs in favour of global market desires.

Tanzania's struggle to be self-sufficient in food production confirms Eric Holt-Gimenez and Raj Patel's argument, which depicts Africa as the most important battle ground for any sustaining solution to global hunger. For these food activists, as attempts are made by agribusinesses to pry open African agriculture to feed global demand, the local needs of the peasantry become obscured, allowing poverty and hunger to persist. This clash of interests mimics Africa's fight for independence against its colonial masters, where the struggle to end poverty and hunger is essentially an agrarian question, which is to be answered by either a food sovereignty or food security based solutions to food insecurity (Holt-Gimenez and Patel 130, 132).

Although multiple definitions of food security exist, food sovereignty advocate Philip McMichael has effectively conceptualized its meaning while providing a brief history of a term that has undergone various transformations. According to McMichael, the term "food security" arose out of the post-World War II era as an integral part of the international developmental discourse. During the colonial era, colonies supplied the urbanites of the metropolis with food and other agricultural products, as their agricultural sectors were engineered to primarily feed the appetites of European empires. Shortly after WWII, colonial independence movements coincided with the lackluster grain harvests occurring in Europe at the time, placing post-war rebuilding plans in jeopardy, and thus food security matured into a crucial component of the global development agenda (McMichael 170). Later, food security became a part of the geopolitics of the Cold War

in the form of "food aid," offered by Northern powers to the developing world to prevent the spread of Communism and provide markets for the excess grains now being produced by the heavily subsidized and newly industrialized American agricultural sector (McMichael 171).

McMichael argues that as food aid continued to flood developing markets, local producers were priced out, creating a growing dependency on cheap American foodstuffs in the Global South. This food dependency was further entrenched by the Green Revolution, as American led biotechnology (hybrid crops of mainly cereals), and synthetic fertilizers and pesticides, abetted by massive irrigation projects, were inserted in various developing nations' agricultural sectors. As a result, the culture of mixed farming and seed sharing declined, overwhelmed by monocultures of staple grains, marketed to supply growing urban areas with cheaper food products (McMichael 171). By the mid-1990s, 30 crops assumed the responsibility of providing 95% of the world's calorie and protein intake, despite the fact that around 7000 plant species have been cultivated and collected throughout human history (Weis 16).

The declining variety of food crops also corresponds with the transition of obtaining food security through a state centred development project to a globalized, corporate driven one, where the interests of a handful of private firms override public ones, guided by the principles of the free market. Under the General Agreement on Tariffs and Trade (GATT) Uruguay trading rounds (1986-94) and later the World Trade Organization (WTO) Agreement in 1994, agriculture became liberalized, transforming food into a commodity (McMichael 170-172; Roberts 54). As such, these agreements removed the national principle of food self-sufficiency in favour of a free market led

solution to food insecurity, praised by neoliberals – today's dominant ideologues who theorize that a free market is the best way of organizing all exchanges of goods and services – as the best way of maintaining global food security (Friedman and Friedman 9). McMichael acknowledges that this fact was articulated by an American representative at the Uruguay trade round of 1994, who stated that, "the US has always maintained that self-sufficiency and food security are not one and the same. Food security – the ability to acquire the food you need when you need it – is best provided through a smooth-functioning world market" (qtd. in 172). Within this market oriented solution to food security, food for everyone is provided by global markets, not necessarily local farmers. Smallholder farmers are to be integrated into the global market, often times working in collaboration with the aforementioned contract farming or out grower schemes, which assist the peasantry by bringing them into global agricultural value chains (Oya 1).

Many, however, oppose this food security based project, as it has not eradicated, but in many instances increased the prevalence of hunger, by causing food prices to greatly increase (Holt-Gimenez and Patel 20). Offering an alternative solution to the world's food problems are proponents of "food sovereignty," who not only place an importance in the accessibility of food, but also food justice. While food sovereignty, a term originating from the World Food Summit in 1996, coined by *La Via Campesina*, or "the peasant way," as a movement is not as active in Tanzania compared to places in Latin America, it does provide a counter assessment to food security that can explain the country's continued food insecurity while offering pro-poor solutions to the nation's food problem. Further importance is placed on such alternatives, as recent land and natural resource conflicts involving the peasantry retaliating against authorities suggests a food

sovereignty perspective needs to be explored, as growing discontent from the country's rural areas could be a sign of an emerging food sovereignty movement ("Mtwara riots"; Balaigwa).¹

To this end, *La Via Campesina* defines food sovereignty as the right of all people to healthy and culturally appropriate food, produced through sustainable methods, where producers have the right to define their own food and agricultural systems (La Via Campesina). According to Jamey Essex, a food sovereignty perspective places special emphasis on land rights, the livelihoods of smallholder farmers, environmental sustainability, localized production and consumption, the democratization of food where producers are more in control of agricultural value chains, and the protection of varying and vulnerable cultures (193). For those advocating for a food sovereignty based solution to food insecurity, championing these characteristics is crucial if the world's food system is to benefit the global community and not solely those in control (Patel 292).

The global food sovereignty movement itself has progressively spread with the onset of the most recent food crisis, whose early stages impelled one chairperson during the 2002 World Food Summit to state that, "Together with terrorism, hunger is one of the greatest problems the international community is facing" (qtd. in Clover 6). The current crisis, beginning in the mid-2000s, is particularly critical in the developing world, as most people spend the majority of their income on purchasing food (Collier 68). Characterized by skyrocketing food prices due to a lack of supply, the crisis has caused tempers to flare, igniting so-called "food riots" in over 30 countries (Collier 67; Bello 2). Many scholars

 $^{\rm 1}$ MVIWATA Conference, July 24 $^{\rm th}$ 2013, Morogoro, Tanzania.

also believe that the rise in food prices inflamed the long standing political unrest and anger towards the growing economic disparity in North Africa and the Middle East, leading to the Arab Spring that began with riots in 2008 (Lagi, Bertrand, and Bar-Yam 1).

Making the current food crisis even more perplexing is that the world actually produces enough food to feed 10 billion people, and yet around a billion people are chronically malnourished, while another billion remain under the threat of not knowing where their next meal will come from. At the same time, another 500 million people are clinically obese while 1.5 billion are overweight worldwide (Akram-Lodhi 4). Thus, despite the fact that the world produces more food than ever before, the current food system is unable to meet the needs of close to half of the world's population. At a country level, a similar situation is illustrated in Tanzania, as the country has the potential to feed itself and become a major producer of food, yet continues to suffer from high levels of food insecurity, as close to 10% of homes are food insecure, while the nation as a whole remains a net food importer for both rice and wheat, two of its major staples (WFP 6, 10). In addition, as of 2013, according to the Global Food Security Index, which measures the risks and factors that drive food insecurity, such as affordability, availability, quality, and safety, Tanzania placed 95th out of 107 countries (The Economist Intelligence Unit).

Largely an agrarian society, which despite its colonial history is relatively peaceful and politically stable compared to other countries in sub-Saharan Africa, Tanzania's population is just over 45 million, with close to 80% of people deriving their income and livelihoods from the agricultural and natural resource sectors. The overwhelming majority of the farming population are peasants, who make up 90% of the country's farmers, cultivating three hectares of land or less (Minster of Finance 7).

Today, agricultural production accounts for just over 26% of the country's GDP, although in the past it has been responsible for over half of Tanzania's economic production (Mbiha and Ashimogo 102). While the country is capable of growing a wide variety of crops, staples in mainland Tanzania in cereal crops include mainly maize, sorghum, millets, rice, and wheat while non-cereals include pulses, cassava, bananas, and potatoes. Of its traditional cash crops, the country produces mainly sisal, coffee, tea, cotton, cashew nuts, and pyrethrum while non-traditional exports include sesame, sunflower, and cardamom (Maghimbi, Lokina, and Senga 41; Ministry of Agriculture 4).

Despite these figures indicating the importance and prominence that farming has on Tanzania's socio-economic structure, the country has been food insecure for decades. In 2011, the country was forced to import around 300,000 metric tonnes of food aid to prevent 3 million people in the Central and Northern parts of the country from starvation (Northern Star Reporter). According to Uwazi, an information group dedicated to "liberalizing" data in order to better inform the public, over the past decade an estimated 600,000 children below the age of five have died because of malnutrition. Since 2000, the death toll attributed to a lack of nutrition is comparable to such horrific events as the Rwandan genocide and the combined deaths resulting from the Asian tsunami and Haitian earthquakes, yet its gravity is often ignored (Uwazi 1).

Notwithstanding these issues, the country also has great agricultural potential.

According to the World Bank, Tanzania is, in fact, a sleeping giant with the ability to not only feed itself but to also become a major food exporter within the region ("Kilimo Kwanza" 3). ActionAid Tanzania goes one step further, as the non-government organization (NGO) cites a scientific study done in the 1980s, that is still relevant today

thanks to the improvements in technology, which finds the Rufiji Basin, covering 20% of the country stretching from the Indian ocean to Tabora in the North and Mbeya in the South, to have enough agricultural potential to feed not only Tanzania, but all of Africa (x; Mwalyosi 16). Optimism surrounding Tanzania's food potential is universal, but how to best tap into this is still up for debate (Wolter 14).

Before the country reaches its agricultural potential, however, it must first resolve its current issues of food insecurity. In order to understand what kind of obstacles are preventing Tanzania from becoming self-sufficient in food production in the first place, the origins of the country's food insecurity must be illustrated through a food sovereignty lens in order to better understand what has caused these food issues to persist, how cooperatives improved the food situation in the country, and if they can do so again. The roots of Tanzania's agriculture structure, that sees the country focused on producing what it does not consume, were planted during the colonial era by both the Germans and later the British, but continued after independence as well, including both the socialist and free market phases of Tanzania's post-colonial history.

Although free from European rule, African states adopted development strategies that saw a continuation of colonial economic patterns. African agriculture thus remained centred on producing cash crops for European nations in an effort to retain foreign exchange dollars and investment to industrialize other sectors of their economies, preferring urban class interests over rural developmental needs (Mapolu 141). Since this coincided with rising oil prices, droughts, and other economic shocks, for Tanzania, the importation of manufactured goods used to create an industrial base caused a greater decline in the balance of trade, requiring even more output from cash crop production

that overshadowed development of its domestic food sector, permitting its harmful colonial legacy to continue (*Tanzania's Food Trade* 8; Davidson 221). As such, substantial planning and economic investments returning to the periphery that could be used to improve the living standards of the peasantry were not forthcoming (Msambichaka 124). For Pascal Zachary, neglecting the rural economy has been particularly widespread throughout Africa, as African elites have never appreciated the importance of agriculture (26). Since profits generated by state bodies did not reverberate back to rural areas, other than in failed attempts to mechanize or to orchestrate resettlement programs in hopes of emulating a Western designed path to development, peasants have been left to surmount natural, structural, and economic obstacles by themselves with little sustained government support (Mapolu 139-140).

These problems include market isolation due to location and poor infrastructure, commodity price fluctuation, and an inability to receive bank loans because their operations are seen as a risky investment that can create a poverty trap for smallholder farmers. Competition emanating from larger farming operations and extortion from middlemen can also prevent farmers from selling their produce at a fair price, leading many into subsistence cultivation. High transportation costs, a lack storage facilities, and an absence of inputs necessary to increase yields can also impact their production, resulting in costly post-harvest losses. There are also natural obstacles that can include soil erosion, floods, droughts, diseases, and further challenges exacerbated by climate change that can also harm production levels, negatively effecting income and living standards (Livingston, Schonberger, and Delaney xi, 8, 13-18; Lyimo 41). These issues are familiar to most farmers, but these obstacles present ever greater challenges for

smallholder farmers because of their lack of resources, making them more vulnerable to the risks that are associated with the vagaries of an agricultural cycle dependent on hoe technology and rain-fed crop production.

Nevertheless, due to the fact that Tanzania continues to deal with issues of food insecurity in its smallholder dominated agricultural sector, some believe that any solution to national food insecurity must come through smallholders themselves. Since they make up the overwhelming majority of the population, the welfare of the peasantry lies in conjunction with that of the entire nation. In Tanzania, this sentiment was expressed as, "agriculture is the backbone of the nation:" "kilimo ni uti wa mgongo wa taifa." This mantra is further echoed by Olivier De Schutter, currently the UN Special Rapporteur on the Right to Food. For him, improving the livelihoods of smallholder farmers must go in partnership with solutions to food insecurity, as this will also decrease levels of urbanization, preserve ecosystems, and decrease poverty (De Schutter 3).

But in order for smallholder farmers to become a major player in solving the nation's food insecurity issues, they need assistance to help deal with barriers that impede their own standard of living. For decades, this responsibility has fallen on cooperatives, seen as a mechanism that can support the peasantry in improving their socio-economic situation. Cooperatives in Tanzania operate within a tier system, where primary cooperatives and unions function as the basic structures of the movement. Secondary, tertiary, and fourth tier cooperatives funnel underneath, with all cooperatives being formed voluntarily by their members. While in the past, lower level cooperative societies operated independently from primary societies, the Cooperatives Act of 2003 attempts to keep these societies in sync with the business practices and objectives set out by primary

cooperatives in order to maintain efficiency and prevent a thinning of resources. These societies are further supported by government institutions as well as independent organizations such as the Savings and Credit Cooperative Union League of Tanzania Limited (SCCULT) and the Tanzania Tobacco Cooperative Apex Ltd (TTCA). The government also owns the most advanced cooperatives college in sub-Saharan Africa, located in Moshi (MUCCOBS), used to train managers as well as other professionals. The Tanzanian Federation of Cooperatives (TFC), is atop of the entire cooperative structure, which is a confederation that represents, promotes, serves, and coordinates the development of all cooperatives in mainland Tanzania. It is an independent, non-political, non-government organization that observes international cooperative principles and is a member of the International Cooperative Alliance (ICA) (Maghimbi 10-13; TFC 3; CRMP 1-4).

According to the ICA, cooperatives are based on the values and principles of self-help, self-responsibility, democracy, equality, equity, and solidarity. Membership to a cooperative is also voluntary, done so to gain access to goods and services that members require to improve their standard of living. While members receive a limited return on equity, all members receive benefits proportional to their use. Profits are also redistributed to members based not on the amount of capital invested but on the amount of business transacted, while each member has one vote in determining the direction of the organization regardless of the amount of shares or business they do within the cooperative (Nadeau and Thompson 8; Chambo 3; DFID 1; "ICA").

To this end, the FAO and scholars like Adam Chambo, former principal of MUCCOBS, are strong advocates of cooperatives that, as rural organizations, are able to

improve the lives of their members if operating within a conducive policy environment, which involves assisting cooperatives in competing within a liberalized market. Chambo further champions the use of cooperatives over agribusiness, arguing that on a global scale, "...food insecurity is looming if production and distribution is left to the divisions of multinational companies," and instead believes that, "...the family farm and cooperatives can provide a decentralized system of food security and employment," and thus is better positioned to create an environment where Tanzania can solve its food insecurity (Chambo 7). Furthermore, cooperatives should also allow small farms to reap the same advantages of large scale ones such as economies of scale, thus potentially avoiding the need for industrialized farms that could displace the peasantry due to their expansionist practices (Lyimo 24).

The benefits of cooperatives have been famously defended by Alexander Chayanov, who wrote about the peasant economy in Russia, but was extremely influential for cooperative theorists in Tanzania and beyond. For Maghimbi, the success cooperatives enjoyed, particularly in the 1950-60s when the government supported and allocated monopolies to cooperatives on certain cash crops, can be attributed to what he calls the "Chayanovian model" of cooperatives, where peasant crop marketing cooperatives were widely used across the country. This model was also prevalent in Russia, India, and other developing nations where large countries had a peasantry dominated population, which protected smallholders from globalization and large scale producers (Maghimbi 7-8; Chayanov xiv-xvi).

While these principles and values of cooperatives are universal, they have not always been adopted or present within cooperatives in Tanzania. Under colonialism and

later after independence, cooperatives operated as a part of the state. Cooperatives were later abolished by the government in 1976 after decades of relative economic success, because the government accused many of these organizations of being corrupt. While this was certainly true, it is more likely that the government abolished cooperatives because they were concerned of the growing power and capital accumulation that some cooperatives were generating, which eventually led to their dissolution as they were seen as a capitalist threat to the country's socialist agenda. Once they were reinstated, cooperatives remained as an offshoot of the government. Reforms enacted in 1991, under pressure from Western donors, discarded the socialist state centric model in favour of a volunteer based one, known as the "Rochdalean model," in an effort to rejuvenate the cooperative movement. Such a feat would prove to be difficult, however, given the level of distrust and tarnished reputation cooperatives had garnered within the peasantry after years of failed and heavy-handed government interference in the movement (Maghimbi 9; Lyimo 67-68).

Given the renewed emphasis in Tanzania and international development policy on the role of cooperatives today, this thesis will investigate if cooperatives will be able to return to a position where they are able to assist smallholders in surpassing the barriers that impede improving their standard of living, which will ultimately help in solving Tanzania's food insecurity issues (Crowley, Tercelli, and Ourabah 7-8; CRMP 1). As mentioned earlier, in recent years the government has encouraged a rejuvenation of the cooperative movement after years of forced hibernation as they too see the role of cooperatives as an essential one if smallholder farmers are to improve their lives and assist in the nation's quest in feeding itself. Numerous committees, policies, Acts, and

programs have been issued by the government since the 1990s in order to address problems of corruption, membership empowerment, structural weaknesses, and to modernize cooperatives to assist them in competing in the free market in the hopes that they can regain their prominence within the country's developmental process (CRMP iii; TFC ii). In response, by 2008, cooperative registration had swelled to around 8500 nationwide, directly affecting close to 8 million people, whereas in 2000, cooperative membership only hovered around 55,000 members total (Maghimbi 26; Lyimo 91). Due to the encouragement by the current government, and increasing involvement by smallholder farmers, cooperatives must be closely examined in order to discover if they are, in fact, as capable of assisting smallholders and eliminating its food insecurity as their defenders claim.

The Tanzania of today, however, is far different from when cooperatives were at their peak in the 1950-60s. Since economic privatization and the liberalization of the market, which occurred under the Structural Adjustment Policies (SAPs) of the 1980s, competition for market share is fierce, something that was missing in the early days of independence when the government allocated cooperatives with a monopoly over marketing certain cash crops. In addition, the government is also encouraging the industrialization of its agricultural sector through the emergence of large scale agribusiness, which they see as another key component to obtaining food security. Under such policies as *Kilimo Kwanza*, the administration is attempting to increase the scale, mechanization, and commercialization of Tanzania's agricultural sector ("Kilimo Kwanza" 5). Thus, with a different economic and political landscape that supports a food security based solution to the country's food insecurity, which has allowed agribusinesses

to play a more prominent role in Tanzania's agricultural sector, it is difficult to imagine that cooperatives will be able to support smallholder farmers as they did in the past. To truly rejuvenate the cooperative movement, policies more in line with the ideals of food sovereignty are needed to allow cooperative societies to operate in a conducive policy environment, which will ultimately empower the peasantry, instead of policies that allow agribusinesses to overpower smallholder farmers.

This thesis is divided into three main chapters in order to illustrate the roots of Tanzania's food problem and assess the role of cooperatives in the future. Each chapter will discuss the major policies and events that have impacted the agricultural sector, demonstrating how the Tanzanian government has dealt with the nation's food insecurity. The state of cooperatives will also be observed throughout in order to show when the movement was successful, why it was able to prosper, how and why it eventually declined, its current condition, and its possible future. Progressing in a chronological manner, the first chapter, divided into three sections, documents the history of Tanzania's agricultural sector, beginning with the colonial period (1884-1960), followed by the postindependence era (1961-1981), and finishes with the period of structural adjustment (1982-present). The next chapter, divided into two sections, will then bring readers into the present context, as it illustrates how the current developmental discourse seeks to obtain food security through the open market, alluding to the dangers this brings when corporations become increasingly in control of food. Once the foundation of Tanzania's current context is constructed, the next section will discuss the government's attempt to rejuvenate the cooperative movement in conjunction with its encouragement of agribusiness.

In doing so, this thesis will demonstrate that as the government continues to adopt a food security based approach to its food insecurity, by promoting the expansion of industrialized agriculture, the importance of cooperatives is likely to further dissipate, diminishing the role peasants play in the development of the country. While proponents of food security may favour such a move, arguing that smallholder farmers are not capable of feeding the country, this thesis cautions that further food insecurity is likely to persist if the peasantry is not given the proper support needed to become a major part of the solution. As such, this thesis favours a food sovereignty based solution to Tanzania's food problem, which promotes the idea that the peasantry must remain intact and in more control of local food systems in order to fight the poverty and hunger that has plagued the country for decades. Cooperatives occupy an important role within this food sovereignty based solution to Tanzania's food insecurity, as they can be used as an organization that supports the peasantry, enabling them to surpass the barriers that impede their development. Since the current government's actions counter this, political reform emanating from opponents of the regime or from civil society itself may be the only way smallholder cooperatives can again become a major player within the development of the country.

Chapter 2: Methodology

Prior to conducting research for this project, I had been to Tanzania on two separate occasions, spending approximately one year there in total. In that time, my love for the country grew to the point where I now consider Tanzania to be my second home. My time in the country has primarily been as a volunteer, where I worked for the Anna Schubert Mackeja Kwofie Foundation, operating in Shinyanga and specifically in the village of Nhobola. The organization's long term goal is to raise funds to build irrigation facilities for the farmers in the village, who cultivate under semi-arid conditions and without access to local markets because of their geographically isolated location. Having seen the difficulties these farmers faced, once I was enrolled in the International Development Studies Master's program at Saint Mary's University, I wanted to conduct a research project that would shed light on these obstacles, as well as potential solutions to their plight. Once my course work was completed, I returned to Tanzania for a third time in order to interview people working within the agricultural sector. While the interviews conducted are not the basis of the research, they did provide me with a unique opportunity to record the opinions of Tanzanians on the issues surrounding food insecurity, and greatly impacted the direction of the thesis.

Primarily, the data collected for this study was collected by using qualitative research methods. Statistical information on food production, investment and planning directed towards the agricultural sector, how much food the country is importing and exporting, and what crops are being grown are used to delineate the magnitude of Tanzania's food system. Government documents were also reviewed in order to understand how these policies shaped the agricultural sector and why they were

implemented at that time. Information collected through qualitative research methods in the form of open-ended interviews are used to provide insight into what is currently happening in Tanzania throughout the various levels within the agricultural sector, as well as to provide an intimate view of cooperatives by those affected by these organizations. Interviews are cross-referenced with the use of other sources such as news feeds, journal articles, and other published works in order to further highlight and confirm their contribution. By compiling information through these research methods, the thesis seeks to better explain why Tanzania continues to suffer from issues of food insecurity, and why cooperatives are unable to assist smallholder farmers as they did before the 1970s.

The main focus as well as the units of analysis are Tanzania and its agricultural sector. Since smallholders and cooperatives are key components to solving the nation's food insecurity issues through a food sovereignty framework, they are the other units of analysis that will be documented within this research. Agribusinesses will also be a unit analyzed, as they are being proposed by food security advocates in the belief that they can help the nation become food secure.

In all, 29 people were interviewed from July 17 to August 19, 2013, in the regions of Moshi, Arusha, Morogoro, Shinyanga, and Dar es Salaam. The areas of Dodoma, Singida and Iringa were also visited, but no interviews were conducted. Of those interviewed, 23 were male and 6 were female, while 2 wished to remain anonymous and unidentified. Ages ranged from the early-20s to the mid-60s and above. Age was not considered to be of particular importance or focus in this study, although it was observed that both farmers and government officials were both young and old. Those in a more

leadership role or of high academic standing did tend to be older, but this should not be surprising as experience is often needed to achieve these types of positions. The age breakdown was also fairly even, as there were 16 people who were believed to be around the age of 20 and above, and 13 people believed to be around the age of 60.

It is important to note the overwhelming male to female ratio, which is a reflection of the fact that the direct involvement of women in Tanzanian cooperatives is greatly disproportionate to men. This is confirmed by Andrew Bibby, who states that men dominate primary cooperative membership in Tanzania, as only 1 in 5 members are women, who are also underrepresented in leadership positions. Although recent legislation has attempted to address this issue, clearly more needs to be done to empower women within Tanzania's cooperative sector, an issue that is also a large part of the argument emanating from advocates of food sovereignty (Bibby 23).

The regions visited are host to some the largest and oldest primary agricultural cooperatives as well as the TFC, the umbrella organization that oversees all cooperative activity within the country. These regions are also home to the country's major academic institutions as well as the political and commercial centres of Tanzania. This allowed for access to fellow academics and policy makers working and analyzing the agricultural sector, cooperatives, and legislation.

Given the time frame as well as budget restrictions, these areas were also selected because of existing contacts already established from previous trips to the country. As the interview process began, further contacts were made, creating linkages to other people involved within the agricultural sector. The areas visited also represent varying climates, densely and sparsely populated regions, as well as areas that are characterized by semi-

arid and fertile conditions, providing a unique glimpse into how certain regions differ in terms of makeup and food security. In doing so, information was uncovered as to how each region deals and interacts with their specific issues of food insecurity.

The study involved interviews with smallholder farmers, directors of cooperatives, the director of the TFC, agribusiness directors, professors and students who focus on the agricultural sector, wealthy landowners, members of the coffee board, cooperative members, scientists conducting research on Genetically Modified Organisms (GMOs), personnel from the department of Agriculture, Food Security, and Cooperatives, as well as members of the NGO community and farming associations.

This study will attempt to document the varying viewpoints originating from the different levels operating within the complicated matrix of the country's food system. Within this structure, farmers are the producers on the ground level, but also interact with NGOs, farming associations, agricultural extension officers, and agents of cooperatives, who then report to their respective administrators. For agricultural extension officers, after they have collected their data, eventually, that information is carried to higher levels of government who, it is hoped, will then be able to create policies that reflect the situation farmers are facing on the ground, assisting them in trying to improve their standard of living. Directors of agribusinesses and the scientists conducting research on GMOs were interviewed because they are the newest actors in relation to the agricultural sector. Interviewing members within this area assists this thesis by gaining insight as to how these new players will impact smallholders and the country's food security in the future. Professors and students at the country's agricultural institute were also

interviewed, as they are also critically analyzing how to improve the lives of the peasantry and solve the country's food problem.

Each interview took approximately one hour and was conducted in an open-ended format. Questions were prepared prior to each interview in order to maintain some structure, but often one question would lead to a new one and snowball from there. Overall, however, the time frame allotted allowed me to go back to the questions I wanted answered. All interviews were recorded in a notebook. Originally, I had thought to record each interview, but after speaking with a friend also conducting research in the country, I decided not to do so as many of his interviewees were not comfortable with being recorded.

Most interviews were conducted in English and in an informal, one-on-one style within a private or semi-private setting. Exceptions to this were interviews done with the majority of farmers, for they were either conducted in the village or on the farmers' fields. These were done in a group format, but remained open ended and informal. There are two reasons for this. First, farmers were interviewed on the farm after a long day's work, and as the interviews were being conducted, others joined the conversation. I did not want to reject anyone for fear of losing their potential contributions if they left the area, so decided to allow the group interview to continue. It also assisted in keeping the interview within a reasonable timeframe and allowed participants to comfortably discuss the issues being presented. The second reason for the group interview format was that the interviews being conducted were in a village in which I have been on numerous occasions having volunteered there for an extended period. Every time I have been there, all meetings were done in a group setting, and I felt it was best to continue this given

certain time constraints and again, for fear of losing any potential contributions of those being interviewed. These interviews were conducted in KiSwahili with the assistance of a translator.

The questions directed towards smallholder farmers focused on highlighting the major challenges they faced and how or whether cooperatives were assisting in overcoming these barriers. Their views on government policies or actions were also asked in order to garner their opinions about what should be done to improve their situation. Despite the fact that some appeared to be more isolated than others, finding markets for their produce was described as the greatest challenge for all of them. For the group of farmers in Arusha, land was also an issue, as they felt they had the manpower and expertise to cultivate more farmland, but did not have access to expand their operations. Although not a formally registered cooperative, the farmers in Arusha believed they practiced similar cooperative values such as sharing profits and having an equal say in decision making.² None of the farmers interviewed in Shinyanga were members of a cooperative, and felt they did not have access to join such an organization due to their isolated position.³

Farmers individually interviewed in Dar es Salaam, Morogoro, Moshi, and Arusha expressed the need for the cooperative movement to be strengthened, believing that they could greatly assist smallholder farmers and were definitely needed if their situation was to improve. Nonetheless, all of these participants highlighted numerous problems with the current state of cooperatives, including their inability to provide

² Interview with a group of Arushan farmers, July 19th 2013, Arusha, Tanzania.

³ Interview with a group of Nhobolan farmers, July 31st 2013, Shinyanga, Tanzania.

payment, credit, or delivery of produce and inputs on time, as well as a failure to deal with market accessibility and corruption.

Prior to coming to Tanzania to conduct the field research portion of this project, my initial assessment was that cooperatives were doing an adequate job in assisting farmers surpass the barriers they face, which is why they were being encouraged by the government, scholars, and various international organizations. While there are some positives, overall the supposed revival of cooperatives appears to be limited. The study then changed its focus in order to discover what was preventing cooperatives from regaining its position of strength within the agricultural sector. Since cooperatives appeared to no longer be playing an important part in the lives of smallholder farmers, the thesis also needed to understand the impact of agribusinesses on smallholders as well as reflect upon the capitalization process that the country's agricultural sector is currently undertaking, as these elements would further impede a rejuvenation of cooperative societies and have a direct impact on the overall socioeconomic conditions facing the peasantry.

This change in focus began with the first few interviews conducted, as all participants said farmers no longer trusted these organizations. Although many cooperatives were registered, most were found to be either dormant or barely functional. This theme showing the decay of cooperatives continued throughout the research project, as participants from across the country said the same thing. Even the word "cooperative" appeared to give off a vibe of negativity, failure, corruption, and a cause of wounds that have yet to heal. Despite this, however, most expressed a need for cooperatives, or at least another organization to step in to assist smallholder farmers. Some also alluded to

the fact that the "cooperative spirit" was still alive and well in the country, despite the fact that cooperatives no longer held the same sway with people as they once did. Participants also expressed concern about some of the large scale developments beginning to occur in the country, from large commercial farming projects, to the possibility of allowing GMOs into the country's agricultural network, to land grabs used for biofuel production.

The research itself is sanctioned by the Research Ethics Board (REB) at Saint Mary's University in Halifax, as well as the Tanzania Commission for Science and Technology (COSTECH), the governing body that oversees all research being conducted in Tanzania. All interviews followed the specific guidelines of each governing body. Participants were free to decline any proposed interview or question without penalty and allowed to remain anonymous if desired. As a gift for their participation, each will receive a copy of the thesis after it is graded, or at the very least a condensed version of the document. It is also hoped that it will be translated into KiSwahili at a later date in order to make it more accessible for Tanzanians.

Chapter 3: Literature Review

In order to illustrate the theoretical arguments covered in this study and to encapsulate the case of Tanzania within a global context, this thesis will assess the works of other scholars who have written on the major issues pertaining to this research. The literature review is divided into four parts. The first deals with the theoretical framework behind the perspectives of food security and food sovereignty, analyzing how each school of thought confronts national and international issues of food insecurity, the role of the peasantry, as well as how each explains the recent global food crisis and the importance of such an event. The second part focuses on the theoretical analysis that advocates for cooperatives, articulating the arguments of scholars who state why they are needed to assist smallholder farmers in improving their lives, allowing them to have a positive contribution to a nation's food security. Continuing this focus on the role of the peasantry, part three discusses the agrarian question and how it is being answered in Tanzania, leading into the fourth and final part of the literature review which explores the potential impact of agribusinesses on smallholder farmers and what the emergence of the global food regime means for their development and wellbeing. Extensions of commercial agriculture, GMOs and the biofuel industry will also be examined in this section in order to demonstrate their potential effects on the country's agricultural sector and existing smallholder farmers. Due to the fact that industrialized agriculture is in its infancy stage in Tanzania, parallels between the country's agricultural sector and other nations' will also be drawn in order to show the direction in which Tanzania could be headed as it continues to modernize its agricultural structure.

An agricultural sector itself has a variety of important functions that impact economic, environmental, nutritional, gender, age, health, and cultural spheres, each having an essential role in the developmental framework of a country as well as enabling it to be food secure. Which direction the agricultural sector should take and how these domains are characterized is shaped by one's theoretical perspective. In order to clearly distinguish between the two primary schools of thought involved in this debate, those pertaining to the theory that is more economically driven, market oriented, and in favour of a capitalist mode of agricultural production will be called the food security school, arguing that agricultural production is primarily economic while food production for local consumption is secondary.

Indeed, those belonging to this school argue that the agricultural sector's primary objective is to be Tanzania's economic engine, as it remains the largest contributor to the country's GDP. As such, a focus on cash crop production should be maintained in order to accumulate funds that can be used to purchase foodstuffs that are available on the global market at a cheaper price. Others, however, would argue that it is vital for Tanzania to feed itself, and not rely on the world market, opting instead for food self-sufficiency and sustainability as a nation's sovereign right. This perspective, championing local food production in order to ensure domestic nutritional needs over economic growth, will be dubbed the food sovereignty school of thought. Both schools will be reflected upon throughout the thesis in order to provide commentary over the main events that have shaped Tanzania's agricultural sector. It must be stressed, however, that regardless of the theoretical perspective, both schools purport to address themselves to the alleviation of hunger. How to achieve this end is thus the central debate. This first

section of the literature review will now observe the works of other scholars and how they articulate the respective theories, exemplifying how they can be applied to solving the current global food crisis as well as the food situation in Tanzania.

The Food Security School of Thought

Food security advocates such as world renowned economist Paul Collier argue that the root causes of food insecurity are irrelevant, for they do not lead to any solution to the current food crisis, which occurred after years of relative food price stability (67-68). In his article *Politics of Hunger*, Collier states that the cause of rising food prices emanates from the rapid economic growth in Asia, and in particular India and China, the world's two most populated countries. As peoples' wages increased, their diets changed, causing new stresses within the world's food supply as more people substituted their traditional, carbohydrate heavy diets for ones more Western oriented and protein concentrated, by consuming more meat (Collier 68). This has placed increased demand for feed or more specifically grains, of which six kilograms are needed to produce one kilogram of beef (Collier 69).⁴ In traditional diets, these grains were consumed directly. But as societies gain more wealth, the working class goes through what food activist Haroon Akram-Lodhi describes as a "gastronomic transition" (59). As a result, more grains are being transferred to raise more livestock for consumption, which in turn causes a decrease in food supply, resulting in the sharp rise in the price of food and hence a food

-

⁴ To further demonstrate how much grain is being used for animal as opposed to direct human consumption, Raj Patel states that 60% of American grains are used for animal feed in the United States (298). If growth rates continue in certain regions of the Global South, their grain consumption numbers are likely to mirror that of the United States and other Western nations, causing further stresses on the future of global food security.

crisis as more people can no longer afford the escalated food prices (Collier 69).

For Collier, the crisis in the developing world is further exasperated because it simply does not have a "modernized" food system. Agriculture is predominantly rain-fed, characterized by a lack of technology, and poor infrastructure. The Global South is also suffering from an underdeveloped and often nonexistent industrialized agricultural sector, under stress due to population pressures, and increasingly facing adverse weather conditions due to climate change. Farmers are also penalized due to the current ban on GMOs in Europe and parts of the developing world, as well as a lack of access to local and external markets and low incomes; all of which have negatively impacted production levels, particularly for smallholder farmers who make up the majority of the population in the developing world (Clover 7; Wolter 29; Collier 67-68).

For advocates of food security, it is smallholders themselves that are major contributors to the food problem, or at the very least are getting in the way of the solution. Simply put, peasants are not producing enough, predominantly for subsistence, and as such are preventing supply from matching global demand, allowing the food crisis to occur (Wolter 14). They are also deemed to be inefficient, unable to specialize in a certain crop due to their small scale, technological know-how, and entrepreneurial skills, which would help them increase their income within the global market given the proper conditions, such as market demand, infrastructure to facilitate delivery of products, and access to processing to capitalize on value added production (Sachs 37, 53). These sentiments are shared by Tanzanian agricultural economics professor Andrew Temu, who believes that the problem with the lack of agricultural production is attributed to the peasantry, as the size of their farms are too small to cultivate the country's available

fertile lands, and their tools are too primitive to maximize its yields. To solve this problem, Temu argues that Tanzania should adopt rules that increase the size of farms through a minimum acreage for smallholders. Temu adds that,

...perhaps a more fundamental problem lies in the predominance of traditional rain-fed smallholder production system in the scale of 0.25 to 3 hectares in the rural Tanzania that is supposed to provide livelihood to over 80 per cent of the population. The failure to promote commercial farming, in particular the development of medium to large-scale commercial farms significantly explains the low productivity growth of the country's rural sector. (Temu 25).

Temu further champions large and medium scale commercialized agriculture, arguing that smallholder farmers lack the capacity to utilize technological improvements such as irrigation because of its high costs, lack of access to improved irrigation technologies, and inadequate physical infrastructure (Temu 25; "Irrigation Transfer"). Researcher Denise Wolter is likeminded, pointing out that because the agro-food industry is not developed in the Global South, countries are unable to meet demand. In Tanzania, for instance, in 2008 domestic sugar consumption amounted to 12 kilograms per person per annum, the equivalent of more than 340,000 tonnes of sugar, but local production only amounted to 263,000 tonnes, unable to match local demand (Wolter 15).

Collier further adds that the majority of peasants are ill-suited for the entrepreneurial role that farmers must adopt in order to increase production and become modernized. For Collier,

In modern agriculture, technology is fast-evolving, investment is lumpy, the private provision of transportation infrastructure is necessary to counter the lack of its public

production levels will continue to remain stagnant (6).

-

⁵ According to Temu, there are 29.4 million hectares of land that is suitable for irrigation development, which accounts to about 31% of all arable land. Currently, only around 227,000 hectares of land undergo irrigation, which amounts to less than 1% of potential levels. For Temu, if Tanzania remains dependent on the peasantry, irrigation potential will never been met, and thus

provision, consumer food fashions are fast-changing and best met by integrated marketing chains, and regulatory standards are rising toward the holy grail of the traceability of produce back to its source...Large organizations are better suited to cope with investment, marketing chains, and regulation (71-72).

Furthermore, smallholder farmers are not reproducing themselves, as their offspring are more likely to move to the city in search of higher incomes and less labour intensive work found in other sectors (Collier 71). As such, Collier calls for an end to the romanticisms he asserts is held by members of the middle and upper classes in the North, as well as some development specialists, arguing that small scale, organic farming is simply not capable of feeding the world. While still sympathetic to the plight of the peasantry and not as far on the right of the political spectrum as Collier, Henry Bernstein adds to this skepticism, arguing that small scale producers lack the surplus necessary to feed non-farmers, a segment of the world's population that continues to grow as more people leave rural areas for urban ones. While both favour a scaling up of farm sizes, as well as championing the market, which under capitalism has been able to feed more people than ever before, Collier further advocates for the use of improved technologies - specifically a wider adoption and acceptance of GMOs (Bernstein 23-24; Collier 68).

Harking back to the points made by Temu and Wolter, food security advocates will often point to India and Brazil as models of success, whose agricultural sectors exemplify what must be adopted throughout the developing world (Collier 73). India welcomed the Green Revolution after it was adopted first by Mexico. Through its adoption, India's agricultural sector became characterized by large scale, mono-crop farming, synthetic fertilizers and pesticides, as well as high yield variety seeds that have fed and generated incomes for millions of people throughout the 1960s-1980s (Sachs

177; "Agriculture for Development" 46). The country, historically plagued by drought, famine, and monsoons, went from food insecure to being a net food exporter thanks to its adoption of modern, commercialized agriculture (Sachs 177, 259-260).

Like India, the Brazilian agricultural model also takes advantage of advanced farming technologies as well as increasing its scale of operations, which has transformed the nation into a massive, globalized food producer, particularly with regards to soy. A favourite crop for agribusinesses due to its versatility and nutritional properties, as it is nitrogen fixing and high in protein, the cultivation of soy is greatly spreading alongside the expansion of commercialized agriculture around the globe. With regards to Tanzania, AgriSol, an American based firm, plans to focus mainly on soy production, alongside palm oil, despite the fact that demand and production for soy is virtually nonexistent, only amounting to 8000 metric tonnes being produced in 2005 (Jones et al 12). While AgriSol claims to produce for Tanzanians first, according to Raj Patel, 80% of the world's soy is, in fact, for feed used by the livestock industry, which is more reflective of the increase in global animal consumption that was mentioned earlier in this section, and not that of domestic needs (168). As such, it is likely that the soy based animal feed is to be used for export, a fact that AgriSol admits too in their plans for future production (AgriSol).

The growth in scale in Brazil has also allowed for the cultivation of farmland that was previously unused, an issue seen throughout much of sub-Saharan Africa, including Tanzania. Calling for an expansion in scale, the Brazilian model, while Collier admits has displaced smallholders and has been harmful to the local environment, has only caused damage when not properly regulated. On the positive side, the increase in scale has led to

growth in contract farming and out grower operations that include peasants within the supply chain. Within this framework, peasants supply a large central business, which has enabled many smallholders to gain access to credit and improved technologies, giving them more opportunities to increase their incomes, standard of living, and household food security (Collier 73). For Collier and others, what has happened in India and Brazil needs to occur in Africa as well. More specially, Africa needs to experience its own Green Revolution in order to maximize its agricultural potential and have production meet its growing demand and the new challenges that appear on the horizon, such as climate change.

As such, proponents of food security argue that Africa's Green Revolution must be fuelled by improved farming technologies. The least developed region in the world is also the fasting growing population wise, the most food insecure, and the most vulnerable to global warming. Thus, the adoption of GMOs is a must, for the biotechnology is seen as the best way to fight against droughts, floods, and disease. Its design, they argue, can be genetically engineered (GE) to specifically combat these obstacles and increase yields (Collier 76). These sentiments are echoed by former Secretary General of the United Nation's Kofi Annan. Associated with an Alliance for a Green Revolution in Africa (AGRA), he has become a major spokesperson for sparking Africa's Green Revolution and a self-proclaimed champion of smallholder farmers in Africa. For Annan,

Seeds have been the main problem...Farmers are using seeds that are 20 years old. They have been locked out of science. Now we are introducing high-yielding, pest-resistant, drought-tolerant varieties. We are also working to liberalise the market. If farmers get a

⁶ At the end of 2013, Annan stepped down from being chair of AGRA, but is still committed to food and nutritional security in Africa (Mudasia-Mwichuli and Farnoudi 1).

bumper crop and do not have a market for their surplus, they will not repeat the effort the next year. (Financial Times).

Currently the production of GMO products are prohibited from commercial use in almost all African countries, including Tanzania, while the usage of fertilizer, necessary for these high yield seeds to produce to their potential, is limited because of unaffordable prices (Collier 76).⁷ Although there are risks associated with the implementation of biotechnology, which will be discussed later, in an interview with an expert on biotechnology, they argued that GMOs were still needed to increase yields. For the participant, food insecurity in Tanzania is primarily caused by a lack of production, which must be addressed by any means necessary. If future problems did occur, they would be dealt with later.⁸

As the quote from Kofi Annan also signifies, in order to further improve the plight of developing nations, proponents of food security advise that it is best to take advantage of the global market. By capitalizing on the comparative advantage they have in growing crops such as coffee, tea, and sisal, Tanzania can sell these goods on the global market in order to increase their incomes, climb out of poverty, and become more food secure. The theory of comparative advantage, illustrated by Adam Smith in his book *Wealth of Nations* states that,

It is the maxim of every prudent master of a family, never to attempt to make a home what will cost him more to make than buy...What is prudence in the conduct of every

⁷ At the time of this writing, only four African countries: Egypt, South Africa, Sudan, and Burkina Faso produced GM crops. Unless milled, the import of GM foods are banned in Angola, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Swaziland, Tanzania, Zambia, and Zimbabwe. Cameroon, Kenya, Malawi, Nigeria, Uganda, and Tanzania are currently conducting field trials on GM crops, the final step before full approval of commercialisation (Tran; Interview with Dr. Tairo, scientist, August 12th 2013, Dar es Salaam, Tanzania).

⁸ Interview with a researcher of biotechnology, August 3rd, 2013, Morogoro, Tanzania.

private family, can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy of them with some part of the produce of our own industry, employed in a way in which we have some advantage (qtd. in Sapsford 70).

In other words, produce what you can produce best, cheaply, and efficiently, and buy the rest.

In relation to agriculture, this line of reasoning is demonstrated perfectly in the Jeffery Sachs' book *The End of Poverty*. In it, the world renowned economist depicts a scenario where a hypothetical smallholder farmer can increase their family's wealth while at the same time meet its food needs by changing from food to cash crop production. The example provided is to show through a micro level how nations can become food secure while at the same time improving their economies. Upon comparing a household that only grows crops to feed itself,

... [This] household decides to shift to vanilla as a cash crop. The next year the household earns \$800 in vanilla, and uses \$600 to buy four tons of grain for food. As more vanilla farmers arise in the region, a new group of trading firms also forms, specializing in shipping and storage of vanilla, food, and farm inputs. (Sachs 52-53).

With this example, Sachs argues that a farmer, given the right conditions, can theoretically move from a life of subsistence to one that gears production towards the market. Since household income has increased, the family can not only buy the food it needs, but it is also wealthier, giving it a way out of poverty.

These sentiments are further echoed by John Block, former secretary of agriculture for the United States. In the Uruguay trading rounds of 1986, Block stated, "the idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on US agricultural

products, which are available, in most cases at lower costs" (qtd. in Holt-Gimenez and Patel 49). This viewpoint proclaims that as long as people are able to have access to food, that is the main concern, and not who produces it, how it is produced, or where it comes from. It also implies that a comparative advantage is a favourable one in terms of both production and consumption. If a nation, like the United States, through its well established agribusinesses is able to generate enough food at cheap prices, then global consumers should benefit.

Thus, the proposed solutions to food insecurity lie within the global market that, through liberalization, can free the Global South from both hunger and poverty. An increase in agribusiness and further adoption of advanced farming technologies in the developing world will thus only reinforce a stronger global food security system in light of the new challenges presented by climate change, increased population growth, dietary transformations, and urbanization. Those who champion the free market structure that allows the most efficient companies to feed the world would therefore place their faith in the current economic system itself in order to solve the recent food crisis that, from a food security perspective, is based on a lack of economic accessibility and food production.

The Food Sovereignty School of Thought

Diverging from this faith in neoliberalism, however, is economist Ha-Joon Chang, who argues that the North's trumpeting of the free market is both misplaced and hypocritical, for they developed their own economies by the same methods they now preach the Global South not to practice. For instance, the United States and Britain, two

nations that today are some of the most vocal in encouraging free trade, became the great powers of their day through exercising extensive protectionist policies (Chang 48). Explaining this duplicity in his book, Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism, Chang observes that although there is some deviation, industrialized nations developed mainly by heavily taxing imports and subsidizing their own industries, yet encouraged the developing world to do the opposite. For them, protecting local industry from more powerful foreign entities was pivotal for their development. Only when these companies matured did countries remove barriers to trade, allowing the once infant businesses to expand internationally (Chang 50). The policy reversal executed by the Global North is twofold, as their industries were now well established, requiring new markets to continue their economic progression while at the same time preventing industrial competition emanating from other countries to develop (Chang 48). Chang describes this process as "kicking away the ladder," which began shortly after WWII, and was abetted by the two major international financial institutions (IFIs), the International Monetary Fund (IMF) and World Bank, and the world's trade organization, GATT, which later became the WTO (61).

Created during the Bretton Woods Conference in 1944 by the United States and Britain to oversee a newly liberalized global economic order, the IMF was originally assigned to oversee and maintain international currency stability while the World Bank was created to rebuild war torn Europe after WWII. Although their initial objectives became obsolete, they continued to exist, focusing their attentions on restructuring

_

⁹ According to Chang, the Netherlands and Switzerland, until WWI, were left open to the world market, but sidestepped traditional neoliberal policies in other ways, such as ignoring patent protection, in order to develop their own economies (15).

economies in the Global South to aid economic development and eliminate budget deficits at all costs (Millet and Toussaint 47-49). The first round of GATT talks also occurred after WWII in 1947, used to regulate international trade. Later upgraded to the WTO in 1995, Chang describes the WTO as,

...a powerful agency pushing for liberalization not just in trade but also in other areas, like foreign investment regulation and intellectual property rights. The WTO now forms the core of the global economic governance system, together with the IMF – in charge of access to short-term finance – and the Word Bank – in charge of longer-term investments (23).

These organizations make up what the author calls the "unholy trinity," as they promote neoliberal policies that favour the Global North at the expense of the developing world, as these institutions are structurally dominated by the world's richest countries who make the global market not as free as they advertise (Chang 13).

As Chang explains, the IMF and World Bank are governed by the North, who control 60% of the votes in both institutions, with the Americans having a built in veto power due to the size of their individual vote, which is based on contributions. Although the WTO's voting structure is different than these financial institutions, as votes are allocated one per country as opposed to equaling the dollar amount invested, the WTO's decisions are made in secret by a group of rich and a few emerging developing countries such as India and Brazil, while other developing nations are prevented, sometimes physically, from attending core meetings, or simply do not have the intellectual and negotiation capacity to participate (Chang 35-36).¹⁰

10 It is reported that in various WTO meetings from Geneva in 1998 to Cancun in 2003, all important negotiations were held in "Green Rooms," attended by invitation only. Rich an

important negotiations were held in "Green Rooms," attended by invitation only. Rich and large developing countries were allowed to participate, while delegates from countries in the developing world were physically removed, as was the case in the meetings that occurred in Seattle in 1999 (Chang 36-37).

Since the concentration of power within these organizations is held firmly in the Global North, their interests effectively shape both the market and the direction of the developmental discourse (Chang 37). As a result, Southern government involvement within this dialogue are discouraged in order to secure the advantage Northern countries have in terms of trade, and thus the same subsidies, funds for research and development, and tariffs that are used to protect industries within industrialized nations are not mirrored in the developing world. With regards to agriculture, this duality is witnessed in the fact that industrialized nations provide over \$200 billion in subsidies per year for its agricultural industry, while the developing world is prevented from doing so because of the neoliberal policies implemented by the IMF, World Bank, and WTO, and for the simple fact that they do not have the same economic resources (Chang 77; Weis 25).¹¹ Alas, the Global North's control over the "unholy trinity" has left the Global South captured within an "unfree" world market system. With regards to food security, due to the massive wave of underdevelopment that has occurred at the direction of a Northern led market, advocates of food sovereignty accuse the free market economy for allowing the current problems within the world's food system to persist, highlighted by the most recent food crisis.

For this school, the causes of the global food crisis encompass some of the ones depicted by theorists advocating for food security, but the root causes go far deeper.

Indeed, along with an increase in global meat consumption, the growth of the biofuels industry, droughts in major wheat producing countries in 2005-06, high oil prices, and

¹¹ At the same time, wealthy nations provide less than \$1 billion in total to developing agriculture throughout the Global South (Weis 25).

food price speculation have all contributed to the rise in food prices, but are only approximate causes of the recent food crisis (Holt-Gimenez and Patel 10). At the very core of today's global food insecurity is the agro-industrial complex, its increasing attempt to control the world's food, and the destruction of agricultural food systems in the Global South that have left the developing world dependent on food aid from the Global North (Holt-Gimenez and Patel 22; "From Food Crisis" 142).

For food activists like Eric Holt-Gimenez and Raj Patel, the current food crisis has been brewing for decades. In their book, Food Rebellions! the authors outline in detail the four main reasons that explain why the agro-industrial complex has emerged and how it has caused so much damage to local agriculture. Overproduction and food aid emanating from the North, the effects of the Green Revolution, the implementation of the SAPs imposed on the South, and free trade and the WTO have all had a hand in destroying agricultural structures in the South while creating an environment for multinational agribusinesses to flourish (Holt-Gimenez and Patel 24-25). A flood of excess grains in the form of food aid crashed local prices throughout the Global South, forcing many farmers in the developing world into subsistence and decreased local production. While it drastically increased yields, the Green Revolution eliminated much of the planet's biodiversity, transformed agriculture into a monoculture, oil based sector, led to the monopolization of seed and chemical inputs by Northern companies, and displaced thousands of peasants from their land due to the expansion of large scale farming. SAPs further opened up developing nations' markets to Northern companies by breaking down tariffs, dismantling national marketing boards, and eliminated price guarantees as well as government led agricultural assistance programs, paving the way

for deregulated markets. Finally, at the hand of the WTO, as well as the IMF and the World Bank, under the guise of "free trade," the Global South was prevented from protecting their food systems from outside interference, while at the same time Northern countries were able to better protect their own economies from similar foreign intrusion (Holt-Gimenez and Patel 24-25).

For food sovereignty advocates, the poverty and hunger that exists in the world today are caused mainly by political decisions on the part of Northern countries, and not due to the failure of the peasantry, production, overpopulation, or food scarcity. Instead, the reasons for why 3 billion people remain food insecure are because of policies that have allowed for the overproduction of food and poverty itself to continue (Holt-Gimenez and Patel 25). In response, social movements have sprouted around the globe in order to take back the right to food.

This belief in "the right to food" is best conceptualized by social movements like Food First, established in 1975. In its mission statement their goal is,

...to end the injustices that cause hunger, poverty and environmental degradation throughout the world. We believe a world free of hunger is possible if farmers and communities take back control of the food systems presently dominated by transnational agri-foods industries (Food First).

Through this lens, they argue that all nations have the right to gear their agricultural sectors and policies toward becoming self-sufficient in food production, and not toward producing strictly for the market or be dominated by agricultural industries that produce food that is harmful to the health of the individual and to the environment (Bello 136). Henceforth, each country is responsible for its own *food sovereignty*, and have the right to make this responsibility a priority.

Via Campesina, establishing itself in 1993, is the originator of the food sovereignty concept. Translated as "the peasant way," the organization is one of the world's largest social movements with around 100 million members who have mounted various protests against the WTO and effectively united smallholder farmers around the world in pursuit of a more unified, democratic food system that protects peasants in the face of globalization (Roberts 5; Bello 12-14). Both movements and others that champion the ideals of food sovereignty believe that the protection of smallholder farmers, who are amongst the poorest people in the world, is paramount if the world is to rid itself of hunger and poverty (Holt-Gimenez and Patel 19).

While the food sovereignty movement is more established in Latin America compared to Africa, there are examples on both continents that can serve as a beacon for the situation in Tanzania, in terms of how cooperatives are used under a food sovereignty framework and how the peasantry occupies an important part within a nation's agricultural policies. In Cuba, agricultural cooperatives have become vital to the country's food production. Once the Cold War ended in 1989, the Soviet Union could no longer fuel Cuba's oil dependent agricultural sector. To withstand the economic crisis that would ensue as a result of the Soviet Union's collapse, the Cuban government installed austerity measures that included dividing large state farms into Basic Units of Cooperative Production, where former employees were given land to cultivate under newly formed peasant cooperatives. Today, almost all peasants belong to either a Credit and Service Cooperative (CCSs) or an Agricultural Production Cooperative (CPAs). CCSs are made up of peasant households who own their own farms and work on them individually, but come together in a cooperative to achieve economies of scale in

marketing harvests, obtaining credit, sharing farming equipment, etc., while CPAs are collective farms where all land and productive assets such as machinery, warehouses, etc., are owned collectively. Now a model of sustainable agriculture, this mode of collective agricultural production has allowed Cuba to go from a system that was heavily industrialized to one that is more environmentally sustainable, or in other words, away from a food security based model to one more in line with the principles of food sovereignty, where production for domestic food needs and the wellbeing of the peasantry is paramount (Rosset et al. 165-166).

Two examples in Africa also highlight the importance of food sovereignty by institutionalizing its ideals within each nation's agricultural policies. Mali, although slightly more agrarian, is a country that is similar demographically to Tanzania, with over 80% of its people living in rural areas, with 97% of its people being smallholder farmers. In 2006, agricultural policy began to reflect the longstanding wishes of the peasantry, as pressure from the country's leading farming organization, the *Coordination Nationale des Organisations Paysannes*, drafted the *Loi d'Orientation Agricole*, which included a commitment to the principles of food sovereignty. This made Mali one of only a handful of countries in the world to make food sovereignty a part of their written constitution and a critical piece of its agricultural policies (Beauregard 40).

While it predates the term food sovereignty itself, the actions and policies derived by Burkina Faso's Thomas Sankara must also be mentioned. Attempting to build a national economy based more on domestic needs, Sankara was determined to have one of the world's poorest countries to become self-sufficient in food production. To do so, policies shifted away from cities and focused on the periphery, with 71% of investments

being allocated to the agricultural sector in his five-year plan for self-reliance. Within only a few years of Sankara taking office in 1983, the country, through its support of the peasantry, became self-sufficient in food production. In articulating the importance of a nation feeding itself, one of Sankara's most famous statements is also echoed by food sovereignty proponents today as, "he who feeds you, controls you" speaks to what Rosset and many others argue, that food sovereignty is an issue of national security - critical in maintaining one's national sovereignty over superpowers who could potentially use food as a weapon or as an extension of colonial rule (Rosset 22; Harsch 364; Mungai 26; Dembele).

These sentiments celebrating food self-sufficiency and in particular the importance of the peasantry are not based on romance, as food security advocate Paul Collier claims, but is instead based on the fact that smallholder farmers play a much more important role within the global food system than some may realize. While Bernstein too believes that only industrialized agriculture, through a global market driven food system can feed the world - activist, parliamentarian, and food sovereignty proponent Walden Bello argues instead for a local market centred food system, which can be sustained by smallholder farmer production (Bernstein 23). According to Bello, smallholder farmers make up roughly a third of the world's total population, but are responsible for two thirds of the world's food production (15). In addition, Bello acknowledges in his book *Food Wars*, "to cite just one well-known study, a World Bank report on agriculture in Argentina, Brazil, Chile, Colombia, and Ecuador showed that small farms were three to fourteen times more productive per acre than their larger competitors" (qtd. in 13). Andrew Coulson further highlights the value of smallholder production in China. The

world's most populous nation has an average farm size of 0.3 hectares, few large scale farms, and yet is one of the most efficient food producers in the world ("Kilimo Kwanza" 2).

With regards to Tanzania, James C. Scott explains that peasants, because of their small scale, were able to effectively readjust their settlement patterns and farming practices in accordance with climate changes, new crops, and new markets with great success in the decades prior to the villagisation process that began in the 1970s (253). Even today, 95% of the country's food production emanates from smallholder farmers (Mbunda 3). Thus, production levels and the supposed scarcity of food availability, even if it were the cause of the recent food crisis and Tanzania's own food insecurity, cannot be blamed on these small scale agriculturalists. Rather, for Tanzanian scholar Richard Mbunda, the state, which has relinquished its role over regulating markets under the direction of its food security based policies, must take back the responsibility of interfering in markets when needed in order to ease food price fluctuations, which would re-establish support behind the peasantry (3-4). Small scale producers can also not be blamed for the devastating toll that farming has on the environment.

In part due to their small size, but also because of the equipment they use, smallholder farmers largely operate independently from the extraction of fossil fuels for they have no machinery to power, nor do they depend on chemically induced fertilizers and pesticides because of their unaffordable prices (Bello 15). As such, peasants offer a more sustainable mode of production, having to rely not on methods that try to conquer nature, but work with their local environments by using the skills and knowledge of the land that they have accumulated over generations.

Just as food sovereignty is seen as an alternative to food security, agro-ecology can be seen as an alternative to industrialized farming. Food does not necessarily need to emanate from cultivated fields, but can also come from forests, meadows, and coastal regions that are often destroyed by agricultural expansion. Nutritional foods and medicines do not need to be separated either, nor must they come from the pre-existing notion of a Western diet, for even weeds and insects have been proven to provide an excellent source of proteins, vitamins, and minerals all necessary to obtain a healthy diet. Regions that adopt these forms of unconventional foods have also been found to generate incomes. For instance, the FAO estimates that non-wood products from the world's forests can be valued at \$120 billion per year. They have also been proven to provide an invaluable source of employment and food for rural communities, particularly women (Roberts 68-80; Altieri 35). Indeed, organic farming practices utilized by smallholder farmers appear to be better for consumers, producers, and the environment on a whole, signalling the call for a decreased emphasis on commercially favoured crops and modern farming methods.

According to food activist and feminist Vandana Shiva, if the United States were to convert 10,000 medium sized farms to organic farming, the emissions reduction would equate to the removal of over a million cars (*Soil Not Oil* 111). If India were to adopt a more food sovereignty based approach to its food insecurity, crops that provide a higher nutritional value would be four times more widespread instead of crops that are grown because they fetch a higher price on the world market. For instance, millet, far more nutritious than wheat or rice, also uses only 200-300 millimetres of water compared to the 2,500 millimetres needed to grow high yield rice varieties (*Soil Not Oil* 110). For food

sovereignty proponents like Shiva, it is nutritional value, the health of consumers and the environment, and the welfare of smallholder famers that must come first, for these interests do not come at the expense of food security, whereas producing for the market and industrial farming does.

For investigative science journalist Thomas Pawlick, the undesirable effects that industrial agriculture has on the environment encompass pollution, soil degradation, wildlife habitat destruction, waste of fresh water resources, loss of biodiversity, and the introduction of "exotic" species which include those manufactured by bio-engineering that threaten biodiversity (124). Each category has disastrous implications for the environment, expressed in a variety of ways which are exacerbated further by the increasing expansion of agro-industrial developments around the globe. Although it would be far too lengthy to discuss how each area impacts the environment individually, in general terms, industrial agricultural practices are the primary cause of 400 coastal "dead zones" worldwide that, due to the damage caused by fertilizer runoff, amount to an area of 245,000 km² or roughly the size of England or Ghana (ETC Group 7, 17).

The dependency on fossil fuels at all levels of the production process, from manufacturing fertilizers to running the machinery to transporting the products, equates to the agricultural industry producing three calories of fossil fuel energy to produce one calorie of food energy (Bello 36). Indeed, transportation, a vital component of the modern day food system, ships food from farm to plate traveling around 2,414 km for the average American, accounting for a tremendous amount of carbon dioxide emissions (Cool Foods Campaign 120). According to Raj Patel, the ever expanding global livestock industry alone produces 18% of all carbon dioxide equivalent emissions, contributing more to

global warming than driving cars (299). The industry has also been cited as the primary contributor in decreasing the number of natural pollinators, such as honeybees and butterflies, causing devastating effects for farmers and those within the honeybee industry throughout Europe and North America, due to its usage of harmful pesticides (ETC Group 16; CBC News; Fausset).

This environmental damage was acknowledged in April 2008, as a group of researchers from the World Bank, FAO, and other UN agencies created the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), which produced one of the most comprehensive studies on agriculture to date (ETC Group 45). According to the study, "...industrial agricultural has been successful in its goal of increasing crop yields worldwide, but has caused environmental degradation and deforestation that disproportionately affects small farmers and poorer nations" (Ludwig). The report also acknowledges that this form of agriculture is largely dependent on fossil fuels, massive irrigation projects, and chemically based pesticides and fertilizers and thus its practices are not seen as sustainable, which should be the main goal of agricultural development. To counter such a destructive system, the report recommends that small scale, low-impact farming practices must be protected, and that peasants, fisher folk, pastoralists, and indigenous peoples participation is crucial to preserving the world's ecological health (Ludwig; ETC Group 45).

Large scale agribusinesses are not only producing in a harmful way to the environment, but they are also manufacturing products that are harmful to the individual consumer. The food industry's use of sodium, fat, and sugar, along with their ability to create the perfect cocktail of these ingredients allows them to maintain a hold on

consumers, manipulating them into continually purchasing their processed foods despite their lack of nutritional value (Lustig 1316). This has led to a growing body of researchers and doctors voicing their concerns over how the food industry is deteriorating the health of the general population, and how it is hooking people onto continually consuming food that is detrimental to one's health, which will drastically increase healthcare costs worldwide, potentially crippling the already exhausted health services within the Global South.

According to medical professor Dr. Robert Lustig, America's growing sugar consumption in the form of high-fructose corn syrup, what he literally describes as poison, has led to increasing rates of obesity, type 2 diabetes, and metabolic syndrome (1307). Pawlick also adds that in Canada and the United States, the consumption of fat and sodium has risen by 65% and 200% respectively since 1950, while the increase in sodium in the average diet is considered as the primary cause for high blood pressure and depleting calcium levels (6-7). In addition, foods that are supposed to provide people with their daily nutritional requirements are no longer providing the same value as they did in the past.

The varieties of fruits and vegetables sold at grocery stores today are chosen by the food industry not on a nutritional or flavour basis, but because of their higher yield potential, thickness and firmness to ensure transport durability, colour uniformity, resistance to disease, and climate tolerance. Furthermore, these foods are treated with synthetic fertilizers that mainly focus on replenishing only a few nutrients in the soil, so even consumers that attempt to eat healthy by avoiding processed foods are not getting

the necessary micronutrients needed to maintain a healthy diet (Pawlick 11, 14, 22-27). In-organic fertilizers used over a long period of time without proper crop rotation or nutritional replenishment are found to degrade the soil's nutrients, thus downgrading the nutritional content in food. According to Pawlick, since 1963, a wide variety of foods, from tomatoes to chickens, dairy products to broccoli, have witnessed a decrease in their vitamins and minerals, but have seen a dramatic upswing in sodium and fat content (Pawlick 26-27). Questionable animal feeding practices, the amount of drugs used to prevent diseases in livestock, pesticide usage, and the consumption of GM foods are also either harmful to humans or their long-term impacts are unknown (Cummins 81-87).

While issues of obesity are more readily observed and discussed in the developed world, for they have an already well-established food industry, these problems are also increasing in the Global South. According to researchers T.C.E. Mosha and S. Fungo, in Tanzania, the prevalence of obesity among men and women in urban areas is estimated to be 30% and 28.6%, respectively. While the authors attribute this growing waste line in part to people leading inactive lifestyles, they also point to a poor diet with low nutritional value, and high consumptions of fats and sugars (Mosha and Fungo 1, 9-10).

Farming, land, and the environment are all linked. If the land is abused by farming practices, agricultural outputs will decline and in time, the land may be unsuitable for agricultural practices. Thus, both production levels and sustainability must be a part of an

¹² Most fertilizers focus mainly on boosting the levels of nitrogen, phosphorus, and potassium (NPK), even though there are multiple nutrients and microorganisms that require other forms of replenishment. A healthy soil is one teeming with millions of organisms that, once depleted, can lead to soil infertility and less nutritious foods consumed by animals and humans. While initial growth has been experienced with the use of synthetic fertilizers, over years of abuse, the land produces lower yields, as has been witnessed in the regions that experienced the Green Revolution in India (*Oil Not Soil* 101-102).

approach that will best achieve food security for not only today, but for the future as well. Maintaining a food system that ensures that nutritional products reach the plates of consumers is also a part of this, and for advocates of food sovereignty, this can best be achieved by smallholder farmers. In support of this notion, the report conducted by the IAASTD recommends that solutions to hunger and climate change need to focus on this form of ecologically friendly agriculture, and not its industrialized counter-part, especially if African nations are to experience a truly green revolution (Ludwig).

Due to its focus on championing the central role of the peasantry and having solutions to food insecurity that are environmentally sustainable, food sovereignty offers an effective and healthy alternative to a food security based solution to the world's food problems. Given the fact that Tanzania's population is mostly made up of smallholder farmers, advocating for industrial, modernized agriculture could result in the removal of the peasantry from their ancestral lands, which could have serious social and political implications. As such, this thesis is in favour of a food sovereignty based solution, placing local smallholder farmers at the forefront of any resolution to the country's food problem, instead of a food security based solution to food insecurity, which aims to condense the role of the peasantry within global agricultural systems.

To maintain their relevance, however, smallholder farmers will need assistance in surpassing the barriers they face in order to help themselves as well as to assist in resolving Tanzania's food insecurity. Many scholars and international organizations argue that cooperatives can fulfill this role of empowering the peasantry, enabling them to reach a higher standard of living, which will in turn assist in feeding the nation as a whole as well. This next section will now look to the literature surrounding cooperatives

in order to understand how these organizations can theoretically assist smallholder farmers surpass the barriers they face.

Cooperatives

There are a few famous thinkers that are attributed with being forerunners of modern day cooperative societies whose ideals can be seen in cooperatives within Tanzania. In the aftermath of the industrial revolution, Robert Owen, Dr. William King, the Rochdale Pioneers, and Francois Charles Fourier were all instrumental in orchestrating the cooperative movement in both Britain and France. Robert Owen, considered by many to be the father of cooperative societies in Britain, had the goal of creating communities that were self-sufficient, living together, and producing what they would also consume (Rhodes 1; Lyimo 12). He believed that as a cooperative, the poorest villagers would then be able to acquire communal property and cultivate as a group, which would create employment and a stronger entity that could surpass exploitative middlemen, allowing villages to gain a "fair price" for their produce (Tchami 6). Following Owen's example, Dr. William King started a consumer cooperative in 1827 in Brighton, England, emphasizing that cooperative membership should be voluntary and neutral in terms of political and religious convictions, and not compulsory or guided by political or religious ideologies (Lyimo 14).

In 1832, encouraged by Owen and Dr. King's work, the Rochdale Pioneers, a cooperative society in Rochdale, England, stressed the goals of promoting employment, creating products that society and its members needed, establishing "a self-supporting home colony of united interests," and allowing for the distribution, production, and

administration to be governed by the members of that society (Rhodes 1-2). While these pioneers were putting their theories into practice in England, Francois Charles Fourier was creating the phalanxes in France; agricultural communities that had both an economic function and a social role. He placed a special importance on communal ownership of the land, a focus on agricultural production, and a reduction of distribution costs (Lyimo 14-16). It is important to observe the contributions of these pioneers because many of these characteristics can be seen, at least on paper, in Tanzania's Arusha Declaration, established in 1967, outlining how Nyerere wanted to create a society based on cooperation, following his vision of African socialism.

Central to this political manifestation were cooperative societies themselves, as their ability to overcome barriers to assets, information services, and to market agricultural commodities were viewed as a necessity to strengthen Tanzania's rural classes. These are issues that all farmers must deal with, and cooperatives provide a vessel to overcome such hurdles. In order to tackle these complex issues for the majority of smallholder farmers, an organization is needed that unites them, pooling their minimal resources together in order to assist them in operating a cost effective business (Chambo 5). Historically within Tanzania, cooperatives were able to collect crops in a timely manner from farmers, minimize late payments, and increase the value added to their products through grading, quality standards, and bulking, where commodities were storied or shipped without undergoing processing and packaging (Msambichaka 121). Cooperatives were also seen as a tool to bring otherwise isolated farmers into the market to sell perishable commodities (Chambo 6).

According to Chambo, Tanzania's historical relationship with cooperatives has, in fact, a direct correlation with its ability to become food secure. In measuring the percentage of people with food energy deficiency, Tanzania was only behind Uganda and tied with Kenya at 43.9% in 2000 (Chambo 6-7). This is in comparison with countries who had smaller cooperative movements like Rwanda and Senegal, who in 2000-01 had percentages of people with food energy deficiency at 65.3% and 60.2% respectively. Chambo attributes this largely to Tanzania's cooperatives movement, although he also points out that the largest cooperatives operated in favourably climatic regions to supply foodstuffs like bananas and maize, as well as allowing for peasants to purchase goods in the market through the sale of cash crops such as coffee and tobacco (7).

As mentioned earlier, according to Maghimbi, the cooperative model that was most widely used in Tanzania and attributed to its success from the 1920s up until the 1970s is what he calls the "Chayanoian" model, named after its creator, Russian cooperative theorist Alexander Chayanov (7). Chayanov, who conducted much of his research on the model of the peasant economy in Russia and on peasant economies in Western Europe, from the early 20th century to the collectivization campaigns of the Stalinist period, argued that cooperatives were vital to the success and survival of the peasantry, particularly in industrializing countries with a peasant dominated population.

In bringing Chayanov's peasant economic model to Tanzania, Goran Hyden uses the concepts of "the peasant mode of production" and the "economy of affection" to

¹³ Energy deficiency can be either acute or chronic and is caused by a lack of food consumption. Measured in adults by the body mass index, acute energy deficiency is associated with body weight loss and reduced physical activity. Chronic energy deficiency is when individuals have adapted to an inadequate level of food consumption, where individuals have never 'lost' weight but have grown less because of malnourishment (Kurpad, Muthayya, and Vaz 1053).

describe the economic situation in the country's rural areas as well as to understand the economic behaviour of the peasantry. For Hyden, each smallholder farmer represents a single, unspecialized unit of production who produces primarily for their own needs, with minimal exchange occurring between farmers. Cooperation among the peasantry is only temporary, caused by food emergencies that can arise due to droughts or disease. Interestingly, assisting others appears to be one of the few risks peasants are willing to take, even if those risks could involve the adoption of new inputs that could increase production, because for Hyden, peasants are not primarily concerned with earning capital, but interested more in acquiring social capital instead. Survival and reproduction, and not production, is the peasantry's main focus – where work or improved productivity is not an end in itself, but is only a means to live. In his economy of affection, which precedes the cash economy, "...economic action is not motivated by individual profit alone, but is embedded in a range of social considerations that allow for a redistribution of opportunities and benefits in a manner which is impossible where modern capitalism...dominates the process of redistribution" (Hyden 12-13; 18-19).

For Chayanov, who further trumpeted smallholder farmers for their hardiness and tenacity for survival in often difficult conditions, socio-economic and political unrest within the peasantry was likely to increase if capitalism, through the expansion of industrialized agriculture, was allowed to erase this pre-existing peasant mode of production, as the growth of commercial farms can come at the expense of lands already used by the peasantry. In addition, the emergence of large scale producers can influence commodity prices, as their machinery allows large scale farmers to cultivate more land with increasing intensity, resulting in more production, allowing them to benefit from

economies of scale. While an increase in production may positively impact food insecurity and benefit larger farms who produce these goods, small farmers risk being priced out of the market, unable to compete against farms that can afford to sell their produce at lower prices. Add to this the land accumulated by industrialized farms, and a number of peasants could become landless, forced to sell their lands because they can cannot compete against these giant food producers (Lyimo 20; Chayanov xi, 5).

To avoid such a scenario, which would greatly increase poverty in the countryside, Chayanov advocated for cooperatives that can not only protect smallholders from the expansion of industrialized agriculture, but also assist them in gaining access to markets and enable the peasantry to produce at levels on par with modern farmers. For Chayanov, cooperatives can do so by either being concentrated vertically or horizontally. In his concept of "vertical concentration," peasant organizations are able to manage different stages of food production, such as packaging, processing, marketing, and selling goods, and not solely the cultivation of crops, allowing members more control over the agricultural value chain. Another form of cooperative production is expressed in his concept of "horizontal concentration," where a collective is formed, uniting various farmers in the cultivation of one or more crops, or to bring peasants together to complete an important, labour intensive task in a short time frame, such as building a storage facility. In each cooperative model, multiple smallholder farmers are able to ban together, potentially producing multiple crops under one organization that can also undertake the processing and or storage of such products, rather than leaving these operations to larger industries who, under capitalism, use the peasantry as low level labourers within their production schemes. Thus, instead of encouraging the advancement of industrialized

agriculture, the state and private investors should look to supporting cooperatives financially in order to allow them to foster the needs of the peasantry, while enabling these organizations to produce at similar levels compared to large scale farms (Chayanov xi-xxxii, 1, 3, 7-9; Freyhold 24).

For Maghimbi, the Chayanovian styled cooperative – which differs from the British originated Rochdale model which is more voluntary and consumer based - has a history of protecting small farmers from being overtaken by large scale farmers and from the pressures that smallholders face under globalization. The success of these cooperatives lie in their ability to, "...advance the position of the poor without making any special changes in the economic equilibrium and without substantially destroying the organizational plan of the small-scale rural economy" (Maghimbi 7-8). These cooperatives could then gain some of the advantages that large scale farms occupy, such as technical improvements and economies of scale. Throughout its history, this model's makeup was responsible for contributing to the success of both cash and food crop production. Although Maghimbi admits that the cooperative movement in Tanzania is currently not as strong as it once was, he does see it having the potential to reduce poverty if it can reform to take advantage of the current laws and regulations of the warehouse receipt system (WRS) (32).

Introduced in 2005, the WRS allows farmers to store grains as collateral in order to receive credit while waiting to sell once prices rise. Created by the International Fund for Agricultural Development (IFAD), the system is being encouraged by the government across the country. However, the government has also been criticized for causing inefficiencies, as officials have been accused of using the service for personal gain.

Sturmius Mtweve also reports in *The Citizen* that the public still lacks awareness on how to use the WRS, while the system also suffers from poor storage infrastructure, a lack of legal and regulatory framework, weak supervisory institutions, and is still unable to attract key stakeholders such as banks for financial support ("WRS"; Mtweve).

While the success of the WRS is contentious, for the FAO, there is no doubt that cooperatives are a necessary tool that can be used to alleviate rural poverty and assist in making nations more food secure. According to the FAO, smallholder cooperatives can gain from pooling members' resources to negotiate better contract farming terms and lower prices for seeds, fertilizers, and equipment in order to increase production.

Improved market opportunities and land rights are also more likely to occur for smallholders under a cooperative compared to ones that operate individually ("Reducing Hunger and Poverty"). In a recently released report, the FAO also cites evidence that agricultural cooperatives can allow smallholder farmers to benefit from the rising cost of food prices because of the organizational structure that operates within the cooperative. The FAO further.

...recommends the promotion of these special enterprises as a way out of hunger and poverty. It emphasizes the need to empower and support the growth and sustainability of agricultural and food cooperatives. It also recommends that governments and policy makers put in place the right policies, transparent legislation, incentives and opportunities for dialogue, because all of these are necessary conditions for cooperatives and producer organizations to develop and grow. ("Feeding the World" 3).

The Tanzanian government also recognizes the importance of strengthening the position of cooperatives in the country's national development strategy, known as MKUKUTA. In the document, the government outlines its plans to financially support a robust

cooperative movement, encouraging growth within this sector (Ministry of Finance 45, 57).

Two key elements are strongly illustrated when observing the literature concerning cooperatives as a whole and within a Tanzanian context. First, cooperatives are a potentially important tool that the peasantry needs in order to be protected from larger scale operations who dominate the global market and threaten smallholder farmers through their expansion. Secondly, cooperatives were indeed pivotal in alleviating poverty and helping maintain food security in Tanzania during the 1950-60s, meaning that at one time they did work and successfully assisted smallholder farmers in improving their lives. Its encouragement by the current government and others can thus be understood, as they appear to be an important organization that assists peasants in improving their standard of living while at the same time providing them with an autonomous position where they themselves are in control of their own welfare. While it may not be the role of cooperatives, assisting the peasantry will ultimately aid in the development of the country, as poverty and hunger levels are likely to subside under the protection and support smallholder cooperatives can offer.

The Agrarian Question

Understanding this role of the peasantry as a central component to the capitalist development of Tanzania is best articulated within debates around the "agrarian question." Originally proposed by Karl Marx in *Das Kaptial*, he describes how capitalism first enters rural England through a process of "so-called primitive accumulation" (Akram-Lodhi 39). Here, with strong linkages to what is beginning to occur in Tanzania,

with respect to the expansion of industrialized agriculture and "land grabs" that surround biofuel production, Marx describes how small-scale peasants who dominate the countryside in number are later expelled from farming through land purchases and expansionist plans from newly formed capitalist farmers (Sulle and Nelson 29; Akram-Lodhi 40). Wondering whether the peasantry would align themselves with the socialist struggle against capitalism or become a counter revolutionary force, Marx ultimately believed that the peasantry would eventually be squeezed out of existence (Maghimbi, Lokina, and Senga 10).

Fellow German scholar Karl Kautsky in 1899 formulated a two part agrarian question, one theoretical and the other political. It asks: what are the dynamics of capitalist agriculture and given those dynamics, what stance should a state take towards the peasantry? Much like Marx, Kautsky believed that small farmers would be erased by capitalism and that the state should do nothing to prevent this from occurring (McLaughlin 25). The fact that smallholder farmers endure, however, suggests that this question remains unanswered.

For Terence Byres and Henry Bernstein, this question also includes the contribution of agriculture to the capitalist development as a whole as well as the role of agrarian classes of labour in the struggle for democracy and socialism (2). For Jason Moore, the agrarian question also has an ecological component that deals with the impoverishment of the land through agriculture's "material exploitation," which is largely ignored (3). In addition to these expansions to the agrarian question, social movements like Via Campesina and others further demonstrate that perhaps a resurgence of the peasantry has occurred in the last few decades and that the agrarian question must be

revisited entirely in order to explain this phenomenon (McLaughlin 25).

For Tanzanian scholars Sam Maghimbi, Razack Lokina, and Mathew Senga, at the core of this question is the right to land and how or who will determine its usage (25). Under the land regimes established by both the Germans (1884-1916) and the British (1918-1960) Tanzanian ownership rights were ignored, legitimizing their removal from the land. Germany's Imperial Decree of 1895 and later Britain's Land Ordinance Act in 1923, amended in 1928, declared that all lands, occupied or not, were treated as Crown lands except when private individuals or communities possessed documentation declaring their ownership, which required government approval. Although these laws recognized traditional communities as land owners through their occupancy, these regulations did not protect their land rights. For under the colonial land regime, landholdings that were granted by the administration were held superior to customary ones, enabling the exploitation of Tanzanian land and labour by combining both property and sovereignty into one package that was controlled by the state. Therefore, land rights and title deeds were only granted to settlers and foreign companies, alienating locals in favour of a system that viewed land, "...held and administered for the use and economic benefit, direct or indirect, of the natives of the Territory" (Maghimbi, Lokina, and Senga 25-26; Shivji 2-4; Sulle and Nelson 36). While this duality between "customary land rights" and "granted rights of occupancy" has been negated by the Land and Village Acts of 2001, contentions remain surrounding how land is classified, evaluated, purchased, and how proper compensated is provided (Sulle and Nelson 37).

While these ongoing land issues will be discussed in detail later in the thesis, the quandary of how land is used for capital extraction brings Akram-Lodhi to answering a

more modernized version of the agrarian question in one of two ways. Either the world continues in the same direction as it has been, by promoting deeper food globalization and slowly Southern agricultural structures mirror the ones already existing in the North, depicted by large tracks of mono-crop cultures, mechanization, irrigation, and a heavily industrialized agro-foods industry, and global agriculture becomes completely industrialized. Or, governments' shift their policy focus to reconstructing local economies, land justice, and food sovereignty (Akram-Lodhi 26). If this capitalist expansion into agriculture is allowed to pass completely, it is believed that the peasantry in Tanzania faces the possibility of being removed, or abandon the land completely, or permanently shuffled onto the outskirts of development, as witnessed by similar events across the globe where the expansion of the capitalist mode of production has come at the expense of the peasantry.

As large-scale agricultural expansionist projects increased in Brazil during the 1950-60s, many peasants were forced from their lands. By 1950, 62% of those in the agricultural economy were landless. Food riots ignited in 1962 over inflation and in retaliation to the ongoing neglect of the local food system in favour of urban industry, giving root to a vibrant food sovereignty movement that can be witnessed today, led by such groups as the Landless Workers' Movement (Bello 13; Patel 177). Although strikes by worker's unions and cries to alter Brazilian agricultural policy proved unsuccessful, elites who spearheaded large scale agricultural expansion treated these uprisings as a serious threat to their industrial ambitions. In 1964, after being in power for only three years, a leftward leaning, peasant friendly government was forcefully overthrown in a coup that was sponsored by both the CIA and Brazilian elites in favour of a military

dictatorship that secured their interests (Patel 177, 180).

Under President Jakaya Kikwete, Tanzania's current government parallels the rightwing one in the Brazilian example, as it is also inclined towards elitist interests, industrializing agriculture, foreign direct investment, and the development of its biofuel industry, as well as its ongoing experiments with biotechnology ("Kilimo Kwanza" 5). Of particular interest to this study are biofuels and GMOs, as they present two highly controversial issues connected to the emergence of the agro-industrial complex that will greatly impact Tanzania's agricultural sector, the country's food insecurity, as well as the wellbeing of the peasantry. The final section of the literature review will delve into these developments in order to explain the rise of agribusinesses around the globe as well as in Tanzania, and their potential impact on the country's smallholder farmers.

Agribusiness

Accounting for the rise of the agro-industrial complex, food sovereignty advocates argue that the very market that food security proponents champion has allowed for the creation of powerful multinational food conglomerates that have, in turn, caused the food crisis the world is now entrenched (Holt-Gimenez and Patel 20). Patel challenges these advocates of food security, arguing that placing faith in the market and in various "anti-trust" or "competition" commissions that exist in certain countries, used to prevent the creation of oligopolies, is an egregious mistake. When firms approach these market regulators, they justify their merger on the basis of efficiency and an improved economies of scale that, they argue, will benefit consumers. In other instances, companies have been able to avoid these negotiations altogether, "...by means of a

revolving door arrangement in which regulators, after a stint of good behaviour as government officials, are given substantially better paying sinecures in industry" (Patel 104-105).

While the market is to usher in an increase in efficiency and lower prices, as food security proponents' claim, Patel argues that the opposite has occurred with respect to the food industry. The market has actually provided more structural power to the largest companies, resulting in less competition and more power held within a handful of multinational corporations. As a result, both farmers and consumers have paid the highest price for this amalgamation of power, having been squeezed by corporations that now dominate the global food value chain. Within the United States, the real price of a market basket of food has increase by 2.8% since 1984, while the farm value of that food has fallen by 35.7%. In addition, market concentration has also led to higher food prices in 24 of the 33 food sectors (Patel 104). As companies continue to amalgamate, competition between food companies diminishes, leading to higher food prices.

While the free market has allowed these companies to expand their influence across the globe, they have been welcomed by the current Tanzanian government and encouraged by international developing agencies to restructure the country's agricultural sector. The World Bank, USAID, and World Vision, are all throwing their weight behind multinational corporations such as Monsanto, Syngenta, Nestle, and Tyson Foods to assist developing countries in increasing their agricultural output and agro-food distribution to improve national food security. In Tanzania, this is most evident in the developments of SAGCOT, where multiple aid agencies and agribusinesses, although in competition with one another, have come together under this expansionist project to

increase agricultural production within a 300,000 km² area that makes up the country's Southern corridor. According to SAGCOT, of the 7.5 million hectares of arable farmland that exist in this zone, only 30% is currently cultivated, thus industrialized agriculture is needed to expand this cultivated area to increase production ("Land Draft" 2; "Investment Blueprint" b, 5; Cupp; Africa Practice & ESEA).

The decline in competition between agro-giants, as well as the growth of a handful of agribusinesses, is clearly outlined by the ETC Group's article *Who Owns*Nature? The international organization dedicated to conserving and advancing the sustainable development of cultural and ecological diversity and human rights explains that,

From thousands of seed companies and public breeding institutions three decades ago, ten companies now control more than two-thirds of global proprietary seed sales. From dozens of pesticide companies three decades ago, ten now control almost 90% of agrochemical sales worldwide. From almost a thousand biotech start-ups 15 years ago, ten companies now have three-quarters of industry revenue. And, six of the leaders in seeds are also six of the leaders in pesticides and biotech. Over the past three decades, a handful of companies has gained control of that one-quarter of the world's annual biomass (crops, livestock, fisheries, etc.) that has been integrated into the world market economy (3).

The tremendous amount of power held within only a few companies over the world's food system is incredibly daunting. Along with their economies of scale, vast financial wealth, and political influence are also innovations that are increasingly changing the face of agriculture, food, and the planet itself.

These companies are spearheading the movement for agricultural systems across the globe to adopt biotechnology and biofuels in order to increase yields and create

greener sources of energy, along with increasing the incomes of those farmers involved.¹⁴ Thus, biotechnology and biofuels can be seen as extensions of commercialized agriculture, both of which are in the beginning stages with regards to Tanzania (ActionAid vii). The repercussions from biofuel production and large scale agricultural expansionist projects such as AgriSol and SAGCOT, however, are already being felt and will certainly have a significant impact on the future of Tanzania's agricultural sector, shedding light on how its own agrarian question will ultimately be answered.

One such example occurred in July of 2013. In Kikwete's home district of Bagamoyo, about 70 km outside of Dar es Salaam, farmers claimed that the Swedish company EcoEnergy had acquired 5,000 hectares of community held land after promising villagers with new schools, health care facilities, and employment. The company, in collaboration with the government obtained the land from the villagers, claiming that the land was an abandoned cattle farm, despite the fact that villagers had been living in the area since the 1950s. Despite arguments and protests from the villagers, around 600 families have been forced off their land so that EcoEnergy can proceed with their plans to produce about 125,000 metric tonnes of sugar which will go towards biofuel production ("Biofuel Land Grab").

The biofuel industry itself has witnesses a boom since the energy crisis, making the discovery of new, cleaner sources of energy an increasing priority for the developed world (Borras, McMichael, and Scoones 576). Oil prices are at all-time highs and

¹⁴ Biofuels originate mainly from biomass that is transformed into a gas, liquid, or solid fuel. The main types of biofuels include biodiesel, ethanol, or purified biogas derived from crops, plant residues, or wastes. All of these can be used as a substitute for traditional fossil fuels used for transportation, domestic, and industrial uses (Sulle and Nelson 7).

_

Western nations, particularly the United States, have longed to find ways to relinquish its dependency on oil originating from the Arab world (Collier 76). Energy consumption within these countries has also not decreased and the emergence of newly industrialized economies has further impacted the world's energy supply. In addition, the growing, although late concern placed on climate change, is also encouraging countries to find greener sources of energy in order to pull away from the world's dependency on environmentally harmful fossil fuels. In this light, biofuels can also be considered as a "win-win" for they provide a clean energy solution without forgoing economic growth (Borras, McMichael, and Scoones 576).

According to Andre Croppenstedt, an economist with the Agricultural Development Economics Division of the FAO, biofuel production will also assist in the effort for developing countries to obtain their food security. For Croppenstedt, biofuel production will not compete with food production as long as the demand for biofuels generate incomes for smallholder farmers and create investments that will raise productivity in food production. He also argues that biofuel production is similar to the growth of cotton, explaining that the growth of cash crops stimulate other agricultural productivity (IRIN). Furthermore, being a new industry, it will create new jobs, as well as provide developing nations with another valuable export crop that can be used to balance its payments and gain valuable foreign exchange dollars (ActionAid ix). With increased incomes, workers no longer have to farm and can now purchase foodstuffs that are provided cheaply through the global market. In addition, it will save oil importing countries millions, as biofuels can provide a valuable substitute for fuel (Sulle and Nelson 7). Not everyone, however, agrees with these claims.

According to Saturnino Borras, Philip McMichael, and Ian Scoones, "proponents of such investments argue that the land is underutilised or even 'idle.' This narrative justifies the appropriation of land for new investment, transforming 'wastelands' into green and productive landscapes" (581). In reality, however, these lands are often occupied by peasants as farmland, ancestral lands, or forested areas that villagers depend upon for their livelihoods (Sulle and Nelson 3, 26, 29; Roberts 68-78). The amount of land cleared for biofuel production can also be unnerving. In Indonesia for instance, 80% of its rainforest, which covered 77% of the country in the mid-1960s, has disappeared in large part due to timber exploitation and palm oil production used for biofuels. While CGAIR, an agricultural researching firm, cites that around 1.3 million jobs have been created through biofuel production in Brazil, Holt-Gimenez argues that the biofuels industry only generates one-tenth of the jobs created by family farming per 100 hectares in the Amazon, where biofuel plantations are referred to as the "devil's orchards" ("Biofuels-Myths"; Dixon et al. 52; Borras, McMichael, and Scoones 577). These examples of land grabbing and the removal of the peasantry in the pursuit of capitalist development is nothing new, as Marx describes under his "primitive accumulation," but it is certainly increasing behind the emergence of agribusiness and the growth of the biofuel industry (Borras, McMichael, and Scoones 579).

For Borras, McMichael, and Scoones, these "land grabs," are also infringing on a peoples' right to feed themselves as well as further degrading the local environments in order to produce these agro-fuels (Borras, McMichael, and Scoones 578). Contrary to what advocates say, according to Vandana Shiva, biofuels actually cause more carbon dioxide emissions resulting from the clear cutting practices used to remove forests and

grasslands for their production as well as for the energy used to process crops into liquid biofuel (*Soil Not Oil* 80). They are also an inefficient source of energy and a poor substitute for fuel. If all the corn and soy grown in the United States was used for biofuel production, it would only substitute for 12% of the gas and 6% of the diesel. It also requires 5.7 Liters of gas and 6,435 Liters of water to produce one Liter of ethanol (*Soil Not Oil* 81). Why this form of inefficient production continues, argues Shiva, is because of the profits raked in by agribusinesses, who gain from the sale of their seeds, pesticides, herbicides, fertilizer, and equipment used to grow and convert crops into energy (*Soil Not Oil* 83).

Biofuels are also seen as an extension of past colonial relationships, as they are becoming the new mono-crop export of today's globalized world. There is even an emergence of a South-South trade, as swelling economies such as Brazil are participating in the land grab in Africa for biofuel production (Borras, McMichael, and Scoones 579). While these developments are only beginning in Tanzania, they appear to be escalating. According to a recent study conducted by the farming association MVIWATA that documents the increasing land grabs occurring in the country, Tanzania has an average of five land conflicts per day, three of which involve large investors and smallholder farmers (Pesatimes). One of the latest incidences occurred in June of 2014, where villagers in Lipokela and Litukila, in the Ruvuma region, had given up their land, unaware of the severity of the negotiations they were about to attend. Upon meeting investors, tired and hungry, those in Lipokela were promised food, while farmers in Litukila were assured they would receive a small amount of cash, which they thought they would obtain just for attending the meetings. Villagers were confused, however, as

they were immediately given a plate of food and the equivalent of just over a dollar each by the investor, who then received over 2,000 and 20,000 hectares of land in exchange from each village respectively. Having been accompanied by police, the villagers also felt threatened, and decided that taking the compensation was better than coming away with nothing. The land deals have also caused a rift between villagers and their leaders, as the leaders accused the villagers of being too ignorant of land policies, while villagers accused their leaders of being corrupt, blaming them for collaborating with investors (Lazaro). As similar incidences of land grabbing continue, controversy surrounding this issue will surely intensify as more and more people are removed from their lands.

While retaliation from the peasantry in response to these land grabs has sometimes resulted in protests, Tanzanian civil society does not appear united enough at this time to mount a full rebuttal to the expansion of large scale agriculture. MVIWATA, the farming association who conducted the study on land grabs mentioned above, is made up of over 200,000 smallholders and a member of Via Campesina, appears to be one of the few organizations that is providing smallholder farmers with a united voice against such actions committed by the government and agro-businesses. At the same time, however, there is evidence that suggests its own agenda is not entirely committed to the welfare of smallholder farmers. For on the one hand, MVIWATA states that it is deeply concerned about the ongoing encroachment of large scale agricultural expansion occurring within the country, yet on the other hand has applauded the work of AGRA and accepted financing from the same organization that is heavily involved with large scale farming operations occurring in the country. AGRA, for instance, is heavily involved with SAGCOT, which was a part of the land deal that purchased land from the villagers

of Lipokela and Litukila (Chiwambo; Lazaro). Critical of these actions, according to one informant, the association has become somewhat of a dysfunctional, misdirected NGO, controlled by its administration and adhering to its financial base, instead of those they are supposed to represent. One of the co-founders of the farming association but no longer officially affiliated with MVIWATA, Dr. Mattee, also expressed concern in our interview, stating that the original goal of the organization, to provide peasants with a united front against common political, socio-economic, and cultural obstacles, was no longer visible.

Another highly controversial segment of agribusiness that should raise the ire of organizations that purport to empower the peasantry is their use of biotechnology.

According to Shiva, the process that created GMOs, being sold by the global food regime as the cure for world hunger, originated from the piracy of thousands of years of indigenous knowledge. For example,

Indian farmers evolved 200,000 varieties of rice through their innovation and breeding. They bred rice varieties such as Basmati...but new intellectual-property-rights regimes, which are being universalized through the Trade Related Intellectual Property Rights Agreement of the World Trade Organization allow corporations to usurp the knowledge of the seed and monopolize it by claiming it as their private property...corporations like RiceTec of the United Sates are claiming patents on Basmati rice. Soybean, which evolved in East Asia, has been patented by Calgene, which is now owned by Monsanto...centuries of collective innovation by farmers and peasants are being hijacked as corporations claim intellectual-property rights on these and other seeds and plants (*Stolen Harvest* 7-9).

 $^{\rm 15}$ Interview with anonymous, August $8^{\rm th}\,2013,$ Morogoro, Tanzania.

¹⁶ Interview with Dr. Mattee, Professor at Sokoine University, August 8th 2013, Morogoro, Tanzania.

This "biopiracy," carried out by scientists of the first Green Revolution who collected germplasm from peasants, contributed \$10.2 billion per year to US corn and soy production in the 1970-80s ("Out of AGRA" 465).

The company owning 90% of all related GMO patents and indeed a pioneer of agro-industry is the largest of these biotech giants. Monsanto, who has a particularly seedy history filled with corruption, deceit, and environmental destruction is today one of the most powerful corporations in the world. From losing a multimillion dollar court settlement after being found responsible for knowingly dumping toxins that poisoned the residences of Anniston, Alabama in the United States for over 30 years, to harassing family farmers over patent abuses across North America, to preventing scientific journal articles from publication that shed light on their devious practices, Monsanto has certainly had its fair share of scandal (Robin 10, 69, 148; Patel 141-146). The the company and the technology they helped create is being supported by AGRA, as well as wealthy philanthropists such as Bill Gates, Warren Buffet, and the Rockefeller Foundation to assist in spreading GE crops around the globe in what is being dubbed as the second Green Revolution. For them, the adoption of GE crops is vital for Africa to feed itself and is the best way to ensure food production in the face of the challenges that climate change presents farmers, such as increases in floods and droughts ("Out of

_

¹⁷ In an effort to withhold scientific evidence that GM corn was illegally transplanted to Mexico, numerous agribusinesses pressured the academically acclaimed journal *Nature* to remove a study that argued that corn in Oaxaca showed traces of genetic contamination. The magazine had never retracted an article in its 133 year history. Once the pre-peer approved article was removed, its authors were prevented from advancing their academic careers, facing numerous character assassinations emanating from Monsanto based firms, who are also increasing their control of knowledge by becoming major donors of universities throughout the United States, limiting the academic freedoms of those who find evidence that place their interests in jeopardy (Patel 141-143).

AGRA" 467). Given the controversy and negative backlash that Monsanto has endured, however, Tanzania must exercise extreme caution when dealing with an entity that could potentially have disastrous ramifications if allowed to enter its agricultural sector. There are also debates as to whether the technology is even accessible to smallholders, raising concerns about the true beneficiaries of this technology.

In order to facilitate a conducive environment for the biotechnology to produce the promised high yields, GE seeds need the necessary inputs of fertilizers and pesticides, and are often cultivated with the use of irrigation systems and heavy machinery, inaccessible to the majority of smallholder farmers (Robin 292-293). The in-organic varieties of some of these products are also induced with a heavy dose of poisonous chemicals, which are extremely harmful to the environment and could potentially negatively impact biodiversity and human health (Bello 16; Robin 308). The GMO technology itself, according to Eric Holt-Gimenez, has also never been proven to actually assist in feeding the world's population, as the majority of GE crops go instead towards feed and fuel ("Of Myths and Men").

¹⁸ In the last few years, marches against Monsanto have been conducted in over 50 countries, protesting the company's pursuit to patent life and, their use of dioxin; which is the key ingredient behind Agent Orange, and the devastation it has caused on the environment and smallholder farmers around the world (MAM; Robin 43). Oddly enough, despite the growing public backlash, Monsanto's CEO was recently awarded the 2013 World Food Prize, along with other biotech pioneers such as Syngenta (Abbott).

¹⁹ According to agricultural extension officer Mujuni Kamwesige Mutembei, in our interview he explained that these in-organic materials are not the only way to increase yields. Upon comparing a farm that uses chemically induced materials and modern hybrid seeds to one that uses organic materials and traditional seeds, the yield levels are virtually the same. The quality of the product produced, however, is far better on the organic farm, which is also much better for the environment, and for one's palate (Interview with Mujuni Kamwesige Mutembei, agricultural extension officer, August 3rd, 2013, Morogoro, Tanzania).

Worse still is the fact that because of the amount of money backing this proposed solution, others are potentially being ignored (Patel 158).²⁰ Biodiversity itself, along with a decentralized food system, claims Shiva, is the best way to ensure the world's food security, even in the face of climate change (Soil Not Oil 105). Droughts and floods are nothing new to farmers, nor are their age old solutions. For Emma Liwenga, who studied food insecurity in semi-arid Myumi, in the Dodoma region, peasants have been developing ways of adapting to their harsh environments for centuries. According to the researcher, to lessen the effects of droughts or floods, smallholders exchange livestock for grains, destock their cattle in order to preserve grasslands and prevent disease, rotate crops, farm in a scattered land pattern, and use local indicators such as the appearance of certain constellations or the greening of fruit trees in order to determine when to begin hoeing and when to plant, maximizing rainfall and avoiding planting during the dry season (Liwenga 13, 79-80). Acknowledging these tactics by no means diminishes the fact that the area is poverty stricken and plagued by food insecurity, but these examples allude to the fact that smallholder farmers have their own ways of mitigating and adapting to difficult climatic conditions, enabling them to survive despite the difficulties they have faced. This example also shows that land that could be seen as "unused" may, in fact, just be dormant for a certain time, but used later by peasants as their own means for mitigating the effects of climate change. Thus, an expansion in biofuel production

_

²⁰ According to Patel, Holt-Gimenez, and Shattuck, the Bill and Melinda Gates Foundation, with over \$30 billion at their disposal, had set up AGRA in 2006 and already spent \$1.3 billion on agricultural development grants, mostly in Africa (17). Such large sums of money going towards the research and development of biotechnologies in Africa is seen as overshadowing alternative solutions that are more environmentally sustainable and small farmer centric (Patel 158).

could strip peasants from this strategic resource, providing another reason why agro-fuels presents a large obstacle to smallholders.

For esteemed economist Amartya Sen, the actual cause of drought or famine itself reflects more upon the socio-economic and political climate within the country, thus requiring a solution that focuses on these areas, rather than one that could potentially confront a climatic change from a technological standpoint. In his book, *Development as Freedom*, the economist argues that hunger is not just a balance between food production, agricultural activities, and population growth, but is more about maintaining a position of entitlement that allows people with minimal incomes to purchase food (Sen 161-162). If Sen is correct, and because commercialized agriculture and agro-fuels require less labour, the political decision to modernize the country's agricultural sector could actually increase the incidences of hunger within the country by decreasing the agricultural labour force, the nation's primary source of employment.

The skills and knowledge that the peasantry has acquired in mitigating the challenges climate presents should thus not be ignored when discussing solutions to food insecurity, and instead be supported further. Otherwise, if large scale agriculture is allowed to engulf the nation's agricultural sector, many smallholder farmers will be forced from their lands as well as from the developmental process. Without other well established economic sectors to house these new found labourers who have migrated to the city, millions more will fall into ever greater depths of poverty, a phenomena that Mike Davis describes as creating a *Planet of Slums*.²¹

_

²¹ In his book with the same title, Davis documents the global change that sees more people living in urban areas compared to rural ones for the first time in human history (14-15). According to Davis, with levels of industrialization being unable to maintain the growth of urban populations

Chapter 4: Roots of Tanzanian Food Insecurity and the Rise and Fall of the Cooperative Movement

Ultimately, Tanzania will be food secure when it is able to consistently feed its people and able to withstand internal and external shocks that could create issues of food insecurity. These internal shocks are represented by adverse weather conditions such as droughts and floods that present a great challenge to food production. External shocks are market oriented, characterised by fluctuating commodity prices that have an impact on Tanzania's economy and prevent food accessibility because food prices become too high.

This chapter of the thesis is devoted to illustrating how the country became so vulnerable to these shocks, and is divided into three parts: the colonial period (1884-1960), post-independence (1961-1981), and the period of structural adjustment to the present (1982-present). Each historical period will exemplify how the development of the agricultural sector has been misdirected throughout Tanzania's history, operating in a food security like fashion, focusing mainly on cash crop production for the global market instead of foodstuffs for local consumption, causing the nation to be food insecure. The history of the cooperative movement will also be documented throughout this chapter in order to highlight its strengths, weaknesses, and what caused the movement to decay. Each period will also demonstrate how the focus of Tanzania's agricultural sector has never been directed to benefit the peasantry, but instead to use the peasantry primarily for the economic benefit of outsiders. At first, Tanzanian agriculture was geared towards producing for European interests. After independence, agriculture was used by

since 1970, slum growth has actually increased more rapidly than urbanization throughout the Global South (17).

Tanzania's elite and urban classes to jumpstart other sectors of the nation's economy and balance its payments, while rural areas experienced massive intervention schemes that ultimately failed to bring development to the countryside. After liberalization occurred in the 1980s, private businesses began to drive the interests of the agricultural sector, focusing agricultural production towards the global market, forgoing the principles of food sovereignty that prioritize local food needs and the wellbeing of Tanzanian smallholder farmers.

The Colonial Period: 1884-1960

Tanzania was forcefully overtaken and colonized by Germany, who declared its ownership of the territory during the Conference of Berlin in 1884-1885. Then known as Tanganyika, the colony's economic policy was to implement plantation agriculture, focusing on cash crop production that could be used by and for the benefit of the Empire, and not food crops that would feed the local populace. Africans who were not on settler lands could also participate in this practice, and were in fact compelled into doing so through a hut tax. This tax was either paid off by crop production sold to the Germans, and later the British, or through the outright confiscation of their lands, or by Africans labouring on European plantations, who operated in often slave like conditions (Yeager 11).

Prior to colonialism, Tanzanian farmers produced what they needed, trading its surplus to the local market. Under colonialism, however, this changes, as cash crop production sold on the global market became the priority, ignoring local needs as European interests trumped those of the community. Since this transition, producing for

the market has remained and is fundamental in understanding how Tanzania's agricultural sector is currently structured (Msambichaka 118).

Shortly after the Germans laid claim to Tanzania, they began to usher in European settlers, encouraging both them and locals to produce cash crops in order to fuel its industrial needs. They introduced cash crops such as sisal, coffee, rubber, and cotton; production of which was to return back to the metropolis (Hayuma and Conning 1). Extra effort was placed not only on the growth of these crops, but also to prohibit the growth of foodstuffs. In the Kilimanjaro and Kagera regions, both coffee and banana trees were grown. However, allowing the two to grow and flourish together was prevented despite bananas being the main food staple in the region. Instead, banana trees were used only to create a wind barrier and for mulching in order to protect and increase coffee production. In the Mwanza region, cereals could not be grown before cotton, as it was believed that the insects and pests that they harbour would have a negative impact on the production of the cash crop (Msambichaka 120). In both instances, cash crop production superseded food crop production.

Sisal, a drought resistant crop, was grown mostly on plantations and not by smallholders. Due to its export value, however, it was planted in extremely fertile areas with rich soils and adequate rainfall. Sisal could have grown and produced similar yields in semi-arid regions of the country, thus allowing foods such as maize, rice, fruits, and vegetables to be grown in the more fertile areas (Msambichaka 127). However, because cash crop growth was the colonialist's primary concern, the importance of food production for local consumption was overshadowed.

For L.A. Msambichaka, meeting local nutritional needs is the foundation of any agricultural sector and the engine of socio-economic development. Simply put, adhering to local food needs creates, "...greater stamina for work, greater labour productivity, and ultimately greater income." Since Tanzanian agriculture has always placed a greater emphasis on cash crop production, however, these primary objectives have never been reached by the country's agricultural sector (Msambichaka 136). Neglecting foodstuffs would also lead to the abandonment of some traditional food crops and varieties that were locally grown in pre-colonial Tanzania, decreasing the country's natural biodiversity (Msambichaka 119).

In order to increase cash crop production further, the British, who overtook Germany as Tanzania's colonial rulers after WWI, allowed for the formation of cooperatives in major export producing areas of the country, beginning in Kilimanjaro and later spreading to Bukoba and Mwanza (Lyimo 34). Grievances emanating from the peasantry about being exploited by Asian and European middlemen as well as a lack of access to credit threatened to decrease production, forcing the British to allow for the creation of agricultural cooperatives in order to support the peasantry and maintain cash crop growth (Lyimo 32). Although this aggravated European settlers who were trying to gain a monopoly over coffee production in Kilimanjaro, it provided smallholder African farmers with a guaranteed market for their produce as well as much needed financial and technical support (Lyimo 35).

Under the Cooperatives Societies Ordinance of 1932, all cooperative societies operated under the stipulation that they must prove to be economically viable to the Registrar, who was appointed by the Governor of the territory (Lyimo 97). The Registrar

had the power to grant loans, conduct inquiries, and disband ineffective cooperative societies. Being under colonial rule, however, cooperatives in this era lacked the democratic organization found in conventional cooperatives as producers were compelled to sell their crops to their cooperative societies, as cooperatives were under the full direction of the colonial authority (Lyimo 106). Still, these newly created cooperatives were highly successful in reducing poverty in rural areas as well as increasing production, as these organizations enabled farmers to bypass unfair marketing practices of mainly non-African traders so they could receive higher prices for their goods and provide an avenue for increased economic mobility and political advancement (Sizya 4-5).

The early success of cooperatives and their positive effects on income can be witnessed in their increasing responsibilities that were awarded to them by the colonial government to market crops, the increasing number of cooperative societies, and the amount of crops produced and export dollars earned. Although the Ordinance that authorized the registration of cooperatives was only established in 1932, within five years the coffee board overseeing all coffee purchases was dissolved into the successful Kilimanjaro Native Cooperative Union (KNCU), the country's first and longest standing cooperative (Lyimo 36).²² In 1945 there were 79 registered cooperatives, and by 1952 they had increased to 474. Also in 1945, Tanzania produced 7,633 metric tonnes of cotton, which grew to 14,335 tonnes in 1952, and grew again to 34,790 tonnes in 1960.

_

²² It should be stressed here that the colonial government, while allotting more power to agricultural market crop cooperatives, did so not to empower the local population, but to instead allow the colony to produce more for Britain's own benefit. Cooperatives, while improving the lives of particularly the rural poor, are created to primarily serve colonial interests, and not its members, a practice widespread throughout Sub-Saharan Africa (Wanyama, Develtere, and Pollet 1, 3).

Coffee exports also increased, earning Tanzania \$1,500,586 in 1945, \$5,813,097 in 1950, and \$11,564,227 in 1955 (Iliffe 57). Also emerging from these early, successful cooperative societies are their leaders who would begin to play a pivotal role in Tanzania's fight for independence during the 1950s. Paul Bomani, S. A. Kandoro, S. A. Maswanya, and I. M. Bhoke Munanka were all cooperative organizers located in Mwanza, who played significant roles within the country's independence movement (Iliffe 57).

Tanzania, however, did not gain its freedom from Britain until 1961. Until then, it remained a League of Nations and later a UN trusteeship territory, directed by the United Kingdom, whose primary function was to produce for the metropolis, often times at the expense of its own wellbeing (Davidson 145). During the 1940s, greater agricultural production from Tanzania and other colonies was required in order to fuel the war effort as well as to assist in Europe's reconstruction once WWII was completed in 1945. The British further tried to ramp up this output with the implementation of the "plant-more-crops" campaign in an effort to increase cash crop production through large scale farming initiatives (Yeager 16).

Large scale farming operations were established across the country, such as the Mlalo rehabilitation scheme, the Mbulu scheme, and the Sukuma land scheme. Each project sought to bring the advantages of modernized agriculture in order to increase cash crop production. Perhaps the most infamous of these large scale farming initiatives, was the Groundnut Scheme of 1946. Although these large scale operations did not reach their desired objectives, the Groundnut Scheme proved to be an epic failure, clearly illustrating that large scale, commercialized agriculture was not guaranteed success within such a

diverse country like Tanzania. While the Groundnut Scheme operating in the country's Southern regions was to provide war torn Britain with margarine, food, and industrial oils, the project was abandoned in 1951, only five years after its inception, having wasted a total of nearly \$70 million (Cole and de Blij 467). Making matters worse for Tanzania, was that at the same time of this project, the central part of the country was suffering from a serious famine (Davidson 83). Still, the British went ahead to produce for itself, and not for those who needed foodstuffs the most.

There are many factors that can be attributed to the disappointing results of large scale agricultural operations in Tanzania. For Scott, the blind faith development policy makers during this era placed in mechanized farming, the lack of proper planning needed to understand the country's varying landscapes, the adverse climate conditions, and the differences emanating within the peasantry itself all played extensive roles in preventing the success of these grandiose farming operations. With respect to the peasantry, these schemes assumed that all smallholders desired the same crop mix, techniques, and yields, and thus attempted to mold them into a standardized model of cultivation. As a result, these schemes suffered from the lack of dynamic and flexible farming methods that these areas required, something that the peasantry had been using for generations (Scott 228).

It is also interesting to note, that one of the companies involved in the Groundnut Scheme was the United African Company, a subsidiary of the agro giant Unilever. While the company was very much involved in the failure of the scheme, it appears that Tanzanian officials have forgotten or forgiven their blunders, as they are also a major partner of SAGCOT, one of the country's latest ventures into large scale agriculture (Scott 228; Africa Practice & ESEA). Thus, despite industrialized farming's past failures,

policy makers continue to view this model of agricultural production as a key component to its food security.

In addition, while the developmental discourse during the colonial era encouraged mechanized farming as a way of improving production, smallholder cooperative societies were also being promoted by the colonial administration and were highly productive themselves. Arguably, their success made the push for these farming schemes that ultimately failed, an unnecessary risk to undertake. The trumpeting of the two differing models of development, one that can be since as a primarily social organization while the other more capitalist, also parallels the situation of today's developmental discourse in Tanzania. International aid organizations and the current government are championing both cooperatives and industrialized farming at the same time in order to improve the situation of smallholders and assist the nation in becoming food secure. However, since cooperatives and large scale farming schemes can present, in general terms, opposing paths of development, the growth of each comes in direct conflict of the other. As this thesis will later discuss, ultimately it is the social, political, and economic environment in which each development model operates in that largely determines its success.

Under colonial rule, this environment was shaped by its European rulers, as Tanzania's agricultural sector focused on producing for the world market, ignoring local food needs. This direction of the agricultural sector has remained, for the prioritizing of cash crop production did not change after independence and as such, can be seen as the roots to the current food insecurity problem. Cooperatives at this time were successful, mainly because they were given proper support from the government, in the form of increased crop marketing responsibilities. The second part of this chapter will now

discuss the continued rise and eventual fall of cooperatives in the post-independence era, as well as how and why Tanzania maintained fixated on cash crop production, which has resulted in the country's ongoing food insecurity.

Post-Independence: 1961-1981

Although Tanzania would gain its independence from Britain in 1961, the push for independence slowly began in the late 1920s, greatly accelerating after WWII, cueing many European settlers to flee the country (Davidson 146). Vital to the independence movement were cooperatives, a fact acknowledged by future Minister of Agriculture Paul Bomani, as he stated that cooperatives were a source of empowerment, as well as a pivotal social organization that assisted farmers in bypassing Asian and European middlemen, and one that allowed for a socio-political organization that united Tanzanians against colonialism (Lyimo 40, 46).

Upon gaining independence in 1961, Tanzania's main objective was to develop a self-reliant, egalitarian nation devoid of class divide (Meredith 250). In order to achieve these goals, that appear to be in line with a food sovereignty perspective, under the direction of the country's first President Julius Nyerere, Tanzania began to adopt the ideals of "African socialism." This ideology was a blend between socialist ideals that preached communal verses individual gains while at the same time encouraging African traditional values of cooperation (Osabu-Kle 172). These values are quite similar to those of the pioneers of modern day cooperative societies, as they promote equal rights to land, social development over profit, and encourage the creation of a cohesive unit of agricultural production.

Having played such an important part in achieving the country's independence, cooperatives supporting smallholder farmers would again play a key role in the development of African socialism in the newly independent state (Lyimo 44). Thought to also have a positive impact on production, government initiatives would lead to an explosion of the cooperative movement after independence, as the number of registered societies increased from 857 in 1961 to 1,533 in 1966 nationwide, while the volume of produce handled went from 145,000 tonnes in 1961 to 496,000 tonnes in that same time span (Lyimo 46; Saul 357). Facilitating this growth was also the Bank of Tanzania, launched in 1962, later renamed the National Cooperatives Bank in 1964, which provided loans to cooperatives in order to purchase more crops and finance other agricultural projects and research, creating an ideal environment for cooperatives to operate (Maghimbi 3).

Furthermore, the Cooperatives Societies Ordinance of 1963 declared that cooperatives were, indeed, necessary for peasants to achieve economic growth and development, and thus must become an integral part in building African socialism and self-reliance (Lyimo 107). So pivotal to the development of the country, the government felt that cooperatives should be given even more responsibility to drive this process forward because of their increasing accumulation of capital, involvement in rural areas, and because they appeared to be an instrument of development itself, as if cooperatives themselves and not their structure, management, or environment equated to their success (Lyimo 107; Saul 357-358).

As a result, to spread the cooperative movement to the most isolated parts of Tanzania, the economic viability stipulation initially installed in the Ordinance of 1932

was removed under the Cooperatives Societies Act of 1968 (Lyimo 107). Believed to be an instrument of development themselves, it was hoped that with cooperatives spread throughout the country, some of the success that the nation's largest cooperatives found in its major export crop areas could be replicated elsewhere (Lyimo 44). In this light, under this Cooperatives Act, the government promoted the creation of cooperative societies in the areas of transport, consumer, savings, and credit in the hopes of boosting these sectors of the country's economy (Lyimo 107)

In order to empower cooperatives further, the government also allocated marketing crop cooperatives with a monopoly over the purchase of certain crops produced by the peasantry, allowing the largest and most established to truly flourish.

Under the Agricultural Products (Control and Marketing) Act of 1962, cooperatives were given a monopoly over purchasing crops including maize, cashew nuts, ground nuts, and coffee from peasants, which were then sold to marketing boards such as the National Agricultural Products Board and the Tanganyika Coffee Board (Lyimo 45).

Monopolies like these were beneficial to their members because they allowed them to pool their produce together within a larger organization that could use its size and marketing power to ease price volatility that occurred throughout the year, allowing farmers to obtain the best prices within the international market place. Such a monopolistic position also ensured the survival of cooperatives as well as providing a reliable market for farmers to sell their produce on a consistent basis (Wanyama 2; Fridell 8). The move by the Tanzanian state to grant such power to cooperatives is similar to the one made by Canada to allow for the creation of the Canadian Wheat Board. Pressed by years of social action and organized protests by farmers that fell in conjunction with the

harsh political and economic times of the depression and WWII, the Wheat Board was created in 1943, granting it a monopoly over all Western Canadian wheat. For both Tanzania and Canada, these monopolies allowed farmers to benefit from improved pricing for their produce and a greater distribution of benefits for the many farmers involved (Fridell 14).

With regards to Tanzania, production itself between the years leading up to and past independence (1950s to early 1970s) was in large part accredited to cooperatives themselves, and these government allocated monopolies attributed greatly to their strong performance (Maghimbi 3). By 1968, the cooperative movement reached its peak, as Tanzanian cooperatives became the third largest in the world in terms of percentage of market share of agricultural exports, behind only Denmark and Israel (Maghimbi 2). Cooperatives also had an impact on producing foodstuffs, as Tanzania was one of the few African countries to maintain agricultural growth over its increase in population during this time (Maghimbi 8).

As such, it can be observed that the relationship between the government and cooperative societies during this time was at its most beneficial for both parties, as the policy environment created by the state allowed these rural organizations to thrive.

Cooperatives were given the responsibility to increase production and improve the lives of their members while the government appeared content with playing a supportive role from a distance. Allowing cooperatives to have a monopoly over crop marketing and supporting them when financially called upon, but not interfering in an administrative sense, thus allowed cooperatives to excel because they were directed by their economic feasibility and under the guidance of its members, and not a political ideology. Although

corruption began to seep in during this period as some cooperatives were becoming increasingly top-down in nature, having been administered by wealthy peasants that took advantage of their prominent position, which this thesis will address later, it must be noted that despite this, cooperatives were assisting smallholder farmers on a whole as well as positively attributing to Tanzania's food security.

In highlighting the importance of keeping the momentum of self-sufficiency going, Nyerere proclaimed that, "We have to build our economy by concentrating first on agricultural development. That is the industry we have, and which can be expanded with our existing capital and manpower." (qtd. in Isinika et al. 21). Going one step further, Nyerere pledged upon independence that Tanzania would become self-sufficient in food production by 1980 (Msambichaka 117).

Despite this apparent desire to direct its agricultural structure more in line with the ideals of food sovereignty, shifting emphasis from cash crop production to food crops, the reality is that after independence, Tanzania's policies did not make these necessary changes. Instead, both progressive smallholders and private commercial estates were encouraged and production was directed towards cash crops to gain access to valuable foreign exchange dollars and to balance the country's payments (Sterkenburg and Wiel 110). This emphasis on cash crop production is witnessed through Tanzania's, "...budget allocations, research activities, extension service, distribution of inputs, price incentives, etc." (Msambichaka 121). Yet despite this attention, due to falling market prices, export earnings were disappointing. Worse, development of four regions in Southern Tanzania-Iringa, Mbeya, Rukwa, and Ruvuma-believed to have great agricultural potential with a favourable climate that could be used to grow all major staple crops were left neglected,

isolated from the political centres of influence in Dodoma and Dar es Salaam (Msambichaka 122).²³

Tanzania also did not diversify its cash crop production, as they maintained the existing agricultural commodities market that they inherited from their former colonial rulers. Having production tied to the desires of the world market allowed current demand for a specific commodity to dictate what products would be produced at that time (Bello 116). For Ian Gillson, Steve Wiggins, and Nilah Pandian, although diversity is the best way to reduce the dependency on vulnerable commodities, developing countries often have great difficulty in diversifying their production.²⁴ According to these authors,

many of these countries are Least Developed and or among the EU's associated countries in Africa, the Caribbean and the Pacific. Almost all of the countries in sub-Saharan Africa rely on primary commodities (including non-agriculture) for over half of their exports, with some countries relying particularly on one, two, or three commodities (Gillson, Wiggins, and Pandian 8).

As such, Tanzanian agriculture was trapped within a market system that forced the country to rely primarily on known commodities that Europeans wanted, such as sisal, coffee, tea, and cotton, for their export earnings as opposed to venturing into non-traditional exports that carried greater risks due to their uncertain demand; an example

_

²³ This isolation has also been physical in nature, for the main road leading South from Dar es Salaam remains unfinished even today, despite the promise to do so at the country's independence in 1961. Until recently, the Mtwara region, which is east of Ruvuma and is situated along the Indian Ocean, did not receive much attention from the media, multinational corporations, or the government; whose people are perceived by the rest of the country as backward, pejoratively known as washamba, which can be translated into 'hicks'. Many also view this physical detachment as a symbol of Southern dislocation from the broader history of Tanzania, and some contend it is the result of deliberate ostracism by the central government. Some have even argued that this marginalization has historical roots, witnessed in a 'hidden agenda' against the South that apparently followed the Maji Maji rebellion against German colonial rule from 1905-07 (Guardian Correspondent).

²⁴ For Gillson, Wiggins, and Pandian, there are three ways to diversify from vulnerable commodities: to produce different crops, venture into other economic sectors, or to capture higher proportions of the value chain (3).

that clearly illustrates the dangers of a market led food system, equating in the loss of a nation's food sovereignty (Sterkenburg and Wiel 110).

Despite this, during the early years of independence, the greatest contributor to economic growth was the agricultural sector, as its production accounted for over 50% of the nation's GDP while coffee, sisal, and cotton accounted for around 60% of foreign exchange earnings, exemplifying just how dependent Tanzania was on its agricultural exports (Wobst 8). Since it was the backbone of its economy, the government was forced to make cash crop production a priority ahead of food crop production in order to develop other sectors of the country's economy. This sacrifice of not developing the food crop sector, however, has given rise to the country's current food security issues.

Aside from economic growth and agricultural output, President Nyerere was also concerned about the direction his country was taking socially. According to him, a small elite class was forming, endangering his socialist aspirations (Davidson 229). Among the accused were some of the more successful cooperatives in the country, generating a healthy surplus. As a result, the President began to invoke policies in an effort to reverse this trend.

In order to achieve his socialist objective, the first of three, Five Year "National" Plans, starting in 1964 and ending in 1969 were implemented (Stephens 168). A part of this plan was a government led initiative of resettlement, sought to quell both the rising inequality within the country as well as to promote a strategy of self-reliance. These goals were outlined in the Arusha Declaration of 1967, where Nyerere established his socialist objectives under the policy of Ujamaa. Meaning "familyhood," Ujamaa was to be the crown jewel of Nyerere's African socialism and one that was hoped to increase the speed

at which the country would adopt his socialist mindset. With respect to agriculture,
Ujamaa was influenced greatly by Maoist China and Western development models,
specifically the Tennessee Valley Authority that had developed capital intensive
agriculture in the United States as well as the economic mobilization from WWII (Scott
224).

At first, Ujamaa called for the voluntary movement of people from urban and scattered rural areas to villages created by the government that were based on communal coexistence. All families pertaining to Ujamaa villages lived and worked together, sharing the fields where they grew crops as well as sharing in their profits. Education, water, and health care improvements were key to this developmental process and all profits made were to go to improving these social structures. All villages were encouraged to grow cash crops to increase incomes, and a minimal acreage quota for food crops was installed to assist in self-sustaining food production (Isinika et al. 71). It was also hoped that these new Ujamaa communities would enable peasants to gain access to larger farms and through modern techniques and equipment to be able to increase production, similar to what had occurred in the West (Meredith 253).

The Arusha Declaration also called for cooperatives to assist in the Ujamaa process as well as the development of rural Tanzania, just as the Ordinance of 1963 had proclaimed (Lyimo 52-53). Under the Cooperatives Societies Act of 1968, however, the government gave itself powers of intervention and to supervise the cooperative movement. Again, just as the British directed under the Ordinance of 1932, this infringed on the democratic nature of cooperative societies as well as their inherent political neutrality, as Tanzania at the time was ruled by a one party state. With the government

firmly entrenched within the cooperative movement, the Registrar was given power to solve problems within communities, taking this duty away from cooperatives themselves (Lyimo 109).

As part of the Ujamaa procedure, many cooperatives amalgamated, some for financial reasons, but mainly because of political decisions emanating from the government. It was thought that this would subdue the capitalist characteristics that the government accused the KNCU and others for having, and thus in order to fit cooperatives within Nyerere's socialist agenda, many stronger marketing crop cooperatives were forced to join with weaker cooperative unions, now run by the Ujamaa villages, under the watchful eye of government administration (Lyimo 54; Maghimbi 5).²⁵ This greatly angered many within the cooperative movement, as members believed that cooperatives were just becoming an extension of the government. Indeed, according to Scott, resettlement can be seen as a way to make rural Tanzanians easier to politically control under the state's desired communal living (224). Imprisoned by colonialism, Tanzanians were now being administratively constrained by their own government.

Cooperative members, however, were already beginning to experience losses of both direction and finances emanating from corrupt cooperative administrators who were running these societies like their own personal fiefdom. According to a Special Committee of Enquiry in 1966 as well as reports conducted by the government on both the KNCU and the Victorian Federation of Cooperative Unions (VFCU) in 1958, 1962-63, corruption within the most powerful cooperative societies and others was widespread.

²⁵ The strongest of these cooperatives, such as the KNCU and the Bukoba Native Cooperative Union (BNCU) actually resisted this until the government forced them to amalgamate in 1974 (Lyimo 109).

-

According to these reports, one cooperative union president who began his position on a low income base had acquired within a few years of employment a car, a truck, two tractors, a house, a bar, a home for his wife, two canoes, and some fishing nets. Another audit showed that one union, filed under "motor vehicle expenses" from 1965-67, had spent large amounts of fuel on Sundays and holidays at gas stations owned by committeemen while hiring personal drivers for administrative personnel on a regular basis. Another union president was also found to have claimed daily allowances for more days than the working days in a month, ranging from 27 to 43! (Saul 361-363).

While the government later intervened to both guide cooperatives further under the Ujamaa process and to quell this swell of corruption, its own administrators continued to steer cooperative societies further away from the needs of the peasantry as these organizations increasingly became driven by those at the top as opposed to being directed by all members, allowing the exploitative behaviour of some previous cooperative leaders to continue. Indeed, the Tanzanian government was interested not only in cracking down on abusive cooperative managers, but also to gain from cooperative taxation and dictating how societies' surpluses would be used (Saul 367). In reflecting on what has transpired with regards to the cooperative movement in Tanzania, as well as elsewhere, according to John Hamer, "individualism, corruption, and bureaucratization..." appear to be the limiting social factors that prevent the development of cooperative movement (127).

Government control would further increase under an amendment that was decreed within the Cooperatives Societies Act of 1968, as all villages that had reached a "high stage of development" could register as a multi-purpose cooperative for producing, processing, and marketing their products (Lyimo 60). As such, cooperatives became built

into Ujamaa, bringing these non-government entities closer to administrative control. Encompassed within the village structure, cooperatives were to take on the production of all farm crops, overextending themselves and causing these organizations to lose their autonomy and effectiveness (Lyimo 59, 89). By the end of 1973, there were 380 Ujamaa villages registered as multi-purpose cooperatives, and by the following year, all regions had their own cooperative union, greatly decreasing the number of registered cooperatives seen nearly a decade ago (Lyimo 54, 60).

Food insecurity, however, would continue to persist. Since the government still retained the same agricultural structure that the colonialists had used during their occupation, cash crops were still emphasised and received more investment compared to food crop production. Their cultivation remained in the most fertile areas, while food stuffs were left to marginal ones, with no viable domestic market established (Msambichaka 120). Under Ujamaa, roughly 60% of all new villages were located in semi-arid areas, often to be situated by roads to make peasants more easily monitored by the state (Scott 233, 237, 239). In addition, the variety of food crops was not increased. Foods such as millets and sorghum, historically important domestic staples that are ecologically sustainable and drought resistant were neglected due to their low value on the export market (Msambichaka 119). If the government's primary goal was actually to become self-sufficient in food production, one would assume that increased growth of two of the four crops (banana and cassava being the others) that account for 40% of the human energy supply of food consumed by Tanzanians would be encouraged (Msambichaka 119).

The production of sorghum and millet was beginning to be replaced by other cereals such as maize, rice, and wheat, for they fetched higher prices within the world market – a phenomena that occurs when crops are grown not for local needs, but for global market desires, something that McMichael and Weis alluded to earlier (Isinika et al. 12; Weis 16; McMichael 171). If Tanzania truly felt that self-sustaining food production was paramount, perhaps the focus on producing non-food crops such as sisal should have declined instead of crops like millet and sorghum. But due to the structure of the agricultural sector, Tanzania was dependent on its agricultural exports that brought in valuable revenues to purchase imports used for upgrades in other sectors. This is not necessarily a negative process, and indeed is a way for Tanzania to use profits from one established industry to develop others. However, because profits generated by the agricultural sector did not reverberate back to rural communities, the agriculture sector and the further development of smallholder farmers did not occur. Potential food production, as a result, was thus collateral damage, as Tanzania's leaders sought to develop emerging industries as opposed to supporting their economic backbone (Msambichaka 136).

According to Robert Bates, taking profits from rural economic sectors and transplanting that revenue to grow an industrial base is a common practice for African states, who have been sold on the idea by Western development agencies and urban interests within their own country that moving from an agrarian to an industrial based economy is how a nation develops. In many instances, great profits are generated by marketing boards, and in the case of Tanzania, cooperatives, who become one of the few economic bright spots due to their monopolistic position as the sole purchaser of crops in

a newly independent, mainly agrarian country, who finds itself in a dire need of capital. As such, profits generated by these rural organizations were diverted to develop industrial and manufacturing sectors through heavy taxation policies. Once the government increased their role within these organizations, they offered lower prices to farmers for their produce, allowing them to withhold the greater profits they were able to accumulate upon their sale on the world market, which would later go to benefit urban sectors of the economy. This occurs, despite the fact that less than 10% of Tanzanians lived in cities during the years after independence, yet 30% of public expenditure in the state's two first development plans went to urban areas (Bates 11, 15, 18).

In line with the more influential urban interests in Tanzania, in the country's second wave of planning, from 1969-1974, a more urban component is stressed, ushering in greater import substitution and capital goods production through the newly nationalized industrial sector (Stephens 102). In order to import industrialized goods, funds gained through cash crop production would be needed. Backed behind 84% of industrial investment made by the government, they hoped to increase productivity by 7%. In this round of planning, the state adopted a mantra preaching a "self-help" attitude for farmers, calling on all people to "work hard" to achieve the common goal of increase food production (Stephens 103). In other words, it appears that smallholder farmers were left to fend for themselves. ²⁶ Less than 6% of all government spending went to the

²⁶ According to Young Kimaro, the isolation between the government and smallholder farmers is still evident. In our interview, she expressed her frustration for the lack of support the peasantry was receiving from the administration. For her, extension officers were particularly absent, while communication and an exchange of information between farmers and the government was sorely lacking (Interview with Young Kimaro, Rotary Club Member and expat, July 18th 2013, Moshi, Tanzania).

agricultural sector, while over 80% of this went to parastatals running large scale, mechanized farms (Stephens 103; Maghimbi, Lokina, and Senga 42).²⁷ Support towards the peasantry was not forthcoming. In fact, despite the Ujamaa mandate, the National Agricultural and Food Corporation (NAFCO), a state farm, received more funds than all Ujamaa villages put together (Maghimbi, Lokina, and Senga 42). Although its GDP increases at this time to 4.8% per capita, food production fell again and the cost of living grew by more than 50% (Stephens 103).

In addition to the sub-par results these policies had on the nation's development, the people of Tanzania did not take to Ujamaa as Nyerere had hoped. At the end of its first year of implementation, only 180 villages were formed (Meredith 254). Impatient with the country's slow response to this socialist construct, the government tried to entice further settlement by promising improved water, health care, and educational services to coerce membership to the newly created Ujamaa villages (Meredith 255). When the speed of relocation was still not to their liking, officials increased their militancy. What was once a voluntary policy transformed into a forceful process of "villagisation." As authorities throughout Tanzania were losing their patience with uncooperative locals, they began destroying property, crops, and burning down houses in order to force people into new Ujamaa villages, many situated in poorer agricultural areas, causing production rates to decrease in the coming years (Meredith 255; Scott 246). The drive for African

_

²⁷ Parastatals operate on regional and district levels in which peasants are not involved in the decision making process, countering the democratic makeup of cooperatives (Lyimo 70). Dating back to the colonial area, these institutions ran railways, harbours, postal services, telecommunications, and airlines. By the 1950s they ventured into crop marketing boards and after independence went into banking. Their three main goals were to prevent capital from exiting the country, to invest in productive sectors with a special focus on industry, and to improve transportation infrastructure (*Tanzania's Food Trade* 16).

socialism had undermined both its values and the need to develop the structure of the agricultural sector. From 1973-77, nearly 11 million people were placed in newly formed villages, amounting to the largest domestic mass movement in Africa's history (Meredith 255).

It was believed that through villagisation, advantages of economies of scale and modern farming techniques in food production would be acquired (Msambichaka 135). This, however, did not occur. In fact, villages in this era were producing less food than at the time of independence (Msambichaka 136). In 1975, about 60% of farmers were producing less than the average farmer was capable (Msambichaka 129). Drought in some areas and floods in others during this time also intensified the problem, as the weak agricultural system could not withstand these harmful internal shocks to its production. Production of cereals dipped by more than 1 million tonnes between 1974-77, forcing the government to get loans and grants from the World Bank and the IMF as well as over 200,000 tonnes of food aid (Meredith 256). In some years during the 1970s, as much as 90% of its imports were food aid (Liisa and Bistrom 12). Instead of achieving Nyerere's dream of becoming self-reliant, his Ujamaa policies helped create a dependency on outside assistance. Agriculture itself suffered a drop of 7% in food production due in large part to the mass migration of people in a short time span, because farmers could no longer tend to their fields and were often transplanted to less fertile areas (Stephens 108).

Cooperatives too suffered serious blows during this time frame. Fearing their growing power, the government tried to collapse market crop cooperatives first through the aforementioned amalgamation methods, and later outright abolishing them in 1976.

The government argued they did so because of the mismanagement and mistreatment of

its members, but they were also banished because they were seen as a capitalist threat to the nation's socialist desires. After the abolishment of most of these cooperatives, stagnation and a decline in agricultural production occurred (Lyimo 60, 67-69).

The parastatals, amalgamated village cooperatives, and crop authorities that came in their place did little to substitute for the departed cooperatives and crop unions (Lyimo 70; Maghimbi 5). Despite receiving preferential treatment in terms of gaining access to credit and resources because they were seen as an instrument that the government could use in planning the economy, nearly half of the 354 government run parastatals had experienced net losses by 1985. Consuming these subsidies also caused inflation rates to increase, discouraging many peasants from producing and selling crops to these organizations (Lyimo 70). Thus, poor productivity and a lack of financial control led to widening deficits. Despite this, salaries within parastatals were much higher compared to those in the private sector, while these organizations also enjoyed a higher employment rate compared to those in Kenya. Seen as too bureaucratic, each parastatal had a parent ministry, a board of directors, and a general manager who was appointed by the President, who often lacked business training. By the 1980s, these posts were frequently used as a dumping ground for difficult politicians, while corruption at all levels in the form of using public vehicles for private business, misappropriating or embezzling funds, falsifying records, and nepotism in hiring was rampant. Despite government calls to clamp down on these institutions, between 1973-82, commercial banks' lending to parastatals rose from 31% to 61% of total funding, further demonstrating these state run institution's ineffectiveness (*Tanzania's Food Trade* 17, 20-12).

State farms also generated little profit while government operated crop authorities were inefficient, corrupt, and overextended, exemplifying again that too much government involvement produced a negative reaction to production (Maghimbi, Lokina, and Senga 42). Crop authorities did not provide cash incentives for improved production quality, failed to deliver farming inputs, credit, and crops to market in a timely manner, and ultimately paid less for farmers' produce. A distrust within the peasantry grew towards these newly government operated institutions, and a once stable cooperative movement began to slowly fade into the distance. Production levels also faltered. Cotton dropped from 100% production in 1974-75 to 68% in 1980 while cashew nuts dropped from 100% in 1974-75 to 16% in 1982. After 1976, smallholder farmers would endure without primary and market crop cooperatives that operated independently from the government for another six years (Lyimo 80, 87; Maghimbi 6).

In the third wave of planning, 1976-81, the Tanzanian government made one last effort to become self-sustaining in food production. However, its actual policies again failed to target this sector properly, and instead continued to focus on agricultural exports in order to correct its balance of payments. From 1976-81, a far less percentage of GDP was invested into the agricultural sector, going from 3.9% in 1976 to 2.9% in 1981 (Isinika et al. 23). The majority of investments that went to agriculture also went to cash crops, not foodstuffs. While investment in cereals went from 5.9% in 1975-76 to 35.6% in 1980-81, investment in cash crops rose from 15.5% to 55.6% in the same period (Msambichaka 129). To this day, most of the country's food imports are cereals, which include wheat, maize, rice, millet, and sorghum (Ministry of Agriculture 4, 2006).

Aside from a boom in coffee prices from 1975-77, Tanzania's focus on cash crops also did not equate to the economic growth rates the country desired (Wobst 10). Coffee benefitted at this time because world market prices were high due to a lack of supply. However, this did not last. Worse, other external shocks had more dramatic effects, arguably erasing the positive experience Tanzania had witnessed during its brief coffee boom.

Inflation had grown from 1.8% in 1967 to 12.3% by 1978. Also, Tanzania's balance of payments deficit reached \$442 million and its external debt was around a billion dollars, equivalent to 25% of its GDP (Yeager 108). Export revenues, after that coffee driven high of 1975-77, also fell dramatically. By the 1980s, export earnings only covered 40% of the value of imports, 20% less than at the time of independence, causing its foreign debt load to greatly increase (Meredith 257). Despite this fall in export values, the country did not pull away from its focus on cash crop production.

Ten years after the Ujamaa policies were installed, even Nyerere admitted that Tanzania was neither self-reliant, nor socialist in 1977 (Stephens 77). Communal farming production never amounted to over 0.5% of all cultivated land (Isinika et al. 25). Even when these communal farming operations were successful, the government intervened, shutting them down, arguing that the village cooperative formed was too capitalistic in nature, operating further away from the state's socialist ideals. As Coulson argues, this was the case for the Ruvuma Development Association, which was a collection of 16 villages, operating closer to the principles of the Arusha Declaration more than any of the villages in the country ("Agricultural Policies" 91). Suppressed in 1969, seemingly because it was successful in the few years it existed, both Coulson and Scott argue that

government authorities have always tried to control the peasantry, never realizing that the role they should occupy was to support them ("Agricultural Policies" 96; Scott 224).

Nyerere himself confessed,

The real failure seems to have been a lack of political leadership and technical understanding at the village and district level. Despite the call in 'Politics is Agriculture' for all political leaders to learn the basics of good husbandry in their areas, and to join with peasants in production, we have continued to shout at the peasants and exhort them to produce more, without doing much to help them or to work with them in a relationship of mutual respect. (qtd. in Stephens 78).

Indeed, the real victims, as well as the main target of these poorly planned and executed policies were peasants, who were seen as backward and unorganized. Ujamaa was the government's way to uniformly bring them into modernization, but also a way to control their production in order to benefit the urban classes. Although this vision of development may have had the best intentions, the idea of villagisation, shared at the time by various Western development agencies such as the World Bank, USAID, and others, did not bring development to Tanzania's smallholder farmers, further damaging the country's agricultural sector, leaving it more susceptible to internal and external shocks (Ergas 387-388; Scott 223, 241, 245-246).

As oil prices increased they ended up accumulating to 60% of Tanzania's import value. Agricultural production also declined from 1972 to 1982, forcing Nyerere to concede that the country was poorer in 1982 than they were ten years ago (Meredith 258). He was also embarrassed by the fact that Tanzania had not become self-sufficient in food production. Annual foreign aid jumped to \$700 million by 1981, accounting for nearly 70% of its capital expenditure (Stephens 84). In addition, a war with Uganda in 1978-79, widespread drought and floods across various regions of the country in 1976, 1980, 1983-

84, falling export values due to the collapse of world market prices, and the breakup of the East African community in 1977 further depleted its resources and the country's optimism originating from its independence (Loxley 14; Stephens 102; Wobst 10; Ponte 5).

The meltdown from these policies and the internal and external events had left the government with little choice in what they had to eventually turn to in hopes of improving their situation. Being unable to achieve its goals of self-reliance and heavily in debt, Tanzania like many developing nations found itself in the hands of the World Bank and the IMF, now firmly in charge of the global developmental process.

This was a dramatic paradigm shift for Tanzania. Having declared themselves socialist, they would now undergo a transformation that would deeply entrench them into the global world of capitalism. Although his hand was forced in many ways, Nyerere was not afraid to voice his displeasure, "...when did the IMF become the Ministry of Finance? When did nations agree to surrender to it their power of decision taking?" (qtd. in Loxley 15). These financial institutions claim that through policies of privatization, trade liberalization, deregulation, and devaluation of the dollar, economic gains directly tied to the developmental process would be achieved. Household income levels as well as the nation as a whole were to reap the rewards of these new economic policies. The forecast of these financial institutions, however, was inaccurate. And for countries like Tanzania, the implementation of these policies had disastrous consequences not only for its economy, but also its agricultural sector, smallholder cooperatives, and its ability to feed itself.

Structural Adjustment to Present Day: 1982-onward

At first, Nyerere was able to hold off the SAPs and the Economic Recovery Programs that began in 1982. Unwilling to go along with the conditions proposed by the World Bank and IMF, Nyerere invoked his own version of SAPs in 1982-83 instead (Holm 95; *Liberalized Development* 11). To improve the economy,

the 'home grown' SAP of 1982-83 combined an attempt to preserve the basic structure of the parastatal sector with increased agricultural producer prices, reductions in consumer subsidies and a limited devaluation. It was accompanied by a major attempt...to suppress informal trading activities.

(Liberalized Development 11).

The plan, however, did not work, and in 1985, Nyerere stepped down from office. Although his policies were often criticized, particularly by those outside of the country, his integrity and love for his people was never in doubt. Always concerned about the welfare of Tanzanians, his policies, however they materialized, were rooted in a strong ethical foundation that attempted to appropriately address the challenges facing his nation. Respectively referred to as Mwalimu, meaning teacher, he is still revered to today as one of the renowned fathers of not only Tanzania, but of a pan-African movement that tried to drive Africa away from Europe and into the hands' of its own people (Pratt 137-139).

Under new President Ali Hassan Mwinyi, the country fully adopted the conditions laid out by the IFIs (Liberalized Development 12). The SAPs that Nyerere had so strongly fought against devaluated Tanzania's currency by 40%, increased producer prices between 46-55%, liberalized domestic and international trade, allowed private ownership of the land and state enterprises, removed subsidies on foodstuffs and fertilizer, and, just

as in years past, further encouraged agricultural exports in order to equalize the country's balance of payments (Holm 96; Mung'ong'o and Loiske 162; Wobst 13).

Since these policies were driven to increase economic gains, cash crops remained at the top of the food chain, while attention to food crop production continued to be lackluster. Due to the devaluation of the Tanzanian currency, this further encouraged export production as cheaper prices on the world market were believed to create more demand (Holm 98). However, as this thesis will illustrate, this did not occur. Although the country had always placed emphasis on its export agricultural products, the fact that it never diversified them makes their collapse much more crippling.

In 2014, Tanzania is currently the world's second largest producer of sisal, a major cash crop grown in some of the most fertile regions of the country and was used traditionally for twines, ropes, bags, and carpets, but also used today as biofuel, composites, and pulp for paper due to its strong fibers (Compact Technologies).

However, during the 1980s, sisal prices drastically fell as they were replaced by synthetics, causing a drop in demand (Osabu-Kle 163). Combine this with the SAPs instructed dollar devaluation, and Tanzanian sisal production began to deteriorate. From 1961-71, the country produced over 200,000 tonnes of sisal every year except in one that fell just short of that mark. But with falling prices, only 60,000 tonnes were produced in 1983, despite the fact it still occupied some of the most fertile land in Tanzania (Msambichaka 122). Today, the country produces just over half that amount, with plans to expand due to a rejuvenation in demand for its newly found usefulness (Compact Technologies).

In an interview conducted with Mr. Faraji, a highly decorated figure in Tanzania as he is a former assistant to Nyerere, a former ambassador to France, a former Chairman of the National Bank, and now an advisor to the Coffee board, the issue of land reform was raised in order to discover why it had not occurred. While he agreed that it should have been done, there was never any initiative by the government to do so. According to him, sisal did not need to be grown on fertile lands where maize and other foodstuffs could have grown instead, benefitting the people of Tanzania on a whole as oppose to plantation owners that cultivated most of the nation's sisal. Although he has since sold his 12,000 hectares of land to Chinese businessmen in 2002, he still expressed regret in not transferring the land over to foodstuffs himself.²⁸

To make matters worse, coffee, now the country's largest agricultural export, also suffered from fluctuating prices as more countries became coffee producers, causing an increase in supply. As a result, in 1989 Tanzania lost about \$45 million due to a 30% decrease in price (Geest and Kottering 75). The situation deteriorated further still, as primary commodity values continued to fall, for agricultural export earnings were 60% in the 1990s, but slid to 14.3% by 2007 (Ministry of Agriculture 9). Of its exports, 85% are agricultural based (Trading Economics). As these figures clearly illustrate, despite its decreasing value, Tanzania is still extremely dependent on its agricultural exports and is just another example of the folly of the market reliance philosophy that is championed by advocates of food security.

-

²⁸ Interview with Mr. Faraji, former assistant to Nyerere, a former ambassador to France, and the former Chairman of the National Bank, July 19th 2013, Arusha, Tanzania.

The coffee example above also illustrates what is known as the "commodity problem," experienced by various developing countries who rely primarily on agricultural commodities for their economic wellbeing. Having so many countries produce goods such as coffee, tea, and cotton, Tanzania is trapped in a "race to the bottom" as they, along with many other developing countries, continue to produce products that are falling in price. Gillson, Wiggins, and Pandian describe this commodity problem as a combination of declining terms of trade and price volatility that cause producers to suffer from both low returns and high risks of production, resulting in a rapid decline in economic standing (6-7).

According to Julie Dana and Christopher Gilbert, the reason why agricultural commodities are so volatile is because planting decisions are made before prices for the new crop are known and thus, production responsiveness is low for annual crop commodities. As such, the decision to produce a crop is made on expected prices, not realized ones. Short term demand may also be low for the raw materials because actual commodity prices are rarely a large component of the overall value of the final product, such as coffee beans in soluble coffee powder. Without the price protection that cooperatives provided farmers in the past, the peasantry has become more susceptible to price fluctuations, causing them to further retreat into subsistence, placing Tanzania's food security in greater jeopardy. This dreadful scenario has only gotten worse since liberalization, particularly for African nations who at one time heavily controlled markets. Since the 1990s, liberalization has allowed for a more rapid and complete pass through of world prices that has increased the exposure of smallholders within the Global South, making them ever more susceptible to price variability (Dana and Gilbert 1-3).

In an effort to further remove governments from controlling the market, subsidies were also discouraged altogether under SAPs on food crops and fertilizer (Holm 98; Wobst 17). Having subsidies completely eliminated in 1994, food production greatly decreased. In particular, maize and rice, now Tanzania's two most produced food crops, suffered the greatest losses since the early 1990s, whereas gains after 1994 occurred due to land expansion (Isinika et al. 66). In the fertile Southern Highlands (Rukwa, Ruvuma, and Iringa), where most of the country's maize is produced, output declined by 13-19% between 1987-89 and 1997-98 (Isinika et al. 56). With respect to rice, Tanzania as a whole experienced a decline in paddy from about 1.9 tonnes per hectare in 1990 to 1 tonne per hectare in 2000 (Isinika et al. 61). Remote producers have also suffered greatly, as they became less likely to want to produce for the market without the added price protection that subsidies provided (Isinika et al. 54).

Due to the fact that the lack of incentives and risk protection have caused a decrease in production, it can be observed that government can indeed play a valuable role in protecting the peasantry from the volatile market. While it did become too involved in cooperatives, as well as planning the economy during the 1970s under Ujamaa, the government's support and allocation of monopolies to crop marketing cooperatives in the 1950-60s allowed them to control prices and smoothen price volatility throughout the year, which greatly decreased market fluctuations to the benefit of the country's peasant producers. This illustrates that ideally, the government's role in accordance to the agricultural sector should be providing price stability, while allowing the peasantry to organize and operate independently from state interference. Although the pre and post SAP eras overlap decades slightly, agricultural growth in the 1970s and

1980s was 2.9% and 2.1% respectively, demonstrating that liberalization has had a more negative effect on food production than Tanzania's socialist policies (Ministry of Agriculture 4).

Cooperatives also suffered from this newly directed economic order. Under the neoliberal policies of structural adjustment, cooperatives, although being reinstated in 1982 and fully re-established in 1984 were unable to regain the position of strength that they had during the post-abolishment era (Lyimo 87). Many, in fact, upon re-emerging went into receivership (Maghimbi 9). As Gibbon and Lyimo argue, the greatest reason for their struggles emanates from the fact that cooperatives now had to operate in a more liberalized market, and thus no longer had a monopoly on the purchase of crops, having to compete with crop merchants and middlemen for business, who were now well established and better prepared for liberalization ("Cooperative Marketing" 395-396; Lyimo 88, 90). Collecting produce from household units instead of cooperative centres in order to bypass individual businessmen also resulted in poor crop grading and poor prices given to farmers. Re-established cooperatives were also poorly staffed as they lacked training, education, and experience, further dampening their return, escalating issues of distrust and mismanagement within its membership.

Due to privatization, the government was also no longer a trustee for cooperatives wishing to secure loans, thus funding became a problem and cooperatives could no longer provide credit or advances let alone timely payment to its members (Lyimo 90-91). In 1960, cooperatives could meet 33.5% of funds needed to purchase members' crops, but by 1996 they could only raise 0.7% of the required funds (Maghimbi 9). Finding themselves in a newly structured competitive market, cooperatives were also forced to

sell to private traders and rented out facilities to them (Lyimo 91). While they failed to support cooperative societies effectively after liberalization, the government still remained heavily involved within cooperative societies, as they did not alter the previous legislation that would allow cooperatives to regain their autonomy. Furthermore, leadership of cooperatives was based on political alliances, not managerial skills, and thus cooperatives remained extensions of the ruling party (Banturaki 5). These issues caused membership to drastically decline. In 1976, there were around 550 members per cooperative, but as of 2001 there were only 107 per cooperative on average, while total membership dwindled to just over 55,000 nationwide by the year 2000 (Chambo 12; Lyimo 91).

The literature documenting the re-instatement of the cooperative movement under neoliberal policies and how they effected cooperatives is further exemplified in the experience of the cotton cooperative in Shinyanga. For Joseph Mihangwa, the strength of cooperatives was based in their monopoly over crop prices. Having access to financial support when needed was also a necessary element of success. During our interview, the director of the Shinyanga Region Cooperative Union (SHIRECU), once a part of the successful VFCU established during the 1950s, explained to me how the cooperative movement began to fall.²⁹

This descent, he said, occurred around 1972. Once the government went into decentralization, declaring that each region needed a cooperatives union, it later replaced these with marketing boards in order to control them. As such, inefficiencies and

²⁹ Interview with Joseph Mihangwa, Director of SHIRECU, July 31st 2013, Shinyanga, Tanzania.

corruption soon polluted the cooperative movement causing it to slowly falter, as these administrators used their prominent positions for their own benefit, implementing a top-down form of governance instead of allowing all cooperative members to democratically control their organizations. By 1976, cooperatives were disbanded by the government, seen as inefficient, corrupt, as well as a capitalist threat to the state's socialist agenda. Then, despite being re-established by the government in 1984, trade liberalization and privatization prevented them from regaining their position of strength.

For Mihangwa, cooperatives and businesses are operating in the same economic playing field, but have different goals that, in a neoliberal economic system, favour one over the other. Although cooperative societies operate like a business, their main goal is to redistribute its profits equally among its members and collect goods and services they need. But a business is directed solely by its bottom line, and thus mainly focuses on engineering profits and not equally distributing them with its members or employees.

Thus, competition with private businesses, especially larger entities, is done on an unfair playing field. By 1993, the private sector controlled 50% of the market. Given that the banks became denationalized, access to credit became more difficult as agricultural cooperatives were seen as too risky and less efficient than their private counterparts, which in turn cost farmers dearly. In addition, the liberalized market also allowed for the dumping of cloths, crashing the price of cotton and in effect, killing Tanzania's cotton industry and domestic market.

Today, while at one time the SHIRECU cooperative ran a monopoly on the local cotton market, it now holds about 20% of the market share which is declining still.

Membership within the cooperative is also falling, with many existing members

searching for private buyers themselves in order to get a better price.³⁰ Indeed, in describing what the chief obstacle was for cooperatives upon reinstatement, Tanzanian scholar Francis Lyimo states that, "the main constraint was the inability of cooperatives to operate under a liberalized economy. Within the free market economy, cooperatives were weak structurally and financially" (91).

Liberalization has also had a negative effect on inflation. In the first few years of implementation, SAPs actually resulted in an increase in inflation, not a decrease that these policies were supposed to create. From 1986-89, the inflation rate rose to 30%, despite the currency being devalued five times at this juncture (Geest and Kottering 70). Today, the country still battles with inflation, which currently hovers around 12% (Ngowi).

Conversely, in order to combat inflation, as well as a rise in food prices which attributes too it, the current Tanzanian government has imported food in order to stabilize the market. The supposed solution has received harsh criticism from some economists and both large and small-scale food producers in Tanzania, who argue that flooding the market with imports to lower prices will stiffen local economic growth as it harms domestic food producers who the government could have purchased from instead. This movement of foodstuffs through the global market also speaks to the growing influence that private businesses have within the international food system, presenting a new challenge for smallholder cooperatives and a serious stumbling block for their current rejuvenation process.

30 Ibid.

As this thesis discussed earlier, advocates of food security proclaim that agribusinesses are far more efficient producers of food compared to smallholder farmers. While proponents of food sovereignty argue that the expansion of industrialized agriculture threatens the very existence of the peasantry in Tanzania, food security supporters, although criticizing the peasantry for their primitive production methods and results, assert that when teamed up with agribusinesses, small-scale operators can obtain a gateway "into the market," and an escape from poverty and hunger. Through the use of contract farming and out grower schemes, which have been on the rise within the Global South since they became an important part of the development discourse during the 1980s, advocates of food security purport that smallholders can gain access to not only the market, but also advanced technologies, improved farming methods, and economies of scale (Collier 73; Little 4). Due to the fact that these large scale operations incorporate smallholder farmers, they can also be seen as a threat to replacing cooperatives as the most important agent of rural development in Tanzania.

This is intriguing, for on the one hand the Tanzanian government supports commercialized agriculture through policies such as Kilimo Kwanza, which allocates funds to fuel the industrialization of its agricultural sector, but on the other hand the government is also beckoning for a robust return for the cooperative movement. Although various international organizations also champion the importance of cooperatives for the betterment of smallholder farmers, the current developmental discourse further encourages the state to relinquish its role within the developmental process, one that, through allotting cooperatives a monopoly on purchasing certain crops, was a chief reason for their success.

For proponents of food sovereignty, initiatives that support the influx of agribusinesses are seen as counterproductive to obtaining food self-sufficiency, for these firms are mainly concerned about earning a profit by selling goods around the globe, and not securing the nutritional needs of the local populace. While food security proponents promote the partnership between smallholders and large agro-firms within out grower and contract farming schemes as a way to improve the lives of the peasantry and national food security, food sovereignty activists would argue that while those involved may benefit from being associated with commercialized farming operations, not all smallholder farmers would be included within this relationship.

Instead, food sovereignty advocates would look to Cuba's use of cooperatives, as well as the state's role in supporting these organizations, as an alternative solution to food insecurity and an improved method that encompasses the peasantry within a nation's fight to decrease rates of poverty and hunger within its borders. Cooperatives are also seen as better suited to meet the needs of smallholders compared to engulfing members of the peasantry within large-scale farming operations, as they are seen as a way of controlling the peasantry, just as large scale agricultural schemes and Ujamaa villages did so in the past. As such, the expansion of agribusinesses should be viewed as a serious risk to the peasantry as a whole, as well as pastoralists and hunter gatherers, for many are in danger of losing their autonomy, lands, and livelihoods, due to the expansion of industrial agricultural projects that are focused more on securing profits and not food security.

Chapter 5: The Growth of Agribusinesses and the Rejuvenation Process of Cooperatives in a Liberalized World

In order to illustrate Tanzania's current food situation, this chapter will explain the increasing role the market is playing in obtaining food security, the growth of agribusinesses within Tanzania's agricultural sector, and the affects this has had on the rejuvenation process of smallholder cooperatives. In doing so, readers will understand how a deepening of liberal economic policies have allowed for a continuation in food price fluctuations and food insecurity, as well as presenting a major obstacle for cooperatives from re-establishing themselves as a crucial component of rural development. In addition, the current developmental discourse and the role of the state will also be analyzed, demonstrating that while the government claims it has made strong policy changes to allow for a robust return of the cooperative movement, in reality, its policies greatly favour the growth of industrialized agriculture, which counter any growth sustained by cooperative societies.

Food Security through the Global Market

In 2012, the Tanzanian government imported sugar and rice with plans to import another 50,000 metric tonnes of sugar and at least 60,000 tonnes of rice in 2013 (Ndeketela).³¹ The rise in domestic food prices that have in part caused inflation rates to increase is said to be caused by a lack of production, often resulting from floods or droughts, examples of interior shocks to a weak food system. But for economist Honest Ngowi, the lack of food production is due to Tanzania's predominately rain-fed

-

³¹ Rice prices in 2013 were on a high in February at \$574.07 while at a low of \$503.82 in August, per tonne (Indexmundi). Although the exact price at the time of purchase is unknown, it is likely that the 60,000 tonnes of rice costs around \$30 million.

agricultural sector (Ngowi). Currently, less than 1% of the near 30 million hectares of land that can be irrigated undergoes this process. In addition, Tanzania today only cultivates around 11% of its 44 million hectares of arable farm land, resulting in the country's inability to meet its agricultural potential (Wolter 14).

As this thesis illustrated earlier, advocates of food security would argue that both the lack of irrigation and levels of cultivated land are due to the fact that Tanzania's agricultural sector is dominated by smallholder farmers, who lack the capacity to develop such improvements or to garner advances in technology that would allow them to expand the size of their fields (Temu 25; Collier 71-72). Past policies have certainly failed to address these issues that do effect production levels and definitely highlight the lack of structural development within the agricultural sector. But these reasons are similar to what Holt-Gimenez and Patel describe as approximate causes to food insecurity, and thus do not entirely explain why food prices climb (10).

According to Hardari Hainisi Msigwa, director of Young Masitus, an up and coming Tanzanian based agribusiness, often rice, as well as other grains are held from the market in order to maintain or create a better price for producers. Indeed, this is a common practice for businesses, who are described by Deputy Minister for Agriculture, Food Security and Cooperatives, Adam Malima as dishonest (Tanzania Daily News). What Malima fails to realize, however, is that a business's number one priority is to turn a profit. Flooding the market with more supply would thus be bad business.³²

³² Interview with Hardari Hainisi Msigwa, director of Young Masitus, Aug 12th 2013, Dar es Salaam, Tanzania.

As a consequence, the Tanzanian government has been forced to import rice to lower prices, because of the practice of private businesses who withhold grains in order to fill the supply void. According to reporter Dorithy Ndeketela, the move to import rice and other foods to quell inflation rates is an unpopular one, not only for agribusiness directors like Hardari, but for smallholder farmers as well. Despite food producer discontent, however, these policies are favourable to the country's urban population, who according to Bates, benefit both urban worker and employer. For him, in order to prevent potential urban unrest, governments seek not to raise wages or suppress labour movements in fears of sparking a back lash, but instead attempt to reduce the cost of living, by keeping food prices artificially low. In this light, "agricultural policy thus becomes a by-product of political relations between governments and their urban constituents" (Bates 32-33).

In the Ndeketela article, the author also alludes to the fact that the dumping of cheap rice from foreign countries has denied regions like Rukwa, located in Tanzania's fertile South, to sell its surplus, a problem attributed to the country's poor infrastructure (Ndeketela). But for Dr. Mattee, a professor at Sokoine University, the country's agricultural institute, Tanzania itself has the ability and the existing infrastructure to supress some of the issues equating to food insecurity and skyrocketing food prices, that at the very least should be able to cut down on the amount of food imports. The country's National Food Reserve Agency (NFRA) can buy grains from surplus areas to transfer them either to the market to stabilize prices or to transport them to areas of food insecurity. Indeed, according to Deputy Minister Malima, regions like Rukwa are regular customers of the government run NFRA (Tanzanian Daily News). However, as Dr. Mattee stated in our interview, the NFRA must compete with private buyers, who can

offer better prices, both at home and abroad.³³ According to Malima, farmers with border access often sell their produce to those in neighbouring countries, where export purchases can be more than double the local price (Tanzanian Daily News). Again, this is par for the course in the business of food when the global market is allowed to dictate who gains access to this highly valuable commodity.

This scenario also illustrates how the current development discourse would rather have countries achieve food security through the global market, rather than being self-sufficient in food production. Indeed, for Tom Hobgood, the director of USAID's Feed the Future program in Tanzania, the country's practice of stocking its grain reserves higher than required is not cost efficient and unnecessarily discouraging the export of maize. The NFRA has the capacity to store 214,000 metric tonnes of grain, but only requires about 100,000 tonnes in order to cover shortfalls in production that occur, according to Hobgood, every 5 years. Anything above that mark could increase storage costs over \$6 million which would lead to wasteful subsidies, and thus it would be far cheaper to import grain in the case of an emergency (Kasumuni). In other words, it is best to rely on the market in order to achieve Tanzania's food security.

This mantra goes hand in hand with the neoliberal mindset. It is also earily familiar to the misguided advice that the IMF provided Malawi in 2001 where the financial institution told the country to slash its strategic grain reserves from 165,000 metric tonnes to at least 60,000 metric tonnes.³⁴ The reasons for this were the same as in

³³ Interview with Dr. Mattee, Professor at Sokoine University, August 8th 2013, Morogoro, Tanzania.

³⁴ This decrease is ironically similar to the one suggested to Tanzania, as they and Malawi were advised to cut reserves by 108,000 metric tonnes and 105,000 metric tonnes respectively.

the Tanzanian example; for cost efficiency and predicted good harvests in the future. A year later, famine broke out, while at the same time grain was being stockpiled by businesses speculating that famine would drive up the price of maize. While the two countries and scenarios are slightly different, the lessons they provide are the same; relying on the world market does not ensure food security. The IMF later admitted to its own mistake, stating that it had not given proper attention to poverty and social safety nets when advising these structural changes (Patel 150).

Perhaps this mindset has also led many, as Dr. Mattee mentioned earlier, as well as educated farmer and horticulturalist David Nyirenda, to suggest that there have been many inefficiencies with the NFRA since liberalization. Indeed, since the 1981 Berg Report issued by the World Bank, African governments have been encouraged by SAPs to remove themselves from interfering with the market, and thus grain reserves should be left to decay (Patel 151). As this thesis will discuss shortly, the state's retreat from structuralist economic policies in favour of neoliberal market principles also casts doubts for a rejuvenated cooperative movement-which would require government support in the form of funding as well as being permitted to have a monopoly over crop marketing in order to be successful. In the absence of an activist government, private industries have been able to manipulate the market for their benefit, making food insecurity the price countries must pay for their business decisions.

Coinciding with this, Mr. Nyirenda in our interview further stated that the system that used to disperse grains throughout the country no longer had enough support to function properly. He also argued that the logic of relying on exports was flawed, dangerous, and unreliable. For him, each country must be responsible for feeding its own

people first, as well as buying from local producers, and not export markets.³⁵ In the case of Tanzania, and in particular for those farmers who do not have border access, if their own government did not take up the responsibility to purchase their food production, who would?

Indeed, this scenario depicting the action by the government to go onto the world market to purchase rice instead of supporting its own farmers carries the comments by the farmers of Nhobola to illustrate an insightful conclusion. In my interview with a group of farmers in an isolated village about thirty minutes outside of Shinyanga town, when asked where they market their produce, their reply was profound. One of the elders sniped, "What markets? There are none." This comment further echoed the effects of the history of food aid and the dumping of Northern subsidized food imports, illustrated by Holt-Gimenez and Patel, mentioned previously (24-25). In addition, the example used in this chapter highlights the effects that the business of food and the neoliberal policies of trade and development have had on Tanzania's food security, as well as the welfare of its smallholder farmers.

With large scale agribusinesses gaining more of a hold on Tanzania's agricultural sector, thanks to the current social, economic, and political climate within the country, the environment that agricultural cooperatives must operate in is far different from the one they excelled at during the 1950-60s. In addition, given their previous failures characterized by the government's encroachment, corruption, and mismanagement that has created a sense of distrust with Tanzanian small farmers, the climb back to

³⁵ Interview with David Nyirenda, farmer and horticulturalist, August 11th 2013, Dar es Salaam, Tanzania.

³⁶ Interview with the farmers of Nhobola, July 31st 2013, Shinyanga, Tanzania.

prominence will indeed be a difficult one to achieve. The next section of this thesis will document the rejuvenation process of cooperatives that occurs within a free market, and alongside the emergence of agribusinesses.

The Rejuvenation Process of Cooperatives and the Rise of Agribusiness in Tanzania

At the turn of the millennium, the cooperative movement had still not gained any real momentum since officially being reinstituted by the government in 1984, nor have they recovered since liberalization policies came into full effect in the 1990s (Banturaki 7). When cooperatives were reinstated, cooperative legislation stated that they were still under the patronage of the ruling political party. It was also compulsory for members to sell their produce to cooperatives regardless of the prices they received, potentially limiting their returns. This changed in 1991, as the Cooperatives Act made membership voluntary, meaning peasants were no longer obliged to sell their produce to cooperatives, following more in line with a Rochdale type of cooperative (Maghimbi 9). Membership continued to stagger, however, as cooperatives failed to provide price incentives as mounting debt continued to wreak havoc on the remaining cooperatives. By 2001, mostly attributed to government administrators who poorly managed cooperatives upon reinstatement, cooperative societies' owed banks close to \$11 million even after the government forgave over \$27 million in loans over the last ten years (Banturaki 7; Maghimbi 9).

In an effort to rejuvenate cooperatives, the government appointed a Presidential Committee in 2000 to discover what was preventing the cooperative movement from

taking off and too advise the government on what policies it must enact in order to reenergize the movement (Maghimbi 10). The committee found that the main constraints for cooperatives was having to operate in a liberalized market, followed by poor management (CRMP 1). According to the committee's report,

Professional management is lacking and many cooperatives are engaging in activities that do not benefit their members. Some Primary Cooperative Societies operate as agents of private traders and rent out their facilities to the latter. In addition, Unions operate facilities that may not be financially viable such as under-utilized cotton ginneries, oil miles, transport facilities, and hotels. Increasing events of misappropriation of cooperative society's resources by dishonest cooperative managers and management committee members is another bottleneck to cooperative development. [As is] lack of training... (CRMP 2).

Despite these glaring weaknesses, the committee also reported that without cooperatives, smallholder farmers were without proper organized support, leaving them isolated from both markets and development (CRMP 2). In light of these findings, the committee recommended the Cooperatives Development Policy as well as a new Cooperatives Act which the government implemented in 2003 (Maghimbi 10).

For Mrs. Faraji, however, recent policy changes have done little in erasing many of the managerial and organizational problems that have plagued the movement for decades. In our interview, the coffee farmer and member of the Tanganyika Coffee Growers Association explained to me that cooperatives continue to fail to collect money from its members on time, preventing the timely delivery of valuable farming inputs such as fertilizer or seeds, which could improve production levels. In addition, according to Mrs. Faraji, those in managerial positions often administer from a distance, isolating themselves from farmers, thus giving cooperatives a top-down appearance as oppose to

one that allows all members to have an equal say in how the organization is run.³⁷ For Samy Munuo, a farmer of organic coffee, student, and tour guide from Materuni village located just outside of Moshi town, another issue facing cooperatives is their inability to provide members with good prices for their produce. As such, Munuo and others within his village will often sell Arabic coffee outside the local cooperative in order to obtain a better price.³⁸

Even for the historic KNCU, members often sell outside the cooperative in order to fetch a better price for their coffee, something that the liberalized market has helped create, as an increase in competition from firms emanating from within and outside Tanzania are able to offer higher prices for primary goods because of their volume, market penetration, and economies of scale. In fact, 32 primary cooperative societies have come together under the banner G32, in order to better facilitate the needs of KNCU members. Although the group has been in operation for ten years, it was legally recognized by the government in 2007, despite the KNCU's protests that it runs parallel to its operations and is thus violating the Cooperatives Act (Simbeye). The issues that have allowed for these problems to persist within the various cooperative societies has yet to be addressed by any decree from the government.

Included in the recent legislative reforms are also those that limit cooperative directors to three, three year terms, mandatory leadership training, and stipulations to allow staff the freedom to complain as well as improved audits and inspections used to cut down on corruption. There are also provisions that attempt to improve the education

³⁷ Interview with Mrs. Faraji, coffee farmer and member of the Tangankia Coffee Growers Association, July 18th 2013, Arusha, Tanzania.

³⁸ Interview with Samy Munuo, farmer, student, and tour guide, July 22nd 2013, Moshi, Tanzania.

of members on farming, members' roles within a cooperative, as well as making it easier to register a cooperative. There are, however, no provisions that appear to address cooperatives' weak presence in the open market. According to Maghimbi, many cooperative experts and leaders within cooperative societies believe that the recent legislation will not assist the movement, and are likely to further impede cooperative development within the country (10). Some also suggest that while the new government policy aims to assist cooperatives, its actual objective is to control them (Maghimbi 11). Although there were over 8500 cooperatives registered as of 2008, almost 80% are dormant, while only eight out of the 44 cooperative unions were active (Maghimbi 30). These policies have also failed to address the problems facing the TFC, the autonomous body that oversees all cooperative societies within the country, taking over from the Cooperative Union of Tanzania Ltd. (CUT or Washirika) in 1994 (Maghimbi 14).

According to its director, Agnes Nanushisa, the TFC's role is to support cooperatives and represent smaller ones in order to ensure that their needs are being met. They train and educate farmers and cooperative members in order to improve farming methods and to run cooperatives more efficiently, as well as assist cooperative societies in finding markets for their produce and inform societies of how political policies may impact them. While they are economically stable as they possess many land holdings, their budget is quite low and they are severely understaffed, having only 18 workers, when at one time the TFC had 300. Ideally, she would like to have at least one representative in every regional zone. This has not been addressed in the Cooperatives Act of 2003.

In order to attempt to grow and re-establish trust in the movement throughout

Tanzania, the TFC has used media outlets and publications in order to get positive stories
and advertising out to farmers as well as conferences and demonstrations in hopes that
they buy into the changes that have gone on within cooperative societies. The TFC has
also been preaching to existing cooperatives to diversify their production in order to
become more flexible under the liberalized market, something that had been neglected in
the past. Still, despite some positives as well as what appears to be encouragement
emanating from government circles to grow and improve the movement, according to
Nanushisa, the cooperative segment within the department of Agriculture, Food Security,
and Cooperatives is often ignored in favour of departments dealing more with food
security and advanced agricultural technology, and as such the cooperative division of the
department is heavily underfunded.

Along with a lack of government funds, another obstacle that cooperatives will increasingly face is the growing presence of agribusinesses within the country. When asked if the TFC had a stance or policies that planned to address this issue, as well as the advancement of agro-fuels and biotechnology, Nanushisa stated that the organization was somewhat hesitant because the government had no official policy on these issues either.³⁹ While this is certainly true, if one observes the rhetoric stemming from the current administration in the press as well as understanding which direction policies that favour the modernization of the agricultural sector plan to take the country, such as Kilimo Kwanza, Tanzania's expansion into the world of industrialized agricultural is already

³⁹ Interview with Agnes Nanushisa, director of TFC, August 19th 2013, Dar es Salaam, Tanzania.

underway ("Kilimo Kwanza" 5). In this light, the TFC should take more of a position on such an issue and educate farmers on the potential effects that GMOs will have on farming, as well as the ongoing land grabs that are occurring in the country. Perhaps because of their close proximity within government circles, they wish to avoid a potential conflict. Johnston Birchall and Richard Simmons also question the direction and influence the TFC has, describing it as a "hanging structure" because only tobacco remains as an associated apex body, while the cotton, cereals, and coffee members have since collapsed. These authors call for a restructuring of the TFC, but argue this is also unlikely, for the government would be unwilling to turn the organization into a structure that could be better suited for meeting the needs of primary cooperative societies, perhaps because of funding issues, which Nanushia alluded to in our interview earlier (Birchall and Simmons 493).

Instead of updating the cooperative sector, the Tanzanian government appears more focused on supporting the growth of agribusinesses. For President Kikwete, if no major adverse side effects can be found by the country's scientists, then he sees is no reason for continuing the current ban on GMOs. In his statement made to the African Green Revolution Forum on September 2012 in Arusha, along with an increase in investment on the research and development of seed technologies, Kikwete also called for a mechanization of agriculture and more use of fertilizers, pesticides, and insecticides to ensure increased agricultural production in the face of climate change, as well as an influx of private sector contributions in hopes of adding more large scale farms and encouragement of agro entrepreneurs (Kikwete). In addition, he praised the recent partnership the country has undertaken with AGRA, which is also in association with the

130

Bill and Melinda Gates Foundation, which has provided funding for research and development on GE crops, as they encourage their usage throughout the continent (Kikwete; "Out of AGRA" 468). The current Minister of Agriculture, Food Security, and Cooperatives echoed this motion, adding that without implementing the improvements that these biotechnologies create, the country's agricultural sector would continue to decline (Majaliwa).

This encouragement is also witnessed in a variety of multimedia platforms dating back to the early 2000s. Many headlines are filled with statements such as,

'Tanzania cannot afford to be left behind in technologies that increase crop yields, reduce farm costs and increase farm profits.' 'Tanzania jumps on the GM bandwagon,' or 'GM crop gets green light in Tanzania,' or 'Tanzania ready to accept GMO technology,' (qtd. in Mugwagwa and Rutivi 104).

Headlines like these clearly indicate which direction the leaders of the country would like to take the nation's agricultural sector. This government initiative is also witnessed in its Kilimo Kwanza policies which are geared towards further encouraging the industrialization of Tanzanian agriculture.

Kilimo Kwanza has eliminated the value added tax (VAT) that it places on intratransport for agricultural products such as sugarcane, sisal, and tea from the farm to the industry for processing (Policy Forum 1). All of these are generally cash crops or cultivated mostly by large scale farmers. Horticultural farming (cut flowers), a growing agricultural export sector, and production for animal feed also receive similar tax breaks. The policy also calls for a duty exemption on the importation of tractors for farms larger than 1.2 hectares, disqualifying many smallholders while favouring large ones (Policy Forum 2).

The goal of Kilimo Kwanza is to modernize the country's agricultural sector and in effect, to jumpstart Tanzania's Green Revolution. However, critics argue that smallholders, who make up the bulk of the agricultural sector, are ignored within the framework of this strategy that instead favours large scale farms, many of whom are foreign owned and operated. According to reporter Edward Qorro of *The Citizen*,

Kilimo Kwanza will never materialise if the peasants, who are the main players, are not fully empowered...farmers would not understand this slogan which they come across on banners and other adverts because they were not fully involved in the first place...the private sector through the Tanzania National Business Council (TNBC) developed Kilimo Kwanza in order to seek financial commitments from government and donors, ostensibly to address lack of transformation of the sector. (Qorro).

If farmers were truly to come first, then this new agricultural policy would be geared towards smallholders, who are the majority. If food security was a top priority, perhaps subsidies would go towards paying local farmers to stock the country's grain reserves as oppose to providing tax breaks for large scale mechanization. However, just as policies of the past ignored the needs of the peasantry, so too does Tanzania's most recent one as large scale agro-businesses pose a serious threat to the welfare of smallholder farmers. Coinciding with the proposed expansion of industrialized agriculture are also developments of biofuels and the aforementioned GMOs.

Perhaps the worst case to date involving the expansion of biofuels that also demonstrates the disastrous effects of agribusiness growth on smallholder farmers involves AgriSol Energy LLC, an American based firm working with a few Tanzanian businesses and investment groups, as well as Iowa State University. Their plan is to

⁴⁰ Interestingly, neoliberals seem to have no problem providing tax breaks in order to encourage large scale farming operations, but cringe at the idea of financially supporting a nation's grain reserves.

develop an agricultural project cultivating over 325,000 hectares in the Kigoma region, which lies on the shores of Lake Tanganyika (The Oakland Institute 2). According to AgriSol's own website, the project itself is to assist in the transfer of agricultural knowledge and technology to existing smallholder farmers, creating new markets, prosperity, and food security in Tanzania. Through state-of-the-art, large scale farming practices, and modernized seeds and inputs, AgriSol plans to grow maize and soybeans for Tanzanians, to be stored and used to produce added value products like animal feed, cooking oil, and protein-rich meats, first with poultry and later beef, eventually to be exported to neighbouring countries (AgriSol).

According to The Oakland Institute, a policy think tank that focuses on encouraging public participation and fair debate on critical social, economic, and environmental issues, the commercial agricultural development project in Kigoma is also looking to expand its operations into biofuel production, with the entire procedure potentially displacing more than 160,000 refugees from neighbouring Burundi who have called the area home for close to 40 years (The Oakland Institute 2). The project itself is a part of Kilimo Kwanza's plans of modernizing Tanzanian agriculture and was enticed by the government who offered the refugees full citizenship rights and \$200, only after they agreed to dismantle their homes and depart from the land they now called home (The Oakland Institute 2). Plans for their removal occur despite the fact that these farmers are highly productive, producing over 40% of the district's food, while only occupying 4% of the land (Rather 10).

These developments of what Marx called "primitive accumulation" pose serious challenges to the health and welfare of the peasantry in Tanzania. Despite the increasing

risks, the government seems ill prepared, as awareness of these activities persist without proper legislation to regulate these initiatives — which even Paul Collier warned would negatively impact the peasantry (Sulle and Nelson 30; Collier 73). In 2006, the government established a National Biofuels Task Force (NBTF) in an effort to promote the development of a biofuel policy in the country, which completed its draft in 2008. It has yet, however, to be formally adopted (Sulle and Nelson 32). Ultimately, the Tanzanian government will need to create a land tenure policy that clearly outlines its policies on land ownership in conjunction with biofuel production.

Land tenure in Tanzania is currently categorized under the country's Land and Villages Acts of 2001. Under these Acts, land is classified as either reserve, village, or general. Reserve lands are conservation areas, national parks, and game reserves while village lands are defined under the Village Act as customary lands managed by village councils, whose borders are defined by local governments, of which legislation dates back to the 1970-80s. General land is any land which is neither reserved nor village, but confusingly can include village lands that are deemed unoccupied or unused (Sulle and Nelson 38). This lack of clarity, as well as the role in which the President can play in this categorization process has led to some controversy.

Under decree of the President, who is the trustee of all lands owned by

Tanzanians, village lands can be transferred into general or reserved lands if deemed in
the "public interest," which can include "investments of national interests" (Sulle and
Nelson 37; Mousseau and Mittal 10). While terms of ownership may vary, the President
has the authority to offer land deeds for 33, 66, or 99 years, which can be renewed
(Maghimbi, Lokina, and Senga 50). Once villagers are compensated, foreigners are then

able to purchase the newly declared general lands. The classification of general lands, however, does not cover usage, and thus the occasional use of these areas by pastoralists or surrounding communities who depend on grazing and forest areas for their livelihoods can go ignored or unnoticed (Sulle and Nelson 38). It is this grey area that has also been the primary focus of land acquisitions and a prime example of the glaring weaknesses within the country's Land Tenure laws (Sulle and Nelson 46). The Land Act itself tries to administer land to make available for private ownership and foreign investment, while the Tanzanian Investment Centre (TIC) is responsible for declaring which land falls into which category. Described as a "land bank" or a "one-stop shop" for land acquisitions, foreign investors must go through the TIC to obtain land (Mousseau and Mittal 10; Sulle and Nelson 38-39). Thus, while customary lands are seen as equal to lands that are granted and titled under the law, it appears that the state, just as the government did under colonial rule, can still intervene to confiscate lands in favour of promising business ventures that are supposedly in the nation's best economic interests.

One such example involves 11 villages in Kisarawe, located Southwest of Dar es Saleem, that sold over 8,000 hectares of land to British owned Sun Biofuels for biofuel production in 2009. Villagers agreed to the sale when the company promised to give compensation and provide over 1000 jobs that would be associated with the cultivation of crops, mainly jatropha, for biofuel production. In order to complete the deal, the government, in the nation's "public interest," converted village land to general land, leaving it in control of the government, leased out to the company for a period of 99 years, so it could begin to produce biodiesel for European markets (Wise).

The business venture, however, was a complete bust, largely because the company, like many others before it, believed in the myth of jatropha. Considered a miracle biofuel crop because it is inedible, it can potentially be produced without taking away from the food supply, while also being able to grow in semi-arid conditions where most plants cannot survive. Many companies and countries throughout sub-Saharan Africa have also jumped at this potential revenue stream. However, although it can grow in semi-arid conditions, it still requires water and nutritious soils to flourish, which means it does, in fact, compete with other food crops for these resources. By 2007-2008, most companies who had jumped on the bandwagon were off soon after, as it did not produce high enough yields (Charles; "Jatropha" 28-29, 35-36, 39-40). Sun Biofuels, however, continued to believe in this myth, and in 2014, the villagers are still left with 5,000 unusable jatropha trees, who are guarded by security to keep them off the land they used to own (Wise).

Worse still, most of the land acquired in the deal was a forested area, the villagers' primary source of food and income, which was removed to pave the way for biofuel production that ultimately did not produce the desired returns. Too add, the company has recently transferred its lease not to the villagers, but to another company, Mtanga, who has "overlapping shareholders" with Sun Biofuels. While villagers are still demanding they receive compensation, Mtanga objects, stating that they are not obligated to keep Sun Biofuels' commitment. The current land owner plans to maintain the jatrohpa trees while adding 1,200 head of cattle, and is partnered with the SAGCOT project (Wise).

While biofuel production is only beginning in Tanzania, it is not the only controversial issue surrounding the country's agricultural sector that is an extension of agribusiness. GMOs, as mentioned earlier, are being encouraged by the current administration to be adopted in order to increase yields for both large and small scale farmer alike. But like biofuel production, adoption of this element of modernized agriculture must be closely analyzed in order to fully uncover if it really benefits smallholders as well as having a positive impact on Tanzania's food security.

According to scientist Dr. Fred Tairo, Tanzania is currently testing two GM crops, water efficient maize and GM cassava. WEMA (Water Efficient Maize for Africa) is in the field trials stage while cassava is still undergoing tests in the lab at the Agricultural Research Institute in Dar es Salaam to see if scientists can create cassava varieties that are resistant to both brown streak and mosaic diseases. The two diseases are said to be responsible for wiping out up to 80% of farmer's yields in some areas, and is spreading with great speed across sub-Saharan Africa (Faul). After touring the year old lab, decorated with pictures of Bill and Melinda Gates to witness what is truly a fascinating scientific operation, Dr. Tairo, who is an assistant to Dr. Ndunguru who heads the operation that focuses on GE cassava, explained to me in our interview the process of creating GM crops. According to Dr. Tairo, a genetically modified organism is one that is

_

⁴¹ The project known as WEMA is conducted in cooperation with Monsanto, and is funded by the Bill and Melinda Gates and Warren Buffet Foundations. The field trials are currently being conducted in Dodoma, Tanzania (AATF). According to Joseph Mihangwa, director of SHIRECU, in our interview he mentioned that Bt cotton has also found its way into Tanzania and has not done well in some regions. The seeds as well as necessary inputs for smallholders have also been too expensive, and peasants are resisting the technology. While this cannot be confirmed, reports indicate that the country is looking to produce Bt Cotton by 2020 (Interview with Joseph Mihangwa, Director of SHIRECU, July 31st 2013, Shinyanga, Tanzania; "GM Cotton").

infused with a single gene (it can be more but this complicates things) from another variety within that species, typically a plant or in this case, the virus itself, in hopes that this will give the genetically altered variety a desired trait such as requiring less water to germinate or to create a variety immune to a specific disease or chemical. The full process from beginning trials to commercial availability can take anywhere from 7-10 years.

Although our interview was mostly based on the science behind the biotechnology, I also asked if alternative methods were being used to counter the spread of these diseases in order to discover, as Shiva and other food sovereignty advocates argue, that biodiversity is the planet's greatest asset in fighting against disease, hunger, and climatic change. According to Dr. Tairo there are, in fact, multiple traditional varieties of cassava that are proving to be resistant to the two viruses effecting the crop, such as improved varieties known as kiroba which are fairly resistant to brown streak while many varieties have been found to be resistant to the mosaic virus. Other varieties have also proven to be successful in halting the spread of the diseases, as well as methods such as improved field hygiene which have been successful in quelling the viruses in parts of Tanzania, Uganda, Kenya, Malawi, and Mozambique (Omongo 10-12). The method of breeding improved traditional varieties also take less time to create than developing a genetically modified version. According to Dr. Tairo, around 3-5 years are needed to create a naturally improved variety which would also require undoubtedly less

resources to support. In closing, Dr. Tairo stressed that GM crops were not the cure to hunger, but are meant to complement other foods in the fight for global food security.⁴²

Acknowledging the fact that natural varieties of cassava that are proven to be resistant to the brown streak and mosaic diseases exist should be explored further and should also eliminate the need to create an expensive and time consuming GE cassava that does the same as a naturally created improved variety. However, the country as well as others within sub-Saharan Africa continue to try and develop this biotechnology that is arguably wasting valuable resources that are needed elsewhere.

But just as big business controls the food market, so too does big money control the developmental discourse. Large amounts of money that are funding the development of the biotechnology, seen as the backbone to Africa's Green Revolution, are emanating particularly from organizations run by wealthy philanthropists such as the Bill and Melinda Gates Foundation, the Rockefeller Foundation, and the Warren Buffet foundation. All of whom wish to alleviate the world of hunger and poverty, but also align themselves within AGRA and various multinational corporations like Monsanto and Syngenta, that some argue have helped create more hunger and hardship in the first place. The complaint proponents of food sovereignty have is that this biotechnology, which was originally stolen from smallholder farmers, is inaccessible to them and thus paves the way for their demise (*Stolen Harvest* 7-9; ETC Group 13; Patel, Holt-Gimenez, and Shattuck 17).

⁴² Interview with Dr. Tairo, scientist, August 12th 2013, Dar es Salaam, Tanzania.

If Tanzanian scientists are successful and WEMA and Bt cassava are released commercially, it is highly unlikely that peasants will be able to afford this technology let alone the inputs necessary to facilitate its growth. This technology, according to Joel Kalagho of the Swiss Development Agency, is completely out of reach for smallholder farmers, unless of course they are supported by wealthy investors who assist them in adopting the technology. More likely, however, large scale commercialized farmers and projects like AgriSol as well as the SAGCOT will benefit most from these technologies that are in line with and the main beneficiaries of Kilimo Kwanza. As Kalagho told me in a meeting he attended just a few days prior to our interview, the head of SAGCOT was extremely excited about the use of this biotechnology, praising their proposed high yields.⁴³

While the government supports the advancement of modernized agriculture through its Kilimo Kwanza policies, from AgriSol to SAGCOT, to biofuels to the use of GMOs, it counters the very rejuvenation process of cooperatives that it also claims to support and strengthen through its Cooperatives Act of 2003. The emergence of industrialized agriculture, which foresees agriculture as occupying primarily an economic function, runs in direct opposition to the socially organized cooperative societies that offer an alternative form of development that differs from ones headed by big business and big government (Dogarawa 2). While the government maintains it recognizes the need to include smallholder farmers in the development of its agricultural sector, it appears that large scale agricultural projects, and not cooperatives, have been given the

⁴³ Interview with Joel Kalagho of the Swiss Development Agency, August 13th 2013, Dar es Salaam, Tanzania.

opportunity of leading the agricultural "Green" Revolution. This current trend speaks to the privatization of the developmental process that seeks to end both poverty and food insecurity through an economic approach, led by big business, wealthy philanthropists, and the free market, and not by a state whose previous market interference practices were deemed by neoliberals as inefficient.

Within this framework, SAGCOT, a government affiliated project under Kilimo Kwanza, is spearheaded by a "who's who" of corporate agro giants such as Monsanto, DuPont, Syngenta, Yara International, Bayer Crop Science, and Unilever as well as organizations such as USAID, AGRA, and the World Bank, whose goal is to develop Tanzania's fertile Southern corridor (Africa Practice and ESEA).⁴⁴ The project aims to develop its 300,000 km² of land into clusters, combining large and small scale farming methods in order to reach the land's agricultural potential ("Land Draft" 7). Although SAGCOT is in its infancy stages of development, to what extent the role smallholder farmers will play in this arrangement is highly contested.

In its own land development draft, SAGCOT acknowledges the historic failures the country has witnessed from large scale farming schemes, particularly the groundnut scheme highlighted earlier in this thesis, but claims that small scale agriculture has also failed despite being heavily funded. It also sites Kilimo Kwanza's initiatives in encouraging large scale expansion of agriculture, and that it will take, "...particular care to respect the rights and interests of smallholders as well as the environment and wise

_

⁴⁴ Monsanto, DuPont, Syngenta, and Bayer Crop Science represent 4 of the top 10 largest seed companies in the world in terms of percentage of market share and profits generated from seed sales. Bayer is also the world's largest pesticide company while Yara is the second largest fertilizer company. Unilever is today the fifth largest food and beverage firm in the world (ETC Group 11, 15, 17, 21).

management of natural resources" ("Land Draft" 7). As this thesis has shown, however, throughout its history, Tanzania has not supported its peasantry financially but instead has taken the profits it has produced and transferred it to other sectors. Furthermore, as the research paper composed by IAASTD has shown, industrialized agriculture is anything but environmentally friendly, whose expansion is often found to be at the detriment of smallholder farmers (Ludwig).

Dr. Gabagambi of Sokoine University, is also highly skeptical of SAGCOT's claims. In our interview that occurred, fittingly during the Nane Nane celebrations in Morogoro, a weeklong festival promoting and showcasing the advances of Tanzanian agriculture, Dr. Gabagambi explained the role of smallholders within this so called partnership. According to him, smallholder farmers would participate through an out grower program or as contract farmers, as they are to sell their crops to larger farm operations, who provide them with an accessible market. But for the professor of agricultural economics, there is no incentive for large scale farmers to purchase goods from smaller ones if they themselves already cultivate thousands of hectares of land. For him, in this petty relationship, smallholder farmers appear to be mere labourers, who are more likely to be bought out over time.⁴⁵

Those advocating for a food security based approach to Tanzania's food insecurity argue that these out grower schemes will provide small farmers with new crops, farming techniques, and increased incomes as they are provided with a readily accessible market. Indeed, the World Bank itself calls out grower schemes and contract

⁴⁵ Interview with Dr. Gabagambi professor of Agricultural Economics at Sokoine University, August 8th 2013, Morogoro, Tanzania.

farming as a way to link agriculture to the market, and a way out of misery for smallholder farmers (Oya 1). But food sovereignty proponents counter this statement claiming that these projects negatively affect food security, nutrition, income distribution, the environment, and the welfare of labourers and women (Senanayake 1). Indeed, according to researcher S.M.P. Senanayake, multiple studies on the subject around the world have only revealed a few cases where out grower schemes achieved growth without sacrificing their equality objectives (Senanayake 2). Being linked to the development of agribusinesses, in general these initiatives have also been found to produce mostly cash crops for export rather than foodstuffs, placing food security in further jeopardy in various developing countries (Senanayake 17).

Out grower schemes themselves gained popularity in Mexico during the 1980s as a part of the reform process and Western led development strategy under structural adjustment. These programs, similar in appearance to those occurring in Tanzania, teamed foreign based agribusinesses with local peasants that helped the country account for 25% of the United States' fruit and vegetable imports, effectively turning Mexico into America's salad bowl by the early 1990s (Little 4). At the same time, however, food availability in Mexico stagnated after decades of growth, while foodstuffs continued to leave it borders (Sharma and Gulati 3).

For advocates of food sovereignty in Tanzania, the fear is that out grower schemes will have the same effect as they have had in Mexico and elsewhere. Indeed, if one observes not only the large corporations that are participating in SAGCOT and what they practice, but also the intellectual literature this operation is based on, one can conclude that smallholder farmers and food security are likely to be ignored from this

developmental project. In their land development draft, SAGCOT states, "...there is much debate on the comparative advantages of small scale and large scale farming." They then ask readers to observe the various viewpoints by citing examples of works by Binswanger-Mkhize, Vermeulen and Cotula, and Collier, all of whom are proponents of large scale farming operations that at the very least assimilate smallholder farmers into the capitalist mode of agricultural production ("Land Draft" 7). He Furthermore, Andrew Temu, who this thesis mentioned earlier for blaming smallholder farmers for their lack of production due to their small scale operations is, in fact, a SAGCOT board member and as such one can assume that he also has a bias against smallholder farmers (Africa Practice and ESEA). Again, this project is in its early stages of development, and thus how this will effect smallholder farmers exactly remains to be seen. However, as the history of those involved and other large scale agricultural expansions projects occurring throughout the Global South have shown, smallholder farmers may be facing a period of extreme turmoil in the coming years.

_

⁴⁶ While Collier's views on smallholder farmers have already been discussed, Binswanger-Mkhize believes the peasantry should be a part of a solution to food insecurity by being transformed into commercialized farmers. He also encourages a relationship with the private sector and an increased use and research of biotechnology. While he admits that there are risks involved with large scale agricultural expansion, the government can mitigate these dangers by providing favourable macroeconomic policies, adequate infrastructure, a strong human capital base, reasonably competent government administration, and political stability, similar to how governments in Brazil and Thailand have operated (Binswanger-Mkhize, et al. 7, 9, 13, 16-17). In a similar fashion, Vermeulen and Cotula, while highlight the alternative to 'land grabs,' encourage smallholder farmers to be included into relationships with larger agricultural firms in contract farming schemes, joint ventures, management contracts, and new supply chain relationships that bring in both small and large scale farming networks together (Vermeulen and Cotula 3).

Chapter 6: Conclusion

Given the current status of the cooperative movement, cooperative societies also face a future filled with many obstacles and uncertainties both old and new. The most recent challenge to the movement is the emergence of agribusinesses, who alongside cooperatives are being cited by the Tanzanian government and international development agencies as a way of supporting smallholder farmers in their fight against poverty and hunger, which would ultimately assist the nation in solving its issues of food insecurity. As this thesis has illustrated, however, one proposed solution comes in direct conflict with the other. The growth of agribusinesses, who are backed by far greater financial and political support, are seen as an overshadowing force that will eclipse the rejuvenation of cooperatives, which in comparison are seen as being supported by the government largely in rhetoric alone.

The two proposed solutions to Tanzania's food insecurity are not only on opposing sides in practice, but in theory as well, for industrialized agriculture can be seen as a primarily economic, market based solution to food security, while cooperatives, created mainly to benefit its members, are more of a social organization that offer to empower Tanzania's peasants, rather than overpower them. While cooperatives do not play a large role within the literature surrounding food sovereignty, in Tanzania they have a history of supporting the peasantry, enabling them to surpass the barriers that impede their development. Since they have played such an important role in assisting smallholder farmers, an integral part of food sovereignty, cooperatives must be included in this instance within food sovereignty circles, particularly because they can be seen as an

alternative to industrialized agriculture, which jeopardizes the socio-economic and cultural existence of the peasantry.

While proponents of food security deny this, claiming that peasants will be included in commercialized farming operations through contract farming and out grower schemes, this thesis has shown otherwise. By illustrating other examples within the Global South as well as in the early developments of industrialized agriculture in Tanzania, smallholders outside these schemes are threatened by their expansion. Their participation within these schemes is also limited, both in the number of smallholder farmers that are included in these operations, as well as in what role they are likely to play, having their fate ultimately decided by their larger and more powerful business partner. As a result, with agribusinesses gaining a greater hold on Tanzanian agriculture, despite making up the majority of the population, the peasantry appears to be marginalized from the country's current path towards development.

While cooperatives do offer an alternative solution to developmental hurdles surrounding the country's rural population, given the current policy environment in which cooperatives must operate, this thesis argues that the cooperative movement is, at this time, largely dormant. While there may be some positives, overall the movement is stifling, hindered by a lack of government support, financial troubles that have existed since being reinstated in 1984, and because they have to compete in a liberal market alongside well-established agribusinesses. While it is believed that a comeback is still possible, the policy environment must change to allow cooperatives to enjoy the same advantages as it did in the past, in particular its monopoly status on purchasing crops and to receive financial backing from the state, in order to be viable once more. Cooperatives

themselves must also maintain the principles outlined by the ICA in order to clamp down on corrupt administrators who in the past, ran cooperatives for their own benefit, and not for its members. Providing members with powers of removing managers who abuse their power is vital to any cooperative comeback. As mentioned earlier, according to Hamer, individualism and petty corruption are commonly cited as a social weakness within cooperatives, which he argues has been present since the introduction of the cash economy (122). In an effort to clamp down on such incidences, Hamer suggests weekly or bi-weekly meetings, with members actively participating in decision making in order to curb power from administrators and return to the "grass-roots" objectives that many of these organizations were formulated upon, having been born out of discontent (113, 121, 127). The state must also, as Coulson argues, assist when necessary, but ultimately maintain somewhat of a distance from cooperatives and the peasantry, and forgo the belief that bureaucrats alone hold the key to agricultural development ("Agricultural Policies" 96).

Until cooperatives are provided with an environment they can thrive in, judging by the current direction of the country's agricultural policies as well as the existing economic climate within the country, agribusinesses and not cooperatives will have a greater impact on smallholder farmers. If the rhetoric of these agribusinesses does, in fact, ring true, then the peasantry could become engulfed in the agro-industrial complex, and the industrialization of the peasantry will have taken place. Some, particularly those in the government, as well as international organizations and academics may welcome this modernization of the country's agricultural sector, believing that development and

food security has finally taken root, even in the most isolated and impoverished rural areas of Tanzania.

But what is more likely to occur is that hundreds of thousands of peasants will lose their lands to the massive agricultural expansionist projects, with more looming on the horizon. What reaction from the peasantry this will invoke exactly remains to be seen. However, if one can observe the riots that occurred in May 2013, in Mtwara, perhaps a glimpse into the future can come to light. In Mtwara, hundreds of locals took to the streets in protest over the government's decision to build a pipeline that would bring oil to Dar es Salaam, to be used to power the commercial capital, instead of developing the area where the resource had been found. In clashes with polices, a handful of protesters were killed while a few buildings and homes were vandalized and burned. Civil unrest has been growing in other parts of the country as well, as a younger, more educated populace slowly emerges, hungry for change (Guardian Correspondent).

Bringing this example to agriculture, the reason for contention here is not oil, but soil, or more appropriately, the land that is and has been cultivated by smallholder farmers for millennia. As more and more peasants begin to lose their land, violence is a potential rebuttal. Indeed, in October 2013, pastoralists in the Morogoro region who have lived in the area for decades threatened to take up arms against the government if they did not return their livestock after sweeping them off their lands (Balaigwa). These violent threats may also increase further given the fact that there is an ever widening gap between the rich and the poor, rated the second largest in East Africa behind only Burundi, while food insecurity remains at dangerously high levels, as the process of deagrarianization continues. For Deborah Bryceson, unlike in the West, urban employment opportunities

are not as abundant in the Global South, leading to a swelling of urban slums, caused either by rural dwellers hoping to discover greater fortunes in the city, or because peasants have been forcefully removed from their lands by the expansion of modernized agriculture, possibility adding to the discontent in these regions, posing a potential socioeconomic disaster in the future (David; Swenya, Kabisama, and Kipobota 178; "Deagrarianization" 102). Currently, according to a World Bank report, poverty levels, while showing a slight decline recently, remain the same as they did in 2000-01. Around 12 million people, close to 27% of the population are living below the poverty line, while 4.2 million people, or close to 9% of Tanzanians, live in extreme poverty with barely enough food to survive. 47 Many people, particularly those in rural areas, have also not benefitted from any recent economic growth that has occurred in the country, as this has largely been driven by non-labour intensive sectors in urban areas, such as the tourism and service industries ("Economic Update" viii, 20).

In addition to the continuing high rates of poverty and hunger, as well as the potential removal of rural inhabitants from their lands due to the expansionist practices of industrialized agriculture, there is also the likelihood that more food and wealth will leave the country, at the hands of agribusinesses and the market that advocates of food security champion. In both platforms of SAGCOT and AgriSol, two of the country's largest commercial agricultural projects, cash crop production was seen as a staple for their respective schemes (Africa Practice and ESEA; AgriSol). Ramping up agricultural exports is also highlighted in the government's policies of Kilimo Kwanza, as well as

4.

⁴⁷ The poverty line in Tanzania is the equivalent to \$22.4 per month while the extreme poverty line is equivalent to \$16.1 per month and per adult ("Economic Update" 20, 60).

within its own National Strategy for Growth and Reduction of Poverty, referred to in KiSwahili as MKUKUTA. According to the report,

...the [agricultural] sector has been identified as a growth driver. The diverse climatic zones provide potential for many crops, livestock and forestry products, as well as sufficient water for irrigation and livestock, and large size of arable land. Thus, given its role in supporting the rural poor and in reducing malnutrition, agriculture has the potential of lifting many of the poor out of poverty. Moreover, increased food demand in neighbouring countries provides further opportunities for agriculture to expand and increase exports to these countries (Ministry of Finance 7).

These initiatives, calling for an increase in food exports while at the same time the country continues to suffer from food problems of its own, suggests that obtaining food self-sufficiency and feeding its people is not a priority. Instead, Tanzania continues to gear its agricultural sector towards the global market, maintaining a food security based approach, and will thus likely retain its food insecurity. Profit security for the food industry is prioritized over the food needs of the people. As private entities are further welcomed, this mantra is only likely to spread.

As food insecurity is expected to continue and even increase under such practices, discontent and anger will also likely escalate. I witnessed such heated opposition firsthand when attending a smallholder farmer conference in Morogoro as a part of the Nane Nane celebrations, held by MVIWATA, where invited speakers voiced their displeasure to an audience of around 1,000 farmers. Dissatisfaction over government policies dealing with export bans, failed fertilizer subsidies, as well as market isolation were some of the many points of disgruntlement and some of the approximate causes for their hardship. Two speakers in particular spoke of the ills of neoliberalism and trade liberalization, arguing that they were the real reasons for why poverty persisted for these

rural farmers, and why a country where the majority of people farm continued to remain food insecure. They also spoke of poor government policies, corruption, and land grabbing as attacks towards the peasantry, and how they and other global organizations favoured large scale agribusinesses over them. In retaliation, these speakers spoke of rebellion, even armed revolt towards a government that they say, does not speak for them or care about the plight of smallholder farmers in Tanzania.⁴⁸

It may be a little presumptuous to think that a few passionate speeches will spark a violent uprising, but it does bring Raj Patel and Eric Holt-Gimenez's point to the forefront. For them, Africa is a critical battleground for finding any sustaining solution to global hunger. Adding that the fight for food sovereignty within African countries parallels Africa's fight for independence, could also ring true for the plight of cooperatives in Tanzania, who were also instrumental in the country's independence movement in the 1950s (Holt-Gimenez and Patel 130, 132; Iliffe 57). The current environment for cooperatives is not suitable for a sustainable return, but as opposition towards the country's existing direction persists, a return to a more apt climate may be in the distance. Although down on the cooperative movement, Joel Kalagho of the Swiss Development Agency did state that the spirit of cooperatives was still alive, just not in a conducive setting to support farmers given its disadvantageous position within the free market. The cooperative movement may be in hibernation right now, but if the peasantry is successful in obtaining a hold on the direction of the country's agricultural

⁴⁸ MVIWATA Conference, July 24th, 2013, Morogoro, Tanzania.

⁴⁹ Interview with Joel Kalagho of the Swiss Development Agency, August 13th 2013, Dar es Salaam, Tanzania.

sector, cooperatives could once again return to a position of prominence, if a change in policies occur.

While such a transition may seem radical, it is not without precedent. Prior to 1989, Cuba was regarded as having the most industrialized agricultural sector in Latin America. Being dependent on the Soviet Union for modern farming technologies and equipment, however, left Cuba without its agro-inputs and oil supplier after its collapse at the end of the Cold War, forcing the country to find an alternative farming model in the midst of the economic and food security crisis it now found itself. Among the major policy changes within the government's *Special Period* was a radical transition toward sustainable agriculture, based on the principles of agro-ecology, with smallholder farmers being the main producers of food, overtaking lands that had gone unused or even occupied by large scale farms. Dubbed the "Revolution within a Revolution," the state was pivotal in assisting the peasantry, as cooperatives provided an organized mode of production while peasants received subsidized farming inputs and extension officers to guide production, provided by the government (Nelson et al. 233-235, 237-238).

Tanzania's own cooperative movement was also born out of necessity, as the British issued cooperatives as a way of easing discontent within the peasantry. Smallholder farmers were frustrated, as middlemen exploited them by offering unfair prices for their produce, forcing the colonial administration to allow cooperatives to facilitate the needs of locals by providing them with better prices and readily available markets, in the hopes of increasing production and preventing a potential revolt. Having achieved initial success, the movement spread alongside colonial administrative support, even though these societies would help foster and grow Tanzania's drive away from

European rule (Iliffe 57; Lyimo 40, 46). After independence, the state provided cooperatives with a monopoly over certain crops, providing them with the support they needed to then insulate their members, and peasants received the goods and services they required to improve their standard of living.

While not operating under a food sovereignty framework initially, as they were used to ensure high production levels that would ultimately benefit their colonial masters, and later the interests of Tanzania's urban classes after independence, these organizations still greatly assisting improving the wellbeing of the peasantry. Members benefitted from using cooperatives in a variety of ways, as they were able to profit from the use of bulking and storage facilities, while previously isolated farmers were able to gain access to markets in order to sell their perishable goods (Msambichaka 121; Chambo 6). In the early 1970s, however, under its Ujamaa policies, government administrators began to infiltrate these organizations on the grounds of curbing corruption, but more so because they wished to drain the surpluses accumulated by these societies that were increasingly seen as a capitalist threat to the state's socialist agenda, which caused cooperatives to falter. While they were later abolished in 1976, only to return in the early 1980s, cooperatives have never been able to recapture their position of strength within a liberalized market.

In 2014, that liberalized market remains, and since its unfavourable for cooperatives to operate in, a comeback under such conditions is highly unlikely. With this in mind, if cooperatives are to return to a position of prominence within the agricultural sector, it will not be under a colonial framework, or an overbearing government, or a state that is guided by the principles of the free market, but under the direction of a state that

adheres to the needs of its disenfranchised peasantry. Perhaps, as the growth of agribusiness continues, political opposition within the country will grow, forced to adhere to the rising civil unrest emanating from smallholder farmers, who are fighting for an alternative form of development. Under such a scenario, allied with potential policy makers that operate under the guidance of food sovereignty, cooperatives could again enter the fray once more. For now, however, peasants will have to endure in the competition for their land with emerging agribusinesses, until they are able to cooperate within the agricultural sector once more.

Work Cited

- AATF-Africa. WEMA: Project Brief. Web. 2012. Accessed: 22 September 2013. http://wema.aatf-africa.org/project-brief>
- Abbott, Charles. "Monsanto exec, other biotech pioneers win World Food Prize." *Reuters*. Web. June 19, 2013. Accessed: 24 January 2014. http://www.reuters.com/article/2013/06/19/usa-food-biotechnology-idUSL2N0EV1CT20130619>
- ActionAid. "Implication of Biofuels Production on Food Security in Tanzania." *ActionAid Tanzania*, 2010: 1-100.
- Africa Practice and ESEA. "SAGCOT: Private Sector Investment Opportunities." Web. 2014. Accessed: 12 January 2014. http://www.sagcot.com/resources/downloads-resources/?no_cache=1&sword_list%5B0%5D=export
- AgriSol Energy Tanzania Limited. "FAQ." Web. 2012. Accessed 19 September 2013. http://www.agrisoltanzania.com/faq_files/29107bda145fda484d516bfc699f83af-0.html
- Akram-Lodhi, Haroon. *Hungry for Change: Farmers, Food Justice, and the Agrarian Question*. Halifax: Fernwood Publishing, 2013. Print.
- Altieri, Miguel, A. "Linking Ecologists and Traditional Farmers in the Search for Sustainable Agriculture." *Front Ecology Environment*. 2(1), 2004: 35-42. Print.
- Balaigwa, Ashton. "Pastoralists vow to recover confiscated cattle by arms." *The Guardian*. Web. October 12, 2013. Accessed: 12 January 2014. http://www.ippmedia.com/frontend/index.php?l=60313
- Banturaki, Jovin, A. "Tanzanian Cooperatives: Their role in Socio-Economic Development." *Co-operative Enterprise Development Centre*. October 2, 2012: 1-31. Print.
- Bates, Robert, H. Markets and States in Tropical Africa: The Political Basis of Agricultural Policies. Berkley: University of California Press, 1981. Print.
- Beauregard, Sadie. "Food Policy for People: Incorporating Food Sovereignty Principles into State Governance: Case Studies of Venezuela, Mali, Ecuador, and Bolivia." *Urban and Environmental Policy*. April 2009: 1-94. Print.
- Bello, Walden. The Food Wars. London: Verso, 2009. Print.

- Bernstein, Henry. "Food Sovereignty: A Skeptical View." Conference Paper for *Food Sovereignty: A Critical Dialogue*, September 14-15, 2013: 1-38. Print.
- Bernstein, Henry and Terence J. Byres. "From Peasant Studies to Agrarian Change." *Journal of Agrarian Change*. Vol. 1, No. 1, January 2001: 1-56. Print.
- Bibby, Andrew. "Tanzania's Cooperatives look to the Future." *International Labour Organization*. January 2006: 1-36. Print.
- Bienefeld, Manfred. "Structural Adjustment and Rural Employment in Tanzania." November 7, 1989: 1-64. Print.
- Binswanger-Mkhize, Hans P., et al. "The Growing Opportunities for African Agricultural Development." *ASTI*. December 5-7, 2011: 1-30. Print.
- Birchall, Johnston, and Richard Simmons. "The Cooperative Reform Process in Tanzania and Sri Lanka." *Annals of Public and Cooperative Economics*, Vol. 81, No. 3, 2010: 467-500. Print.
- Borras, Saturnino M Jr., Philip McMichael, and Ian Scoones. "The politics of biofuels, land and agrarian change." *The Journal of Peasant Studies*, Vol. 37, No. 4, 2010: 575-592. Print.
- Bryceson, Deborah. "Deagrarianization and Rural Employment in sub-Saharan Africa: A Sectoral Persepctive." *World Development*, Vol. 24, No. 1, 1996: 97-111. Print.
- Bryceson, Deborah. *Liberalizing Tanzania's Food Trade: Public and Private Faces of Urban Marketing Policy 1939-1988*. Dar es Salaam: Mkuki na Nyota Publishers, 1993. Print.
- CBC News. "Canada Wrestles with Bee-Killing Crop Pesticides: Government Recommends Mitigation Measures, not Ban." *CBC News*. Web. May 3, 2013. Accessed 19 September 2013. http://www.cbc.ca/news/technology/canada-wrestles-with-bee-killing-crop-pesticides-1.1319100>
- Chambo, Suleman, A. "Agriculture Co-operatives: Role in Food Security and Rural. Development." *Paper Presented to Expert Group Meeting on Cooperatives Held on 28-30 April*, 2009. 1-13. Print.
- Chang, Ha-Joon. *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism*. New York: Bloomsbury Press, 2008. Print.

- Charles, Dan. "How a Biofuel Dream Called Jatropha came Crashing Down." *The Salt*. Web. August 21, 2012. Accessed 16 September 2013. http://www.npr.org/blogs/thesalt/2012/08/22/159391553/how-a-biofuel-dream-called-jatropha-came-crashing-down>
- Chayanov, Alexander. *Theory of Peasant Cooperatives*. Translated by David Wedgwood Benn. Ohio: Ohio State University Press, 1991. Print.
- Chiwambo, Yakobe. "AGRA to empower 4000 small farmers." *The Guardian*. Web. January 27, 2014. Accessed: 9 February 2014. http://www.ippmedia.com/frontend/index.php?l=64144
- Clover, Jenny. "Food Security in Sub-Saharan Africa." *African Security Review*. Vol. 12, No. 1, 2003: 1-15. Print.
- Cole, Roy and H. J. de Blij. *Survey of Sub-Saharan Africa: A Regional Geography*. Oxford: Oxford University Press, 2007. Print.
- Collier, Paul. "The Politics of Hunger: How Illusion and Greed Fan the Food Crisis." *Foreign Affairs*, Vol. 87, No. 6 (November/December 2008): 67-79. Print.
- Commander, Simon. Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America. London: Overseas Development Institute, 1989. Print.
- Compact Technologies LTD. "Past, Present, and Future." Web. 2013. Accessed 17 January 2014. http://www.tsbtz.org/index.php/about-us/past-present-future
- Cool Foods Campaign. "Another Take: Global Warming and Your Food." *Food, Inc.* Ed. Karl Weber. New York: PublicAffairs, 2009. 119-122. Print.
- Coulson, Andrew. "Agricultural Policies in Mainland Tanzania." *Review of African Political Economy*. No. 10, 1977: 74-100.
- Coulson, Andrew. "Kilimo Kwanza: A New Start for Agriculture in Tanzania?" *Institute of Local Government Studies*. Nd. 1-8. Print.
- CRMP. "The Cooperative Reform and Modernization Program: 2005-2015." *The United Republic of Tanzania*. April 2005: 1-37. Print.
- Crowley, E.L., Ilaria Tercelli, and Nora Ourabah Haddad. "Annual Report on FAO Activities in Support of Producers' Organizations and Agricultural Cooperatives." *FAO*, 2011: 1-116. Print.

- Cummings, Ronnie. "Another Take: Hazards of Genetically Engineered Foods and Crops: Why We Need a Global Moratorium." *Food, Inc.* Ed. Karl Weber. New York: PublicAffairs, 2009. 79-90. Print.
- Cupp, Krista. "Tyson Foods and World Vision Partner to Fight Hunger in Tanzania." *Global Newswire*. Web. September 25, 2013. Accessed: 10 June 2014. < http://phx.corporate-ir.net/phoenix.zhtml?c=65476&p=irol-newsArticle&ID=1858005&highlight=>
- Daily News. "Tanzania mulls growing genetically modified cotton." *Daily News*. Web. May 8, 2013. Accessed: 22 January 2014. http://dailynews.co.tz/index.php/parliament-news/17185-tanzania-mulls-growing-genetically-modified-cotton
- Daily News. "Thieving coops come under fire." *Daily News*. Web. July 26, 2013. Accessed: 23 January 2014. http://archive.dailynews.co.tz/index.php/local-news/20355-thieving-coops-come-under-fire
- David, Correspondent. "Rich, poor gap growing in East Africa report." *The Guardian*. Web. December 4, 2013. Accessed: 14 January 2014. http://www.ippmedia.com/frontend/?l=62262>
- Davidson, Basil. *The Search for Africa: History, Culture, Politics*. Toronto: Random House, 1994. Print.
- Davis, Mike. Planet of Slums. New York: Verso, 2006. Print.
- Dembele, Demba. "Burkina Faso: Thomas Sankara's Revolutionary Legacy Lives On." *Green Left Weekly*. Web. December 9, 2009. Accessed: 11 July 2014. https://www.greenleft.org.au/node/42930>
- De Schutter, Olivier. United Nations General Assembly, Human Rights Council. *Report submitted by the Special Rapporteur on the right to food*. December 20, 2010: 1-21. Print.
- DFID. "Working with Co-operatives for Poverty Reduction." *Briefing Note: DFID.* 2010: 1-19. Print.
- Dixon, et al. "Feed, Food, and Fuel: Competition and Potential Impacts on Small-Scale Crop-Livestock-Energy Farming Systems." *CGIAR Systemwide Livestock Programme, Project Report.* SLP, Addis Ababa, Ethiopia: 1-89. Print.
- Dogarawa, Ahmad Bello. "The Role of Cooperative Societies in Economic Development." *Department of Public Administration*. Zaria-Nigeria: 2005: 1-20. Print.

- Ergas, Zaki. "Why Did the Ujamaa Village Policy Fail? Towards a Global Analysis." *Journal of Modern African Studies*, Vol. 18, No. 3, September 1980: 387-410.

 Print.
- Essex, Jamey. "Idle Hands Are The Devil's Tools: The Geopolitics and Geoeconomics of Hunger." *Annals of the Association of American Geographers*, Vol. 102, No. 1, 2012: 191-207. Print.
- ETC Group, 2008. "Who Owns Nature? Corporate Power and the Final Frontier in the Commodification of Life." *Ottawa: ETC Group.* 2008: 3-23. Print.
- FAO. "Agricultural Cooperatives: Key to Feeding the World." *World Food Day*, October 16, 2012: 1-8. Print.
- FAO. "Agricultural Cooperatives are Key to Reducing Hunger and Poverty." Web. Media Centre, October 31, 2011. Accessed: 05 December 2012. http://www.fao.org/news/story/en/item/93816/icode/
- FAO. "Jatropha: A Smallholder Bioenergy Crop." Vol. 8, 2010: 27-53. Print.
- FAO. "Irrigation Technology Transfer in Support of Food Security." Vol. 14: *Water Reports*. Kenya, 1997. Web.
- FAO. "The State of Food Insecurity in the World: How does International Price Volatility Affect Domestic Economies and Food Security?" 2011: 1-55. Print.
- FAO. "The State of Food Insecurity in the World: The Multiple Dimensions of Food Security." 2013: 1-56. Print.
- Faul, Michelle. "Scientists: Cassava Disease Spread at Alarming Rate." *Associated Press*. Web. May 7, 2013. Accessed 18 January 2014. http://news.yahoo.com/scientist-cassava-disease-spread-alarming-rate-155818766.html
- Fausset, Richard. "Mexico monarch butterfly population smallest in years, study says." *LA Times*. Web. March 13, 2013. Accessed 19 September 2013. http://articles.latimes.com/2013/mar/13/world/la-fg-mexico-butterflies-20130314>
- Financial Times. "Africans Sow Seeds of Green Revolution." *Kofi Annan Foundation*. Web. January 2012. Accessed: 31 March 2013. http://kofiannanfoundation.org/newsroom/news/2012/01/africans-sow-seeds-green-revolution

- Food First. "Food First Mission Statement." *Food First/Institute for Food and Development Policy*. Web. 2012. Accessed: 05 December 2012. http://www.foodfirst.org/en/about/mission>
- Freyhold, Miachaela von. *Ujamaa Villages in Tanzania: Analysis of a Social Experiment*. London: Heinemann, 1979. Print.
- Fridell, Gavin. *Alternative Trade: Legacies for the Future*. Halifax: Fernwood Publishing, 2013. Print.
- Friedman, Milton, and Rose Friedman. *Free to Choose: A Personal Statement*. New York: Harcourt Brace Jovanovich, 1980. Print.
- Geest, Willem Van der, and Andreas Kottering. "Structural Adjustment in Tanzania: Objectives and Achievements." *Negotiating Structural Adjustment in Africa*. Ed. Hilary Hodgson. London: James Currey Ltd., 1994. 69-83. Print.
- Gibbon, Peter. "Cooperative Cotton Marketing, Liberalization, and 'Civil Society' in Tanzania." *Journal of Agrarian Change*, Vol. 1, No. 3, 2001: 389-439. Print.
- Gibbon, Peter. *Liberalized Development in Tanzania*. Sweden: Reprocentralen HSC, 1995. Print.
- Gillson, Ian, Steve Wiggins, and Nilah Pandian. "Rethinking Tropical Agricultural Commodities." *DFID*. August, 2004: 1-30. Print.
- Guardian Correspondent. "Kikwete pushes co-op unions to form bank." *The Guardian*. Web. March 21, 2012. Accessed: 17 September 2013. http://www.ippmedia.com/frontend/index.php?l=39697
- Guardian Correspondent. "The untold story of Mtwara gas riots." *The Guardian*. Web. June 30, 2013. Accessed: 17 September 2013. http://www.ippmedia.com/frontend/?l=56502>
- Guriro, Amar. "48.6% Pakistanis suffer from food insecurity: 80 districts out of 131 have inadequate food: moot told." *Daily Times*. Web. June 7, 2013. Accessed: 26 January 2013. http://scope.org.pk/pdf/Pakistanis%20Suffer%20from%20Food%20Insecurity.pd
- Hamer, John, H. "Preconditions and Limits in the Formation of Associations: The Self-Help and Cooperative Movement in Sub-Saharan Africa." *African Studies Review*. Vol. 24, No. 1. March 1981: 113-132. Print.

- Harsch, Ernest. "The Legacies of Thomas Sankara: A Revolutionary Experience in Retrospect." *Review of African Political Economy*. Vol. 40, No. 137. 2013: 358-374. Print.
- Havnevik, Kjell, and Hanne Haaland. "Biofuels, Land, and Environment Issues: The Case of SEKAB's Biofuel Plans in Tanzania." *Biofuels, Land Grabbing, and Food Security in Africa*. Ed. Prosper B. Matondi et al. London: Zeb Books, 2011. 106-133. Print.
- Hayuma, M. and J. Conning. "Tanzania land policy and genesis of land reform sub-component of private sector competitiveness project." *Land Policies and Legal Empowerment of the Poor*, 2-3 November 2006, Washington DC. 1-10. Print.
- Holm, Mogens. "The Impact of Structural Adjustment on Intermediate Towns and Urban Migrants: An Example from Tanzania." *Structurally Adjusted Africa*. Ed. D. Simon et al. Pluto Press: London, 1995. 91-108. Print.
- Holt-Gimenez, Eric. "Biofuels: Myths of the Agro-fuels Transition." *Institute for Food and Development Policy*. Vol. 13, No. 2, 2007: 1-6. Print.
- Holt-Gimenez, Eric. "From Food Crisis to Food Sovereignty: The Challenge of Social Movements." *Monthly Review*. July-August 2009: 142-156. Print.
- Holt-Gimenez, Eric. "Of Myths and Men: Mark Lynas and the intoxicating Power of Technocracy." *Huffington Post: Green.* Web. March 2, 2013. Accessed: 13 January 2014. http://www.huffingtonpost.com/eric-holt-gimenez/of-myths-and-men-mark-lyn_b_2591502.html
- Holt-Gimenez, Eric. "Out of AGRA: The Green Revolution returns to Africa." *Society for International Development*, 51(4). 2008: 464–471. Print.
- Holt-Gimenez, Eric, and Raj Patel. "Food Rebellions!: Crisis and the Hunger for Justice." Oakland, CA: Food First Books, 2009. Print.
- Hyden, Goran. Beyond Ujamaa in Tanzania: Underdevelopment and an Uncaptured Peasantry. London: Heinemann, 1980.
- ICA. "Co-operative identity, values, and principles." *International Cooperative Alliance*. Web. 2014. Accessed: 14 June 2014. http://ica.coop/en/whats-co-op/co-operative-identity-values-principles
- IFAD. "Empowering farmers in Tanzania through the warehouse receipt system." *IFAD: Rural Poverty Portal.* Web. Nd. Accessed: 26 February 2014. http://www.ruralpovertyportal.org/country/voice/tags/tanzania/warehouse>

- IFAD. "Statistics." *IFAD: Rural Poverty Portal*. Web. 2010. Accessed: 13 November 2012. http://www.ruralpovertyportal.org/country/statistics/tags/tanzania>.
- Iliffe, John. "Tanzania under German and British Rule." *Self-Reliant Tanzania*. Ed. Knud Erik Svendsen and Merete Teisen. Dar es Salaam: Tanzania Publishing House Ltd, 1969. 46-62. Print.
- Indexmundi. "Rice Monthly Price US dollars per Metric Ton." Web. 2013. Accessed 22 September 2013. http://www.indexmundi.com/commodities/?commodity=rice
- InvestorGuide Staff. "What are the Most Commonly Traded Commodities?" Web. January 25, 2013. Accessed 27 January 2014. http://www.investorguide.com/article/11836/what-are-the-most-commonly-traded-commodities-igu/
- IRIN. "Biofuel and Food Security." *Au Monitor*. Web. 2010. Accessed: 05 December 2012. http://www.pambazuka.org/aumonitor/comments/431>
- Isinika, Aida, C., et al. "Africa in Transition Macro Study Tanzania: Final Research Report." *Final Research Report*. August 2003: 1-93. Print.
- Jennings, Michael. "Almost an Oxfam in Itself': Oxfam, Ujamma, and Development in Tanzania." *African Affairs*, Vol. 101, 2002: 509-530. Print.
- Jones, Chianu et al. "Soybean Situation and Outlook Analysis: The Case of Tanzania." *Agricultural Research Institute*. 2008: 1-61. Print.
- Kasumuni, Ludger. "Grain reserves too costly, govt told." *The Citizen*. Web. September 12, 2013. Accessed: 26 September 2013. http://www.thecitizen.co.tz/News/Grain-reserve-too-costly--govt-told/-/1840392/1989180/-/n44wvrz/-/index.html
- Kikwete, Jakaya. "Statement by his Excellency Dr. Jakaya Mrisho Kikwete, President of The United Republic of Tanzania, at the Opening of the African Green Revolution Forum." Web. September 27, 2012. Arusha, Tanzania. Accessed: 31 March 2013. http://jkikwete.com/speechz.php?id=1273
- Kurpad, AV, S Muthayya, and M Vaz. "Consequences of inadequate food energy and negative energy balance in humans." *Public Health Nurtrition*: Vol. 8, No. 7A, 2005: 1053-1076. Print.
- Kweka, Josephat. "Trade Performance Review 2005: Tanzania." *University of Dar es Salaam*, 2005: 171-190. Print.
- La Via Campesina. "La Via Campesina: The International Peasant's Voice." *La Via Campesina*. 2011: 1-2. Print.

- Lagi, Marco, Karla Z. Bertrand, and Yaneer Bar-Yam. "The Food Crisis and Political Instability in North Africa and the Middle East." *New England Complex Systems Institute*. September 28, 2011: 1-15. Print.
- Lang, Tim, and Michael Heasman. *Food Wars: The Global Battle for Minds, Mouths, and Markets.* London: Earthscan, 2004. Print.
- Lappe, Anna. "The Climate Change Crisis at the End of Our Fork." *Food, Inc.* Ed. Karl Weber. New York: PublicAffairs, 2009. 105-118. Print.
- Lazaro, Felix. "Smallholders lose land to large-scale farmers: study." *The Citizen*. Web. June 5, 2014. Accessed: 25 June 2014. < http://www.thecitizen.co.tz/magazine/business-week/Smallholders-lose-land-to-large-scale-farmers--study/-/1843772/2338194/-/item/2/-/td06tqz/-/index.html>
- Ledermann, Samuel, T., and Ari Novy. "GMOs and Bt Cotton in Tanzania: The Small Holder Perspective." *ANSAF*, January 2012: 1-38. Print.
- Little, Peter, D. Living Under Contract: Contract Farming and Agrarian Transformation in Sub-Saharan Africa. Madison, Wisconsin: University of Wisconsin Press, 1994. Print.
- Livingstone, Geoffrey, Steven Schonberger, and Sara Delaney. "Sub-Saharan Africa: The State of Smallholders in Agriculture". *IFAD*. Conference on New Directions for Smallholder Agriculture, Rome. 24-25 January 2011: 1-32. Print.
- Liwenga, Emma. "Food Insecurity and Coping Strategies in Semiarid Areas: The Case of Mvumi in Central Tanzania." Stockholm University, 2003: 14-189. Print.
- Loxley, John. Structural Adjustment in Africa. London: MacMillan, 1989. Print.
- Ludwig, Mike. "Monsanto and Gates Foundation Push Genetically Engineered Crops on Africa." *Global Research*. Web. July 12, 2011. Accessed 31 March 2013. http://www.globalresearch.ca/monsanto-and-gates-foundation-push-genetically-engineered-crops-on-africa/25605>
- Lustig, Robert, H., MD. "Fructose: Metabolic, Hedonic, and Societal Parallels with Ethanol." *Journal of the American Dietetic Association*, September 2010: 1307-1321. Print.
- Lyimo, Francis Fanuel. *Rural Cooperation in the Cooperative Movement in Tanzania*. Dar es Salaam, Tanzania: Mkuki na Nyota Publishers Ltd., 2012. Print.

- Machira, Polycarp. "How Africa is entangled in US, Europe's GMOs politics." *The Citizen*. Web. November 28, 2012. Accessed: 05 December 2012. http://www.thecitizen.co.tz/magazines/32-political-platform/27486-how-africa-is-entangled-in-us-europes-gmos-politics.html
- Maghimbi, Sam. "Cooperatives in Tanzania mainland: Revival and growth." *ILO*, 2010: 1-48. Print.
- Maghimbi, Sam, Razack B. Lokina, and Mathew A. Senga. "The Agrarian Question in Tanzania? A State of the Art Paper." *University of Dar es Salaam*, 2011: 1-69. Print.
- Majaliwa, Christopher. "Kikwete wants GMOs taken aboard." *The Daily News*. Web. March 20, 2013. Accessed: 23 March 2013. http://www.dailynews.co.tz/index.php/local-news/15669-kikwete-wants-gmostaken-aboard
- Makoye, Kizito. "Tanzanian Farmers Accuse Biofuel Investors of Land Grab." *Alertnet*. Web. July 18, 2013. Accessed: 27 July 2013. http://allafrica.com/stories/201307191426.html
- Makoye, Kizito. "Water-efficient maize boosts harvests for drought-hit Tanzanian farmers." *Alertnet*. Web. May 14, 2012. Accessed: 28 March 2013. http://www.trust.org/alertnet/news/water-efficient-maize-boosts-harvests-for-drought-hit-tanzanian-farmers/
- MAM. "March Against Monsanto." Web. 2014. Accessed: 25 January 2014. http://www.march-against-monsanto.com/
- Mapolu, Henry. "Tanzania: Imperialism, the State, and the Peasantry." *African Agriculture: The Critical Choices*. Ed. Hamid Ait Amara and Bernard Founou-Tchuigoua. London: Zed Books Ltd., 1990. 138-148. Print.
- Mbiha, Emmanuel, R., and Gasper C. Ashimogo. "Challenges and Opportunities of Organic Agriculture in Tanzania." *Global Agro-Food Trade and Standards: Challenges for Africa*. Ed. Peter Gibbon, et al. London: Palgrave Macmillan, 2010. 101-119. Print.
- Mbunda, Richard. "The Development State and Food Sovereignty in Tanzania." Conference Paper for *Food Sovereignty: A Critical Dialogue*, September 14-15, 2013: 1-23. Print.
- McLaughlin, Paul. "Rethinking the Agrarian Question: The Limits of Essentialism and the Promise of Evolutionism." *Human Ecology Review*. Vol. 5, No. 2, 1998: 25-39. Print.

- McMichael, Phillip. "Food Security and Social Reproduction: Issues and Contradictions." *Power, Production, and Social Reproduction: Human In/security in the Global Political Economy*. Ed. Isabella Bakker and Stephen Gill. Toronto: Palgrave Macmillan, 2003. 169-189. Print.
- Meredith, Martin. *The Fate of Africa*. New York: Public Affairs, 2005. Print.
- Millet, Damien, and Eric Toussaint. Who Owes Who?: 50 Questions About World Debt. Belgium: CADTM, 2004. Print.
- Ministry of Agriculture, Food Security, and Cooperatives. "Follow-up of the Implementation of the World Food Summit Plan of Action." *Government of Tanzania*, June 2006: 1-14. Print.
- Ministry of Finance and Economic Affairs. "National Strategy for Growth and Reduction of Poverty II: National Strategy for Growth and Reduction of Poverty." *Government of Tanzania*, 2010: 1-168. Print.
- Moore, Jason, W. "Ecological Crisis and the Agrarian Question in World-Historical Perspective." *Monthly Review.* 2008: 1-7. Print.
- Mosha, T.C.E., and S. Fungo. "Prevalence of Overweight and Obesity Among Children Aged 6-12 Years in Dodoma and Kinondoni Municipalities, Tanzania." *Tanzanian Journal of Health Research.* Vol. 12, No. 1, 2010: 1-13. Print.
- Mousseau, Frederic and Anuradha Mittal. "Understanding Land Investment Deals in Africa Country Report: Tanzania." *The Oakland Institute*. 2011: 1-59. Print.
- Msambichaka, L.A. "State Policies and Food Production in Tanzania." *The State and Agriculture in Africa*. Ed. Thandika Mkandawire and Naceur Bourenane. London: Codeseria, 1987. 117-143. Print.
- Mtema, Nelly. "Kikwete: We have not grabbed peasants' land." *Tanzanian Daily News*. Web. September 25, 2013. Accessed 29 September 2013. http://www.24tanzania.com/kikwete-we-have-not-grabbed-peasants-land/
- Mtweve, Sturmius. "Warehouse receipt system 'inefficient." *The Citizen*. Web. September 15, 2013. Accessed 26 February 2014. http://www.thecitizen.co.tz/Business/Warehouse-receipt-system--inefficient-/-/1840414/1993340/-/q9wldi/-/index.html
- Mudasia-Mwichuli, Sylvia and Bijan Farnoudi. "Kofi Annan steps down as Chair of AGRA but reaffirms commitment to food and nutrition security in Africa." *News Release*. Geneva/Nairobi, December 16, 2013: 1-2. Print.

- Mugwagwa, Julius T. and Rutivi, Cathy. "Socio-economic impact of GMOs on African consumers." In Buntzel, Rudolf ed. *Genetic Engineering and Food Sovereignty: Reader on Studies and Experiences*. Bonn, Germany: Church Development Service (EED), 2009: 55–66. Print.
- Mujwahuzi, Mark, R. "The Impact of Population Growth on Food Production in Taznania: Problems and Prospects." *Challenging Rural Poverty*. Ed. Fassil G. Kiros. Trenton, NJ: Africa World Press, 1985. 99-115. Print.
- Mungai, Michael. "Why Africans Should Celebrate Thomas Sankara." *The Long Walk to Freedom Continues for the Children of Our Country*. Vol. 17, No. 2, December 2013: 26-27. Print.
- Mung'ong'o, Claude, and Vesa-Matti Loiske. "Structural Adjustment Programs and Peasant Responses in Tanzania." *Structurally Adjusted Africa*. Ed. D. Simon et al. London: Pluto Press, 1995: 159-186. Print.
- Mwalyosi, Raphale, B.B. "Resource Potentials of the Rufiji River Basin, Tanzania." *Ambio*. Vol. 19, No. 1, February, 1990: 16-20. Print.
- Nadeau, E.G., and David J. Thompson. *Cooperation Works! How people are using cooperative action to rebuild communities and revitalize the economy*. Madison, WI: Lone Oak Press, 1996. Print.
- Naerstad, Aksel. "Africa can Feed Itself." The Development Fund, 2007: 1-303. Print.
- Ndeketela, Dorithy. "Tanzania to Import Sugar as Deficit Bites, Pushing up Prices, Inflation." *The East African*. Web. January 19, 2013. Accessed: 18 September 2013. http://www.theeastafrican.co.ke/business/Tanzania-to-import-sugar-as-deficit-bites/-/2560/1669720/-/uux56d/-/index.html
- Nelson, et al. "Institutionalizing Agro-ecology: Successes and Challenges in Cuba." *Agric Hum Values*, Vol. 26, 2009: 233-243. Print.
- New Agriculturalist. "Country Profile: Tanzania." Web. May 2003. Accessed: 14 November 2012. http://www.new-ag.info/en/country/profile.php?a=861>.
- Ngowi, Honest. "Importing food to curb inflation in Tanzania: Good or bad economics?" *The Citizen*. Web. June 9, 2012. Accessed: November 9, 2012. http://www.thecitizen.co.tz/business/13-local-business/23021-importing-food-to-curb-inflation-in-tanzania-good-or-bad-economics.html

- Northern Star Reporter. "Food crisis looms over Northern Tanzania." *The Northern Star*. Web. September 5, 2012. Accessed: 28 November 2012. http://www.northernstartanzania.com/12/index.php/news/2-food-crisis-looms-over-northern-tanzania>
- Nyerere, Julius. "It's Up to Us: Uhuru na Kazi." *Africa Today*, Vol. 8, No. 10, Tanganyika: A Nation Is Born, Dec. 1961: 4-5. Print.
- Oakland Institute. "Understanding Land Investment Deals in Africa: AgriSol Energy and Pharos Global Agriculture Fund's Land Deal in Tanzania." *Land Deal Brief.* June 2011: 1-4. Print.
- Omongo, Chris, A. "Cassava Brown Streak Disease: How does CBSD affect Cassava?" *ASARECA*. Nd.: 1-14. Print.
- Osabu-Kle, Daniel, T. Compatible Cultural Democracy: The Key to Development in Africa. Toronto: Broadview Press, 2000. Print.
- Oya, Carlos. "Contract Farming in Sub-Saharan Africa: A Survey of Approaches, Debates and Issues." *Journal of Agrarian Change*. Vol. 12, No. 1, January 2012: 1-33. Print.
- Patel, Raj. Stuffed and Starved: The Hidden Battle for the World's Food System. Toronto: Harper Collins Publishers Ltd., 2009. Print.
- Patel, Raj, Eric Holt-Gimenez, and Annie Shattuck. "Ending Africa's Hunger: Bill Gates's fortune is funding a new Green Revolution. But is that what Africans need?" *The Nation*. September 21, 2009: 17-23. Print.
- Pawlick, Thomas, F. The End of Food: How the Food Industry is Destroying our Food Supply and What You Can Do About It. Vancouver: Greystone Books, 2006. Print.
- Pesatimes Correspondent. "New Research Pins Land Conflicts on Investors." *Pesatimes*. Web. Nd. Accessed: 25 June 2014. < http://www.pesatimes.com/news/agriculture/new-research-pins-land-conflicts-on-investors>
- Policy Forum. "Do Kilimo Kwanza Exemptions Benefit Poor Farmers?: An analysis of Tanzania's Budget 2010/2011." *Policy Brief.* Vol. 3, No. 10, 2011: 1-2. Print.
- Pratt, Cranford. "Julius Nyerere: Reflections on the Legacy of His Socialism." *Canadian Journal of African Studies*. Vol. 33, No. 1. 1999: 137-152. Print.

- Qorro, Edward. "Activists challenge Kilimo Kwanza drive." *The Citizen*. Web. May 1, 2011. Accessed: 24 November 2012. http://thecitizen.co.tz/business/-/10504-activists-challenge-kilimo-kwanza-drive
- Rather, Dan. "Trouble with the Land." Episode Number: 631. Transcript. September 27, 2011: 1-28. Print.
- REAP. "Chairman's Message." *REAP*. Web. 2012. Accessed 27 September 2013. http://www.reap.com.pk/links/chairman_message.asp
- Rhodes, Rita. "British Co-operative History." *Co-operative Research Unit, Open University, United Kingdom.* 2009: 1-30. Print.
- Roberts, Wayne. *The No-Nonsense Guide to World Food*. Cornwall, UK: New Internationalist, 2008. Print.
- Robin, Marie-Monique. *The World According to Monsanto: Pollution, Corruption, and the Control of our Food Supply*. Paris: Editions La Decouverte, 2008. Print.
- Rodney, Walter. *How Europe Underdeveloped Africa*. London: Penguin Books, 1972. Print.
- Rosset et al. "The Campesino-to-Campesion Agro-ecology Movement of ANAP in Cuba: Social Process Methodology in the Construction of Sustainable Peasant Agriculture and Food Sovereignty." *The Journal of Peasant Studies*. Vol. 38, No. 1, 2011: 161-191. Print.
- Rosset, Peter. "Food Sovereignty and Alternative Paradigms to Confront Land Grabbing and the Food Climate Crises." *Development*, Vol. 54, No. 1, 2011: 21-30. Print.
- Sachs, Jeffrey, D. *The End of Poverty: Economic Possibilities for Our Time*. New York: Penguin Books, 2005. Print.
- SAGCOT. "Investment Blueprint." SAGCOT. 2011: 1-68. Print.
- SAGCOT. "Land Development Draft." SAGCOT. 2010: 1-10. Print.
- Sapsford, David. "Smith, Ricardo and the World Market." *The Companion to Development Studies*. Ed. Vandana Desai and Robert B. Potter. London: Arnold, 2002: 70-74. Print.
- Saul, John. "Marketing Cooperatives in a Developing Country: the Tanzanian Case." *Two Blades of Grass: Rural Cooperatives in Agricultural Modernization*. Ed. Peter Worsley and Ann Allen. Manchester: The University Press, 1971. 347-371. Print

- Scott, James, C. Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed. London: Yale University Press, 1998. Print.
- Sen, Amartya. Development as Freedom. New York: Anchor Books, 2000. Print.
- Senanayake, S.M.P. "Contract Farming and Out Grower Schemes in Less Developed Countries: Definitions, Typologies, and Economic Theories." *University of Colombo Review, Sri Lanka New Series*, Vol.1 No.1, 2006: 1-25. Print.
- Sharma, Pooja and Ashok Gulati. "Approaches to Food Security in Brazil, China, India, Malaysia, Mexico, and Nigeria: Lessons for Developing Countries." *ICRIER Policy Series*. No. 14, March 2012: 1-26. Print.
- Sher, Taneer. "On the Right Track: Rice Exports hit \$1bn mark in 7 Months of FY13." *Daily Times*. Web. March 2, 2013. Accessed 13 September 2013. http://archives.dailytimes.com.pk/business/02-Mar-2013/on-the-right-track-rice-exports-hit-1bn-mark-in-7-months-of-fy13>
- Shivji, Issa, G. *Not Yet Democracy: Reforming Land Tenure in Tanzania*. Dar es Salaam: Hakiardhi, 1998. Print.
- Shiva, Vandana. *Soil Not Oil: Environmental Justice in an Age of Climate Crisis*. Cambridge, Massachusetts: South End Press, 2008. Print.
- Shiva, Vandana. *Stolen Harvest: The Hijacking of the Global Food Supply*. Cambridge, Massachusetts: South End Press, 2000. Print.
- Simbeye, Wa Finnigan. "Tanzania: US Wants African Countries Adopt Dar's Agro-Blueprint." *Tanzania Daily News*. Web. October 19, 2011. Accessed: 24 March 2013. http://allafrica.com/stories/201110200720.html
- Sizya, Mwelukilwa, Joshua. "The Role Co-operatives play in Poverty Reduction in Tanzania." *Paper Presented at the United Nations in observance of the International Day for the Eradication of Poverty*. October 17, 2001: 1-14. Print.
- Stahl, Kathleen. M. *Tanganyika: Sail in the Wilderness*. The Hague: Mounton & Co., 1961. Print.
- Stephens, Hugh, W. *The Political Transformation of Tanganyika: 1920-67.* New York: Frederick A. Praeger, Inc., 1968. Print.
- Sterkenburg, Jan, and Arie van der Wiel. "Structural Adjustment, Sugar Sector Development and Netherlands Aid to Tanzania." *Structurally Adjusted Africa*. Ed. D. Simon et al. London: Pluto Press, 1995. 109-135. Print.

- Sulle, Emmanuel and Fred Nelson. "Biofuels, Land Access, and Rural Livelihoods in Tanzania." *IIED*. 2009: 1-75. Print.
- Svendsen, Eric K., and Merete Teisen. *Self-Reliant Tanzania*. Dar es Salaam: Tanzania Publishing House, 1969. Print.
- Swenya, Armando, Martina M. Kabisama, and Clarence Kipobota. "Tanzania: Stuck in Poverty." *Social Watch*, 2012: 178-179. Print.
- Tanzanian Daily News. "Tanzania: Freeing Agricultural Products Market Bears Fruit Minister." *Tanzanian Daily News*. Web. May 22, 2013. Accessed 15 September 2013. http://allafrica.com/stories/201305220523.html
- Tanzanian Federation of Cooperatives. "A Simplified Guide to the Cooperative Development Policy and the Cooperatives Societies Act of Tanzania Mainland." *Cooperative Development Department*. October 2006: 1-20. Print.
- "Tanzania Market Brief". Pakistan. 2010: 1-5. Print.
- Tchami, Guy. "Handbook on Cooperatives for use by Workers' Organzations." *International Labour Office*. 2007: 1-118.
- Temu, Andrew. "Aid for Trade and Agro-Based Private Sector Development in Tanzania." Paper presented to the *Organization for Economic Co-operation and Development* on Aid for Trade in Doha, November 6-7, 2006. 1-64. Print.
- The Economist Intelligence Unit. "Global Food Security Index." Web. 2014. Accessed: 2 April 2014. http://foodsecurityindex.eiu.com/
- Trading Economics. "Food imports (% of merchandise imports) in Tanzania." Web. November 2012. Accessed: 15 November 2012. http://www.tradingeconomics.com/tanzania/food-imports-percent-of-merchandise-imports-wb-data.htm
- Tran, Mark. "GM crops: African opposition is a farce, says group led by Kofi Annan." *The Guardian*. Web. September 5, 2013. Accessed: 25 September 2013. http://www.theguardian.com/global-development/2013/sep/05/africa-gm-genetically-modified-crops>
- UNDP. "The Millennium Development Goals: Eight Goals for 2015. Web. Accessed: 13 June 2014. http://www.tz.undp.org/content/tanzania/en/home/mdgoverview/
- Uwazi. "Malnutriton: Can Tanzania Afford to Ignore 43 000 Dead Children and TSHS 700 Billion in Lost Income Every Year?" *Policy Forum*, February 2010: 1-12. Print.

- Valdes, Alberto, and William Foster. "Net Food-Importing Developing Countries: Who They Are, and Policy Options for Global Price Volatility." *ICTSD*. Issue Paper No. 43, August 2012: 1-21. Print.
- Vermeulen, Sonja and Lorenzo Cotula. "Making the Most of Agricultural Investments: A Survey of Business Models that Provide Opportunities for Smallholders." *FAO and IIED*, 2010: 1-106. Print.
- Vice President's Office. "National Strategy for Growth and Reduction of Poverty." *Government of Tanzania*, 2005: 1-30. Print.
- Wanyama, Fredrick, O. "Cooperatives for African Development: Lessons from Experience." School of Development and Strategic Studies, Maseno University, Kenya.
- Wanyama, Fredrick, O., Patrick Develtere, and Ignace Pollet. "Reinventing the Wheel? African Cooperatives in a Liberalized Economic Environment." *Annals of Public and Cooperative Economics*. Vol. 80, Issue 3, September 2009: 1-36. Print.
- Weis, Tony. *The Global Food Economy: The Battle for the Future of Farming*. Halifax: Fernwood Publishing, 2007. Print.
- WFP. "Comprehensive Food Security and Vulnerability Analysis: Tanzania 2012." *World Food Program.* September 2013: 1-74. Print.
- Wise, Timothy. "Picking up the pieces from a failed land grab project in Tanzania." *GP Rights*. Web. June 27, 2014. Accessed: 9 July 2014. http://www.globalpost.com/dispatches/globalpost-blogs/rights/picking-the-pieces-failed-land-grab-project-tanzania
- Wobst, Peter. "Structural Adjustment and Intersectoral Shifts in Tanzania: A Computable General Equilibrium Analysis." *International Food Policy Research Institute*, 2001: 1-93. Print.
- Wolter, Denise. "Tanzania: The Challenge of Moving from Subsistence to Profit." *OECD Journal*. 2009: 1-34. Print.
- World Bank. "Agriculture for Development." *The International Bank for Reconstruction and Development*. Washington, D.C. 2007: 1-386. Print.
- World Bank. "Date Page." *Tanzania. 2012 The World Bank Group*. Web. Accessed: 13 November 2012. < http://data.worldbank.org/country/tanzania>.

- World Bank. "Tanzania Economic Update: Raising the Game, Can Tanzania Eradicate Extreme Poverty?" *The World Bank Group*. Issue 4. December 2013. 1-60. Print.
- World Wildlife Federation. "Climate Change Impacts on East Africa: A Review of the Scientific Literature." *World Wildlife Fund.* November 2006: 1-12. Print.
- Yeager, Rodger. *Tanzania: An African Experience*. Boulder, Colorado: Westview Press, 1989. Print.
- Zachary, Pascal. "African Agriculture: A Light at the End of the Tunnel." *The Milken Institute Review: Third Quarter*, 2006: 24-29. Print.

Interviews

Kimaro, Young. Personal Interview. July 18, 2013.

Gabriel, Mambo. Personal Interview. July 18, 2013.

Faraji, Mr. Personal Interview. July 19, 2013.

Faraji, Mrs. Personal Interview. July 19, 2013.

Arusha Farmers. Personal Interview. July 19, 2013.

Munuo, Samy. Personal Interview. July 21, 2013.

MVIWATA Conference, Morogoro, Tanzania, July 24, 2013.

Ally, Haroon. Personal Interview. July 29, 2013.

Mihangwa, Joseph. Personal Interview. July 31, 2013.

Nhobola Farmers. Personal Interview. July 31, 2013.

Mutembei, Mujuni, K. Personal Interview. August 3, 2013.

Anonymous. Personal Interview. August 3, 2013.

Gabagimbi, Damian. Personal Interview. August 8, 2013.

Anonymous. Personal Interview. August 8, 2013.

Mattee, Amon. Personal Interview. August 8, 2013.

Msigwa, Hardari. Personal Interview. August 12, 2013.

Tairo, Fred, MD. Personal Interview. August 12, 2013.

Kalagho, Joel. Personal Interview. August 13, 2013.

Nollo, Kenneth. Personal Interview. August 13, 2013.

Nanushisa, Agnes. Personal Interview. August 19, 2013.