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**Economic risks in the agricultural sectors of emerging economies:
Smallholder perspectives of projects based on Thailand's 'Philosophy of
Sufficiency Economy'**

by
Julian Egery

Globalization and International Development, University of Ottawa
Faculty of Graduate and Postdoctoral Studies

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Résumé

La croissance économique dans les économies émergentes a changé l'existence de nombreux petits exploitants. Typiquement, les disparités économiques augmentent avec la croissance économique et le secteur agricole connaît une croissance plus faible que les autres secteurs de l'économie. La croissance de ces inégalités ainsi que les problèmes de vulnérabilités des agriculteurs durant cette période de développement chez les pays émergents ont souvent été porteuses de problèmes sociaux et de tensions politiques, comme cela est le cas en Thaïlande. Dans ce pays, la philosophie de l'économie de contentement (ou économie de suffisance) a été utilisée par la monarchie de diverses façons. En raison des lois interdisant la critique de la monarchie, ces projets ne sont pas assez évalués et les perspectives des petits exploitants touchés sont en grande partie inconnus.

Un projet d'agriculture biologique situé dans le district de Mae Taeng (province de Chiang Mai) et géré par une organisation non-gouvernementale (ONG) appelée ISAC suit les principes de l'économie de contentement. Un échantillon raisonné de vingt agriculteurs de deux villages (Don Chiang et San Pa Yang) participant au projet a été formé et des entrevues semi-dirigées ont été réalisées. Les questions relatives à l'âge et au niveau d'éducation de tous les membres de la famille ont également permis de créer un échantillon quantitatif de 72 personnes. Un cadre épistémologique basé sur le réalisme critique a été utilisé.

Les résultats indiquent que l'utilisation de l'économie de contentement peut aider certains agriculteurs, en particulier les agriculteurs âgés, à réduire leur vulnérabilité économique. Le projet semble être durable à court terme, mais les jeunes générations semblent susceptibles de chercher une vie en dehors de l'agriculture. En outre, certains avantages de l'agriculture suivant les principes de l'économie de contentement comprennent la réduction des stress financiers, l'amélioration de la santé et une meilleure vie de famille. À l'inverse, une décision de vivre selon les principes de l'économie de contentement peut conduire à une stigmatisation des agriculteurs au sein de leur communauté, ainsi qu'à des tensions intracommunautaires.

Mots-clés: agriculture sous contrat, disparités économiques, vulnérabilité économique, économies émergentes, agriculture biologique, économie de contentement, Thaïlande.

Abstract

Economic growth in emerging economies has been changing the livelihoods of many smallholders. Typically, disparity increases as economies emerge, and the agricultural sector experiences lower growth relative to other sectors. Growing inequalities and economic vulnerabilities during this critical period of development in emerging economies are often associated with social problems and political tensions, as this is the case in Thailand. In the latter, the Philosophy of Sufficiency Economy (SE) has been employed through the monarchy in a number of ways. Due to laws prohibiting critique of the monarchy, these projects are not fairly evaluated and the perspectives of smallholders affected are largely unknown.

Knowledge on the effectiveness of Thailand's Philosophy of SE in combating the disparity problem and economic vulnerability in the agricultural sectors of emerging economies was gained through semi-structured interviews. An organic farming project run by a Non-Governmental Organization (NGO), called ISAC follows the principles of Sufficiency Economy, and is located in the Mae Taeng district in the north of the province of Chiang Mai. A sample of 20 farmers from two villages (Don Chiang and San Pa Yang) who participate in the project was interviewed. Questions regarding age and education level of all family members also created a quantitative sample of 72 individuals. An epistemological framework based in critical realism was employed with the use of purposive interview sampling methods

Results indicate that employing SE can help a select group of farmers to escape economic vulnerability. This group includes farmers in an older age group with sufficient land and access to guidance. The philosophy may help keep this group of farmers satisfied as the country's economy evolves. The project appears to be sustainable only in the short-term as younger generations seem to be reaching higher levels of education than their elders and are likely to pursue lives outside of agriculture. In addition, some benefits of farming with the principles of SE include, lower financial stress, improved health, and a better family life. Conversely, a decision to live by the principles of SE can lead to a stigmatization of farmers within their community, creating in-groups and out-groups.

Keywords: contract farming, disparity problem, economic vulnerability, emerging economy, organic farming, Sufficiency Economy, Thailand

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1. Introduction

As the world economy continues to globalize, a group of developing countries often labelled emerging economies, or emerging market economies (EMEs) are quickly strengthening their economies, improving institutions and, significantly decreasing extreme poverty (Calderón & Fuentes, 2010; Cazes & Verick, 2013; Das, 2010). EMEs attract a lot of attention from scholars and development practitioners as they gain momentum and navigate a new and intricate economic path. In 1990, emerging and developing economies represented 30.8 percent of world GDP. This figure has climbed to 50 percent of world GDP by 2012, and has continued to grow (Cazes & Verick, 2013). The three largest emerging economies (China, India, and Brazil) represented 10 percent of world GDP in 2010 (Das, 2010). There is no universally accepted list of EMEs, but existing lists tend to classify roughly 30 countries (Das, 2010).

Despite some significant decreases in poverty and increase in world GDP contribution, EMEs characteristically have far more macroeconomic volatility than industrialized countries. They typically depend on a few volatile sectors, have a narrow tax base, weak institutions, and poor economic policies (Calderón & Fuentes, 2010). The evolution of these economies has an increasingly powerful effect on the rest of the world. The process is complex, and is quickly changing the way billions of people live their lives. Employment is the most direct way individuals and families can change their livelihoods, and rapid economic growth has dramatic effects on labour and employment (Cazes & Verick, 2013). The agricultural sectors of EMEs have been changing considerably as economies transition from being agricultural to post-agricultural economies, a shift referred to as the agrarian transition or “structural economic changes” (De Koninck, 2012; Latt, 2009)¹. An intensification of agriculture in the second half of the 20th century, a period known as the Green Revolution, has also affected economic growth, labour patterns, and livelihoods in EMEs (Pingali, 2012; Walker, 2012). These transitions can be studied as separate phenomena, and general characteristics can be identified. However, these transformations are not mutually exclusive and proceed in various ways, with

¹ This definition is slightly different from the one used by Byres (2002, p. 55), who defines the agrarian transition as “changes in the countryside [...] necessary to the formation of a national capitalist economy”

a myriad of effect intensity, which depend on a country's political environment, resources, and society, among other things. There are profound challenges in managing these transitions and this thesis will focus mostly on the problems related to inequality in EMEs.

One author, Yujiro Hayami (2007), has defined a problem experienced by countries that transition from low-income economies to middle-income economies in East and Southeast Asia; he calls it the disparity problem. His explanation is based on a common phenomenon documented in the history of industrialized nations. As development proceeds, economic growth is increasingly concentrated in non-agricultural sectors, causing both the relative decline of the contribution of the agricultural sector to the economy and an increasing gap between the average revenues of the farming and non-farming populations (the disparity problem). Typically, this phenomenon is not immediately accompanied by adjustments in agriculture and political measures, which could lessen the income gap. These adjustments could include for example the rapid increase of yields, margins profits or the area cultivated per farm². Although these adjustments can happen, they usually do so after significant time lag and are not necessarily sufficient to close the income gap. The resulting growing income gap often leads to political debates and tensions. Farmers frequently organize themselves and ask their government for help. Requests often include supporting agricultural revenues in order to close the income gap, thus increasing livelihood security. As discussed in Anderson (2011) and others, industrialized countries have generally progressively moved towards farming protection and support measures in the course of their history. However, within middle-income countries, these requests are often opposed by the government or other stakeholders for several potential reasons. One of these reasons is that the tax base is too narrow to support a large farming population. Another is more ideological, claiming that farmers should help themselves first and that those who are less productive should simply abandon agriculture. Finally, and more importantly, solving the income gap through increasing crop prices in middle-income countries to support farmers would seriously affect the urban poor, which can still be numerous in middle-income countries, and could ultimately have a negative effect on national economic growth. Thus, Hayami says EMEs can be faced with a fundamental

² The latter could come from further agricultural expansion (usually at the expense of forest areas) or from cultivated land sold or abandoned by a significant number of farmers retiring or shifting to non-agricultural employment.

dilemma on how to maintain low-cost food for a growing urban population employed in sectors whose competitiveness rests on low salaries (a problem typically faced by low income economies) all the while supporting a large farming population under the pressure of a changing agricultural sector with political tensions arising from growing inequality between the farming and non-farming population.

Another important problem facing the agricultural sector of emerging economies is linked to the disparity problem. This problem, which is not necessarily exclusive to emerging economies, consists of the increasing economic risks involved in agriculture. As will be discussed in chapter 2, the modernization of agriculture has often been accompanied by an increased orientation towards commercial production destined to domestic and international markets as well as the adoption of Green Revolution technologies. If the latter can increase yields, and presumably income, the use of modern technologies is associated with several problems. Importantly, it appears their use entails higher costs of production that, coupled with widely fluctuating local and international crop prices, can lead to serious economic risks and indebtedness problems (Pingali, 2012; Taotawin, 2011).

Because agrarian transformations in EMEs do not follow a unique linear path in all countries, it is useful to focus on one. An important Asian EME with a rich history and unique political setting is Thailand. Its economy has experienced profound changes and has consistently been recognized as an EME by important economic groups (Das, 2010). Thailand's government is currently facing both the disparity problem and increased economic risks in agriculture, and a number of approaches have been used to try and solve these problems.

Thailand experienced remarkable economic growth up until 1997 when the bubble burst and the country went from being the world's fastest growing economy to being the epicenter of the Asian economic crisis, experiencing an economic contraction of 11 percent (Hewison, 2000; Reynolds, 2001).

Agricultural development has been an important part of the countries development and resilience to economic shocks such as the 1997 Asian economic crisis. Covering 40 percent of its territory, and employing close to 40 percent of the population, agriculture in Thailand is strong, making Thailand the world's second largest agro-exporter among developing countries (De Koninck, 2011). However, the trends described by the agrarian transition as well as the

challenges outlined by Hayami's disparity problem can be observed here. Examples include significant changes in labour patterns, increased disparity (income gap), and decrease in absolute poverty (Cherdchuchai & Otsuka, 2006; Chambers, 2013). The government has taken a number of important strides towards reconciling political tensions on this issue. Attempts include significant grants to rural districts, development projects, and changes in policy on taxes and premiums set on crops (Chambers, 2013; Kasem & Thapa, 2011, 2012; Rigg, 1987; Walker, 2012). Debates regarding the disparity problem and how it should be solved in Thailand and elsewhere are taking place among economists, development practitioners, policy makers, and academics.

Non-Government Organizations (NGOs) run projects around the country that aim to support farmers by combatting economic risk in agriculture. A number of these projects are based on a belief that veering away from modern, commercially oriented agriculture and returning to more "traditional" ways of life can solve problems associated with transformations in developing countries. One Thai example is the Khao Kwan Foundation, which operates in Suphan Buri province (see *Figure 1*, #38). They claim that pesticide and herbicide use is 'un-Thai' and encourages self-reliance by way of organic farming, and aim to replace "the capitalist system" with 'networks of rural communities' (Chattip, cited in Dayley, 2011, p 9). Having a predominantly Buddhist population, Thailand's approaches to development are often influenced by Buddhist thinkers, who tend to promote these populist theories in order to escape the grip of market capitalism or to attenuate the impacts of its excesses. An important philosophy, which has been promulgated by Thailand's very influential King, is the philosophy of Sufficiency Economy (SE or *setthakit por piang*). This philosophy encourages farmers to avoid risky behaviours in the production and consumption spheres, prioritizing moderation, subsistence production and localized exchange, at least until more robust livelihoods and local economy can emerge. It, thus, greatly resembles³ – and was probably inspired by – the community culture school, which emerged in the 1980s and rapidly became influential in Non-Governmental Organization (NGO) circles (Walker, 2012). In regards to the agricultural sector, both emphasize moderation in risk-taking activities as well

³ There are nonetheless differences between sufficiency economy and some community culture school proponent, the latter being notably much more critical of the capitalist system, state development policy, and globalization.

as in wants and consumption. Indeed, sufficiency here does not mean complete autarky or self-sufficiency, but rather living within one's means, knowing when one has enough to live a happy life and be grateful for what ones has. Both sufficiency economy and community culture school also criticize the (over) use of costly Green Revolution technologies, and thus see organic agriculture in a very positive light. Community culture and SE also criticize a development path strictly oriented towards commercial agriculture and rapid international integration. As a result, they wish to reinvigorate community cultures and local markets (Essen 2010; Kitahara 1996; Nartsupha, 1991)

The monarchy is a deeply important institution in Thailand. Royal and royally inspired projects and policies have played a great role in rural areas. Criticizing the monarchy is illegal in Thailand as outlined by the *lèse majesté* law, which incarcerates people up to 15 years for actions or speech, which could be interpreted as a critique of the monarchy and the royal family (Mishra, 2010; Streckfuss, 2011). Because critique of the monarchy is forbidden, there is very little research on the outcome of royally inspired projects, such as those related to sufficiency economy. This is an important criticism among academics (Chambers, 2007). Whether or not SE-inspired projects achieve what they set out to can be contended, but there is a research gap lying in the proper evaluation of these projects regarding the alignment of the actual desires of rural smallholders with the moral imperatives of SE (Sopranzetti, 2012). Other drawbacks include the philosophies vague implementation, and its targeting of rural people who are expected to lead simpler lives than the rest of the population (Chambers 2007, 2013; Walker, 2012). Also, royal and royally inspired projects are often not adequately evaluated or properly planned and the perspectives of the smallholders vis à vis these projects and their satisfaction regarding experienced livelihood changes is largely unknown (ex: Bundhuwong, 2010). There is simply not enough critical evaluation of these agricultural projects to ensure their long-term success for all stakeholders.

Through networking with colleagues at the United Nations Environment Programme, where I worked as an intern in the fall of 2012, I came across an NGO called the Institute for Sustainable Agricultural Communities (ISAC), which operates in Northern Thailand. This NGO teaches farmers how to farm organically. They support them throughout a difficult process of converting from modern chemical farming to organic farming, and connect them to trusted organic markets around the province of Chiang Mai. The goal here is to help farmers

escape situations of economic vulnerability apparently caused by chemical farming, and allow them to live modestly by giving them the tools to transition to subsistence organic farming. The ideology behind this project is the same as the King's Philosophy of SE, and the methods of organic farming aim to improve the natural environment, and the health of farmers and consumers. The projects alignment with the philosophy of interest, without being directly associated with the monarchy, and its direct participation with agricultural workers makes ISACs work ideal for the research project.

This research project asks if the Philosophy of Sufficiency Economy can be effective at decreasing economic vulnerability as well as dealing with the disparity problem in Thailand. Using a critical realist perspective, I evaluate one case where the principles of SE are instilled by an NGO in two rural communities of Northern Chiang Mai through organic farming. The perspectives and experiences of 20 heads of household, along with quantitative information on their direct family members (72 people in total) have been collected and analyzed to understand the effects of an SE-inspired project on the ground. Ideologies, struggles, goals, livelihood changes, and lived experiences of farmers have allowed me to gain knowledge on exactly how an SE project is implemented, what its results are, how it is viewed by the smallholder, and what its potential is on a larger scale. Smallholder perspectives are largely unknown but are of utmost importance to determining if the development approaches based on the principles of SE are effective and worth pursuing further. Thus, this research project aims to understand if an agricultural development project based on the principles of SE in Northern Thailand are addressing the needs and goals of the smallholders involved all the while effectively tending to economic vulnerability and the disparity problem Thailand, and other middle-income countries, is faced with today.

The disparity problem and economic risks are especially challenging, and understanding how countries are dealing with these issues today, can help future policy decision-making. Changes in agricultural development and the way it affects the livelihoods of millions of farmers and their families need to be better understood for the sake of the success of the economy, and the livelihoods of all smallholders involved. This research project is a small-scale case study, but can contribute to the discourse on agricultural changes in emerging economies by studying a philosophy that builds the foundation for the approaches taken. The philosophy in this case is the Philosophy of Sufficiency Economy, which is based in

community culture rhetoric. Continued research can help to inform policy makers and smoothen the transition. The methods used by Thailand and other middle-income countries can help the next generation of low-income countries make a healthy transition to middle-income status and eventually high-income status. Countries with a similar geographic, historical, political, and/or economic profile can learn from Thailand's experience as they approach similar obstacles. Because this research project is investigating tactics used to decrease economic vulnerability in the agricultural sector of emerging economies, the findings can contribute to a better understanding of how the rural population can be supported with the tools available to a middle-income economy.

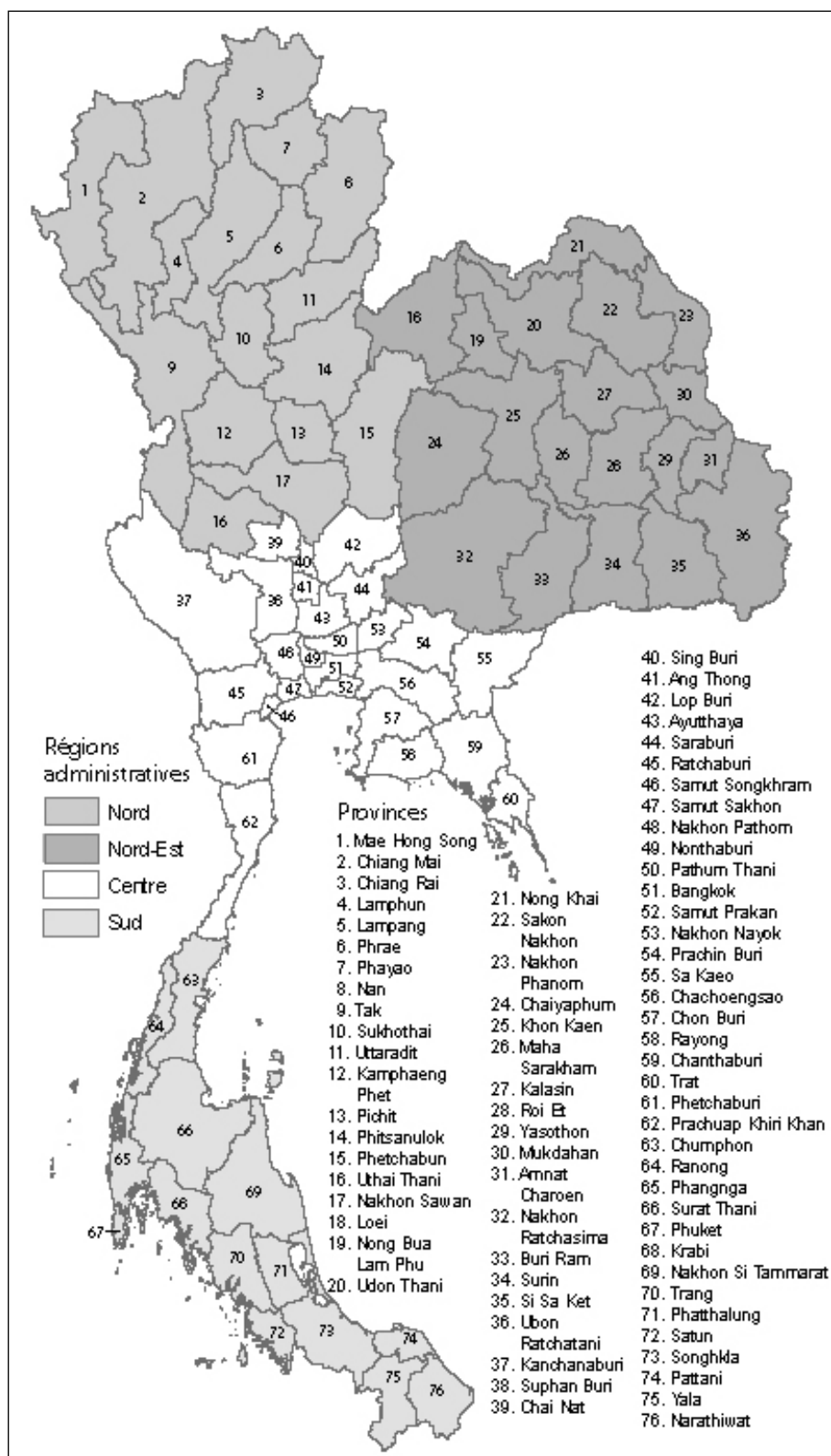


Figure 1: Provinces and Thai administrative regions, 2010

Source: Leblond (2011)

2. Literature Review

2.1. Emerging Market Economies

2.1.1. Definition

The term Emerging Market Economy (EME) was coined in 1981 by Antoine W. Agtinael to describe developing countries whose economic growth surpasses the majority of developing countries, closing in on the economic status of a middle income country (MIC). There is no universally accepted definition or list of EMEs, but one functional definition by Das (2010) is “a developing economy that has undertaken sustained macroeconomic reform measures, which in turn have resulted in sustained rapid GDP growth for a decade or so” (p.47).

In the past few decades, rapid economic growth in large MICs has led to a fundamental shift in the global economy. In 1980, developing countries represented less than one third of world GDP, but by 2012, more than half of the world's GDP came from developing countries (Cazes & Verick, 2013). Typically, EMEs manage to reduce poverty, indicating a significant improvement in the well being of much of the world's vulnerable populations. Some EMEs, however, have experienced relatively slow poverty reduction. In most EMEs, inequality has increased, even where poverty declined and due to weak job creation, the norm for people in emerging economies is: informality, working poverty, and vulnerable employment (Cazes & Verick, 2013).

The problem of increased inequality and persisting vulnerability in EMEs is the starting point for this research project. As the following section will outline, EMEs tend to experience several transformations in agricultural development. As the economy of an EME grows, transformations take place in all economic sectors and affect people with a wide range of livelihoods. This research paper will focus on transformations in the agricultural sector of EMEs.

2.1.2. Characteristic transformations in Emerging Market Economies

Agriculture plays a key role in development as it not only feeds nations, it employs people, and represents an important portion of a country's gross domestic product (GDP). The way it is managed affects workers, consumers, the economy, and the environment. Agricultural transformations are not linear, uniform, or mutually exclusive phenomena. They appear in different countries in various ways, and are affected by policy decisions and the general political economic environment. Models of these transformations help to better understand their key characteristics and their effects on populations. The following sections will describe four important transformations and occurrences: (a) the agrarian transition, (b) the green revolution, (c) economic vulnerability and (d) the disparity problem.

a) Agrarian transition

While the agrarian transition has many paths and has been experienced dissimilarly in different countries, the following stylized facts can nevertheless be mentioned. Market-oriented and capitalist economic development produces various transformations in rural agrarian societies, which include the penetration and growing importance of commercial farming and market relations in rural areas, which lead to profound social, environmental and economic changes, as well as differential growth between economic sectors and geographic areas. The latter process progressively leads to structural economic changes such as shifts in output, employment and livelihoods away from the rural agricultural sector towards a predominantly urban non-agricultural sector. As an economy grows, non-agricultural sectors boom, and the growth in the agricultural sector lags behind. In EMEs, long-run economic growth has been accompanied by a significant migration of workers out of the agricultural sector (Headey et al., 2010; Latt, 2009; Timmer, 2002). The process of development over the last two to three centuries has been built on the movement of people out of subsistence agriculture into more productive jobs in commercial farming or a movement to employment outside of agriculture. This phenomenon has been proven to increase revenues and help lift people out of poverty (Poapongsakorn, 2006). Western European countries encouraged this transition, and it continues to take place in many developing countries (Cazes & Verick, 2013). This transformation results in a reduction of workers in agriculture and often the total number of people working in farming, and has historically taken place in all industrial

societies. It is currently taking place in many developing and emerging economies, including China (Zhu et al., 2010) and Thailand (see below).

According to the World Health Organization, the global urban population has grown from 2 out of every 10 people living in urban areas in the early 20th century, to almost 4 in 10 by 1990, to more than 5 in 10 by 2010. It is projected that this figure will reach 7 out of 10 people by 2050. The number of urban residents across the globe is rising by almost 60 million each year, but almost all urban population growth in the next 30 years is expected to occur in the cities of developing countries. Between 1995 and 2005, the urban population of developing countries grew by an average of 1.2 million people per week, or around 165 thousand people every day. On average, this rate of urban population growth is expected to slow down significantly (Global Health Observatory, 2014). These trends, however, have differed between regions (Headey et al., 2010). For example, many Asian countries have experienced relatively high economic growth, with relatively low numbers of rural smallholders leaving the farm, also referred to as agricultural exits. The opposite is true for the African continent where economic growth has been slow, but the movement of rural people into urban areas has been high. It is also worth noting that data often obscures the nature of agricultural exits. In many cases, rural smallholders do not necessarily move out of rural areas directly into urban cities, but will instead move to a local non-farm economy. Low agricultural exits and the survival of small farms in East and Southeast Asia can be explained in part by geographical factors facilitating access to public services and non-farm income sources (ex: high population density in rice farming areas, good access to political decisions include high rural population density, which facilitates access to public services and non-farm work Some rural regions have high population densities and thus high access to public services and non-farm work, making it easier to stay on the farm as a part-time activity (Headey et al., 2010).

There is concern regarding these high numbers of migrants into urban areas leading to congestion and over population. Cities may not offer enough job opportunities for all the newcomers. If the formal sector cannot provide migrants with employment, many will seek employment in the informal sector, contributing to inequality and marginalization (Headey et al., 2010; Hewison, 2014).

A governments approach to economic transitions is reflective of the way the importance of agricultural sector is viewed. Headey et al. (2010) outline two distinct schools

of thought regarding the role of agriculture in development. First, perceiving the industrial sector as the primary source of economic growth characterises the industry first view. The agricultural sector, in turn, is perceived as somewhat backward and unproductive. Because of this view, domestic and international policy environments have emphasized industrial and urban development and neglected agricultural development, especially in the 1960-1970 period. This has led to an ‘urban bias’ where, for example, many developing countries taxed agriculture and maintain food prices low to help support industrialization and urban investments. These urban biased price regimes however, were significantly dismantled in the 1980s and 1990s. Trade and subsidy biases still exist today (Bezemer & Headey, 2008).

The second school of thought is the agriculture first view where agriculture is seen as an engine of growth. Today’s most advanced economies have all achieved substantial productivity gains in agriculture in the early stages of their development. Agricultural work in developing countries is skill extensive and labour intensive, which leads to additional employment opportunities, a powerful tool in poverty alleviation. In the world’s least developed countries, agricultural gains have the strongest linkages of all sectors to growth in other sectors. Agricultural development can also contribute to higher incomes, better nutrition (and higher food security), and can prevent distress migration from rural to urban areas (Bezemer & Headey, 2008; Headey et al., 2010).

By stimulating interest in agricultural development, an influential book entitled “The Role of Agriculture in Economic Development” by Johnston and Mellor, published in 1960, facilitated a movement towards development based on the agriculture first view (Timmer, 2002). In this book, Johnston and Mellor outlined the five roles that agriculture plays in economic development: (1) increase the supply of food for domestic consumption; (2) release labour for industrial employment; (3) enlarge the size of the market for industrial output; (4) increase the supply of domestic savings; and (5) earn foreign exchange (Timmer 2002). Today, even the language in the field of agricultural development has changed as it is understood that the agricultural sector does not merely *contribute* to the overall economy of a country, but plays an important *role* in economic development (Timmer, 1988, 2002). Finally, in 2008, the World Bank released its annual World Development Report, entitled *Agriculture for Development*. This report urged countries to put agriculture at the center of development plans in order to decrease poverty (World Bank Group, 2008). Ideally agricultural and non-

agricultural sectors should grow together, but the nature of economic development and growth makes this very difficult to achieve.

As a result of a mentality shift towards the agriculture first view, an era of research in the field gave rise to new discoveries, and a more positive attitude towards the importance of agriculture in a country's overall economy. In the 1970s and 1980s, an emphasis was put on the role of new markets, price incentives, and new technologies to boost agricultural development (Timmer, 2002). This boost in agricultural development is known as the Green Revolution.

b) Green Revolution

An understanding that prioritizing agricultural development was important for economic growth led to new focus on improving the macroeconomic environment, as well as investing in rural infrastructure and new technology.

The Green Revolution is an era of agricultural development that began roughly in the mid 1960s⁴ and it aimed for and led to increased agricultural production through the modernization of agriculture and increasing the yields of major food crops (wheat, maize and rice). Higher yields were achieved through the development and diffusion of high yield grain varieties, improvements to irrigation, and the use of industrial inputs such as chemical synthetic fertilizers and pesticides, as well as the extensive use of machinery (Pingali, 2012; Taotawin, 2011). The Green Revolution is part of a wider transformation of agrarian society as a whole, as it attempts to integrate into the world market economy (Vaddhanaphuti & Witthayāphak, 2011).

The Green Revolution relied on high investment in crop research, improved irrigation infrastructure, market development, and appropriate policy support. Scientific advances were already made in the developed world for the major staple crops (wheat, rice and maize), which were adapted to the specific conditions of different regions. Agronomist Norman Borlaug developed high yield disease resistant wheat, kick starting the Green Revolution. He went on to win the 1970 Nobel Peace Prize for his work in 'tackling world hunger' (Macmillan Publishers Limited, 2009). The early successes with wheat at the International Maize and

⁴ For more precise timelines, see Pingali (2012) and references therein.

Wheat Improvement Centre (CIMMYT) in Mexico and rice at the International Rice Research Institute (IRRI) in the Philippines inspired the establishment of the Consultative Group on International Agricultural Research (CGIAR). CGIAR generated knowledge, invention, and products (such as breeding lines) that were made publicly available; national public and private sectors responded with investments for technology adaptation, dissemination, and delivery. Countries were able to benefit from crop varieties that were high yielding, required less irrigation, were resistant to disease and harsh environments, and a lower maturity time (Phongpaichit & Baker, 2002; Pingali, 2012).

As a result, an extraordinary increase of food productivity was witnessed in developing countries since the late 1960s. Populations in this period more than doubled, the production of cereal crops tripled, and the amount of cultivated land increased by less than one third. Yields of staple foods in developing countries rose between 1960 to 2000: 208 percent for wheat, 109 percent for rice, and 157 percent for maize. Developing countries adopted modern farming techniques quickly with 63 percent of cropland dedicated to modern farming techniques by 1998. However, figures vary significantly depending on the region and country. Asia, for example, attained 82 percent of cropland under modern techniques by 1998, while Africa reached 27 percent. In fact, South East Asia and India were the first to show the Green Revolution's impact, with strongest yields in China and the Philippines. Despite high use of modern techniques, not all countries benefited from such high yields, and over time, high yield growth has proven difficult to sustain. Nonetheless, projections indicate that, without the Green Revolution, food production would have been 20 percent lower, requiring 20-25 million more hectares of land for agriculture. World food prices would be 35-65 percent higher and average caloric availability would have declined by 11-13 percent (Pingali, 2012).

In the post-Green Revolution period (1986-2006), investment in agriculture decreased significantly. A spike in food prices in 2008, however, has sparked new interest in agricultural investment, which may lead to a second Green Revolution aimed at sustaining productivity gains, enhancing smallholder competitiveness, adapting to climate change, and reducing environmental problems (Barrett, 2010; Pingali, 2012).

Despite the numerous benefits associated with the Green Revolution, several significant drawbacks have been reported. Authors such as Tungittiplakorn (2002) blame the Green Revolution for creating new problems. Some of the most pressing issues include: increased

production costs, requirement to repurchase hybrid seed varieties each season, deterioration of agricultural ecology, a loss of biodiversity, adverse impacts on human health, a disruption of traditional labour patterns as well as uneven distribution of benefits (Pingali, 2012; Taotawin, 2011).

Conversions to new, more productive, farming methods are typically carried out on the cultivator's own capital, but much of the more productive methods have been supported by incentive schemes preferred by agribusiness (Phongpaichit & Baker, 2002). Contrary to subsistence farming (traditional or otherwise), intensive farming requires a significant amount on financial input, as Phongpaichit & Baker (2002) demonstrate: "Compared to the simple regime of clearing and broadcasting [rice] in the period of the frontier expansion, the levels of investment now required by the individual [rice] cultivator were huge" (p.40). The increased need for the cultivator to invest in agriculture has increased economic vulnerability (defined in the following section), as it often leads to debt, and may also adversely affect their psychological disposition as they find themselves embroiled in a situation over which they have no control (Dearden, 2002). Some farmers may be in a better financial position to make these investments and benefit fully from them, contributing to inequality.

Negative impacts on human health and environmental conditions are a major criticism of the Green Revolution (Pingali, 2012; Taotawin, 2011). One of the most critical issues on the global agenda is the need to preserve biodiversity for future generations while still providing for the needs of the present generation. This challenge was first formally outlined in 1987 at the World Commission on Environment and Development, which called for sustainable development (Dearden, 2002). Uncontrolled and unmonitored use of chemicals on the farm leads to a destruction of ecosystems in and around agricultural areas. These chemicals are also suspected to cause a slew of health issues for consumers, but also threaten the health of farmers who are in direct contact with them on a continual basis. Accidents can also lead to chemical burns or ingestion/absorption of chemicals at high levels (Convention on Biological Diversity, 2002; Pingali, 2012).

A new dependence on cash for farming, and degradation of natural environment contributes to the economic vulnerability of rural smallholders.

c) Disparity problem

Inequality between countries has been declining in the last three decades, but inequality within countries has been on the rise (Hewison, 2014). While we should recognize that agrarian transitions have shown and are showing great variations, it is useful to point to the work of Hayami (2007) and others who discuss dilemmas during the agrarian transition facing middle-income countries. As all models, Hayami's model is a simplification of reality. Hayami explains why income gaps exist in middle-income countries and EMEs, and why it is so difficult to address.

Low-income economies face a “food problem” where population growth and food demand are high, and economic growth and industrialization are suppressed. Politicians' major problem at this stage is securing low-price food to urban dwellers (Hayami, 2007). High-income economies face a “protection problem” where slow population growth and saturated food consumption give rise to declining food prices and farm incomes. Historically, these rich countries have been able to subsidize farming or increase food prices because the rest of the country can support this fiscal burden. It can be added to Hayami's description that many of these rich countries were and are still producing agricultural surpluses. They have been able to manage their agricultural surpluses while at the same time supporting their farmers through a combination of strategies. These include export subsidies and using food aid as a vent for surplus disposal mechanism. (Cardwell et al., 2007; Kneteman, 2009). These strategies have become highly controversial and are among the object of conflicts in international trade liberalization negotiations (Lacombe 2002). In dealing with the “protection problem”, politicians are mostly concerned with keeping farmers income level balanced with non-farm incomes (Hayami, 2007).

According to Hayami, middle-income economies, particularly in South East and East Asia, are facing a “disparity problem” caused by a lag in agricultural productivity growth behind non-agricultural growth. This can be coupled by increased economic risks and indebtedness problems. To respond to the needs of the rural poor and the social instability that arises with such inequality, advanced economies have typically adopted a strategy in which farm income are directly and indirectly subsidized. The capacity of a middle-income country to adopt a similar strategy is however limited. Food capacity is high, but urban poverty,

relatively low per capita incomes, and an industrialization strategy still relying on low wages makes increasing food prices socially, economically and politically difficult. Another difficulty lies in the great number of farming households and the relatively low government funds that are characteristic of middle-income countries. Corruption may also inhibit the fair dissemination of funds and assistance (Walker, 2012). According to Hayami, emerging economies are thus faced with the typical problems of low *and* high-income economies. However, securing low-price food and balancing agricultural wages with the rest of the population, is contradictory. Hayami's description of this stage of economic development is supported by a number of authors; according to Timmer (2002), non-agricultural workers contribute more than three times as much to GDP than agricultural workers. This low relative agricultural productivity is a structural characteristic of nearly all poor countries, and raising it is a key source of growth during structural transformation. The same dilemma is outlined by Barrett (2010) and defined as the "Schultz" stage where rising agricultural incomes fall behind those in a rapidly growing non-farm economy, resulting in important political tensions. Barrett identifies macro stability as the primary means of rectifying the issue of income gaps. By this he means that the country as a whole must stabilize politically and economically; a top-down approach.

d) Economic vulnerability

Vulnerability, in the context of social sciences, can be defined as the potential to be adversely affected by an event or change (Eakin & Luers, 2006; Eriksen et al., 2005). Vulnerability can be physical or social and is made up of three components: exposure, sensitivity, and capacity to adapt. The two major factors influencing vulnerability are environmental changes and economic changes (Eriksen et al., 2005).

Market prices for crops, weather, and other environmental conditions have always been out of the farmer's control. Unforeseen drops in market price can lead to devastatingly low return while bad environmental conditions (ex: a dry spell, floods), an invasion of pests, or a violent storm can destroy crops.

There are a number of strategies that can help farmers reduce, avoid, or escape these risks. Some approaches are coping strategies whereas others are characterised as adaptive. To cope is to find alternative solutions as a direct response to changing situations. It is often an

involuntary response to a disaster or an unanticipated challenge for survival. Adapting refers to a more long-term strategy that typically involves changing the framework within which coping takes place. It is generally a more reasoned response to changing circumstances of vulnerability and income earning (Bryceson, 2002; Eriksen et al., 2005). Although the line between coping and adapting may seem ambiguous, it allows us to make the distinction between responses to stressors, and addressing the stressor in order to solve the problem. Choosing to vote for a politician based on his or her policies for decreasing poverty and helping the rural poor, for example, can be categorized as adaptive whereas selling farmland to pay off debt would be considered coping.

Some coping strategies worth noting include: (1) borrowing money (sometimes from several sources) to pay off debts; (2) selling land or other resources to pay off debts; and (3) short-term migration. Important adapting strategies include: (1) diversification of income source through on-farm crop diversification (ex: multicropping or integrated farming) or engaging in both on-farm and off-farm work (pluriactivity); (2) engaging in contract farming; (3) reorienting agricultural production away from globalized economy and more towards subsistence production and local markets; (4) reducing costs of production by avoiding modern techniques and seeking alternative farming methods such as organic farming; (5) investing in irrigation and water management (typically a state effort), which help reduce risks due to lack or surplus of water and allows greater intensification (if this is the objective); (6) reducing economic risks due to fluctuating or unfavourable crop prices through state interventions or insurances ; and (7) adoption of chemical inputs which help reduce loss of crops to pests, invasive plant species, and disease.

In terms of adaptive strategies 5 and 6, agriculturalists depend on their government to make investments in agriculture and commit to policy that favours the farmers. The peasantry can represent an important voting power, which can be leveraged to make such demands. There is always a risk, however, that policy adjustments also tend to benefit the rural elite, causing the poorest to fall behind. The seventh strategy involves the tools made available by the Green Revolution but, as discussed above, those who have more to invest are in a better position to take advantage of modern farming techniques. Strategies 1, 2, 3, and 4 have not yet been described at length, but are important adaptive strategies that agricultural small holders in EMEs and developing countries often employ. The following sections (i) Pluriactivity, (ii)

Contract farming, and (iii) Moving away from conventional commercial farming through organic farming, will discuss these strategies in more depth.

(i) *Pluriactivity*

Producers may choose to veer away from crop production, and towards non-agricultural income diversification. In these scenarios, farmers may stay in and around their farm without actually farming on them. Some may choose to rent or sell the land, while others let the land fallow, abandoning it forever, or at least for some time (Hall et al., 2011; Leblond 2011; Robson & Berkes, 2011). A more important strategy in the Global South has been to increasingly combine agricultural activities with off-farm work, usually in the form of salaried work. In adopting such a pluriactive livelihood, households are able to diversify their income. As economic risks in their on farm and off farm work are generally uncorrelated, this form of pluriactivity help reduce the impact of sudden and negative shocks. This risk-reduction effect has been well documented in Southeast Asia in relation to the Asian economic crisis (Bryceson, 2002; Hirsch, 2011, Rigg et. al, 2012).

The variety of employment possibilities for pluriactive farmers makes it very difficult to track and quantify the number of people working and/or living in or off the farm. Pluriactivity is, therefore, often not taken into account in many statistics (Headey et al., 2010). These changes in income-earning methods lead to significant changes in livelihood and identity, but some others question to what extent rural people are really leaving the land or losing their identities as agriculturalists (Hirsch, 2011).

(ii) *Contract farming*

Contracts in farming exist all over the globe, and may take different forms. In some instances, farmers are granted land leases for a pre-determined time period. In this case, farmers do not own the land, but agree to cultivate on contracted land for payment. Often times, these farmers also pay taxes and contribute to welfare funds. The aim of these land-contracting schemes is to decrease poverty, resettle populations, and increase agricultural production (Andersson et al., 2011). For the purpose of this study I will focus on production contracts, which are “contractual arrangements between farmers and other firms, whether oral

or written, specifying one or more conditions of production and marketing of an agricultural product' (Roy, 1972 in Zhang, 2012 p.3)".

Walker (2012) points out some of the major pro-contract farming arguments saying that critics tend to "...shift the discussion of contract farming away from the idea of a voluntary agreement between independent actors and toward the contextual structures of capitalist penetration, dependency, exploitation, and differentiation" (Walker, 2012, p.121). Instead of focusing on national and international issues, this argument (micro in nature) urges thinkers to focus on the local framework. Looking at household adaptation and peasant persistence, as well as focusing on dynamic partnerships may put a more positive light on contract farming.

The most prominent pro-contract farming arguments include: the potential to raise incomes of the poor and promote rural development, adoption of modern technology, higher production, decrease in price risks if prices are fixed by the contract; acquisition of new skills by the farmer; and access to new markets (Agriculture and Consumer Protection, 2013; Walker, 2012; Zhang, 2012). Because a contract can lock a crop price in, and because the produce has a guaranteed buyer, this is an attractive option for farmers who seek alternatives. The relationship between the farmer and the company can be positive, whereby the smallholder actually has leverage. In order to find farmers willing to work with them, company representatives must present the benefits, expectations, and risks to a community, and farmers are free to sign or to reject. The availability of other alternatives gives the farmer the opportunity to balance out options. In many cases, farmers may sign a contract for a few seasons just to experiment. In other words, farmers are not bound to a contract for life, and are not necessarily forced to sign. There is a power relationship between the farmer and the company, but similar relationships exist in the absence of agribusiness. The rural elite, for example, can have a more threatening effect on rural smallholders, and potential for coercion is higher in these traditional agricultural relations. Also, just because a power relationship between farmers and the companies exists, does not mean that the result will be dominance or exploitation (Walker, 2012; Zhang, 2012).

Most arguments against contract farming are based on the simple fact that the power relations are extremely skewed between smallholders and corporations. Others include: rural inequality, unstable contractual relations, lack of competitiveness, risk of market failure,

corrupt companies and staff members, manipulation of quotas, and rural indebtedness (Agriculture and Consumer Protection, 2013; Walker, 2012; Zhang, 2012).

The arguments regarding power and inequality are most relevant for this research project. The contract signed by farmers gives a false image of two parties coming together with common goals and agreeing on a free and reciprocal contract: “the wildly promoted view of the contract as a bargain freely made by two equal parties is a form of mystification which is central to the effectiveness of the companies domination” (Clapp in Walker, 2012, p.120).

Also, farmers themselves are not all on the same playing field. Some have far more land than others, and/or higher incomes, and/or higher positions in their villages. If the contract entails the use of chemical inputs or high yielding seed varieties, investment is required, which only the wealthiest farmers can afford. These more affluent farmers also have the organizational capacity to be more effective in negotiating with companies. All this causes an uneven spread of benefits within the farming community itself.

Finally, commercial production redefines the farmer, his land, his labour, and his community. The farmer often loses control over key decisions, becoming estranged from what takes place on his/her farm. These entities are suddenly commoditized and arguably dehumanized. In general, critics acknowledge the potential for financial benefits, and agree that the negative effects they have observed are not necessarily universal (Walker, 2012; Zhang, 2012).

(iii) *Moving away from conventional commercial farming through organic farming*

I have shown that modern farming may not be benefiting all stakeholders, as there have been some significant problems with indebtedness and environmental issues. As a result of these critiques, a wide range of alternative techniques, marketing networks and philosophical or religious perspectives on farming have emerged. As Vandermeer (1995) and many others (Taotawin, 2011) have pointed out, alternative agriculture is a rather imprecise umbrella term, and the authors and perspectives it refers to are united solely in their rejections of ‘conventional’ farming, and not the promotion of a specific form of farming or marketing approaches. Among the various approaches, one could find integrated pest-management, reduced chemical farming, integrated farming, community-supported agriculture, and fair

trade (Rigg et al., 2009; Friedland, 2010; Taotawin, 2011; Walker, 2012). For the purpose of this thesis, the main alternative discussed is organic agriculture⁵.

A global organic movement has been underway for decades. Proponents emphasize organic agriculture's positive impacts on both the environment and rural livelihoods. Removing the use of chemicals in farming may be an attractive adaptive strategy as it decreases investment costs, eliminates environmental and health threats, and produces crops that can be sold at higher market prices (provided appropriate marketing networks and demand are in place). However, its economic success is the object of much uncertainty. Typically, organic farming involves reduced yields (Seufert et al., 2012), which can, however, be more than compensated for by a reduction in (some) production costs and by premiums on prices, in particular in certified or fair trade organic farming. However, several authors have noted the paucity of detailed economic studies in the South and the great variation in the results obtained (Kilian et al., 2006; Bolwig et al., 2009). Indeed, although some studies have shown positive results (ex: Setboonsargn et al 2006 in Thailand), others have documented situations in which organic farming had a low profitability and thus entailed reduced income as compared to conventional farming and even incomes inferior to basic needs requirements (ex: Bolwig et al, 2009; Poupon, 2009; Valkila, 2009; Beuchelt et Zeller, 2011).

Also, organic farming involves many important intricacies making this farming alternative difficult to navigate. The term *organic* is often dubious as its definition varies depending on the source. The International Federation of Organic Agricultural Movements (IFOAM) is the only worldwide umbrella organization dedicated to supporting the adoption of environmentally, socially, and economically sound systems based on the principles of organic agriculture. IFOAM defines organic agriculture as:

“a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit

⁵ As will be discussed in reference to the Thai case in section 3, organic agriculture is often used in combination with specific political, philosophical and religious beliefs derived from the community culture school and sufficiency economy.

the shared environment and promote fair relationships and a good quality of life for all involved” (IFOAM, 2012 p.6)

IFOAM, which was founded in 1972, aims to lead, unite, and assist organic movements around the world. They do this through support of organic projects and programs; facilitating production and trade; establishing principles, norms and standards for organic agriculture; and running accreditation services worldwide.

IFOAMs basic standards for organic production and processing were first published in 1980 and have since undergone constant review. Today, the list is detailed and relatively exhaustive, but is often adjusted to accommodate the diversity of organic agriculture around the world, always relating to the principles of: health, ecology, fairness and care.

Smaller organizations around the globe can be accredited by IFOAM to certify local farmers as organic; to date, roughly 120 countries have accredited organizations. If a farmer can meet the required criteria, they gain access to the organic market, which is growing around the world. This certified produce can be sold domestically or internationally. It is important to note that, in the eyes of IFOAM and its partners, a *product* is not organic, a *method* of production is (IFOAM, 2012; FAO, 1999).

Although there are strict rules to organic production, and numerous definitions, the basic rule of organic agriculture is that natural inputs are used and synthetic ones are banned. There are exceptions such as harmful natural agents (arsenic for example), or synthetic substances such as insect pheromones that are needed and are not harmful (FAO, 1999).

Aside from having the knowledge and capacity to seek certification and understand the process, farmers are faced with some risks. In the long term, as organic produce gains in popularity, the market price is likely to eventually decrease. An important short-term risk is the time and expertise needed to effectively convert farmland to be suitable for organic produce, and adopt new specialized techniques to guarantee viable produce (IFOAM, 2012).

2.2. Thailand

2.2.1. Thailand as an Emerging Market Economy

Although there is no universally accepted list of EMEs, Thailand’s economic

growth since the 1980s certainly characterizes it as an EME. GDP per capita (in current US dollars) has increased from \$100 in 1960 to over \$5,400 in 2012, a 54-fold increase in 52 years (World Bank, 2014). It has been labeled by the World Bank as an economic miracle during the economic boom of 1985-1996, and is the second largest agro-exporter among so-called Southern, or developing countries (behind Brazil in total number of global exports) (De Koninck, 2011; De Koninck & Vandergeest, 2012). Thailand is tied with Vietnam as the world's number one rice exporter⁶ (De Koninck, 2011). It has also experienced significant decreases in poverty. From 1988 to 2011 the percent of Thai population living under the national poverty line decreased by a factor of over 7.5 from 65.3 percent to 13.2 percent (World Bank, 2014).

The agricultural transformations outlined in *section 2.1* have all taken place in Thailand to certain degrees. The following section will describe the physical, political and historical Thai context and explain how these transformations have fostered in this major EME.

2.2.2. Overview of Thailand

Thailand covers an area of roughly 513,000 km² and is located in the heart of the Indo-Chinese peninsula. It is home to 67.8 million people with a population growth rate of just 0.31 percent. Population in Thailand grew tremendously in the 20th century from 8.3 million in 1911 to 27.3 million in 1960 to almost 67 million by 2012, but population growth rates began to decrease in the early 1970s, with more dramatic decreases in the late 1980s and early 2000s (see *figure 2*) (Hirschman, 1994; CIA, 2014; Kermel-Torrès, 2004; World Bank, 2014). Its border countries include Burma, Cambodia, Laos, and Malaysia, with a coastline spanning 3,219 km (CIA, 2014; Kermel-Torrès, 2004; Walker, 2012).

⁶ Thailand has seen a dip in rice exports in recent years

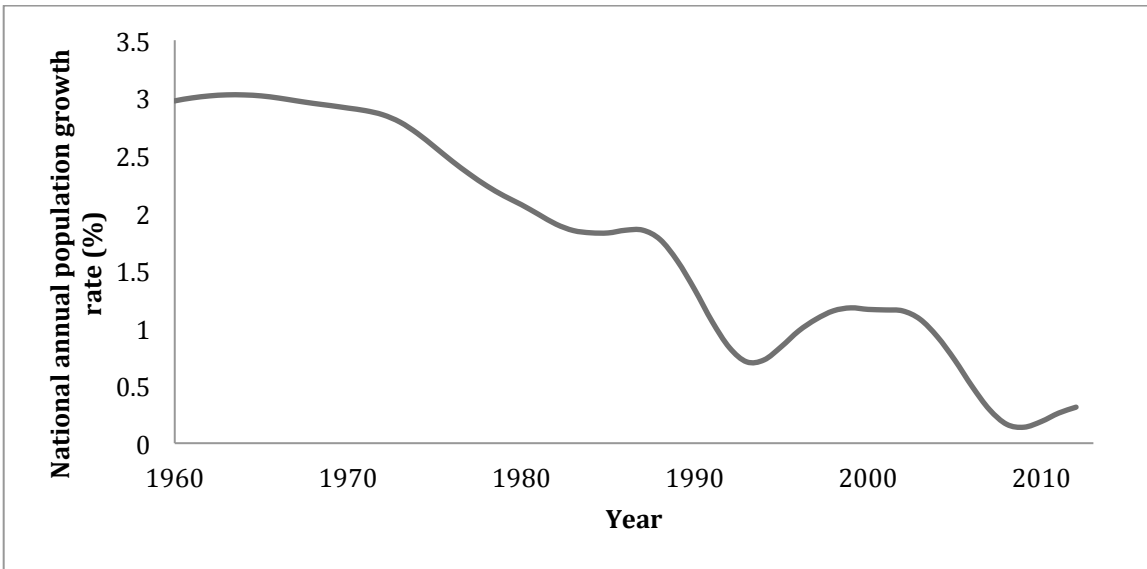


Figure 2: National annual population growth rate from 1960 onwards

Source: World Bank (2014)

In terms of the economy, Thailand's GDP (in current US dollars) has increased from \$2.7 Billion in 1960, to over \$365 Billion by 2012. Annual growth rates in GDP and GDP per capita have fluctuated greatly since the mid 1960s. Both have reached more than 6 percent by 2012 (see *figure 3*) (World Bank, 2014).

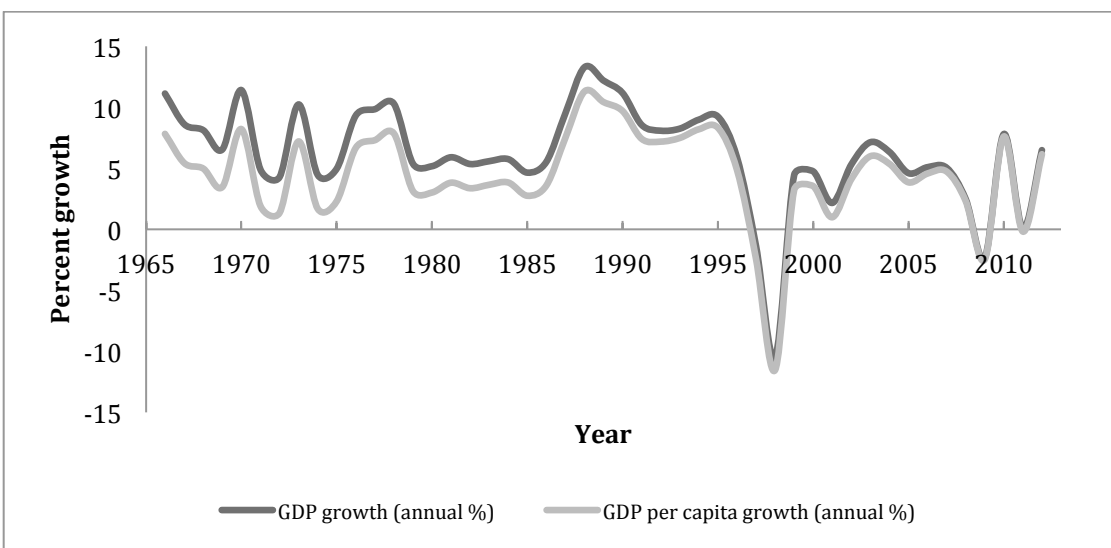


Figure 3: GDP growth and GDP per capita growth rates, 1967 to 2012

Source: World Bank (2014)

Cultivated land covers 40 percent of the country's territory, 17 percent of which can be irrigated, and agriculture currently employs close to 40 percent of the population. Thailand's most important crops include: rice, sugar cane, maize, cassava, oil palm, and tobacco (Falvey, 2000; De Koninck, 2011; Rigg, 1989). Although livelihoods across the country differ tremendously, Thailand is predominantly and almost uniformly Buddhist, with over 95 percent of the population practicing. Also, over 90 percent of people in the country learnt Thai as their mother tongue (CIA, 2014; Kermel-Torrès, 2004).

Thailand is made up of 4 administrative zones: the Center, the South, the Northeast and the North. Each region is different in topography, climate, and ethnicity.

The center of Thailand is made up of 26 provinces (see *figure 1*), and is home to the densely populated capital city, Bangkok. Between 1950 and 2000, Bangkok's population increased from 700,000 to eight million by 2010. Six provinces make up the Bangkok Metropolitan Area (BMA), covering roughly 8,000 km² of land. The BMA produces more than half of the country's wealth (Kermel-Torrès, 2004; De Koninck, 2012).

The South is the smallest region in Thailand with the highest rainfall. It is open to the sea with a coastal eastern side with alluvial plains, and a rocky and indented western side. Most areas within the 13 provinces are rural, with roughly 9 million inhabitants. Although Thailand is predominantly Buddhist, one fifth of the population in this region is Muslim. Fishing, rubber production and tourism are major sources of income in the South. Agriculture is still very important in some areas, but larger investments are being made elsewhere (Kermel-Torrès, 2004; De Koninck, 2012).

Bordered to the north and the east by the Mekong, Northeast Thailand (also known as the Isan) is the largest region in the country, only slightly larger than the North, but much more densely populated, with 19 million inhabitants. The region is mountainous, predominantly rural and agricultural and depends greatly on the Mun River for water. It has a hard environment with soils that are poor and of variable fertility. Rainfall is irregular causing an alternation of flooding and draught throughout the year. The area has also experienced the highest deforestation in the country, which accelerated in the 1950s, and slowed in the early 1990s. Although it has a major city, Nakhon Ratchasima, there are very few urban areas. The Northeast is poorest region of the four with revenue per capita reaching less than one third of the national average. Agriculture is threatened in this area due to poor soil conditions, irregular

rainfall, and substandard irrigation systems (Kermel-Torrès, 2004; De Koninck, 2012; Suksri, 2008).

The northern region of Thailand is characterized by relatively narrow lowland plains that are densely populated, cultivated, and surrounded by hills and mountains. Forest, paddy fields, and orchards mostly cover the region, with some cultivated uplands and highlands. Almost 70 percent of the province's land is mountainous and forested, with numerous hill tribes living in various mountainous sub regions. The main upland ethnic minority groups are the Karen and Hmong (ETC Asia, 2014). The major water sources are the Ping River and Nan River. Rainfall in the mountainous areas of northern Thailand tends to be moderate to high with short cool and dry seasons. Lowland areas in the North (as well as the center and Northeast) receive modest rainfall, so they depend on rain falling in upper watersheds, which flows in the rivers and replenishes aquifers (Kermel-Torrès, 2004).

The population of the 17 northern provinces is roughly 11.8 million, but the population growth rate is the lowest in the country; it is highest in the center (National Statistics Office, 2010a). Population density is low due to the rough terrain of the mountains, and much of the population is concentrated in the northern lowlands (Kermel-Torrès, 2004). Average income is lowest in the North and Northeast, but as much as it may seem marginalized, the North is where the first Tai settlers arrived when they migrated from what is now the Chinese province of Yunnan. The first Tai kingdoms in what is now Thailand were thus founded in Northern Thailand (Donner, 1978; Hewison, 2014).

The research project takes place in Chiang Mai province, which is located in the Mae Ping River Basin, roughly 710 km from Bangkok, and at roughly 305 meters above sea level (ETC Asia, 2014). It has an area of 22,993 km² and borders the provinces of Mae Hong Son, Chiang Rai, Lampang, Lamphun, and Tak (See *figure 1*). It is inhabited by more than 1.5 million people. There was a significant population growth in the 1970s, but it decreased by one half in the following decade (Ganjanapan, 1989).

The capital city, also named Chiang Mai, is the second largest city in the county, and is home to roughly 700,000 people. Many employment opportunities in tourism exist in and around this major city, which has an international and domestic airport, making it very accessible to tourists. Tourists also often visit Chiang Rai in the neighbouring province to the north (Donner, 1978; ETC Asia, 2014; Kermel-Torrès, 2004).

Roughly 80 percent of people in the province of Chiang Mai work in agriculture. Some of the major agricultural products from Chiang Mai and the northern region include: rice, fruits, garlic, soya, beef and swine. Products such as sugar cane, rubber, and cassava are also produced, but in much lower proportions compared to other regions, especially the Northeast (Kermel-Torrès, 2004). The 1993 Agricultural Census reveals that the total number of agricultural holdings in Chiang Mai was over 158,000, having an area of close to 1.3 million rais (over 206,000 hectares⁷) (National Statistics Office, 1993). By 2003, the total number of agricultural holdings in Chiang Mai grew to 165,660, having an area of over 1.3 million rais (over 216,000 hectares). At this time, just over 60 percent of the holdings are owned with a title deed, and roughly one third of Chiang Mai's land holdings are used to cultivate rice. Close to 40 percent of total holdings are just 2 to 5 rais in size, covering 16 percent of land holding area. Almost 40 percent of land holding area is represented by holdings between 10 to 19 rais (National Statistics Office, 2005).

There are significant differences between regions in terms of income, GDP, and land tenure, among other things. The transformations in Thailand have affected these indicators. The following section will describe the major events in Thailand of the 19th century, followed by major events by decade since the 1930s. Afterwards, I will discuss how transformations in agriculture have evolved in Thailand, and how they have affected the social and political environment.

2.2.3. Political, economic, and agricultural history

Thailand (formerly Siam) faced the threat of colonialism in the latter half of the 19th century but, unlike other countries in the region, Thailand was never colonized (Larsson, 2006; Walker, 2012). Thai territory was defined in the 19th and early 20th centuries, in a time of absolute monarchy, by the expansion of the British and French empires to the south, east and west. While Thailand lost control over some kingdoms in the south and east, it managed to keep control over some territory populated by non-Siamese populations such as the Malays and Laos in the South, North and Northeast.

⁷ 1 hectare is equivalent to 6.25 rais

The colonial era still influenced Thailand despite the fact it was never actually colonized. In particular, a series of treaties starting with the Bowring treaty in 1855 opened up Thailand to trade. Progressively, these treaties, population growth and the construction of communication routes (canals and then railways) led to agricultural expansion as well as increased commercialization and production of rice surpluses for national consumption and exports close to communication routes. Thailand's agriculture specialized progressively in rice cultivation in these areas and Thailand became a major rice exporter. For a brief period, the state also offered large land concession in exchange for the construction of canals in what was at the time marshes and waterlogged forest areas in the Chao Phraya delta close to Bangkok. The colonial context can also explain modernization efforts, which included the end of slavery, and *corvée* labour. This ended the Sakdina or feudal regime, freeing labour. As a result, noble and royals lost their capacity to keep large estates under cultivation. They kept land in the most productive areas close to Bangkok and some northern cities, in particular Chiang Mai. In fact, historically, high tenancy rates are concentrated in these two regions (De Koninck, 2012; Larsson, 2006; Leblond, 2011; Walker, 2012).

In the late 19th century, King Chulalongkorn set out to create a powerful monarchy ruling over a society of independent peasants. This resulted in a society of landlord-tenant in early canal projects and northern valleys, as well as a new peasantry of independent smallholders (Phongpaichit & Baker, 2002). In the early 1900s, the growth of the rice economy helped solidify a society of landlord and tenant. A government investigation concluded that landlord-tenant disputes represented a serious threat to public order and, by the mid 1930s, policy favoured peasant settlement over landlordism, but Bangkok did not restrain the creation of estates by the Northern Nobility (Phongpaichit & Baker, 2002).

Up until 1932, Thailand's monarchy had absolute power, but a military coup overturned the throne, turning an absolute monarchy into a constitutional monarchy, and shifting the political environment from one of monarchical absolutism to bureaucratic absolutism (Chambers, 2013; Mishra, 2010). Under the premiership of Field Marshal Phibul Songkhram (1938-1944; 1948-1957), development policy took a form akin to Import Substitution Industrialization (ISI) and limited some forms of imports to foster local industrialization. By the late 1950s, the state redirected its strategy towards Export Oriented Industrialization (EOI); a development path aimed at accelerating industrialization by

exporting goods to foreign markets, encouraging high levels of foreign investment, and limiting import tariffs. State bureaucracy dominated and manipulated Thailand's market structure until 2001 (Chambers, 2013). A series of power shifts and significant development has marked the 1932 to 2011 period.

Cash cropping, cultivating crops not solely for subsistence but also for sale, has long existed in Thailand but spread particularly quickly after World War II (Rigg, 1987). In the late 1950s, the Thai government pursued a series of infrastructural improvements, an effort that remains strong today. These improvements have taken the form of better roads and better access to electricity (Rigg, 1987; Walker 2012). Road length more than doubled between 1960 and 1980 (Leblond, 2011 p. 178). The connectivity of Thailand to its economic center is far superior to any other country in South East Asia (De Koninck, 2012). Leading up to the 1960s, Thailand was a low-income country that depended primarily on rice and had relatively stagnant GDP (Hayami, 2007). The 1950s, 60s, and 70s, however, were a period of outstanding economic growth in South East Asia with a number of countries transitioning to middle income status. Thailand made this transition due to labour-intensive industrialization mostly during the 1960s to 1980s period. Economic growth accelerated during the economic boom of 1985 to 1996, that is until the 1997 Asian financial crisis (depicted in *figure 3*) (Hayami, 2007; De Koninck, 2012).

In the decades following World War II, agriculture boomed in Thailand and other developing countries due to significant agricultural expansion (De Koninck and Rousseau, 2012). Agricultural area rapidly expanded from 12 million hectares (or 23 percent of the country) in the early 1960s to 21.4 million hectares (or 42 percent) in the early 1990s. Since then, agricultural area somewhat diminished to 19.7 million hectares (38 percent of the country) in 2007 (De Koninck and Rousseau, 2012). The number of land holdings in Thailand grew from 3.97 million in 1978 to over 5.5 million in 1993. This figure, however, stayed relatively stable as Thailand's agricultural expansion began to reduce around the early 1990s. In Northern Thailand, farmland areas increased from 3.8 million hectares (or 23 percent of the region) in 1975 to 4.8 million hectares (28 percent of the region) in 1991. Farmland area then slightly decreased and reached 4.4 million hectares, or 26 percent of the region, in 2007 (Office of Agricultural Economics, various dates). The number of farm holdings increased from nearly 1 million in 1978 to almost 1.38 million in 1993, which decreased slightly to 1.37

million by 2003 (De Koninck, 2009; National Statistics Office, 2003; Poapongsakorn, 2006). Economic growth in the 1960 to 1980 period was marked by the Green Revolution, which peaked in Asia in the early 1970s, although its effect was felt somewhat later in Thailand. As the Thai agricultural frontier was closed in the 1980s and agricultural expansion became more difficult, agricultural growth came to rely increasingly on agricultural intensification through the use of Green Revolution technologies (Kasem & Thapa, 2011; Timmer, 2012).

Despite the existence of a rice premium, the Thai government began making significant investments in agriculture in the 1970s (Walker, 2012). In 1974, the King of Thailand mentioned a new philosophy based on Buddhist principles of moderation, which was later called Sufficiency Economy (SE). A number of military coups have taken place in Thailand's history, but a brutal military coup in 1976 involved a massacre, and will forever stand out as one of Thailand's darkest events (Winichakul, 2008). The coup ended a brief democratic period (1973-1976) in which attempts by the government to limit land rents in the North and to implement a land reform scheme, which would involve acquiring land from the rich and redistributing it to the poor, were fiercely resisted.

The 1980s showed continued economic growth for the country. This economic growth began to boom in the mid 1980s and lasted roughly a decade until the 1997 Asian economic crisis. The state began to promote contract farming across Thailand in order to increase rural incomes, reduce risks linked to price, and to support the profitability of domestic capital in the agro-industrial sector, and the rice premium was abolished in 1986 (Walker, 2012). Increasing production costs, insufficient and fluctuating crop prices and thus indebtedness slowly emerged as major agricultural problems in the 1980s, but poverty and unemployment were greatly diminishing in the late 1980s (Bello et al., 1998; Chambers, 2013; Reynolds, 2001).

The following decade is known as the turbulent 1990s as Thailand began the decade with very promising economic growth, but ended with devastating economic malaise. In 1994, the King spoke about SE for the second time, giving it a clearer definition. Soon after, in 1997, the Asian economic crisis hit, and Thailand was at the source and center (Chambers, 2013; Reynolds, 2001). *Figure 3* shows the dip in GDP growth at this time. The King made his third mention of SE in 1997 in response to the economic crisis, speaking more forcefully about its importance. Thailand experienced an economic contraction of 11 percent from 1997 to 1998 (Chambers, 2013; Reynolds, 2001).

Things began to change when Thaksin Shinawatra, a telecommunications tycoon, was elected in 2000. By 2001, EOI (Export Oriented Industrialization) was replaced by a new system where the state guides and encourages development. Thaksin had an eclectic set of policies that aimed to give Thailand more macro stability and development as well as help Thailand's peasantry gain traction and experience economic growth. Thaksin wanted to diminish Thailand's reliance on exports and make the economy more reliant on the more controllable domestic market. His political views were not based on Buddhist moderation, and thus went in direct opposition with the King's views of SE. Thaksin's policies were often referred to as Thaksinomics, and were composed of two main tracks. The first pushed for foreign investment, international trade, exports and tourism, while the second focused on further decreasing poverty and strengthening small to medium sized businesses (Chambers, 2013). One of Thaksin's most interesting populist endeavours was an alteration of existing price support schemes. A rice-pledging scheme was implemented in the late 1980s in order to help tide farmers over until market prices increased, and assure them that they would not be harshly affected by a strong and sudden decrease of rice prices. The pledge price was set slightly under recent average market prices, but in the 2001-2002 season, Thaksin raised the pledge price over the market price. Similar pledging schemes were also applied to fruit and vegetable crops. As such, a policy designed to counter economic risks was transformed into a rural income growth policy. These schemes were highly popular with farmers as it helped increase their income and reduce their vulnerability, but a closer look revealed that corruption was involved, and economic consequences were severe (Poapongsakorn, 2006). The high pledge price encouraged excessive expansion of production, leading to a need to store surplus. Storage is expensive and is notoriously associated with various problems ranging from quality deterioration to theft by corrupt officials and others. Other consequences include falsification of documents, and substitution of rights to take advantage of the high government price. Thaksin, however, was true to his word and secured many votes from farmers, millers, and warehouse owners (Ammar, 2011; Kohman, 2012).

Much of the 2000-2010 period was dedicated to recovery as Thailand experienced high economic growth again after the Asian economic crisis. The decade began with some important rural support. In 2001-2002, under Thaksin Shinawatra, the 'Million Baht Village Fund' microcredit program was implemented. Villages each received 1 million baht for

development initiatives. Government microfinance initiatives have been commonly criticized, and this is one of the largest in the world (Kabosky & Townsend, 2012). Thaksin has been widely condemned for indebting the country (150 billion baht debt by 2006), increasing disparity, not showing any significant improvements to poverty statistics or GDP, and having some non-democratic tendencies (Chambers, 2013). *Figure 4* shows, however, that debt as a function of GDP actually decreased between 2001 and 2007. Ammar (2011) explains that the Thaksin administration had so many off record deals that some important figures were left out of the official budget, skewing data like that found in *figure 4*. Thaksin did, however, appeal to the majority of rural poor, who represent an important voting power, and as *section 2.2.3* will discuss, absolute poverty during this time decreased.

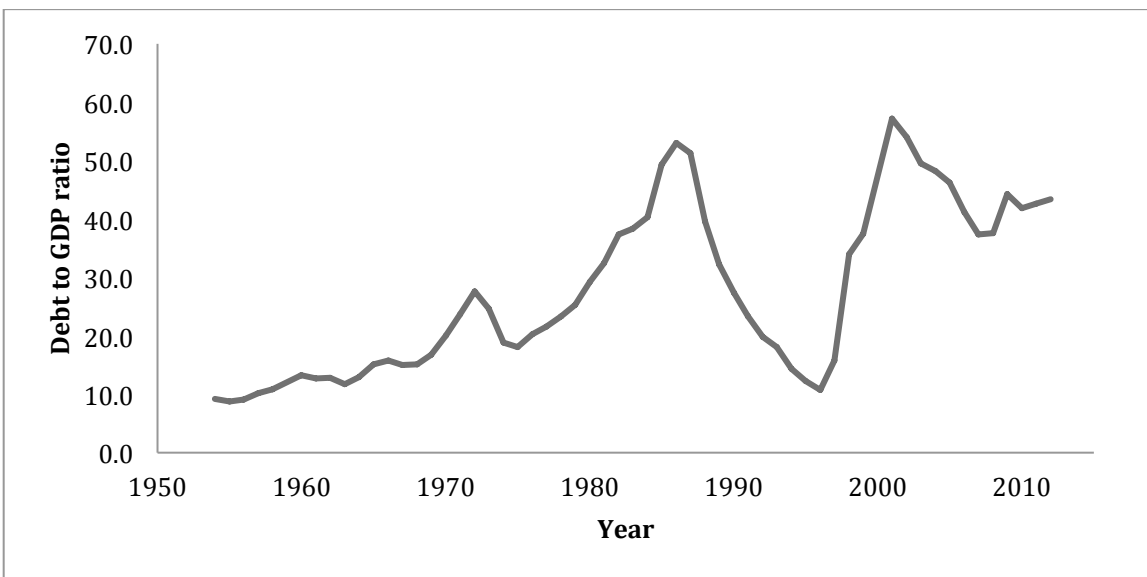


Figure 4: Debt as a percentage of GDP in Thailand, 1954-2012

Source: Abbas et al. (2010)

In September of 2006, Thaksin was overthrown by a military coup with the support and endorsement of the monarchists (Chambers, 2013; Walker, 2012; Winichakul, 2008). In The coup did not solve the political problems, and several governments have formed, shifting power back and forth between elected pro Thaksin governments (2008; 2011-2014) and anti Thaksin forces coming to power through judicial and military actions in 2006, 2008 and May 2014. The crisis ensues today and has several causes, among them is income inequalities as well as political inequalities.

2.2.4. *Agricultural transformations in Thailand*

a) Agrarian transition

There is much evidence suggesting that the agrarian transition has been proceeding in Thailand with some authors claiming that it has proceeded vigorously (De Koninck, 2011). The peasantry was the foundation of the Thai economy from the middle of the 10th century to the middle of the 20th century but, over one generation, the smallholder peasantry had ceased to be the dominant feature of the paddy fields. It has been rapidly substituted by a society of commercially oriented farmers and wage labourers (Phongpaichit & Baker, 2002). Consistent with the agrarian transition model described in *section 2.1*, growth in Thailand's agricultural sector has been lagging behind other sectors, and the farmer's methods and lifestyle have drastically changed in a relatively small window of time.

The proportion of people working in agriculture and the percentage of the total population living in rural areas of Thailand is decreasing (see *Figure 5*). This observation shows the critical movement in Thai employment. In addition, this decrease in agricultural employment can be observed in tandem with employment increases in industry and services (see *Figure 6*). Growth of manufacturing output began to accelerate during 1986-1990 due to the relocation of many Japanese labour-intensive exporting plants to Thailand (Poapongsakorn et al., 2006).

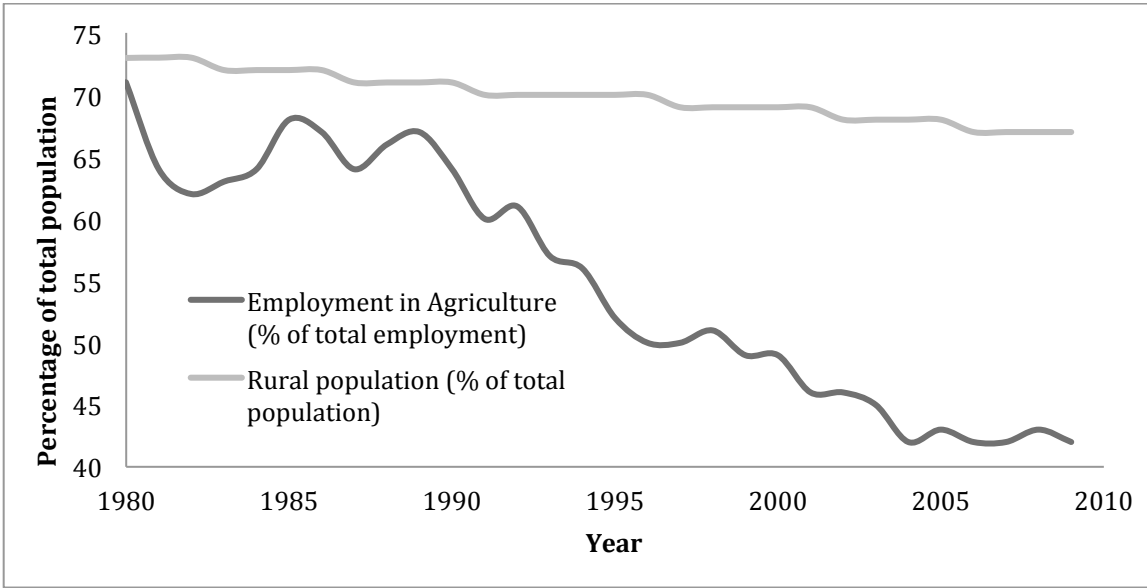


Figure 5: Evolution of the proportion of total population living in rural areas and employed in agriculture, 1980-2009

Source: World Bank (2014)

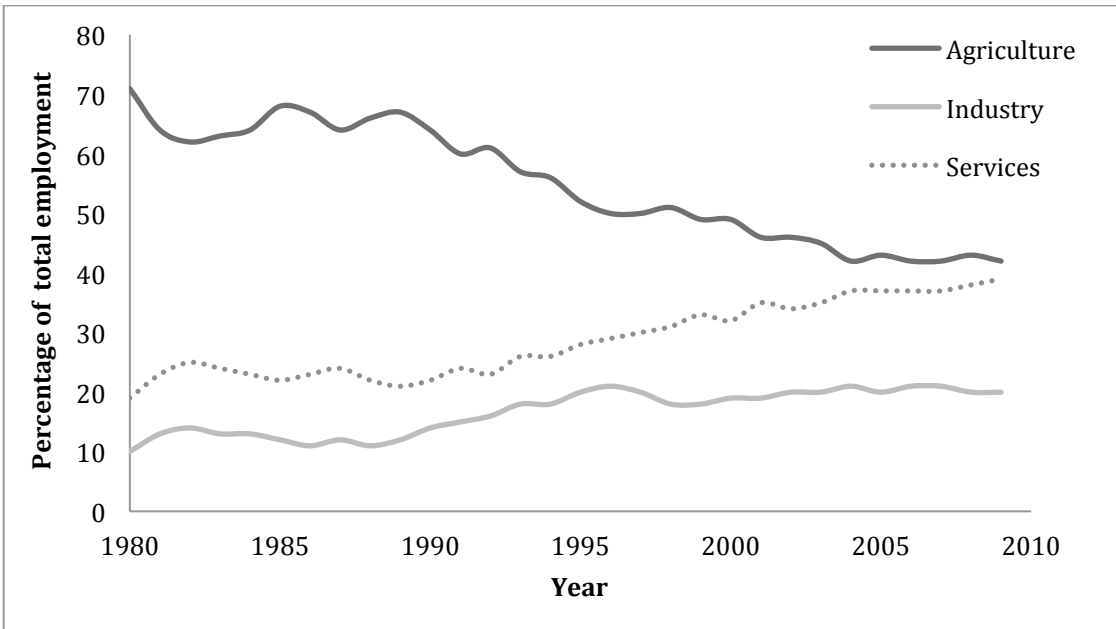


Figure 6: Employment in Thailand: relative importance of the agricultural, industry and service sectors, 1980-2009

Source: World Bank (2014)

Thailand jumped from a low-income status to being a middle-income economy between 1960 and 1980 (Chambers, 2013; Hayami, 2007). In the earlier years, poverty incidence in Thailand was alarming, but a dramatic decline, starting in the 1980s, has brought absolute poverty (as defined by the United Nations) to an all time low (see *figure 5*).

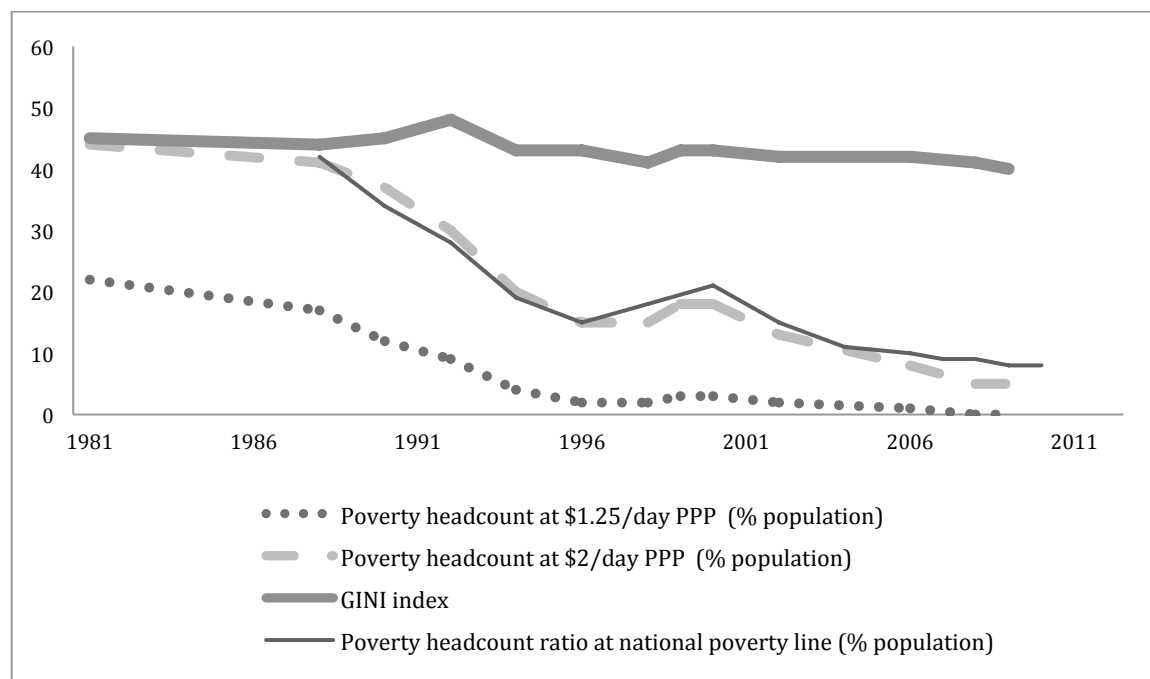


Figure 7: Poverty in Thailand compared to the GINI index from 1980-2010.

Source: World Bank (2014)

The physical migration of smallholders from rural areas to urban areas has been significant. Thailand's urban population represents more than one third of the total population with an annual growth rate of 1.6 percent. (CIA, 2014; Kermel-Torrès, 2004). The amount of agricultural exits in Thailand and other Asian countries, however, has not been as important as in other developing nations, especially those in the African continent (Headey et al., 2010). Thailand followed a parallel path with Sri Lanka, Malaysia, Bangladesh, Vietnam, Nepal, and Pakistan in terms of agricultural exits and economic growth (Headey et al., 2010). It appears this movement of farmers outside of agriculture is taking place slowly over generations but is affecting mostly the younger generations, who went to work as taxi drivers, construction workers or in factories. Also, several women from poor households, for example, have left to

work as prostitutes in Bangkok while many children of rich peasants and capitalist farmers have gone there for university education. Few of these are likely to return (Ganjanapan, 1989).

The lagging growth of the agricultural sector, the movement of labour, and the decrease in poverty are all characteristic of the agrarian transition in EMEs. The Green Revolution in Thailand took place alongside the agrarian transition, but other developing countries experienced it on a much larger scale (Rigg, 1989; Walker, 2012). Nonetheless, the use of modern farming techniques in Thailand has been very present, and has played an important role in agricultural development.

b) Green Revolution and other agricultural changes since the mid 20th century

According to Global Food Security Indices, Thailand ranks 46th out of 107 countries. Food consumption and sufficiency of supply is high in Thailand, and despite low diet diversification, Thailand has the highest nutritional standards possible (Economist, 2012). Despite the work that still needs to be done, Thai people are not struggling with the same problems as they did just a few decades ago. For example, prevalence of undernourishment in 2008-2010 was 5.5 percent compared to 26 percent in 1990-1992 (National Statistical Office, 2013).

As mentioned earlier, agricultural expansion proceeded rapidly in the 1950s to 1980s. This expansion occurred for both subsistence and commercial purposes. As such, it was fuelled by several factors (see Leblond, 2011), including population growth and the realization by both governments, merchants and farmers that formerly forested uplands could be profitability devoted to non-rice cash crops such as kenaf, maize and cassava. Crop prices were highly favourable in the 1960s and 1970s, due in part to high foreign demand that seemed insatiable for some time. Thailand had large expanses of land available for agriculture, and the government as well as entrepreneurs strongly supported agricultural expansion and infrastructure development (Fuglie, 1991; Rigg, 1987). This period of expansion is associated with the increase in average size of land holdings, as seen in *Table 1* below (Office of Agricultural Economics, 1992).

Unit : rai/household

แผนพัฒนา National Plan				ขนาดฟาร์ม Farm Size
ฉบับที่ 1	2504	Plan I	1961	18.72
ฉบับที่ 2	2510	Plan II	1967	22.66
ฉบับที่ 3	2515	Plan III	1972	27.23
ฉบับที่ 4	2520	Plan IV	1977	26.38
ฉบับที่ 5	2525	Plan V	1982	26.38
ฉบับที่ 6	2530	Plan VI	1987	27.75
	2531		1988	28.18

Table 1: Farm holding sizes

Source: Office of Agricultural Economics (1992)

Production was increased first through agricultural expansion at the expense of forest areas, giving rise to relatively low yields. This led to more cash exchange in agriculture, and more dependence on regions outside the farming community. As development proceeded, the practice of labour exchange between relatives and friends was gradually eroded and replaced by the use of wage labour. This considerably increased production costs (Leblond, 2008; Yanagisawa & Nawata, 1996). Since the economic boom of 1985-1996, agricultural wages have rapidly increased, as have non-agricultural manual wages. As the forest frontier was closed in the 1980s, agricultural expansion slowed in the 1980s and agricultural land even decreased in the 1990s and early 2000s (De Koninck et al., 2009; Rigg & Vandergeest, 2012). As a result, agricultural expansion was gradually replaced by agricultural intensification, which depended on the tools made available by the Green Revolution. The use of machinery and irrigation pumps improved, and the use of high yield seed varieties as well as chemicals such as herbicides and pesticides allowed farmers to reach higher yields while decreasing the demand for labour and thus labour costs (Leblond, 2008; 2011). In 1998 the most popular

machinery were two wheeled tractors and rice millers which were used on 65.8 and 49.5 percent of Thai land holdings respectively (National Statistics Office, 1998). The amount of pesticides used in Thailand from 1973 to 2004 increased eight fold (Wyatt, 2010a). In 1950, imports for fertilizer were less than 10,000 metric tons. By 1970, imports for fertilizer rose to 265,000 metric tons, and in 1990, one million metric tons of fertilizer were being used on paddy (Phongpaichit & Baker, 2002). The distribution of fertilizers has varied between administrative regions, with the highest utilization in the Northeast, which, by 1996, represented nearly half of Thailand's fertilizer utilization (Falvey, 2000). In 2008, almost 95 percent of landholdings used fertilizer, of which more than 43 percent used solely inorganic fertilizer, 50 percent used both organic and inorganic fertilizer and only 6 percent used solely organic fertilizers (National Statistics Office, 2010a).

Technological improvements became the second largest source of agricultural growth after capital accumulation throughout the 1981 to 2003 period (Poapongsakorn, 2006). As documented in De Koninck and Rousseau (2012), average yields of rice, rubber and maize increased significantly starting respectively in the 1980s (rice, rubber, palm fruit) or 1990s (maize). As such, the Green Revolution did not impact Thailand as fast and dramatically as it did other developing or South East Asian countries (Feeny, 1983; Rigg, 1989; Walker, 2012). Rice yield in Thailand did not reach the soaring heights that others experienced, and its growth has begun to level off in recent years (Headey et al., 2010). Speculations about this low relative impact and slow evolution include: unfavourable export taxes, limited areas for irrigated agriculture, late development of non-rice high yielding varieties, policies which maintain fertilizers at above world prices and low investments in irrigation in the first half of the 20th century (Bruneau, 1987; Feeny, 1983; Poupon 2009). It may seem peculiar that government policy in Thailand did not favour the Green Revolution at first. There are a few explanations for this. First, Thailand has long been among the worlds largest rice exporters. In addition to an abundance of land, there was no pressing need for Thailand to achieve higher rice yields. Next, there were concerns regarding the quality (taste) of modified rice varieties, which affects both its desirability at home and in foreign markets (indeed, the much higher prices that Thai rice can fetch in international markets is linked to the decision not to trade quality for quantity). Also, because modern varieties require larger amounts of water, Thais preferred financial risk avoiding strategies in environments where control of water is limited.

Finally, early-modified varieties developed in the Philippines were not adapted to Thai environments, a problem that was progressively solved through local agronomic research (Rigg 1989, 1995).

The agricultural intensification period was marked by an increase in real income, and an increase in investment by farmers in mechanization. However, as discussed earlier, if investment exceeded the gross income, farmers would accumulate debt. The prices of the new agricultural inputs have been on the rise since the late 1940s, along with increasing family expenses, thus putting agricultural profits and the wellbeing and livelihood of several farmers under pressure (Latt, 2009; Leblond, 2011). The price of fertilizer has been particularly high, and the hybrid nature of some varieties developed keeps farmers dependant on purchasing new seeds every season (Bruneau, 1987; Poupon, 2009). Prevalence and intensity of agricultural debts in Thailand have increased as farmers increasingly borrow money from the Bank for Agriculture and Agricultural Cooperatives (BAAC) and private financial sources. Farmers have used these loans to cover the costs of machinery, seeds, and chemicals, but also to purchase modern consumer goods. This is perceived to have led to a serious indebtedness problem (seen in *Figure 8*) in rural Thailand (Chambers, 2013; De Koninck et al., 2009; Parnwell, 2006).

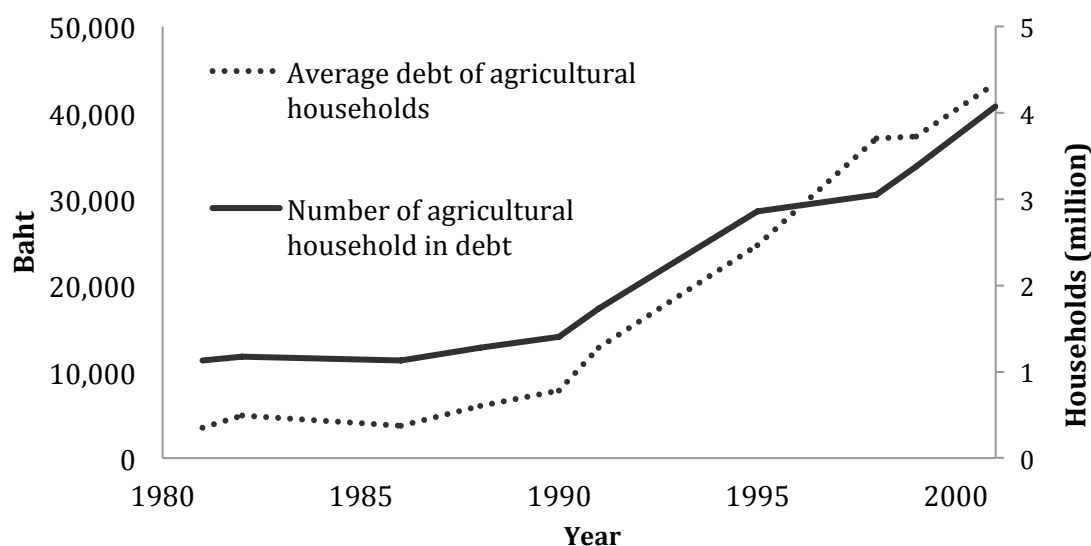


Figure 8: Debt in agriculture from early 1980s to 2000

Source: Office of Agricultural Economics *Agricultural Statistics of Thailand* (various years)

Early critique of the Green Revolution thought it would inevitably lead to the destruction of smallholder farming as the largest (and richest) farms would more rapidly and in greater number adopt new technologies and would more benefit from their use. However, in Thailand, smallholders have not disappeared and have even become more numerous. Between the 1993 agricultural census and the 2008 intercensal survey, the number and proportion of farm holdings of less than 6 rai (0.96 ha) and between 6 and 9 rai (0.96 -1.44 ha) both increased⁸, while the reverse is true for all land size classes superior to 10 rai (1.44 ha). This is consistent with the decrease of the average land holding size from 3.4 to 3.1 hectares. The corresponding figures for the Northern region could not all be found, but the same general conclusions apply: smallholdings have not disappeared. Indeed, in 2008, while over 42 percent of holdings were between 10-39 rai, over 32 percent were under 6 rai. Interestingly, the smallest holdings (under 6 rai), although the second most numerous only cover 4.2 percent of total land holding area in all of Thailand, and 5.4 percent in the North. The largest holdings (140 rai and more, equivalent to 22 hectares) represent just 0.5 percent of holdings in Thailand, and 0.6 percent in the North (National Statistics Office, 2010a, 2010b).

The growing number of small farms in the context of the Green Revolution should not be interpreted as a sign that the Green Revolution did not encourage rural inequality.⁹ Overall returns have been much better for those few cultivators who, because of environmental conditions (irrigation) or financial and political resources, were in a better position to invest in the whole package and to do so early (Phongpaichit & Baker, 2002). Indeed, as green revolution technologies greatly depends upon favorable environmental conditions, such as good soil quality and access and regulation of water, farmers established in areas with irrigation infrastructures were favored, such as those the core agricultural areas of the Central and Northern regions. This helps explains the extent to which rice yields vary between regions. The highest rice yields in the 1990s and 2000s were achieved in the North with an average of 3.74 tons of rice per hectare between 2004 and 2006. The Northeast reached the

⁸ Landholdings of less 6 rai increased from 1.1 million to 1.4 million (so from 19.7 to 24.6 % of the total number of landholdings. In comparison, the number of landholdings between 6 and 9 rai increased from 0.75 million to 0.82 million, those between 10 and 39 rai decreased slightly from 3.1 to 3.0 million and finally the number of holdings larger than 40 rai decreased from 0.72 million to 0.56 million.

⁹ As will be discussed in section 2.3, a major factor explaining this phenomenon appears to be the growing role of pluriactivity and non-farm income.

lowest yields with 1.95 tons of rice per hectare in the same time period. The North also experienced the highest positive percentage change in yield from the 1994/96 to 2004/06 periods than any other region (FAO, 2008).

In regards to the social dimension of the Green Revolution technologies, farmers with larger holdings could make more efficient use of new capital investments such as pumps, tractors, and harvesters. Not surprisingly, most large holdings are controlled by Thai elites allowing them to capitalize most on agricultural development. Moreover, government support often appears to further benefit those who have already capitalized on the intensive farming system. Rich peasants make up 20 percent of households, and they possess almost 50 percent of the land while the poor and middle class farmers, who each represent roughly 30 percent of the population own 27.3 percent and 5.3 percent of land respectively (Ganjanapan, 1989). The poorest areas that relied on rain fed agriculture were also the slowest to benefit from the Green Revolution, contributing to widening interregional disparities and an incidence of poverty that still remains high (Pingali, 2012). A stark class divide becomes apparent, and policy around agricultural development tends to cater to the elite, revealing an alarming level of urban bias. Rigg (1995) argues that the Green Revolution should be used to liberate peasants, especially the land poor, from rural problems. Government subsidy schemes for fertilizers, for example, benefit local influential people who are agents of distribution. Other forms of private credit, which became available through merchants and companies selling the tools and inputs for the new high-intensity regime, were generally available only to the rural elite. Institutional sources of cash favored the few landholders with a secure paper title, or the big cultivators with a large marketable surplus (Phongpaichit & Baker, 2002). Some policies have appeared to support the rural smallholder, such as the first government subsidies for the rural economy in the 1970s, and the abolishment of the rice premium in 1986 (Walker, 2012). Rice price support schemes still exist today, guaranteeing above market prices, which began in the early 2000s, for rice and other crops. These large government expenses to the rural economy, however, provided little guarantee that the money would benefit the cultivator rather than the trader (Phongpaichit & Baker, 2002). When governments are involved with the economy, there are dangers of rent seeking and corruption, hindering agricultural development. At the same time, important extensive and effective state support programs are typically also behind a sectors growth

(Bezemer & Headey, 2008). In Thailand, corruption has been a major factor impeding agricultural growth and exaggerating a gap in rural society (Poapongsakorn, 2006).

The conclusion among academics tends to be that agricultural intensification has increased disparity within Thai rural society as incomes of the agricultural sector and non-agriculture sector continue to diverge. The poorer regions of Thailand (mostly in the North and Northeast) have experienced the lowest rates of GDP increase and absolute poverty reduction (Phongpaichit & Baker, 2002, Pookaonthong, 2002).

Lastly, the use of Green Revolution technologies also had environmental impacts. Major environmental threats in Thailand include: drought, deforestation, bad soil conditions, and chemical pollutants. The use of pesticides and herbicides, which protect the quality of crops, not only contribute to rural indebtedness due to high investment, but has also affected soil and air quality, and the health of those who live or work in and around farms (Suksri, 2012). Also, the frequency and scale of drought over the last 25-30 years has been so dramatic that it is now considered one of the most significant physical stresses that Thai communities face (Parnwell, 2005). With an increase in demand for crops comes an increase in demand for water; a resource that is scarce in parts of northern Thailand as the region does not have consistent rainfall and irrigation systems do not reach all areas. Without proper support for this precipitation problem, farmers are left with nothing to trade, and no cash (De Koninck, 2012; Mongkawad, 2010; Suksri, 2008). As discussed in *section 2.1*, economic vulnerability is perpetuated by economic and environmental changes (Eriksen et al., 2005). A dependence on inputs, which require investment, has added to existing problems in agriculture such as fluctuating market prices and environmental conditions. In addition, the use of chemical inputs has exaggerated environmental issues. The result is increased economic vulnerability for those who cannot benefit enough from Green Revolution techniques to absorb these consequences.

c) Disparity

Despite some of the serious drawbacks of agricultural development in Thailand, listed above, “livelihoods in rural Thailand are now much more secure than they were when many of the foundational studies of peasant politics were written in the 1960s and 1970s. The most striking change is the dramatic reduction in rural poverty” (Walker, 2012, p.38). By and large, fewer Thai farmers are living under the poverty lines defined by the World Bank or the United

Nations, but are instead experiencing relative poverty. Thailand's lowest relative incomes are in the rural agricultural sector; almost 90 percent of poor Thais live in rural areas (Jitsuchon & Siamwalla, 2007). It is important to note, however that food security analyses show that, although Thailand is food secure as a nation, there is disparity among the provinces (Bruneau, 1987; National Statistical Office, 2013). Additionally, 5-7 million people still live under the poverty line and 5 million are vulnerable to falling into poverty (Hewison, 2014). Authors such as Headey et al. (2010) ask if poverty decreases in part due to the successful adoption of modern farming techniques in Asia can be sustained. Some threats include: unsustainable policies that encourage wasteful use of fertilizer, electricity, and irrigation; a decrease in rice yields in recent years; and the demand for high amounts of water in areas that are not well irrigated (Headey et al., 2010).

The 2000-2010 period showed high economic growth and was a period of recovery, but also showed signs of increasing income inequality within regions, but mostly between them (Ekasingh et al., 2007). In the mid 1970s, the richest 20 percent of the population earned eight times more than the poorest 20 percent, but this figure jumped to 14 times by the 2000-2010 period (De Koninck, 2012; Chambers, 2013; Poapongsakorn, 2006). In 2007, 10 percent of families controlled over 51 percent of wealth while the bottom controlled roughly 8.5 percent (Hewison, 2014). Urban centers have also shown much higher return than rural regions. For example, Gross Regional Product (GRP) in Bangkok was 5.3 times that of North-eastern Thailand in 1975. By the early 1990s, this figure jumped to 9.8 times (Ekasingh et al., 2009).

Hayami (2007) predicts that the income gap will not be closed before Thailand advances to a high-income stage. Relief of this disparity requires a certain level of fiscal capacity that Thailand, and other middle-income countries, may not have (Hayami, 2007). Supporting the income of such a high number of farmers would require immense capital that an emerging economy does not typically have access to (Walker, 2012). Almost all high-income countries protect farmers with the help of domestic consumers, taxpayers, and foreign producers. Today's emerging economies need to find techniques to transition in a healthy way in a much smaller window of time. The 1979 World Development Report (WDR) on Structural Change and Development Policy stated that developing countries are experiencing structural transformation far more rapidly than industrialized countries did. The transformation

in these industrialized countries took many decades, allowing for a gradual emergence of economic, social, and political institutions that could effectively handle the effects of structural transformation. Subsequent 2008 and 2009 WDRs still agree (Barrett et al., 2010; Headey et al., 2010).

Following the 2006 military coup, there has been a deliberate and politicized linking of inequality and politics (Hewison, 2014). The legal structure for Thailand in areas such as land ownership, have drawn eminently from the West although it has lacked the supporting education, and administration (Falvey, 2000). Today many farmers own the land they farm on, but the role of the former aristocracy, and land ownership in some areas have not been radically reformed. The vast majority of land in and around Bangkok, for example, is predominantly owned by the Crown Property Bureau, the royal family, and individual royals (Hewison, 2014). A growing number of smallholders have been forced to become dependant rural workers with greater insecurity of subsistence because they have lost their own land or have been evicted (Ganjanapan, 1989). These landless labourers earn the lowest agricultural incomes, and land rents have increased since the mid 1970s (Ganjanapan, 1989). The rights of these labourers have not been effectively defended in Thailand. An attempt to defend these rights was made by The Peasants Federation of Thailand, but its progress was quickly halted. The federation was formed in 1974, and quickly managed to convince an elected government to pass the Land Rent Control Act in December of 1974. The Act guaranteed tenancy contracts for 6 years, required one rent payment annually, and fixed the landlords share to a maximum of 50 percent. Unfortunately, it was not properly implemented with enactment on less than 10 percent of rice land. After a short period of growth, some disputes with the government and violence with opposing parties, 21 of its leaders were assassinated (Ganjanapan, 1989). The lack of long-term support from the government in the protection and implementation of this act is a good example of clientelist politics, or urban bias, that protect interests of the elite in Thailand (Hewison, 2014). These clientelist policies block the small holder from owning land, and protecting their labour rights, giving them access to limited income.

In 2011, the national average income was 23,263 baht per month (b/mo). Income in Bangkok was 41,631 b/mo (almost 1.8 time the national average), and income in the North and Northeast were 17,350 b/mo and 18,217 b/mo respectively, each representing roughly 40 percent of the average in Bangkok. The poorest 10 percent of the population earned 1,896

b/mo, and the poorest 10 percent in the North and Northeast earned just 1,789 and 1,593 b/mo respectively, roughly 7 percent of the national average, and 4 percent of the average income in Bangkok (Hewison, 2014). These, and other results reveal significant income gaps between regions and between rural and urban areas. Thai average annual incomes in 2007 were 224,000 baht per year (b/yr), with rural income at 172,000 (over $\frac{3}{4}$ of national average). Thais in the Central area earned 187,000 b/yr, the Southern average was 175,000 b/yr, the Northeast reached 166,000 b/yr, and northern Thailand grossed an average of 156,000 b/yr. None of these figures, even central Thailand, were higher than the national average, spanning just 70 to 83 percent of the average. The highest incomes were found in Bangkok and municipal areas. The average annual income in Bangkok was 420,000 b/yr, or 187.5 percent of average national income, and municipal incomes were one and a half times the national average (Walker, 2012). Again, disparity between regions and between urban and non-urban areas becomes evident.

The World Bank has stated that the source of inequality is the rise in profits observed in the last 50-60 years. These profits have been remarkable, but have not been evenly distributed. Excluded groups have thus had to accept highly particularistic political and economic goods rather than programmatic attention to issues of social welfare, poverty, and redistribution (Hewison, 2014).

When an income gap is too high, social and political instability becomes a significant problem, and can cause a stunting of economic growth for the entire country. When the income gap between top and bottom quintiles exceeds twice the average per capita income, it is large enough for citizens to notice and affect the political economy of the growth process (Timmer, 2002). As mentioned above, this low relative income coupled with relatively low growth in the agricultural sector is squeezing families out of their homes; a brutal livelihood change that does not go unnoticed or unchallenged. The only way to sit out the disparity problem would be for rural people to accept their lower income status for the time being. This is unlikely to happen on a large-scale, and farmers are seeking alternatives that can help them close the income gap.

2.3 Adaptive Strategies in Thailand

As agriculture in Thailand evolved, the livelihoods of rural dwellers and farmers have changed. A significant amount of those affected are looking to adopt strategies that could help them adapt to rising economics risks and increase their income, thus improving their quality of life. After a discussion on power, I will describe some of the major adaptive strategies that are common in Thailand. As relying on the state to provide subsidized or guaranteed crop prices were already treated in the previous sections, it will not be discussed again.

2.3.1. Power and empowerment

Unequal distribution of income is reflective of uneven power relations. Thai smallholders do not possess the tools they need to fight corruption or uneven income distribution. For example, labour organizations are legal in Thailand, but not always encouraged and highly restricted by law. The process of setting a minimum wage is virtually dominated by the employer, over $\frac{1}{3}$ of workers work over 50 hours week (longer than the legal maximum) (Hewison, 2014). The clientelist policies prohibiting the protection of labourers contributes to their marginalization, facilitating underpayment for their labour, leaving them with even less power to take control of their lives, and pressuring them to over work to make ends meet.

This example points to the importance of understanding the role of power, empowerment and capabilities in livelihoods of vulnerable people.

Power relationships play an important role in any process of transformation and it is the dynamic that determines social, economic and political relations (FRIDE, 2006). Jo Rowlands, a prominent author in power discourse, identifies four kinds of power: (1) power over; (2) power to; (3) power with; and (4) power within (Rowlands, 1995). When one party has power over another, it controls aspects of the subordinate parties lives so that these individuals do not have control over their lives. It is an instrument of domination and can be subtly exercised (Rowlands, 1995).

The power within is the power an individual has to take control of their decisions and have agency in their lives. Increasing ones ability to resist and challenge ‘power over’, and to find ‘power within’ is how Rowlands (1995) defines ‘empowerment’. The World Bank states that empowerment is the freedom of choice and action. Therefore, it is the control over the

resources and decisions that affect the life of an individual. The World Bank has identified four characteristics of empowerment: (1) access to information; (2) inclusion and participation; (3) accountability and; (4) capacity for local organization (FRIDE, 2006). The definition of empowerment is hazy, making it easy to construe; however, it is generally well understood that individuals should not be subjugated to ‘power over’.

Escaping this ‘power over’ can be facilitated by local and international strategies and policies. According to Rowlands (1995), undoing negative social constructions is key, because it allows people to see themselves as having the capacity and the right to act and have influence (Rowlands, 1995). In the context of poverty, for example, delineating poverty as ignorance permits a technocratic targeting of poverty as a kind of policy triage. This turns a blind eye to the underlying structural causes and the broader political issue of redistribution (Hewison, 2014). Strategies that put power into the hands of local users and organizations instead of solely in the hands of local governments, referred to as devolution, can also help to empower smallholders (Berkes, 2010). Moreover, policy can be founded on a rights based approach; a conceptual framework that puts human rights at the center of development processes, instead of focusing exclusively on economic growth (FRIDE, 2006; Sen, 1990).

The Thai smallholder is faced with the challenge of responding to a changing environment where power structures are profoundly skewed. Their economic vulnerability is high and is constantly at risk of deepening. A number of strategies are available in Thailand, and the following paragraphs will describe them.

2.3.2. Diversifying on-farm and off-farm income sources

One major strategy to reduce economic vulnerability (and often to increase income) is to diversify income sources. This can be done on-farm by raising various crops – sometimes in the same field (multicropping) – as well as livestock and fish (integrated farming). This strategy has been widely used in Thailand as it allows farmers to more easily absorb market fluctuations and thus decrease their vulnerability to economic risks (Taotawin, 2011). As discussed in Kasem and Thapa (2011, 2012), studies in and outside of Thailand have shown that diversifying crops can decrease poverty by smoothening out impacts of price fluctuation, and can give farmers the opportunity to change crop combination in response to market demands. In one study, 84 percent of farmers said that crop diversification contributed to an

increase in income. This same study, however, also showed that three quarters of land in Nakhon Pathom province (see *Figure 1*, #48) is still being used for rice mono cropping.

A second strategy relying upon diversification involves diversifying farming household incomes outside of agriculture. Engaging in both non-agricultural and agricultural work, or pluriactivity, has become a highly prevalent strategy in Thailand (Rigg, 2005; Rigg et al 2012;). This pluriactivity can take several forms. The head or other members of the farming household can engage occasionally in salaried off-farm work, either locally or in urban areas. The latter would involve short-term migration. In other cases, a member of a household, typically a child, would be hired as a salaried worker locally without leaving the house. This person's income would then contribute to the household's overall income. If one conceptualizes the household as a multi-local entity, a related form of pluriactivity involves situations whereby children have migrated to urban areas and are sending portions of their income back to the village; these are known as remittances. This is often associated with practices where the grandparents in the village are taking care of the migrating population's children. Remittances thus pay for the cost of living and education of the youngest generation and can contribute to the income of the on-farm caretakers. Although not technically a choice by the farming population, the increase of remittances sent from family members engaged in non-farm work back to their family is also making a strong contribution to financial stability and raising income (Amekawa, 2013). By the late 1980s, roughly 30 percent of Bangkok's population were migrants, mostly originating from the Northeast. Between 1985 and 1995, the Northeast lost over half a million people to migration, and by 1996 remittances from these migrants to their rural families represented one third of household income. By the late 2000s, roughly 50 percent of North-eastern households depended on remittances. Remittances coming from migration can lead to alleviated debt, but also cause families to fracture as children, who remain in rural areas with their grandparents, are separated from their parents, or wives are separated from their husbands. The absence of these family members may also make it more difficult for the remaining family members to manage the farm (Amekawa, 2013; Ekasingh et al., 2007).

Pluriactivity has played a key role in increasing farmer's income and decreasing poverty and economic vulnerability. In some instances, such off-farm income compensates for losses in agriculture, "In fact, it might be more accurate to say that villagers are able to

continue rice cultivation because of the supplemented income from wage labour and trade” (Phongpaichit & Baker, 2002, p.39). Studies have shown that diversifying income outside of the farm increased gross income and played a major role in decreasing poverty in Thailand. Also, while rural class stratifications used to be based to a large extent on access to land, the importance of this factor has considerably declined as the importance of non-agricultural income increased. As a result, and although the incidence of poverty and economic vulnerability is still greater among smallholders, access to education (and thus non-farm income) is becoming a more relevant factor to explaining income inequality in rural areas and amongst farming households. Lastly, in line with this, pluriactivity has become a major tool to manage economic risks in rural areas. The unequal economic vulnerability observed in rural areas is thus significantly explained by the access to non-farm income (Estudillo & Otsuka, 2010; Rigg, 2006; Rigg and Salamanca, 2009).

These changes in income generation have, in a short period of time, altered the way in which families live together. Pluriactivity has been accompanied by other important changes (not necessarily positive or negative), including: a geriatrification (increasing average age) of farmers; a change in female leadership and general role in the community; and an increase in value of education, and, most notably, a decrease in absolute poverty (Cherdchuchai & Otsuka, 2006; Rigg, 2006; Rigg & Salamanca, 2009; Rigg et al., 2012;).

2.3.3. Contract farming

In Thailand, over 165,000 land holdings, or almost 840,000 hectares, were being cultivated under a contract in 2008. These figures only represent fewer than five percent of total land holding area in Thailand (National Statistics Office, 2010a). Nonetheless, since the 1980s, contract farming has been encouraged by the Thai government and has expanded considerably in Thailand since the 1970s, thus becoming an important part of the diversification within the agricultural sector in some regions (Walker, 2012). Isolated examples of contract farming in Thailand point to some of the benefits and risks of this adaptive strategy.

Walker (2012) studied a village in the North of Thailand, partially covering mountainous area as well as planar area. Contract farming was introduced in 2003, after a long period of prominent garlic cultivation. Garlic was a popular crop for cultivation here, but

required high investment; a lot of labour; inputs such as herbicide, pesticide and fertilizer; and market prices fluctuated from soaring heights to devastating lows between 1984 and 2008. In the early 2000s, the government encouraged farmers to abandon garlic cultivation by offering cash payments to those who would switch to another crop. At this time some farmers switched to contract farming sweet corn or tobacco. Sweet corn was successful in the first season or two and was later abandoned, but tobacco farming found more long-term success. So, in this particular area, farmers experimented with different crops, and signed contracts with a number of competing companies. Walker's interviewees explained that the companies provided farmers with seeds or seedlings and agrochemicals, and the cost of this was deducted from the selling price of the crops. In the event that the crop fails the company, instead of the farmer, incurs debt. In this case, the company offers a type of crop insurance, and some price stability. Farmers expressed satisfaction with the system as it keeps them out of debt, and all they can potentially lose is their labour time.

The village of Ban Tiam has its own unique history, climate, and set of obstacles, and it appears that farmers here have a seemingly healthy relationship with their powerful agricultural partners. Walker (2012) states "... farmers have been able to draw the economic power of agro industrial capital into the village... These farmers have actively participated in... the penetration of capital into the countryside" (p.112). The overall impression here is that contract farming has had a positive effect in Ban Tiam, mostly due to the fact that farmers are avoiding debt, and the corporation does not appear to be abusing its power.

Studies on contract farming elsewhere in Thailand, however, can tell a very different story. In Prachin Buri province (See *figure 1*, #54), fish farmers struggle with unexpected fish die outs. The reason for these die outs is unknown, but some point fingers at the farmers for over medicating the fish and giving them vaccines, while others blame nearby factories for allowing toxic runoff to poison waterways. Large corporations operate in these areas, giving farmers the opportunity to farm fish for them under a contract. One fish farmer tells her story. Because of the economic stressors involved with fish farming, she was open to an alternative. A company made a convincing pitch to her, which involved a visit to another farmers home and fish farm. She was convinced to sign a contract and, early in the fish farming process, the farmer found herself in a debt cycle due to high investment. The company strongly advised for the use of medication in order to keep fish alive. Out of fear of losing her fish, she obliged. In

addition, she had to feed the fish throughout the season. She reported that the company would take far too long to pick up the fish, which caused her to spend even more as the fish had to be fed while she waited. There were also problems with the size and weighting of the fish. Ultimately, the farmer decided to leave contract farming and find her own markets to sell in. When she made the switch, she tried farming without the use of medication and realized that it was not necessary to use it. A number of her neighbours have joined her and, together, they penetrate fish markets around the area (Janchitfah, 2011).

This example sharply contradicts the example of Ban Tiam. Here, the company is abusing its power, as it does not support farmers, it neglects its responsibilities (such as picking up fish on time), and causes farmers to incur (apparently) unnecessary costs such as medication. In fact, another individual explained, “sometimes they feel like their labour has no value, as if they are slaves, and that they only exist to benefit those who control the technology and the capital” (Janchitfah, 2011).

The contract farming approach, and other strategies described above, implement a range of philosophies. Some may focus on embracing a globalized Thailand whereas others have a critical view towards globalization. Several strategies in Thailand employ the latter [by and of itself, org agriculture can be done with a globalization mindset –Thaksin wanted this], and the following section will describe some of Thailand’s most prominent philosophical perspectives applied to agricultural development.

2.3.4. Sufficiency Economy and associated approaches

a) Community culture

Community culture is a perspective that emerged in the 1970s and 1980s and since gained rapidly in popularity. It draws on indigenous wisdom and economic systems found in villages. It sees communal life of the past as a model to solve problems associated with globalization. Several NGOs established projects in the 1980s in line with community culture, emphasizing the reduced used of chemicals and other costly and environmentally destructive inputs, while focusing on subsistence and local commercial production. In line with some Buddhist thinkers, some advocates of community culture also criticize increasing materialism and excessive consumption desires (McCargo, 2001; Reynolds, 2001. Community culture in

Thailand has been criticised for creating an unhealthy dichotomy between rural and urban areas and romanticizing the rural past (Reynolds, 2001). Some authors have refuted these statements by explaining that community culture is not a romantic view, but is strictly based on managing change, and that it is proven that indigenous people have vast knowledge that should be used. Also, NGOs put emphasis on groups that are too often neglected by the state (Hewison, 1993).

Thailand's decision to adhere to IMF economic plans as a response to the 1997 economic crisis caused a lot of eyebrows to rise, reviving theories based in populism and community culture. Numerous NGOs working across Thailand are inspired by these theories. The IMF's new role in Thailand has been widely viewed as the beginning of the West controlling Thailand through economics. A number of authors¹⁰ have concluded that the developed world is conquering developing countries such as Thailand by subordinating them to economic colonialism and that Thailand's response to the economic crisis was confused, ceding to the demands of greater powers instead of pushing to overcome the crisis with dignity and independence. This 'blame the West' mentality is known as resurgent nationalism, a subcategory of populist localism. These views are all framed around the assumption that Thais are being made slaves of financially strong countries (Hewison, 2000). This criticism of Thailand's decision to further commit to globalization in part explains the popularity of community culture and associated approaches since the late 1990s among Thai intellectuals and elites (Parnwell, 2005). One important philosophy that is largely inspired by community culture and has been widely used across Thailand is the philosophy of Sufficiency Economy.

b) Philosophy of Sufficiency Economy (SE)

The current King of Thailand, His Majesty Bhumipol Adulyadej has been reigning since 1946 and is extremely influential, despite a constitutional monarchy, having a paternal relationship with his people. It is forbidden to publicly criticize him, or anything the monarchy does. The *lèse majesté* law enforces this by incarcerating people up to 15 years for the crime of speaking against the King (Mishra, 2010). Although the monarchy is not meant to have a direct effect on politics, the King and the royal palace have been known to intervene indirectly

¹⁰ "Declaration of Independence from the IMF" by Dr. Thanat Khoman and "United States: Strategy to stay in control" by various authors (See McCargo, 2001 p. 100-101)

(Chambers, 2013; Hewison, 2008). The King has the potential to exert power over his people as his actions (through projects) and words (such as promulgating a philosophy) have an effect on Thais.

In response to the 1997 economic crisis, the King began to strongly emphasize moderation, economizing and rationalization for all Thais as well as the creation of “social immunity” for farmers (PRD, 2012). On December 4th 1997, the eve of the King’s birthday, HM Bhumipol announced and explained his philosophy of Sufficiency Economy (SE) as riding on three Buddhist principles: moderation, reasonableness, and self-immunity that can be applied at any level of society in various ways with the ultimate goal of always taking “the middle path”; a core Buddhist value. In essence, adopting SE into one’s life means eliminating materialism and consuming (only) ‘enough’. This means producing for yourself and, when you can, for your community, making purchases only if they are truly necessary, and ensuring that you are always in a position to absorb external **shocks**. It sees Western values as placing money as they ends, which justify all means, whereas the means should justify the end (Amekawa, 2013; Cantwell, 2010; Mongsawad, 2010; PRD, 2012; Pruetipibultham, 2010). The philosophy links to Buddhist economics, which is the systematic study of how to attain a given ends with the minimum means. A general understanding that today’s consumption rates are so high that environmental destruction is too significant to ignore has sparked an increased interest in alternative economic models. Buddhist economics offers a mentality shift, which redefines our relationship with work, wealth, satisfaction, and consumption (Payutto 1994; Schumacher, 1973). Buddhist countries like Thailand can use an already existing Buddhist value system to promote philosophico-socio-religious models such as SE.

The philosophy is somewhat abstract, making it difficult to place into action (Walker, 2012). An example of SE in practice is the King’s New Theory on Agriculture (NTA) proposed in 1992. Ultimately, the goal of this Royal Development Project is to encourage on-farm diversification and allow farmers to be less dependent on and thus less vulnerable to the market, while addressing water scarcity problems. This is not a moneymaking scheme, but a tool to help sustain healthy and environmentally conscious livelihoods on farms. It

recommends that a typical farmer owning 15 rai¹¹ (2.4 hectares), split it in four: 30 percent for a pond to support cultivation, 30 percent for rice, 30 percent for cash crops, and 10 percent for dwelling, paths, kitchen, garden and livestock pens (Mongsawad, 2010; PRD 2012). This is a type of integrated farming. Theoretically, once farmers have established themselves according to the New Theory and are, thus, self-reliant, they can then move to more commercial activities and further expand production processes while collaborating in the community through cooperative stores or a rice mill factory (Mongsawad, 2010). NTA clearly requires an impressive amount of planning, significant cash input, and a particular topography that can support the physical plan. The NTA itself has a clear layout, but how the philosophy behind it (SE) can be applied politically is vague in most circumstances (Chambers, 2007, 2013; Walker).

The impact of such Royal Development Projects is significant, but critical analysis is limited (ex: Leblond, 2011, p. 459-460). A few examples, however, do exist. The analysis of an agricultural project in Northern Thailand, created in 1969, revealed that farmers were being excluded due to their inability to adhere to strict Good Agricultural Practice (GAP) requirements that limit the use of certain chemical inputs and ban the use of others. Additionally, negative perceptions and social constructions of Hmong and Shan people taking part were enforced (Latt, 2009). Also, a Peat Bog Development Project in 1973 in Southern Thailand aimed to address flooding issues by converting wetlands to dry lands that could be used for agriculture. The project coordinators neglected to research the environmental and social effects of the conversion. After drainage, these former wetlands became too dry and too acidic because the lower layers of peat soil contain pyrite, which oxidizes when the soil dries. The soil then turns into acid sulphate soil, which cannot be used for much, especially not agriculture. Moreover, if its seasonal cycles are properly understood, wetlands can be used for growing rice, fishing, and can allow cattle to graze (Bundhuwong, 2010).

These analyses reveal that, due to a law that prohibits critique of the monarchy, projects can move forward virtually free of critique prior to, during, or after its implementation. This impediment of critical analysis poses a threat to those affected by SE

¹¹ 15 rai of irrigated paddy could be more than enough to support a family, but upland farms could easily require more, especially if there is no off-farm income

inspired projects, as there is very little research on the outcome of such projects. Also, because the philosophy entails ideas about localism, being more oriented towards subsistence and local markets before going for exports, it is best suited for those who have the tools to produce food for themselves. The rest of society cannot live this way, exempting them from this resourceful, less materialistic way of life. There is a bias here in that SE is predominantly directed at farmers, encouraging them to live simpler while the rest of society continues to live as usual. Those farmers who do adopt SE into their lives strive for subsistence, making them less likely to revolt due to low wages and inequality. This raises questions regarding the possible use of SE as a tool to keep farmers satisfied with their lifestyles in order to help decrease political unrest. Finally, community culture typically calls for devolution so that communities can control their own fate. SE's tie to the monarchy, however, causes it to lose this important aspect of community based living (Chambers 2007; Walker, 2012). Because critique of the monarchy is forbidden, there is very little research on the outcome of SE inspired projects.

The philosophy does, however, provide a unique opportunity to apply Buddhist principles in a macro and micro economic context. Sufficiency economy is a bold initiative, which would be difficult to introduce in the absence of such a respected leader (Falvey, 2000). An important adaptive strategy that is strongly linked to SE is organic farming, removing the use of artificial inputs to farming not only changes the pattern of production and consumption, but also allows farmers to produce what they need, sell the surplus, and avoid or eliminate debt. Because of its benefits to the environment, and its small-scale nature, farmers can more easily achieve many fundamental Buddhist values, such as respecting and preserving all life, which are engrained in the Philosophy of Sufficiency Economy (Cantwell, 2010; Schumacher, 1973).

c) Organic farming

Environmental awareness has been on the rise in Thailand, leading to more environmentalism both in rural and urban areas. This has increased health conscious patterns of production, which are supported by complimentary patterns of consumption. An urban-based populist culture has encouraged consumers to seek food products that are not only better for the consumer's health and the environment, but better for the producer as well. A new 'sustainable' agricultural discourse in Thailand began in the 1990s (Taotawin, 2011). In recent

years, some major health concerns have come to the attention of the Thai government, Thai farmers, local NGOs and other organizations. Investigations have shown dangerous levels of pesticides in Northern Thailand and subsequent studies have shown that local consumers put heavy emphasis on health when purchasing food (Sangkumchalianga, 2012). As mentioned earlier, the use of pesticides in Thailand increased eight fold between 1973 and 2004 (Wyatt, 2010b.). This has spurred new interest in sustainable agricultural practice.

As mentioned earlier, the specific implementation of sufficiency economy (and community culture for that matter) often relies in part on organic farming techniques (Beech, 2009; Tosakul, 2014), although not necessarily on formal certification. Certified organic agricultural land is relatively low, but is growing. In 1998 just 1,005 hectares of land were certified organic while, in 2006, 21,701 hectares of land in Thailand were used and certified for organic production. These figures are still extremely low relative to total agricultural land, but are showing growth. Furthermore, between 2005 and 2006, market value increased by 3.4 percent (Sangkumchalianga, 2012).

Two important players in Thailand include: the National Bureau of Agriculture and Commodity Food Standards (ACFS) and Organic Agriculture Certification Thailand (ACT). ACFS is Thailand's food safety and security board while ACT works specifically with organic products and is the major IFOAM accredited certifier in Thailand. The Department of Agriculture also certifies organic produce with its "Organic Thailand" seal. Other IFOAM accredited certifications in the country include KRAV, Ecocert and BCS (Sangkumchalianga, 2012; Wyatt, 2010a).

There are also many players in Northern Thailand that act as producers, or certifiers of organic produce. The Northern Organic Standards Association (NOSA) is a locally registered body with produce being sold primarily in the province of Chiang Mai. They have gained the trust of organizations and consumers over the years, and have created their own local certification that is not accredited by IFOAM or its partners. A number of IFOAMs standards and regulations simply did not work for the farming communities in these areas. Some major issues included land restrictions, buffer zones, and a two-year waiting period before gaining official organic farmer status. Because farmers here are only trying to sell locally, NOSA was not too concerned about not having IFOAMs accreditation. Consumers were not concerned either, and NOSA chose to focus on the needs of local farmers and consumers thus giving rise

to a local interpretation of ‘organic’ based on community-supported standards (Wyatt, 2010b). NOSAs decision is not unheard of. Certifying bodies around the world opt to define their own organic standards if the international standards simply do not align with the local farming communities needs and constraints. There are over 364 different organic production standards worldwide. In the case of NOSA, where a strong bond between the organizations, producers, and consumers exists, the organic standard they have defined works for them. There can, however, be a number of obstacles consumers must overcome to ensure that the certification they see means what they think it means. The figures listed above regarding land area used for organic agriculture are therefore misrepresentations since many farmers are farming organically under different standards not recognized by international bodies.

Lack of awareness makes it difficult to continue spreading the organic movement in rural areas of Northern Thailand. Consumers who seek produce that is better for their health are not necessarily aware of what different certifications mean, or what sustainable farming techniques exist. One example, Safe Foods, is a government certification that indicates a production method using specialized techniques that decrease the amount of chemicals used. Safe Foods may be healthier than other food products but are, evidently, not organic. Safety Vegetable is one subset of the Safe Foods label, which indicates the reduction of pesticide use. Another example (which is phasing out Safety Vegetable) is Good Agricultural Practice (GAP); a fast track program allowing farmers to decrease pesticide use and be certified in three months instead of one year. These and other similar certifications add up in the market place and cause a lot of confusion among consumers. One survey in Northern Thailand showed that 60 percent of consumers like and trust certification labels, 24 percent said they did not know what the labels meant, and 18 percent said that they did not trust them. In addition to this, there are a number of fake labels that imitate logos and names of popular certifiers (Wyatt, 2010a.). In another study in Northern Thailand, just over 30 percent of people recognized the various “Food Safety” labels, while less than 10 percent recognized ACT or NOSA, with numerous consumers not knowing that NOSA indicates that the produce is organic. Many others did not know the difference between ‘safe’ and ‘organic’ (Sangkumchalianga, 2012). Consumers in Northern Thailand are relatively knowledgeable compared to other areas. In Bangkok for example, one study showed that 97 percent of consumers did not know the meaning of organic (Wyatt, 2010a.).

A method called spatial labeling is often used where the market is a ‘certified space’. There are many advantages to this such as less money being spent on packaging, and less waste. However, this open space is easy for other producers to infiltrate and pass as organic. One last source of confusion is the Ministry of Public Health’s Food Safety Program. Each year they inspect food markets for cleanliness, pesticide contamination, and problems regarding health. If a market passes, a sign saying “Clean Food, Good Taste” is installed for the public to see. This is meant to indicate that a minimum standard for health and safety has been met, but consumers often assume that it indicates much more than this. They do not realize that it says nothing about the production method, and does not speak to the differences between the produce of one farmer versus another (Wyatt, 2010a).

Studies in Northern Thailand give mixed messages about the effectiveness of these government efforts. Sangkumchalianga (2012) reports that the government and other private initiatives do, in fact, encourage organic farming as it continues to grow. Wyatt’s research on the other hand (2010b.), states that the government does not do enough to address the problems associated with organic farming, and there is a persistent ambiguity regarding the meaning of the term organic. Inorganic chemical imports are still rising in Thailand despite the increase in inorganic pesticide prices. In 2005, a mere 0.103 percent of total cultivated land was certified organic (Kasem & Thapa, 2011, 2012). There is not enough research on the impact of SE, nor is there sufficient analyses of organic farming and its outcomes in Thailand. It is, therefore, worth understanding how SE paired with organic farming can affect the livelihoods of those who have adopted this approach.

3. Theoretical and methodological framework

3.1. Site selection and characteristics

The goal of the research project is to evaluate how effective the philosophy of Sufficiency Economy is at decreasing economic vulnerability as well as adapting to the disparity problem in Thailand. Because speaking against the monarchy in Thailand is illegal and the principles of SE are promoted by the King, the best way to gain access to smallholder perspectives affected by the philosophy is to research a project designed around the principles of SE without having a direct affiliation with the monarchy. Also, because a major topic is inequality in the agricultural sector, the site selected had to be rural, and the population involved in the project had to be smallholders working in the agricultural sector. ISACs goals and vision line up with those of SE, and the area they work in is precisely the target area of a SE inspired project run by the monarchy, making Mae Taeng district a perfect site for the research project.

Mae Tae borders the districts of Chiang Dao Phrao, Doi Saket, San Sai, Mae Rim, and Samoeng of Chiang Mai Province as well as Pai of the Mae Hong Son Province. Mae Taeng has an area of approximately 1,400 square kilometers with population, reported in 2000, of over 71,200 people. It has planar and highland areas, sloping from west to east. The highest point is roughly 1600 meters above sea level and its lowest point roughly 350 meters above sea level. The northern extension of the Doi Suthep National Park is contained in the districts southern most area, while the Sri Lanna National Park penetrates Mae Taeng in the East (Brinkhoff, 2014; “Mae Teang, Thailand”, 2013, Phiboon, 2013). In 1993, 10,053 land holdings existed in Mae Taeng district (6.34 percent of the total in Chiang Mai), or 96,509 rais (National Statistics Office, 1993). Agriculture is a primary source of income for 75 percent of Mae Taeng workers; 10 percent are merchants, and the remaining 15 percent are industrial workers, mechanics or ‘other’. Major agricultural products include rice, soybeans, peanuts, tobacco, sugarcane, mangoes, garlic, potatoes, tea, coffee, chilli peppers, and cotton. Farmers also manage farming animals such as cows, buffalo, pigs, chicken, and fish. Mae Taeng is the only organic group to successfully manage organic pork and organic pork products (Phiboon, 2013). The Mae Taeng district is home to 13 sub-districts and a number of small organic

communities who, together, represent an organic group. This group, facilitated by ISAC, shares knowledge and has access to seven organic markets in Chiang Mai, each open on designated days. Farmers share the cost of transport, and choose to go on days when they know they have enough to sell and make the trip worthwhile. Besides selling their products at the markets, organic farmers have other marketing channels, such as government organizations, universities, hospitals, and schools. Farmers also participate in value added projects and training so that they can sell more than just crops and make more money.

The organic movement in this area started in 1989 in Darapirom temple, located in a neighbouring district called Mae Rim. Monoculture was very popular in the area at this time and many farmers were worried about the health of their soil as lower yield and unhealthy crops were indicating weaker soil quality. The resources at the temple were limited but, in 1993, an academic and the current director of ISAC, Dr. Chomchuan Bunrahong, approached farmers in the sub-district of San Pa Yang who had real interest in organic agriculture to participate in a developmental program for organic agricultural production in the area. Seminars and training sessions encouraged farmers to pursue organic agriculture as a small network, which grew to roughly 60 farmers by 2007. At this time San Pa Yang's organic group merged with one in a neighbouring sub-district called Sob Poeng. A team formed ISAC when this merge took place and successfully spread organic farming to other villages such as Don Chiang¹², which is part of Sob Poeng. ISACs goal is to support farmers struggling with debt to transition to an organic farming approach through the theory of SE in order to eliminate debt and eventually accumulate savings. ISAC is now a member of Thailand's Alternative Agriculture Network (AAN).

Up until 1994, farmers would attempt to sell organic produce in small nearby markets, but demand was very low. Selling at small local markets, at temples, and directly to neighbours was the main approach until ISAC connected the farmers to a network of organic markets. ISAC was formed in 2007 and their priority was to gain access to markets where organic produce could be sold in larger quantities, and at the proper price. Their first market was at Darawittayalai School in 1994, thanks to the help of a teacher there. By gaining organic certification through NOSA, and through their affiliation with AAN, ISAC built relationships

¹² Don Chiang is often written as Don Jiang or Don Jeang. Pronunciation is "don-gee-ang"

with markets around Chiang Mai, creating a network of markets their farmers can have access to. Today farmers have access to seven markets, which give them several options throughout the week. These markets include; a flea market at Nakornping hospital, the organic farmer Kuang market (in Mae Hia), JJ Market, flea markets at Prince school and Phuttisopon school, flea market at Chiang Mai city hall, and the market at Darawittayalai school. The creation of this network is the centerpiece of ISACs action plan, as it gives the farmers they have trained access to numerous markets that other farmers simply cannot access. Consumers looking for organic produce shop at these markets and seek out ISACs farmers, building long term relationships with them, ISAC also helps prepare farmers for selling in the market with effective selling techniques including produce presentation, presentation of the farmer (personal hygiene), and proper product cleaning and handling techniques (Phiboon, 2013).

ISAC supports two communities in the Mae Taeng district: Don Chiang and San Pa Yang. These communities are situated next to each other and are roughly 2 hours north of the city of Chiang Mai. The main water source in the district is the Ping River, but smaller rivers include the How River, Mae Long Mae Rim River, and Mae Rim River, but irrigation is still an issue for farmers in this region as there are no government irrigation systems. San Pa Yang and Don Chiang are both located off of a small road along the How river. They are in a valley roughly one to two meters wide, near the east side of the northern extension of Doi Suthep National Park. The communities are based around a general center of habitations, but have irrigated paddy fields and orchards located around them (“Mae Teang, Thailand”, 2013; Phiboon, 2013). It takes only 10-15 minutes to drive a motorbike from one community to the other. There are 53 organic farmers in the Mae Taeng organic farmer group: 18 members in the sub-district of San Pa Yang, and 35 in Sob Poeng sub-district (which includes Don Chiang). Farmers own various amounts of land that is typically passed down through generations. There has been a tremendous increase in price of land since the 1960s, and few farmers can afford to buy new land. Some work on borrowed land, or are hired for labour. The organic farmers mostly own land for rice paddies, as well as land for vegetable or fruit cultivation. Paddy fields are located a short motorbike ride from most homes while vegetable cultivation, which is mostly small scale, is located on the same land farmers live on. The organic farmers benefit from the organic project in a number of ways. First, they cultivate year-round, even in the off-season. Because they can return to the market, which ISAC gives

them access to, on a weekly basis, they have a steady income. Of course, with access to a market, non-organic farmers could benefit from these strategies as well. The organic farmers, however, receive a premium for their produce, making their frequent trips to various markets more worthwhile. Finally, because the project is axed on the philosophy of SE, they are striving to cut costs as much as possible. They often work as a community, providing labour for each other, sharing travel costs to and from the market, and virtually eliminating the costs associated with using chemicals and industrial seed in modern farming. In Don Chiang, farmers live close to each other in a nuclear community near a main road and a temple. They are surrounded by trees, and have small winding paths for pedestrians and motorbikes. Many members of this farming community are connected through family. Homes are mostly made with wooden walls, tin roofs, and cement floors. This community has a rice mill thanks to government support. Other communities can pay to use it, but the community members can all use it freely. Homes in San Pa Yang are located deeper in forested areas, away from the main road, and are scattered in distribution. These homes tended to be larger and built with more cement than wood. These farmers are all involved in rice, fruit, and vegetable cultivation with several producing value added products (prepared food, soaps and shampoo), some producing fish, and others producing organic pork products (Phiboon, 2013).

3.2. Epistemology

The effects of implementing a development method based in SE is not well understood, and I believe that there is an answer ‘out there’ that can be investigated through operational links traced over time. My goal is to gain access to information through empirical and theoretical analysis that can be used to analyze, evaluate and potentially improve existing development practices in the agricultural sectors of emerging market economies (EMEs).

The theoretical framework I have used is Critical Realism (CR), which can be seen as a middle ground between positivism and constructivism. The key assumptions of CR have been outlined by Andrew Sayer (1992) in his book *Methods in social science: A realist approach*: (1) the world exists independently of our knowledge of it; (2) our knowledge of the world is fallible and theory laden; (3) knowledge develops neither wholly nor discontinuously; (4) objects, whether natural or social, necessarily have particular causal powers or ways of acting

and particular susceptibilities; (5) the world is differentiated and stratified; (6) social phenomena are concept dependent; (7) science of the production of any kind of knowledge is a social practice; and (8) social science must be critical of its objects. The assumptions point out that there is fallibility in our current knowledge of the world, and we are constantly able to prove ourselves wrong. This view of knowledge is comparable to the scientific method, which states that there is always the possibility of error and one can only disprove, but not guarantee that anything has been proved (Popper, 2002). Also, our social environment is (i) socially constructed, (ii) not a closed system, and (iii) always changing. There are, therefore, transitive explanations, which are socially constructed and changeable, and intransitive knowledge, which refers to an underlying and unchanging reality (Forsyth, 2003). Truth exists within our social systems, but is not necessarily readily accessible (Easton, 2010). One important characteristic to understand about CR is that it does not claim to find the absolute truth, or to attain a ‘grand perspective’ (Easton, 2010; Jeppesen, 2005; Sayer, 2000). My research project aims to access intransitive knowledge of SE in practice through a glimpse of context specific transitive explanations of its implementation in two villages in Northern Thailand. My empirical and theoretical epistemological approach is defined as intensive/concrete by Sayer (1992), and is based in critical realism through the use of case research, which have been acknowledged as being a strong pair (Easton, 2010).

One major concept that proved important throughout the process was the notion of power. Whether it be the power relationship between smallholders and the NGO, smallholders and companies, monarchy and civilians, government and all other actors, or researcher and participant, power relations are always present, and their importance in the research project could not be undermined. Keeping in mind power relationships in production and consumption while using a critical research framework allowed me to take a critical look at a project based in community culture and populism.

3.3. Methods

I am apprehensive to identify this research project as a case study. The ultimate goal is to better understand a process and a philosophy as it is implemented in the agricultural sector. The goal is not to evaluate one NGOs project, or to assess the success of organic farming. I

am, however, using the particular case of organic farming through ISAC as a window to development practices rooted in the Philosophy of Sufficiency Economy. Therefore, there is an undeniable case study aspect to my research. Easton (2010) defines case research as “a research method that involves investigating one or a small number of social entities or situations about which data are collected using multiple sources of data and developing a holistic description through an iterative process” (p.119). Data has been collected through interviews, observation, and literature analysis.

My data is largely qualitative as I used an ethnographic methodological approach based on interviews. This method allowed me to “attempt to study social life as it unfolds in the practices of day-to-day life” (van Donge, 2010 p.180). In an effort to avoid artificial research situations and allow for unexpected outcomes, I tried to integrate myself within the community as much as possible and conduct semi-structured interviews.

A form of non-probability sampling called purposive sampling was used. This method allows the researcher to select participants based on predetermined criteria. In this case, I interviewed farmers who currently participate in an organic farming project run by ISAC. I also selected heads of household to ensure that participants are the most likely household member to contribute appropriate data in terms of breadth and depth. Heads of household make decisions for the family and are best suited to answer questions regarding decisions to work with ISAC and farm organically (Oliver, 2006).

Because I cannot speak Thai, a professional translator was necessary. This is an expensive approach that can have some drawbacks. It did limit my relationship with the participants and community members as I was in the dark and could barely communicate directly with them. However, selecting a professional to assist me proved to be extremely helpful. The translator’s attitude and personality allowed us to integrate easily and seemed to help decrease the awkward relationship that exists between a young English speaking white academic and middle to old age Thai speaking farmer. In an attempt to ensure that female participants were comfortable, I expected to hire a female translator. Once in Chiang Mai, however, the best match happened to be with a male translator. Because participants were all heads of household, I was expecting to speak mostly with men. What happened was the exact opposite, and the translator built a very strong rapport with each participant regardless of his or her sex.

3.4. Interview design & analysis

The interviews were with 20 heads of household and were split in four phases. There was a qualitative sample, which includes just the 20 heads of household who participated in the interview. Some quantitative questions were asked about all household members as well, which created a quantitative sample of 72 people. Phase one aimed to discover what the interviewees 'story' is. This involved simple questions regarding the participant's age, current and past occupation(s), education, history, number of family members, income, savings, debt etc. This phase allowed me to understand the interviewee personally in order to better place his or her responses to future questions. It also gave me information that reached further into the community, and I gained demographic information on family members. In total, information regarding age, occupation, and education was collected on 72 individuals, who make up the qualitative sample. The goal of Phase two was to discover the aspiration of the individual: what do they want for themselves and their family and what do they believe is a viable direction for their lives to move? I also asked about what obstacles they have faced before transitioning to organic farming, as well as what obstacles they face today. Phase three focused on the project they are involved with. Here I asked participants if the project addresses issues important to them, whether promises have been made, and if they have been kept thus far. I wanted to discover why they chose to participate and whether they believe the outcome has been, or will be, favourable for them. I asked about trade-offs and obstacles. The major goal here was to understand their perspectives of the project. Finally, Phase four, was an unstructured conversation that allowed the interviewee to speak freely on issues the interview had addressed thus far. It was an opportunity for me to probe a little in order to gain some insight on the interviewees' views of SE.

This is a small-scale research project that aims to contribute to discourse on agricultural shifts in Thailand and other emerging economies, as well as possible solutions, keeping in mind that "anthropologists don't study villages, they study in villages" (Walker, 2012 p. 5). I piloted the study myself however I had the assistance of a translator on the field. Qualitative data was analyzed using a computer program called NVivo 10.

3.5. Ethical Considerations

As a 25 year old white man from Canada, visiting temporarily to conduct research, my relationship with rural Thai people could never be the same as it would have been had I also been a rural Thai farmer. Despite this obvious obstacle, “we can never truly be ‘insiders’ or ‘outsiders’ in any absolute sense” (Binns, 2006, p.14). I, therefore, had to embrace my position in the areas I visited, and be sensitive to how my presence and approach can affect those I am interviewing as well as the results of my research. In a village with a low average level of education, a graduate student from overseas can appear to be extremely academic. A power relationship can emerge, whereby the researcher has the power of Western knowledge over the participant. This is referred to as academic imperialism (Binns, 2006), and it was important to be sensitive to this throughout the interviewing process.

The research project depends on adult human subjects who may be considered members of a vulnerable population. All information gathered and participant’s identities have been kept confidential. I am familiar with the University of Ottawa Research Ethics Board regulations (2012), and have read and understand the Tri-council policy statement on Ethical Conduct for Research Involving Humans.¹³

The research can benefit interviewees by potentially improving projects affecting them. The sensitivity of the research was reduced significantly by allowing participants to speak about SE and other related subjects without asking questions directly related to it. Because of the laws prohibiting critique of the monarchy, asking direct questions about these projects could put participants in an uncomfortable situation. No obvious identifiers have been associated with statements made by interviewees. When an interviewee has made comments related to SE, has made negative statements about the project or spoke about other sensitive topics, I did not make any obvious relation to which interviewee made specific statements, and only mention or record such statements if they are relevant to the core of the project.

¹³ Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada (2010)

3.6. Limitations of the study

The scope of my project was limited to farmers who have made a decision to farm organically. The majority of these farmers used to engage in contract farming with the use of chemicals. The conversion to organic farming is difficult and time consuming, and all farmers interviewed have made a conscious decision to make this transition. After all their hard work, and with their commitment and mindset, it is likely that the participants would view their decision in a positive light. Thus, a positive outlook on organic farming, the project, and the philosophy attached to it would be unsurprising. In addition, ISAC was my only connection to this community, and I was dependent on them to find participants. However, my translator and I gathered participants while we were in the field. Some prominent community members were told about my arrival, but there was no set schedule. My translator and I communicated with others and set up interview times while on site. The use of purposeful sampling was important to guarantee the most appropriate sample population. Time and financial restraints also came into play and this sampling method guaranteed that each interview would produce relevant and useful information. However, this sampling method rests on the subjectivity of the researcher (Oliver, 2006). My criteria have been transparent and are consistent with the aims and epistemological basis of the research.

The representative of ISAC introduced me on the first day, but was not present at any other time. Working with an NGO was necessary for me because I had no other connection, but there are disadvantages to this, which I did my best to handle in a way that would not affect my data. In addition, this project represents only one single instance, or a sample of one, and its key limitation is its low statistical representativeness.

With more time and more flexibility, interviews with farmers in the same area who have not transitioned to organic farming, or who have tried, but have returned to chemical and/or contract farming would have given me more insight. In their first meetings in San Pa Yang, for example, ISAC spoke to 80 individuals, and only 5 participated in organic farming afterwards, while 35 from 200 participated in Don Chiang. Speaking to non-organic farmers, however, was beyond the scope of my research project.

Despite these limitations, I was still able to gain information to answer my research questions. My interviews told a story of each individual and their families. Their perspectives of SE and

farming became clear. Information regarding their goals, their concerns, the obstacles of their lives, and their histories was collected to reveal aspects of their livelihoods that help to better understand economic vulnerability in the area, and the effectiveness of employing the Philosophy of SE to address economic vulnerability.

4. Data Analysis

I conducted 20 separate interviews with heads of household, which I refer to as the qualitative sample. I asked them qualitative questions about their lives, decisions, and opinions as well as quantitative questions about them and their families. The latter resulted in quantitative information on 72 people (all participants plus all other household members), which I refer to as the quantitative sample. A household member includes all individuals living in and depending on the household and does not include family members who are living away. In many cases the grandchildren of participants were considered household members, but their children live and work outside of the village and are, therefore, not included in the quantitative sample. Interviews were conducted, with a translator, either in or around the home of the participant, or in a community center in Don Chiang, whichever was most convenient for the participant.

4.1. Age and demographics

The average age of the 20 participants, or qualitative sample, is 55 years old. The average age in San Pa Yang (SY) was slightly higher at 57, while Don Chiang's (DJ) average participant age was 54. Roughly two thirds of the participants live in DJ. On average, each household has 3.5 members, and the total number of people in the quantitative sample (all participants plus all family members) is 72. The average age of the quantitative sample is 40. This is slightly higher than the average age in Thailand, which is roughly 35 years (CIA, 2013)

Figure 9 below shows the number of people in each 10-year age group. The most represented age group is between 50 and 60. In the entire sample, there were 4 generations present: (1) children, (2) parents, (3) grandparents, and (4) great-grandparents. The ages overlap and I will not categorize them specifically, but it is important to note that the participants interviewed were predominantly group 3 (grandparents), with only two participants in group 2 (parents). Those in group 2 are often not living in the household; some are in school, others are working various jobs outside of the community and are not dependent on the household. This group, however, often have children of their own (group 1) who are

being raised by their grandparents (group 3), and are dependent on the household. Also, some participants are living with siblings who are close in age, as well as their spouses, who are also relatively close in age. There are fewer people between the ages 11 and 40 because these are family members who are away at school or working elsewhere. The children are often with their grandparents, causing there to be a higher number of people in the lowest age group relative to the age group above it.

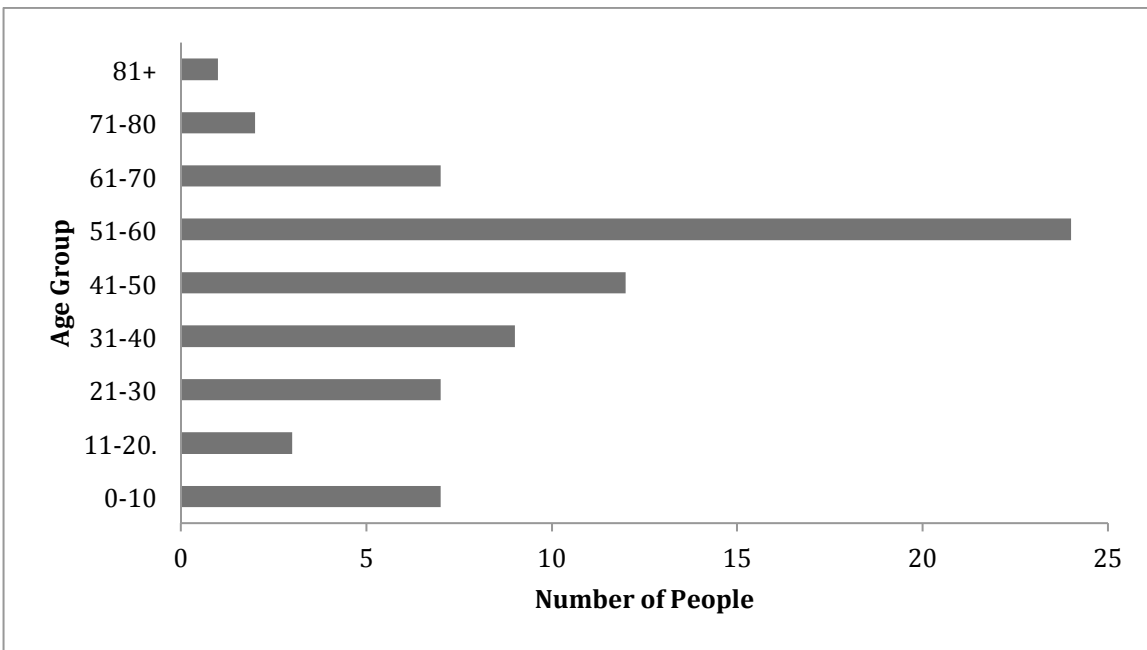


Figure 9: Number of people in the quantitative sample in each 10-year age group

Members of the household identify the head of the household themselves and, in most cases women were identified as the head of the household. I interviewed 6 men, and 14 women (see *figure 10*), with the youngest participant being 39 years old, and the oldest at 70, with an average of 55 years.

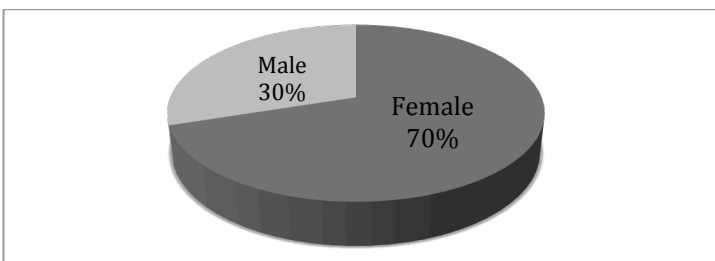


Figure 10: Percent of participants of each gender (n = 20)

4.2. Education

The level of education (LOE) in the quantitative sample was graded on a scale of 0 to 5 (see *table 2*). Note that, on three occasions, the participant did not know the LOE of one family member. These individuals were omitted from this analysis as no score was attributed to them.

Scale	Grouping	Level
5	University Level	Enrolled or graduated Bachelor degree or higher
4	Diploma/Vocational	Enrolled or graduated from vocational diploma
3	High School	Enrolled or graduated grades 10-12 inclusively
2	Secondary School	Enrolled or graduated grades 7-9 inclusively
1	Primary School	Enrolled or graduated Kindergarten to grade 6 inclusively
0	No Education	Has never attended school

Table 2: Scales and grouping of each LOE

The average LOE for the quantitative sample was 1 (Primary School). The average was the same in Don Chiang (DJ) as in San Pa Yang (SY). However, a closer look comparing age groups to education level reveals that, in this sample, the level of education is much higher between the ages of 10 and 40, and is particularly high between the ages of 20 and 30 (see *Figure 11*).

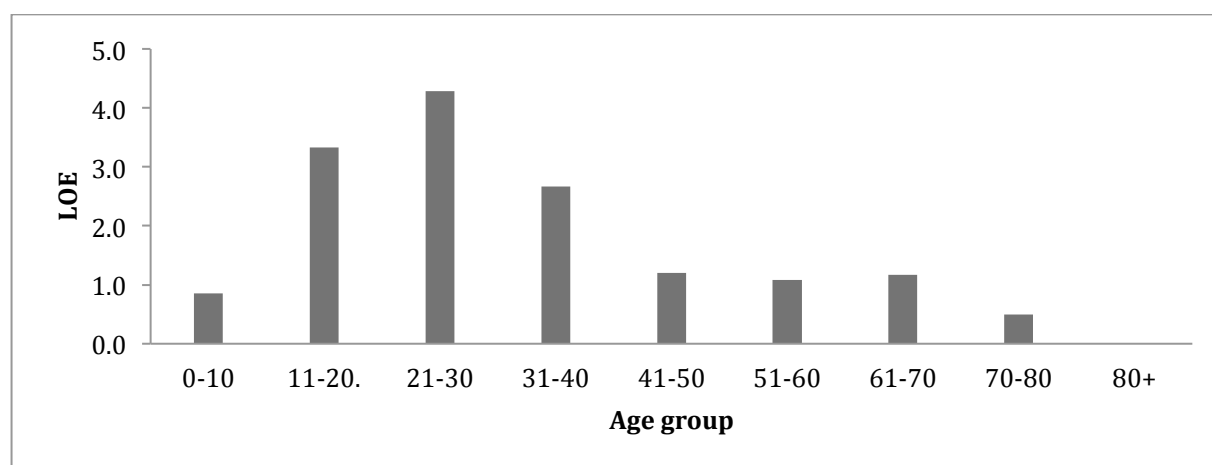


Figure 11: Average Level of Education (LOE) per 10-year age group. See *table 4.2.1* for description of LOE calculation.

This data indicates that, in these two rural villages, more individuals are attending school and pursuing higher education than the generations before. These findings are consistent with those found elsewhere in rural Thailand (Rigg, 2006).

4.3. Reasons to transition to organic farming

Participants were asked why they chose to transition to organic farming. Each participant identified several major reasons behind their decisions, which are illustrated in *Figure 12*. These questions sparked a lot of conversation, and participants went into detail about their experiences.

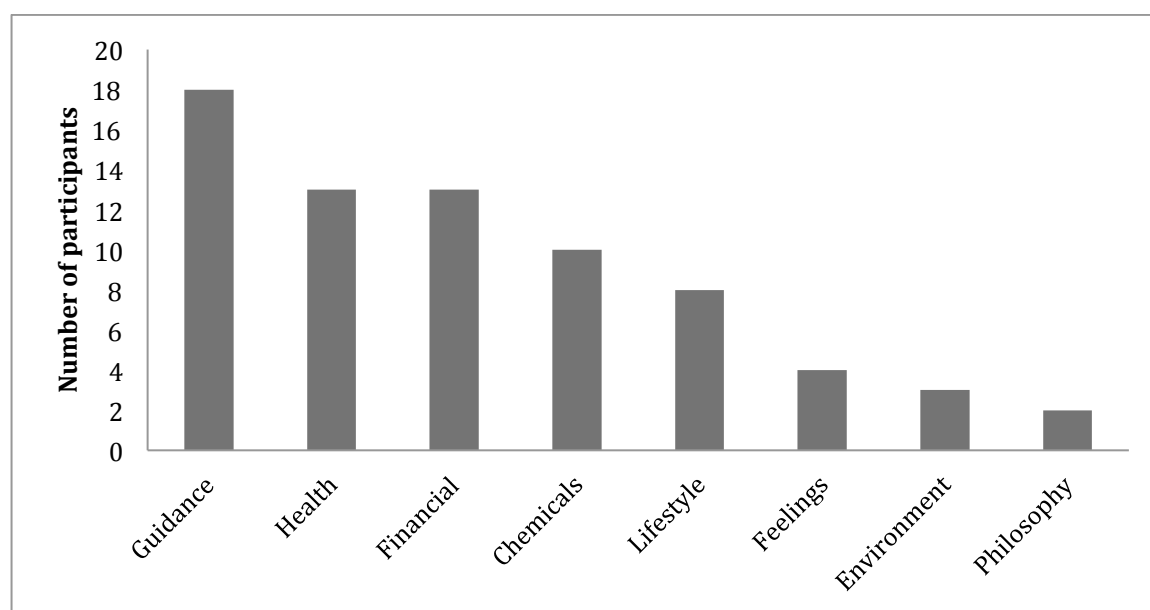


Figure 12: The major reasons identified by participants for deciding to transition from chemical farming to organic farming.

Legend: Guidance- community members, family members, or ISAC members providing guidance to help them and convince them to transition; Health- concerns regarding bad health when working with chemicals; Financial- any financial stress; Chemicals- issues with the system of chemical farming; Lifestyle- desire to have lifestyle changes organic farming could offer (ex: scaling down); Feelings- depression or negative attitude and morale; Environment- a desire to improve the health of the environment; and Philosophy- desire to live by the principles of SE.

All but two participants explained that their major reason to transition was the guidance of a family member, community member, or an ISAC representative. Most participants were approached and explained the benefits of converting to organic farming. The

two who did not identify guidance as a reason for transition were those who approached ISAC themselves. Those who identified guidance may have considered organic farming before, but only became comfortable making the decision to quit chemical farming and make the transition to organic farming when they felt they had a reliable guide. Seeing the experiences of others in their community added to their comfort.

Health and finances are tied in second, with thirteen participants reporting each of them as primary elements that inspired them to farm organically. Those identifying health explain that they are aware of the health impacts of working with chemicals. One woman explains a terrifying experience with chemicals that caused her to spend days in the hospital recovering from chemical burns to her face and body. Another woman explains how her husband had a container of chemicals explode while it was strapped to his back, causing him to have chemical burns as well. Finally, another farmer explained that when she volunteered with the University of Chiang Mai and Ratchapat University over 20 years ago, she discovered that people in her community had high amounts of harmful chemicals in their bloodstream that can never be eliminated. Aside from this, farmers acknowledge the health problems associated with chemical farming, but also discuss the health benefits of working with ISAC. Not only can they eliminate chemicals from their immediate surroundings and diets, they can also learn how to live a healthier lifestyle through ISAC. The NGO teaches farmers about good nutrition and helps them manage or prevent conditions such as diabetes.

Thirteen people identify some sort of financial component to their decision to transition. Farmers discussed financial issues in the form of debt, high expenses, low income, and unstable market prices. Farmers explained that the investment needed to farm with chemicals was far too high. They knew that organic farming would significantly decrease their expenses. Participants also describe a debt cycle that is difficult to escape, but farming organically with ISAC offered alternative solutions. Crop prices often change due to market trends, but for those working with certain agricultural companies, a grading system (described below) would also affect crop prices. With organic farming, prices are higher than regular crops, and are locked for several months. They are still, however, subject to market fluctuations between these locked periods. Finally, participants felt that their income was too low for the work they were doing. Low income is a result of the financial elements listed above. Because organic farming with ISAC requires little to no investment, has more stable

crop prices, involves a savings program, and guarantees a constant inflow of income through the market system, organic farming is seen by these participants as a way of decreasing the intensity of their economic problems. Although high debt, market price fluctuation, and high expenditures are all linked and give rise to low income, participants identify some elements more than others.

Eight participants wanted to change their lifestyle (less labour and more free time), four say that feelings of stress drove them to make a change, just three wanted to transition to improve the health of the natural environment, and only two wanted to live by the principles of SE.

Half of the participants say that the contract farming system has failed them one way or another. Of the 20 participants, only one had never farmed with chemicals before, and transitioned from factory work to organic farming through marriage. The remaining 19 had farmed with chemicals and under a contract. More than half of these farmers describe their experiences with agricultural companies negatively; feeling trapped by the company's regulations and contracts. They describe how the companies perpetuate a debt cycle. At the beginning of the first season, the farmer signs a contract with the company they are working with. This contract will outline what they are growing as well as what the expectations are in terms of yield and quality, among other things. At this time, farmers also purchase the seed they need (which cannot give rise to fertile plants, so they must be repurchased the following season), the herbicides, and pesticides, or any other chemical inputs they require. This means that before they have any crops, or any cash, they have committed to a contract, and have spent a considerable amount of money just to get started. This investment can be sound if the product generates enough cash to significantly exceed the input. They farm throughout the season, but during this time, the farmer and their family inevitably have other expenses, including food. They are not involved in subsistence farming, so farmers must go elsewhere to purchase food. According to many participants, farmers cultivating with chemicals often buy organic produce for their own consumption. There are also large amounts of land to tend to with large harvests, so farmers must often rent equipment such as tractors, and hire labour. All this time, they are not receiving any money and are going further into debt. Unless farmers have enough cash on hand, they must borrow money to make the original investment and support themselves between the investment and the paycheck. This could come from

commercial banks, government banks such as BAAC, or even a community borrowing system. Interest rates differ depending on the lender. At the end of the season, the company comes back, buys the produce and prepares for the next season by signing another contract that will entail selling the farmer more seed and chemical inputs. At this point, the farmer receives a large sum of money, but most of it is used to pay off their original investment. They may come out of the season with some cash left over, and they may not, causing them to fall deeper into debt. Once debt is incurred, it is extremely difficult to escape. Only one participant claimed to have not accumulated debt with contract farming. Season after season, farmers would repeat this cycle, and accumulate more debt. What more, participants suspect that the companies they have worked with are dishonest and take advantage of farmers. In several cases, farmers said that the company's representatives would simply never show up at the end of the season to buy the crops. This is devastating for farmers as they receive nothing for their investment, and are left with produce they cannot sell. They suspect that the companies do this when they have reached a certain quota. Additionally, on occasion, company representatives would call farmers and request they harvest their crops later than originally planned. The example of tobacco was often used here. Farmers know when crops must be harvested and would warn the company that this extra time would destroy the crops. The company would insist that they wait. By the time the company arrives to the farm, the crops have rotted, and the company refuses to pay for them. Finally, companies have the liberty to determine the value of various crops. The prices they are willing to offer are related to market prices, but they have also created a grading system. In the past, crops would be purchased on a pass/fail basis. For crops to fail, they must be in very poor condition. Today, many companies use a grading system ranging from A++ to F. The grade depends on a number of characteristics such as size and color. A perfect score was virtually unheard of, and farmers would have no choice but to accept the price that the company says they are willing to pay. Regardless of the quality, the companies will leave with all the crops. Because of the uneven power relationship that inherently exists between the company and the farmer, farmers who have signed a contract have no choice but to oblige by the rules regardless of any suspected corruption or dishonesty.

These explanations were disheartening, but an interesting observation was the way in which different participants explained very similar experiences. Some farmers describe these events with a critical lens, and could see how these are tactics used by companies who are

abusing their power relationships. Others simply see this experience as a way of life. They are not aware of how the system can be improved; they simply see that the system was difficult to live with and caused economic stress.

Most of the responses regarding a decision to transition to organic farming were not surprising, and led to a number of interesting anecdotes describing the events that led participants to change a major component of their livelihood. It is clear that guidance is an important part of the process, as the transition is very daunting and participants need to know that someone is there to help them. Also, these guides help farmers see the consequences of chemical farming techniques. Many farmers were unaware of health impacts until someone approached them to explain these impacts, and how organic farming can help. They can also see for themselves how the lives of others have changed, which can convince them of the benefits.

It is interesting how few participants say that they want to live by the King's Philosophy. This does not necessarily mean that it had not crossed their minds, but that it was not a major part of the decision, and may relate more indirectly to their decision. Finances, health, guidance, and other factors were far more important. This suggests that, if the monarchy wants farmers to abide by their Philosophy, they cannot depend on the farmers love for and trust in their King to make the needed lifestyle changes that will allow them to live by the principles of SE. Farmers need direct guidance, and they need to understand that their financial situation and their health can be improved. Additionally, potential project participants need to know how a project based in the principles of SE can get them to a healthier and more financially stable lifestyle.

4.4. Goals and obstacles

All participants were asked to identify the goals they had before they joined the organic farming community (*Figure 13*), as well as the obstacles they experienced at this time (*Figure 14*). Obstacles were defined as the struggles participants have experienced while trying to reach the goals they have identified. Next, they were asked to describe the goals they currently have now that they have transitioned to organic farming (*Figure 15*) as well as the obstacles

they face today (*Figure 16*). Their answers help to highlight the change in their livelihoods, their values and their struggles.

Before participating in organic farming with ISAC, the three major goals (all with 7 participants identifying them as a goal) were: improving family life, having more material possessions or commodities, and improving their financial situation. Participants portray their former selves as having a value system that was not in line with the philosophy of SE. Financial goals could be further broken down into increasing income, managing debt, and decreasing expenses. Increasing income was the most important financial goal. Other goals include: owning more land, improving health, and improving general quality of life.

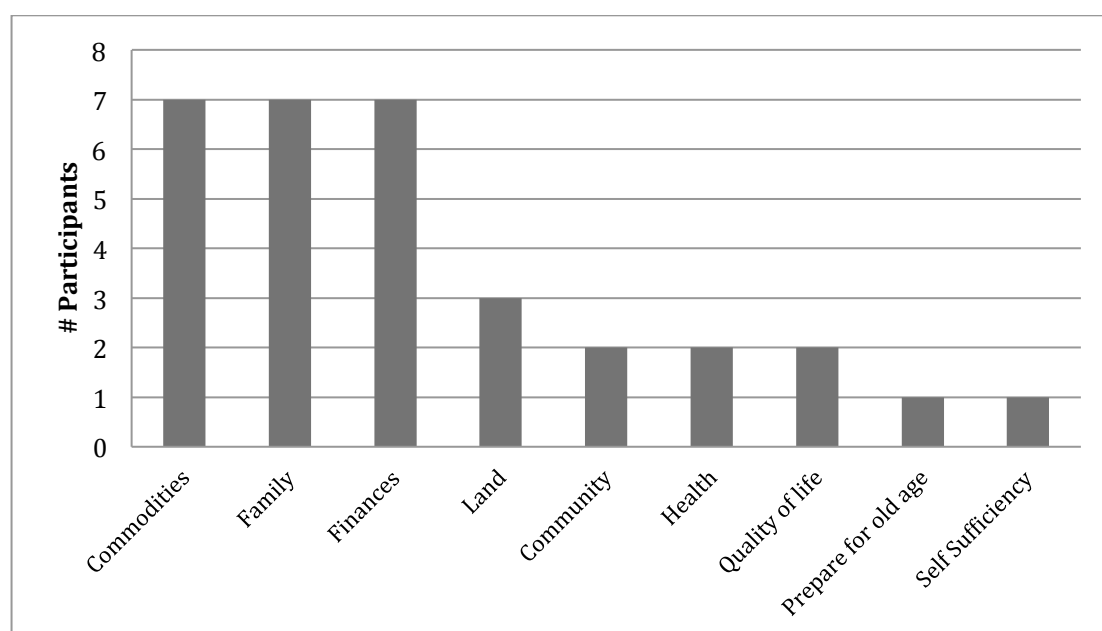


Figure 9: The major goals participants had before they transitioned to organic farming

The major obstacle at this time was, without a doubt, financial struggles. Fourteen of twenty participants identified some sort of financial obstacle, which could be further broken down into (in decreasing importance): low income, increasing debt, high expenses, unstable market prices, little assets or inheritance, poverty, and expensive land. Interestingly, farmers did not mention remittances despite the fact that many of them have children working outside of farming, and are looking after grandchildren. Seven participants said that low support from the government, family, or general support was an obstacle, and low morale was a major obstacle for five participants who described feelings of depression and helplessness, with one

participant describing the years before transitioning to organic farming as “dark times”. Bad production and low education were also identified.

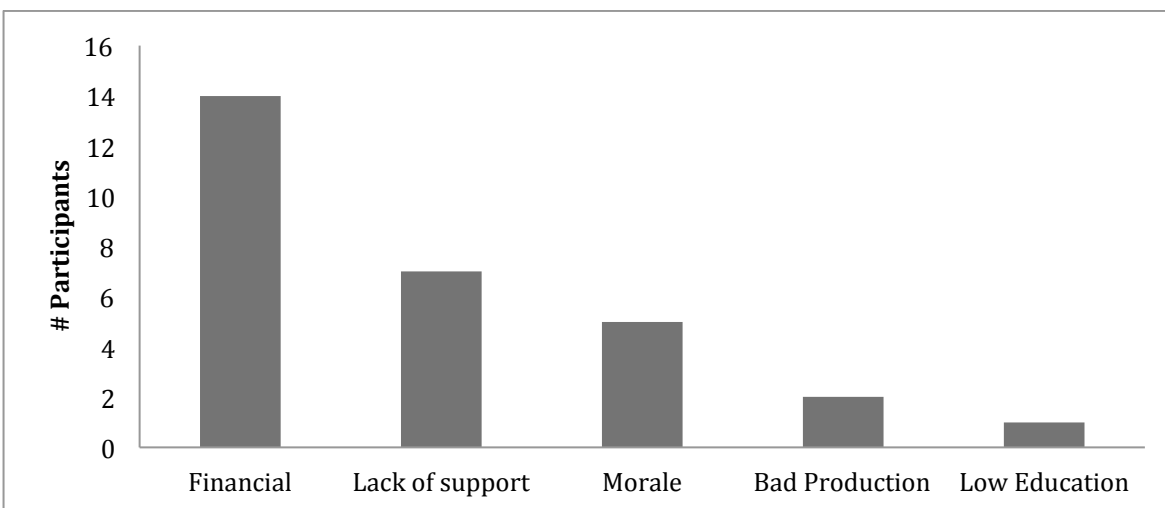


Figure 10: The major obstacles participants faced before they transitioned to organic farming

Most goals have changed since converting to organic farming with ISAC. Family was the only goal that remained the same, with 7 participants. The biggest goal, however (with eight participants) was to spread organic farming to other community members and across the region. Twice as many people want to improve the community than before, and less than half as many people identify a financial goal. Of those who identify finances, none want to increase income, two still need to get rid of debt, and one wants more savings. Although participants did not identify savings as a main goal, they are all putting money into savings, as it is a prerequisite to be a part of the program. Wellbeing, health, more land and commodities are still goals, but not for many, and improved environment and living by the principles of SE were also mentioned by few.

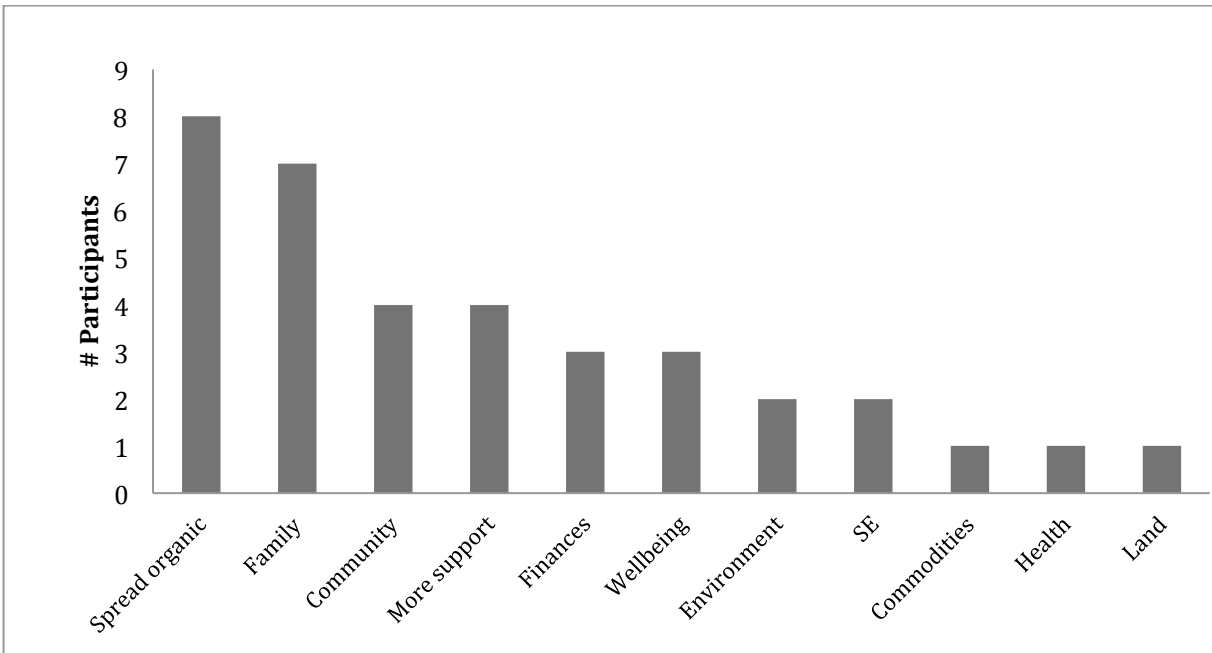


Figure 11: Goals participants have today, after they have made the transition to organic farming

There are far more obstacles today than before, with twelve categories of problems today compared to five before organic farming. However, only three of today's obstacles were identified by more than two people. In addition, today's largest obstacle (difficulty spreading organic farming) was reported by eight people compared to fourteen people reporting financial issues as an obstacle before transitioning to organic farming. Farmers long to spread the organic farming concept, but are struggling to do so. Today's most important goal and most important struggle are both related to spreading organic farming and the concepts associated with it. Since converting to organic agriculture, two people mention low rice yields (organic rice is known to have lower yield), and other minor obstacles include low irrigation, insects, family, community, corruption, and old age. The three major obstacles (in decreasing importance) were difficulties spreading organic farming, finances, and four people claim to have no obstacles anymore. Although finances are the second largest obstacle, they are only identified by six participants (compared to fourteen before), and debt was an obstacle for three people, expensive land for two people, just one participant identified ISACs low funds, and one identified low market prices as an obstacle. This is very different from financial obstacles before which were predominantly low income, high debt, and high expenditures.

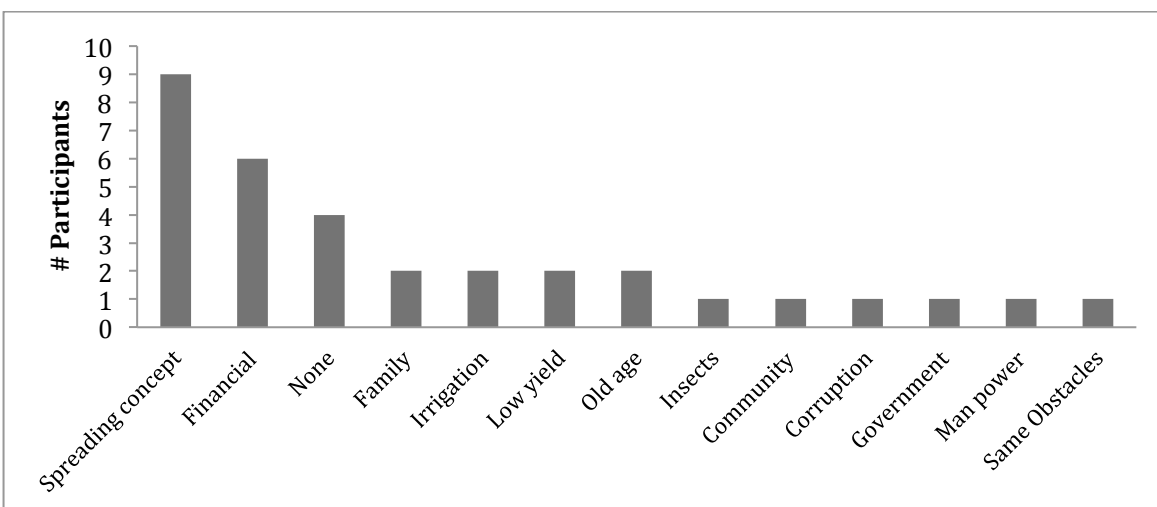


Figure 12: Obstacles participants face today, after they have made a transition to organic farming

Some of these results were not expected, and others were. The issue of irrigation is known to be widespread in the area, and ISAC has identified it as a major issue. When talking about the project itself and questions are focused on agriculture, irrigation becomes a bigger issue, but when participants are asked to identify obstacles and goals in general, poor irrigation is not something that comes to mind.

It is not surprising that financial troubles are still an obstacle, but the nature and severity of these obstacles have changed. In this area, there is a clear decrease in financial stress, but also a big change in how people view money. Just because low income is not stated as an obstacle does not mean that the participant's income is higher, it just means they do not feel that they need it to increase. Much fewer people complain about debt, and the term 'savings' appeared for the first time; no one used the term 'saving' when describing their goals before. An important part of financial security is having access funds to fall back on when times are difficult. Without this safety net, individuals are more economically vulnerable to unexpected changes in the economy, their employment, and in their livelihoods. Increasing savings, or simply introducing savings to a community is in line with the mission of the project, and suggests that there has been some success in decreasing economic vulnerability. Also, low morale has disappeared from the list of obstacles. This is a very positive outcome and may have a lot to do with the fact that participants are no longer working under the influence of large companies, but is most likely due to the assistance they are receiving from ISAC.

Finally, the third most common answer was not an obstacle at all. Four people claimed that they had no more obstacles, indicating at the very least a feeling of satisfaction or fulfillment in their lives.

4.5. Sufficiency Economy

Because of sensitivity towards the topic of Sufficiency Economy (SE), I did not ask any direct questions about it. SE, however, is a major part of the research project as it is the principles of this Philosophy that I am interested in analyzing in order to better understand how it can help to decrease economic vulnerability in the agricultural sector of an emerging economy.

Of 20 participants, 18 mentioned SE without any direct questions on it. Only seven interviews took place in peoples homes, but of these, two participants had posters and photos of the King of Thailand on their walls, indicating strong support of the monarchy. One had two photos of her daughters receiving university diplomas from a princess. The overall attitude towards the King and his philosophy was quite positive with some saying they love the King and his philosophy, but there were some important statements made about SE that can indicate some of its weaknesses.

Not all participants went into deep detail about the philosophy itself. Eight people spoke about the mentality needed to achieve a sufficient lifestyle that is aligned with the values of SE. Of these, three emphasized the meaning of the word ‘enough’, saying that it is central to having the ability to live off of what you need, and no more. Of those who went into detail, major themes were: going back to traditional lifestyles; saving money; changing from within; having strength of mind and not body; and value systems. They explain that it is a process that requires commitment and a certain way of thinking. For the most part this value system entails saving money, working hard, growing food for yourself, changing how much you consume, and understanding when is enough. Others add values such as compassion, caring for the environment, and being selfless. This view clearly reflects the opinion they have of themselves, but also insinuates a negative view of others who do not choose to live by the philosophy of SE. It suggests that others do not work hard, that they are selfish, and they disregard environmental issues. Not only does this mean members of communities are judging

each other, it may also be creating in-groups and out-groups. One participant stated that there was a connection between organic farming and good morality, explaining that chemical farmers will not even eat their own produce because they know it is unhealthy, but will sell it to others. One participant changed their way of life to be more sincere, another mentioned that people who live by SE could be more generous, and while one farmer said people are apprehensive because they put too much value on money, another states that people are too greedy to convert.

When speaking of struggles, participants often mention the way their communities view them. Some explain that they have lost friends since they have switched to organic farming while others go further, explaining situations where other community member's file complaints and spread rumours. One farmer explained that neighbours believe that farming organically gives rise to more bugs, rats, and wild dogs in the community that attack their crops or threaten their health and safety. The path chosen seems to make a statement to neighbours, which may or may not be positive. Effectively, numerous people feel ostracized because of their decision to live by the principles of SE through organic farming. It appears to make a strong statement that is not necessarily deliberate which may lead others to feel insulted or think that their lifestyle is being criticized or challenged. Just three participants display feelings of empathy explaining that they understand how difficult it is to change one's lifestyle in order to live by the principles of SE and that there are many factors stopping people from switching. One adds that it takes time for people to make the decision and that everyone is ready at a different time. These participants show that they are not all judging those who do not live the way they do. The organic community in Don Chiang is mostly made up of family. There are numerous family connections here, whereas in San Pa Yang, farmers make these decisions alone. Farmers from San Pa Yang reported far more issues related to the attitudes of their community than those in Don Chiang.

Because of some sensitivity regarding the topic of SE, I did not ask farmers if they were satisfied with the philosophy. I did not have enough time with the community to establish the kind of trust it would take to receive honest answers. Instead, I asked them to expand on comments and anecdotes. Of 18 people, only eight explicitly say that they are satisfied with the philosophy of SE. However, no participants express that they are unsatisfied. Despite this general satisfaction, seven participants point to some struggles directly related to

living by the principles of SE. All participants have described some kind of struggle related to organic agriculture and the way of life since they have transitioned, but only seven make clear connections between SE and their struggles. Four general themes came out of these struggles: being fully self sufficient, spreading the philosophy to others, technical problems, and difficulties making SE fit into lifestyles outside of organic farming. When it comes to being fully self-sufficient, farmers explained that it is hard to have all the tools (knowledge, know how, guidance etc.), and there are instances where they find that they need to break the rules. Trying to live self sufficiently can be very difficult if you are simply not producing enough to support yourself and your family. One farmer gives the example of going into debt so that he can build a house on his property for his son and his new family. There are times in people's lives where they have to take out loans, which goes against the philosophy. Ideally, when living by the philosophy of SE, one should only produce what they need and not depend financially on anyone else to live their lives. To be fully self sufficient, one must save their money so that they have enough money for the events of their lives that require high funds. This particular participant, however, does explain that there could have been ways to avoid his predicament. SE and ISAC both encourage growing teak on your land in order to have wood for construction. This farmer only recently started doing this and wishes he had started earlier. This would have decreased expenses in building a home for his son. Teak, however, can take a several decades to grow to a mature state.

Four participants explain that it is very difficult to spread the mentality to their neighbours. It seems that the organic network here has a collective goal to spread their philosophy to others, and they consider it an obstacle. As mentioned above, living by the philosophy of SE also entails some kind of negative view of other lifestyles and politicizing day-to-day life. This seems to lead 'believers' of SE to try converting others, much like a religion with the King, a father figure, as its leader. Furthermore, some technical obstacles exist especially when it comes to budgeting. The philosophy requires participants to keep a close eye on their incomes and expenditures, and requires them to put money into savings. Without this, one cannot be truly living by the principles of SE. For many, this is difficult to do as it depends on basic mathematical skills, ability to keep organized records of money flows, and keep track of savings and interest rates. These are not skills that most of these farmers have ever had to acquire, and can be intimidating and confusing. Finally, seven

participants point out the clear connection between SE and the philosophy of ISAC. They point out that the two are a very good fit, and some go deeper by indicating that SE simply does not fit with most other lifestyles, which is consistent with many critiques of SE in the literature. Some have worked in factories and say that SE simply does not fit when you work in a factory. One woman gives the example of her daughter who lives in the city and works as a cashier and spends half of her earnings on a car, which she views as being a necessity in her life. Also, because organic farming (with or without a contract) is so difficult to start, it is also difficult to transition to a SE lifestyle.

One participant tells a story that helps depict one of the central issues with the way people view life in Thailand, and how the general population lacks an important type of education regarding SE. An employee of the state retired and moved to San Pa Yang to simplify his life and begin farming organically. A policeman is considered to be well educated and has a very respectable income. This man had the money to buy land and asked the participant how much it would cost to have an organic farm. The participant's response was "nothing, just grab a hoe and start digging!" The policeman did not see that there was a philosophy to be understood, and that money was not going to buy him an organic farm. The participant goes on to explain that it is a process. First, you begin by growing for yourself, and the rest comes later. Your actions and your mindset are what will get you an organic farm, not money. He explains that this is an example of how educated people have never been educated on philosophies of how to live your life, especially not on how to live self-sufficiently. He tries to have students from schools in the area come to see his farm so that he can help expose more people to this type of education. This particular participant was very critical of the value systems in Thailand and believed that SE break the paradigm.

4.6. ISAC

It was very clear throughout the interview process that the participants have a positive view of ISAC. When asked if they are satisfied with ISAC's work, every participant said yes. This is unsurprising, as they may have assumed I represented ISAC or that I was there to evaluate ISAC. Also, these participants have chosen to stay with the project, this decision alone rests on the fact that they are happy with the project. Throughout the interview, 18 of 20

people praised the NGO at least once, mostly saying that ISAC has helped them tremendously, that they are committed and genuine. Participants appreciate the NGOs help and feel that it is coming from a trustworthy source. When other organizations and government representatives have failed to monitor projects and provide continued assistance, ISAC has managed to keep a close relationship with the community and has helped them to farm organically and live a self-sufficient lifestyle. The personal relationships are intimate and strong.

Conversely, 16 people gave at least one critique of the organization. Most of these criticisms had to do with a lack of continuous funding. In Don Chiang, many people make reference to the Learning Center, which has been under construction for three years. The Learning Center is meant to be a common place for farmers to gather and take part in community activities, or workshops. It is also meant to be used to host foreigners, like myself. The center's construction has been put on hold due to low funding. Aside from being an eyesore, it is virtually useless (although there was one semi built room that was in good enough shape for my translator and I to sleep in). Another criticism regarding financing is incentives for the community leaders. One farmer suggests that ISAC give some financial incentives to farmers to reach out and gather more organic participants. Currently, farmers must incur all travel expenses, and leaders struggle to make the journey to other communities to organize trainings because they cannot afford to do it themselves. He adds that the government has money, and you cannot battle the government and capitalism without money, so ISAC needs to find a way to come up with more funds. Another major critique is the lack of personnel. There are not enough people representing ISAC who can come in to the communities and continue supporting farmers, or go outside of the community to gather more members. Some farmers say they still need continued support even though they have been established as organic farmers for years. One farmer says there is a problem with miscommunication internally, and two farmers mention the need to be more aware of corruption within the market system as non-organic farmers often sell produce within their market at organic prices. Finally, one farmer raises an interesting point regarding the politics within the communities. A hierarchy of farmers seems to emerge as leaders are easily identifiable, as well as the veterans of the program. Often times, farmers take it upon themselves to criticize other farmers and make accusations regarding the legitimacy of their organic farming techniques. Many issues arise with the organic pigs because in order for them

to be organic, everything they eat must be organic. It is unclear why farmers take it upon themselves to make accusations. Perhaps they aim to claim some kind of authority, or may have genuine concern about others benefiting from organic farming without putting in the work. As the organic community grows, ISAC needs to clarify its role and responsibilities, and ensure that all farmers understand their roles as well.

Participants were asked if and how ISAC aligns with their values. Only seven people made clear connections between ISAC and the specific values of SE. Thirteen people said that they chose to work with ISAC because they knew that the project would improve their health. Four of these people describe specific examples of how ISAC has helped them with their own personal health issues. Most were related to healthier eating and managing diabetes, but one woman claims to no longer suffer from dizzy spells thanks to organic farming with ISAC. Not all participants indicated that they saw the connection between ISAC and SE, but by being part of ISAC's project, they are living by the principles of SE.

Finally, participants were asked if ISAC ever made any promises. Everyone's initial response was no. Some added to this by saying that ISAC says that they can improve their life with the project, but that they must make the decision and commit. They make no guarantees, but they do say that if participants are serious and committed, their lives will change for the better. It appears that ISAC does its best to support farmers so that, with their hard work, they can make it to a new organic lifestyle, and can reap the benefits of escaping the chemical farming life, and living more self-sufficiently. Their promises are not concrete, but seem to say that it is possible to improve your life with this project, but it will be tough and will require some perseverance.

5. Discussion

5.1. Demographics

Quantitative data pointed to some interesting dynamics within the community, which can affect the future of organic farming in the area and how rural people manage economic stress. Because Thailand has improved access to education, and values have shifted towards a desire to achieve higher levels of education, younger generations are exceeding their elders very quickly in levels of education. In my quantitative sample, the age group with the highest level of education was between 20 and 30. Older generations had very little education, and the younger generations were all enrolled in school with plans to continue. The most represented age group in the sample was between 50 and 60 years old. At the same time, the younger portion of the sample population is being educated at a level never reached by their elders. A major part of the reason farmers are economically vulnerable is because they lack access to other options. If the younger generations of Don Chiang and San Pa Yang are receiving University educations and earning professional certificates, it does not seem likely, or logical, for them to continue doing the same farm work their parents and grandparents did with a level of education they reached at 10 years old. With low incomes in farming and high incomes elsewhere, one could assume that the younger, educated generations with access to new opportunities would not continue to farm organically or otherwise. In addition, farmers all had stories of struggle to tell, and the outside world offers opportunity, especially to those armed with certificates and degrees. Younger generations would, understandably, want to avoid struggling with the same problems their elders did. In fact, this is likely the exact reason they have continued to educate themselves.

As seen in the older age distribution, farming organically by the principles of SE seems to appeal to an older age group. This is not surprising seeing as older people tend to want to downsize and have a simpler lifestyle. As part of the human lifecycle, individuals typically experience a phase of growth in younger years. Individuals have expenses as they build their lives, and tend to have the energy to expend on efforts to promote growth in their lives. Following these periods of growth is old age, where individuals have less desire and less energy to expend on reaching certain goals they may have had in the past. At this stage, a

simpler lifestyle is appropriate. As seen in San Pa Yang and Don Chiang, younger generations are experiencing a different life than their grandparents, which involves more education and a likely transition outside of farming. SE provides aging farmers with an opportunity to simplify their lifestyle and scale down their farming techniques as the next generation's transition out of farming. This way, older farmers experience less extreme livelihood changes. They can remain on the farm as long as they please, but with time, generations will thrive in urban centers. The land left behind will likely not be used for farming, and in many cases may be sold. This transition could leave more room in the agricultural sector for modern, more productive, farmers.

Demographic findings were consistent with trends discussed by Cherdchuchai & Otsuka, (2006), Rigg (2006), Rigg et al. (2012), and Rigg & Salamanca (2009). The population here is geriatrified (high proportion of the population is older), female leadership and general role in the community is high, there is an increase in value of education as younger people reach higher levels of education than their elders, and, of course, a decrease in absolute poverty.

In theory, organic farming is sustainable – this will be discussed further below. However, even if organic farming through ISAC is sustainable in theory, it depends on families continuing to farm. If younger generations leave, these communities will dwindle. Based on this alone, it appears that this organic project risks being an example of what I call *short-term sustainability*; being sustainable in theory, but only attainable in practice for a short period of time due to outside forces.

5.2. Contract farming

5.2.1. Comparing Don Chiang and San Pa Yang with Ban Tiam and Prachin Buri Province

Walker's (2012) investigation of the village of Ban Tiam (described in the section 2.3.4) showed some clear benefits to contract farming. Ban Tiam has its own unique history, climate, and set of obstacles, and it appears that farmers here have a very different, and seemingly healthier, relationship with their powerful agricultural partners than those in Don Chiang and San Pa Yang: "... farmers have been able to draw the economic power of agro

industrial capital into the village... These farmers have actively participated in... the penetration of capital into the countryside” (p.112). Ban Tiam is driving distance from Don Chiang and San Pa Yang, and the difference in the nature of the contract farming taking place in both areas appears to be radically different. My experience in San Pa Yang and Don Chiang, therefore, did not leave me with the same impression Walker has of Ban Tiam. Admittedly, my master’s research is much smaller scale than Walker’s, but the difference in two proximate villages in studies just two years apart is too much to ignore. Evidently, the nature of the relationship between the company and the farmer is critical for the farmer’s security. One of Walker’s participants tells a story almost opposite to what my participants say. She says that the companies incur all debt if the crops are not viable, adding that without the company, she used to have to borrow money and accumulate debt. She also tells some success stories of farmers, herself included, making large profits off of relatively small plots of land. In Don Chiang and San Pa Yang, farmers complained of falling into debt because of the companies. They were certainly not insured if their crops here not viable, and many were confident that, over the years, they could see that the company was using dishonest tactics to take advantage of them. The response to contract farming in my research was overwhelming and quite persuasive: contract farming here was subordinating farmers, trapping them in a debt cycle, and taking their independence from them causing them stress. On top of this, the largest concern (tied with financial concerns) among farmers was their health due to the chemicals used in large-scale farming; an important factor hardly mentioned in Walkers chapter on contract farming.

The example of fish contract farming in Prachin Buri province however (see *section 2.3.4*) has some striking similarities to the experience reported by the ex-contract farmers I interviewed in Don Chiang and San Pa Yang. Aquaculture and agriculture are different in many ways; especially because, in Thai aquaculture, live organisms are experiencing frequent die outs due to disease. The same does not happen with farming crops. Despite these, and other, differences, a debt cycle perpetuated by high investment when working under a contract is described. Additionally, both describe questionable behaviour on the part of the company. According to one fish farmer, companies encouraged the use of medication for fish, which she later realized was completely unnecessary. She also reported lateness in picking up fish, which causes the farmer to incur even more costs (Janchitfah, 2011). Companies in Don Chiang and

San Pa Yang appear to be guilty of similar dishonest actions. In their case, they have found ways to pay farmers less with their own grading system, and manage to get out of having to buy unneeded produce by forcing farmers to wait so long to harvest that crops are not viable for sale. In both cases, it is easy to detect some level of power abuse that results in various struggles for the smallholders involved.

In the context of my research, farmers have land tenure or have access to borrowed land. The contract they sign with companies outlines what they are to cultivate, in what time period, how payment will work, and what inputs must be used. The power relationship here is undisputedly skewed, and the result of this coalition appears to vary depending on how the relationship is managed by both the farmers and the companies. There are many ways to farm under a contract and the approach taken can evidently give rise to very different results.

My study only included people who have transitioned to organic farming, so the information I collected may be coming from a relatively biased source. It is not surprising that the overall view of contract farming will be negative when those I interviewed made a conscious choice to move away from it. Also, perhaps those still working with the same companies are not choosing to transition because they are benefiting from the system. The experiences of the participants, however, are very negative and suggest that power relationships between the company and the smallholders in being abused. Nevertheless, if I ignore the larger questions of capitalist control, smallholder subordination, or proletarianization, and focus on the local context, I can still say that, at least in the case of these two villages, the presence of contract farming here has a questionable impact on the community, at best. It is clear that the impact was negative on my participants both financially and psychologically, but I do not know what the farmers who have not chosen to farm organically without a contract think. Participants described economic and psychological stress, suspicions of corruption, and a loss of control in their daily lives.

Applying the arguments for and against contract farming in the context of San Pa Yang and Don Chiang based on the feedback of my participants leads me to believe that contract farming can have its place in agricultural development, but runs the risk of creating hardships and destroying livelihoods if it is not properly monitored or kept in check by another party.

Power exists in all relationships and will take many forms. At the community level, it is important to take context into account. The relationships between farmers and their

neighbours, the state, other villages, NGOs working in the area, companies, and the monarchy are all relevant. Depending on the nature of these relationships, a range of approaches to agricultural development may be appropriate. In some cases, contract farming may work, but the way the company goes about its business is key to the long-term success for all stakeholders, big and small. Despite these opinions, I do not believe that one can simply ignore the larger issues of subordination as economies transition to a more globalized market. If a power gradient is such that one party exercises power over another the result can be destructive to the smallholders livelihood. In the agricultural sector, contract farming is an example of skewed power dynamics, but it is, of course, present in many contexts. Corrupt governments or leaders, large corporations monopolizing resources, or even the elite 1 percent in developed countries reaping immense benefits at the expense of the other 99 percent, challenged in recent *occupy wall street* protests are all examples of power dynamics gone wrong. In fact, as this section will also discuss, the power relationship between the people of Thailand and their King is also skewed and the possibility exists that policies promoted and implemented in the name of the monarchy without appropriate evaluation and monitoring would end up hurting smallholders. It is important that academics, policy makers, and the community at large are capable of identifying these power relations before they get out of hand, and keep 'simple' relationships between dominant and subordinate groups a major proponent of all development discourse. As seen in Sen's Capability Approach, humans must have the power within themselves to make choices in their lives. When a dominant group abuses its power, people lose control of their day-to-day lives and are thus unable to achieve the goals that would define them as individuals.

Next, the idea that the signing of contracts is an equal and balanced decision is simplistic. Perhaps farmers have other options, but these options can involve some significant risks, whether the option is to move outside of agriculture, or join an NGO or monarchy led agricultural project. Also, there is likely to be an imbalance between the company representatives (who are far more educated and better equipped to understand the contract) and farmers, who might not understand the nuances in the contract and the potential loopholes. In addition, the higher social status of company representatives as well as their capacity to make an alliance with local influential people might increase their power of persuasion. The company may also not respect the contract with impunity given notably the imperfect nature

of the justice system. Marketing the benefits of working with an agricultural company can be much like marketing products and services to consumers. Supply does not simply meet demand; using the right tactics, supply can influence demand: “producers are not passive operators merely responding to consumer behaviour, but are active operators deliberately influencing consumers to buy the commodities that are produced” (Harris, 1974 p.301). Although farmers are being marketed a plan of action, and not a product, they can easily be manipulated to sign a contract. The stakes are high for farmers and the alternatives are not as appealing when higher incomes and better security can potentially be in their reach. Farmers may be unaware of the risks or disadvantages of signing contracts for chemical farming and they are not necessarily properly defined or described by the agricultural company. One farmer said that when chemicals were first introduced, farmers were so unaware of its deleterious effects on health and the environment that they used to play with it and throw it at each other like children playing with snow. In the event that farmers are conscious of risks and dangers, the perceived benefits may simply outweigh the costs. For example, today all stakeholders generally know the negative effects of using chemicals, but still choose to use them.

On top of this, what the company signs for at the start will not necessarily remain the same into the indefinite future. Walker (2012) briefly discusses the possibility of changes within the company once they have farmers on board for long-term partnership. In this scenario, farmers are dependent on the company and more vulnerable to any changes the company wants to make. At the start, the contract may include some benefits to entice the farmer, but after some years of business, the company can alter or remove these benefits, or add in some new regulations that are not beneficial to the farmer. This is referred to as “contract normalization”.

5.2.2. Moving forward

Contract farming is an option that has the potential to allow corporations to increase profits, help the government catalyze economic growth in the agricultural sector, and assist farmers in finding financial stability, as well as better livelihoods. Because of the potential to abuse the existing power relationship, contract farming must respect some basic standards of ethics, morality and equality. As all parties are, in fact, all benefiting from the agreement long-

term, and there is no corruption or coercion, then contract farming can be a healthy part of a growing economic sector. For this healthy relationship to exist universally, a dynamic system involving a 3rd party would have to be put in place where monitoring is central, and basic rules are established and enforced. If contract farming can be destructive to people in one village, but beneficial to another nearby, then it is clear that there are ways to ensure healthy relationships, and identify unhealthy ones.

5.3. Economic Vulnerability

There is no obvious way to determine whether an individual or a community is economically vulnerable. It is more practical to make comparisons, and determine relative vulnerability. The farmers I interviewed have been affected by government policy, but have chosen to participate in a project run by an NGO, which emulates the philosophy of SE promulgated by the monarchy. By making changes in their lives through this project and philosophy, farmers are *adapting* to their current economic environment; they have made a conscious decision that will have a long-term effect. They are not merely *coping*, which entails involuntary responses to changes in their environment.

As seen by the obstacles faced by farmers before and after their involvement with ISAC, it is clear that economic stress is much less prominent. Farmers identified low income, high expenses, and debt as being their biggest financial obstacles before farming organically. Today, financial stresses are different, and less protuberant. The few who did mention financial stress today only mention that they still have some debt, or they would like more savings. Although farmers are not 'rich', they appear to be in a much more stable economic situation. For one, because they produce for themselves, their expenditures on food are significantly reduced. Second, they are all involved in a savings program and are now accumulating extra cash for future purchases, old age, and inheritance. Third, their incomes are low, but steady and predictable as they cultivate and sell year round with a premium for all organic produce. Fourth, they have diversified crops (absorbing any major market changes for one crop), and always receive the market price for their organic crops instead of receiving whatever a company representative deems appropriate. Finally, because of their detachment from cash cropping, they have virtually eliminated agricultural expenses. They no longer have

to purchase fertilizer, pesticides, insecticides, seeds, or most of the machinery and other equipment needed for chemical farming. They also reduce costs by working as a community through the principles of SE. They often share labour, and the costs incurred travelling to and from the market, and farmers in Don Chiang can benefit from using a rice mill. The vast majority of the participants have escaped debt completely, while the rest are managing it without going deeper into a debt cycle. Most claimed to have been in debt before organic farming. In addition, they can rely on the guidance of ISAC and other community members when there is a problem. The two major factors contributing to economic risk in Thailand are market dependency and environmental degradation. For the reasons listed above, farmers working with ISAC have decreased their dependency on the market, and have improved their economic situation by transforming high debt, low income, and high expenses to low or no debt, low but steady income, and low expenses. Relatively speaking, I would argue that the interviewed participants are certainly less economically vulnerable today than they were before they transitioned to organic farming with ISAC. Perhaps these results could be achieved in other ways, but this research project has shown the potential that SE with organic farming has to decrease economic vulnerability in rural communities. It is worth noting, however, that those who have benefited tend to be older and often have children working outside of agriculture, indicating that this approach to decreasing economic vulnerability works best with a specific demographic.

In terms of environmental degradation, as mentioned in the literature review, major environmental threats include: drought, deforestation, bad soil conditions, and chemical pollutants. Drought is difficult to control, and the government has the highest potential to make significant improvements, unless an NGO grows strong enough to fund irrigation projects itself. Participants mentioned some issues with irrigation but, surprisingly, it was not a point of focus. The amount of irrigation however depends on the geography of the area (topography, climate, etc.), and other areas may suffer more than the Mae Taeng district. Monocropping and cultivating high yields require immense amounts of water, but organic farming is relatively low yield and is diversified. Although irrigation in the region is poor, and pressure is high in the dry season, organic farmers will experience less stress associated with water due to less need. Deforestation issues have been steadily improving in Thailand. Farming organically could help decrease the effects of deforestation by providing a natural

environment, free of toxic chemicals, for a number of affected species. Eliminating pesticides and herbicides will allow a diversity of plant, animal, fungal, bacterial, and insect species to thrive again. This organic project also directly addresses bad soil conditions and chemical pollutants. Soil in chemical farming is stripped of its natural nutrients season after season. It becomes weaker each time it is subjected to chemical treatment and the more it supports high crop yields. These deleterious effects grow more difficult to reverse as time goes on. The natural health of soil is restored through organic farming, and chemical pollutants are removed altogether.

Farmers who have participated in a transition to organic farming appear to be less economically vulnerable than before. They are in a much better position to absorb any changes in the market or their environment. They have not, however, escaped relative poverty. They still earn far less money than Thais living and working in an urban setting. It is an adaptive stabilizing scheme that they have adopted, and not a money making scheme.

5.4. Adaptive strategies

5.4.1. Individual decisions

Participants have not reacted to economic stress on their own. They chose to participate with a Non-Government Organization, and before doing so, most were working with companies. Prior to the NGOs involvement, farmers lacked the tools and knowledge to cope with economic stress alone, thus most stayed with the companies despite known adverse health effects and, in most cases, accumulating debt. My data suggests that guidance is key in individual decision-making. For farmers to change the way they make a living, they are likely to rely on another party's input and suggestions. Without this guidance, farmers have trouble knowing how to change their current situations. Guidance was the primary reason identified by participants behind their decision to transition to organic farming with ISAC, indicating that individuals struggling with economic vulnerability are likely to take action if an outsider is willing and able to guide them towards alternative options. Just four participants made a conscious decision to transition to organic farming without the guidance of an outsider, and one of these participants did so due to an accident with chemicals, which caused her to be

hospitalized for burns. The three who did so out of their own volition still needed help, and found it by approaching ISAC themselves. These individuals become pioneers in the community, and are essential for the growth of the organic movement because they tend to be the primary trusted connection for the rest of their family and the community, presenting alternative options with the added ability to prove its benefits through lived experience. Despite the role remittances play in rural incomes, discussed by Amekawa (2013), participants did not explain that they have been receiving remittances when discussing their income. This may simply not be something they think to mention, but they may not be requesting or accepting remittances from their children. If the project has helped them stabilize financially, there is a possibility that those who have children working outside of farming don't need the remittances. Additionally, SE entails decreasing dependence on others, and this community may want to stabilize financially without depending on remittances, all the while decreasing economic stress on their children.

5.4.2. Populist localism and community culture

ISACs philosophy, like SE, is based in populist localism and community culture. It involves a return to older ways of living, which, in this case, entails a greater orientation towards subsistence farming and community cooperation within the organic group. As described in the literature review, one major critique of this philosophy is that it romanticizes an imagined rural past.

Sixteen participants expressed criticisms of ISAC, but they were not based on criticisms of the philosophy itself. Farmers did not express any issues with disconnecting themselves from large-scale trade of produce, nor did they take issue with the fact that this philosophy cannot be applied to the urban community, or other geographical contexts. The problems they experienced seemed more linked with some issues with project management, which are all things ISAC can improve. These issues mostly had to do with low funds, but also issues with communication and responsibilities. The fact that these were the issues identified by farmers suggests that the philosophy behind the project is either not being critically analyzed by the participants, that it truly reflects their values and addresses their problems, or that other problems exist but that all participants have chosen not to discuss them with me. In

addition, these management and funding problems are typical of an NGO, and point to some of the inherent weaknesses of NGOs.

The positive feedback, however, was much more overwhelming. All participants said that they were satisfied with the project. This is significant as it indicates that the smallholder is, in fact, satisfied. Moreover, not one showed any signs of apprehension when enthusiastically answering ‘yes’ when asked if they were satisfied with ISAC and their work. The prominent praise was that ISAC is dependable and honest. Farmers may believe in SE or other similar philosophies, but they need some sort of leader especially when they do not have the know-how, or the funds to support a change in livelihood. It appears that ISAC has had a positive influence on the community by being knowledgeable, dependable, and approachable. These qualities are important if an organization is to make a difference. Farmers mention similar projects run by the government or other organizations that could not survive because there was no long-term commitment. It is important to keep in mind that there could be self-fulfilling prophecy present here whereby farmers want to believe that they have made the right decision, and that the organization they have put trust in is coming through for them. Nevertheless, it is impressive that not one participant expressed dissatisfaction.

The philosophies for SE, community culture, and populism themselves can, in theory, have potential to decrease economic vulnerability. Given the right leaders, returning to a traditional way of life at the community level can significantly decrease economic vulnerability. This research project has shown this to be true, but only in specific communities at a specific time. It appears that these communities are currently doing well, but this does not guarantee long-term success, or that it would be beneficial at much larger scales.

The work of an NGO can also be effective in helping economically vulnerable communities. Responses from participants indicate that they need long-term commitment from an NGO if a project is to survive. To date, ISAC has effectively used a community culture based philosophy to help farmers decrease their economic vulnerability. It is worth noting here that the feedback came from farmers who have chosen to join ISAC and to transition to organic farming. The feedback, however, did contain honest criticism, but still an overwhelming satisfaction expressed by all participants.

Finally, the philosophy of ISAC has helped farmers in other ways. Most notably, ISAC helps farmers understand how to lead a healthier life. They explain healthy diets, and assist

farmers dealing with conditions such as diabetes. Their guidance reaches further than managing debt and farming organically, indicating the potential for additional benefits of NGOs working with communities.

5.4.3. Monarchy

The philosophy of SE has a number of negative and positive aspects. One of the most obvious criticisms is that it is hypocritical as it only affects the poorest people in Thailand and leaves the rest of the country to continue living as usual. Also, to a western researcher, having a philosophy promulgated by a King who cannot be criticized or have any of his initiatives critically analyzed seems inequitable. If the philosophy is to be implemented, it must honestly and concretely be proven to work. Far too many people can be affected by the spread of the philosophy and the implementation of projects based on its principles. The community at large needs to know what its advantages and drawbacks are, as well as its viability in practice based on sound research and rigorous critique. Other monarchy projects appear to have their drawbacks, and because of this lack of critique and laws against it, serious flaws could not be foreseen and could hardly be documented.

Participants of my research project did not all discuss the philosophy of SE, but those who did, had a positive view of it. Three problems came to light in analyzing participant feedback on the philosophy: (1) inevitability of rule breaking, (2) appropriateness at different stages of life, and (3) dividing communities. First, the philosophy is strict, and it is almost impossible to follow completely. In practice, people must be able to ‘break the rules’, because they will inevitably be faced with times that require them to do so. Farmers will have expenses that will require them to go into debt, especially when incomes are low. Their homes need to be fixed, they may want to buy more land, or buy a new scooter as a necessity, not a luxury. It seems, however, that once a farmer has completely integrated his or life into the philosophy, these events become easier to handle and rule breaking is unnecessary. One farmer went into debt to build a home for his son, but realized that had he been growing his own teak, which is a specific recommendation of SE and of ISAC, he would have been able to avoid a large portion of the expenses. Second, the farmers interviewed had an average age of 55 years. At this stage in life, most farmers have made the most important decisions in their lives. They have married, they have had children, and they have worked for many years. They are

considered to be growing older, and are looking for a simpler life. This is typical of older people, and living sufficiently with smaller scale farming is bound to appeal to an older population. A younger farmer, however, is starting up their lives and is more likely to have dreams of ‘moving up’, buying land, a home, and supporting children. At this stage of life, living by the principles of SE is not feasible and not an attractive option. Finally, when comparing goals and lifestyles, many farmers living by the principles of SE expressed a negative view of those who do not choose the same lifestyle, using words like greedy and selfish to describe those who do not live by SE. Conversely, when farmers join the organic farming project, many have felt judged and criticized by those who have not chosen this way of life. SE followers must be inclusive and understanding in order for communities to have stability.

The philosophy does however appear to have some significant benefits. If farmers truly believe in the principles of the philosophy, and have the tools they need such as viable land, they can be satisfied with their lives. If they can escape economic pressure and control from outside forces, people can live happily. Being satisfied with having what you need and not more, is contradictory to current Thai urban and Western cultures, and points out some significant flaws in other ways of thinking. In a world of excess and spending, satisfaction is virtually unattainable. Psychologically, finding happiness in what you have is extremely important, and if people in rural Thailand can do this, perhaps the rest have something to learn. Aside from finding happiness, living by these principles is more sustainable, as it requires far less use and production of materials used for short periods of time to be trashed later. Participants did indicate that they were feeling less stress, they had more free time, and they feel more supported and secure. Several farmers even expressed that they have more confidence in themselves, and felt a sense of pride as they gained more control over their own lives.

Finally, thinking back to the macro economic environment in Thailand, SE has the potential to, at the very least, give older farmers viable alternatives, buying the country more time from a political point of view. In other words, because downsizing and sufficiency would appeal to the older population, which appeared to be the trend in my research, older farmers could find satisfaction with a SE lifestyle, relieving some of the political tensions that exist in Thailand today. As younger rural Thais educate themselves, less of them will remain in

farming, and political tensions could soften. Having the option to farm using the philosophy of sufficiency economy could allow older farmers to reduce economic stress during this period of transition in the economic sector. Two conflicting issues delineate the disparity problem: a need to keep food prices low and a need to support rural livelihoods. Farmer's incomes are far lower than non-agricultural workers, and this difference is growing to be more obvious. As mentioned in the literature review, if farmers genuinely accept their low relative incomes, they would be less dependent on the government. In addition, the Thai government could continue to manage food prices in order to keep the national economy growing until the country reaches a higher economic status. Once Thailand finds a strong enough foothold, it can begin to make subsidies to farming and commence closing the income gap. Farmers had very positive things to say about the principles of SE. They acknowledge its restrictions, but do believe in finding satisfaction in sufficiency. The King has enough influence socially and politically to promote this way of life. Farmers are free not to listen, but those who do could find stability with this plan. Those who find SE inspired projects attractive will represent a portion of the rural community who decrease their dependence on their government or any other player, such as agricultural companies. This means SE would have its time and its place, but would be phased out once the country can support its farmers. One major obstacle is that, despite the King's influence, many rural people want to increase their income. Organic farmers say that other farmers do not believe in SE and are not willing to transition to this way of life. Their goals do not align to SE. In addition, only two farmers said that a desire to live by the principles of SE motivated them to transition to organic farming. The monarchy can only use its influence on the people, and it does not appear to be enough to convince the masses. Where their influence lacks, however, word of mouth, family relations, and involvement of organizations can help to continue spreading the philosophy. Its relation to Buddhism however (all participants were Buddhist) also helps to increase the philosophies appeal.

For the time being, SE can be used as patchwork to help a portion of farmers escape economic vulnerability. If policy makers want to continue working within a neoliberal framework, research projects like this can help to identify some of the key weaknesses that need to be rectified to ensure that the system is working at all levels. In this project, I have shown that organic farming and living by a philosophy of SE can be advantageous, but that

unhealthy power relationships are a major component of economic vulnerability and can be improved to keep farmers out of these predicaments.

5.4.4. Government

The government has always had role to play in agricultural development in Thailand. The abolishment of the rice premium and other crop price support schemes were the beginning of support in the agricultural sector. The government has implemented a number of projects improving irrigation and community life, but has also worked on poverty, education, and environmental protection. The ‘Million Baht Village Fund’ program injected millions of baht into small villages. The rice mill in Don Chiang, for example, was purchased because of this initiative. The government’s support has been present, but its capacity to continuously support farmers is limited at this time due largely to financial constraints, but also the governments capacity to effectively plan, implement, monitor and evaluate projects over the long term in a way that intimately involves the rural community.

Interviews suggested that the government’s presence is not viewed favourably. Those who discussed government projects claim that they were never monitored, and there is never any long term, dependable commitment. When government representatives come to visit Don Chiang, the farmers are all expected to gather and listen to their instructions, all the while showing them utmost respect and undivided attention. Farmers tend to feel that this is condescending and unhelpful since these government officials do not work in farms and cannot possibly have the knowledge the farmers have. These farmers do not feel heard, and their expertise and knowledge are not being put to use.

Community members have shown interest in planning a dam project since there is no government irrigation system in the area. The dam project would cost 30 million baht¹⁴, but could protrude into a protected area. The sub-district administrative organization (SAO) is not supporting the project, or allowing them access. Documents bounce back and forth between SAO and the Royal Forestry Department (RFD), and the project can never move forward or be adapted. This is one example of how farmers do not feel supported by the government. From

¹⁴ Equivalent to USD \$926,000 PPP

the perspective of farmers, the government appears to have a cold and unsupportive attitude. Whether this is the reality is unknown, but it is the perception in this area, for my sample. The government has restrictions that limit their ability to support farmers. One is a fiscal restriction along with strong motivations to stimulate growth in other sectors. In addition, the government works on a nine to five, Monday to Friday schedule. Farmers do not have this type of schedule; therefore long-term assistance is most effective when an outsider can have a constant presence that aligns with the real lifestyle of farmers.

5.5. Organic farming

Organic farming has some clear benefits to health and the environment. Health was one of the major motivations to transition to organic farming. Perhaps some may be experiencing a placebo effect, but several farmers claim to be in better health than they were before. Eliminating chemicals from the soil makes for healthier soil that can be used to support crops indefinitely.

If SE is to be implemented, organic farming is an excellent conduit. Organic farming is difficult to practice large scale, but it fits well with subsistence farming, and allows farmers to escape the expenses typically incurred in chemical farming, making it easier to stay out of debt, despite lower income. For farmers to truly benefit from organic farming, they must have access to a market system. These farmers start by producing for themselves, but evidently produce for sale in local markets. They therefore have interpreted subsistence and SE to allow for this connection to the local market. This income allows them to save money, and pay for every day expenses. Their organic markets give farmers access to the consumers who are willing to pay a premium for organic produce. This access is difficult to gain as it entails certification procedures that are grey and confusing. The easiest way to connect to these networks is to be part of an organic farming community. In the case of Don Chiang and San Pa Yang, this connection has been critical to their success. Therefore, guidance and a willingness to learn a new way of farming, as well as a connection to an organic market and/or organic community is key.

The major drawbacks of organic farming are the potential for corruption, confusion for consumers in the market place, and a long and risky transition period that entails converting damaged chemical treated soil to chemical free soil for organic farming. Because I only interviewed those involved with organic farming, I did not speak to those who have tried to transition, but one could assume that a failed attempt would have devastating effects. In addition, if organic farming spreads too much, the market prices of organic crops is likely to decrease. .

In the area studied, farmers long to spread organic farming, as they believe in its benefits based on lived experiences. Several explain that the government is unhelpful despite statements claiming a commitment to supporting organic farming. The Ministry of Environment, for example, has not added organic farming to its policy statement. Also, a few farmers explain that the government discourages organic farming by giving organic farmers incentives to transition back to chemical farming, offering cash for every rai (roughly 2.5 rai is equivalent to one acre) that is converted to chemical farming land. This contradicts information found in the literature, but is consistent with Wyatt's (2010b) claim that the Thai government is not doing enough to support organic farming.

The benefits listed above are clear and appear to be worth absorbing the negative aspects of organic farming so long as farmers have guidance and access to organic markets. Whether organic farming can be beneficial on a large scale is not necessarily clear. Pressure on the agricultural community to produce for domestic and international trade is high, and if all farmers cultivated low yields organically, it would be difficult to satiate the need to produce for international trade. Chemical farming allows few farmers to cultivate high yields while organic farming would require far more farmers to reach the same yield. For organic farming to support these high yields, farmers would have to move back to rural areas, possibly requiring agricultural expansion, which leads to deforestation. The trend right now is the opposite, and for this reason, it is my opinion that organic farming has its limits. The amount of land used for organic farming is, however, very low in Thailand and can certainly afford to increase. Organic farming can help change attitudes towards food, health, and the environment.

6. Conclusion and implications

At a macro level, Thailand is currently trying to handle the disparity problem, which is causing farmers and their families to manage their own livelihoods at the micro level in response to a changing economic environment. My research uncovered the transitive explanations of the implementation of the Philosophy of Sufficiency Economy (SE) in two villages of Northern Thailand. This was used to gain intransitive knowledge of SEs effectiveness in decreasing economic vulnerability at the micro level, and relate this to its role at the macro level with regards to the disparity problem.

This research project investigated the Philosophy of SE itself as well as other philosophies routed in the same concepts (community culture and populist localism). It described organic farming internationally, in Thailand, in Northern Thailand, and at the level of the organic project directly researched. It looked at the meaning of economic vulnerability and the role NGOs can play at decreasing it. The role contract farming could play in rural lives as well as some important power relationships have also been investigated. The characteristics of emerging economies, especially with regards to their agricultural sectors, led to discussions on the disparity problem; a central part of this research project. The Thai governments strategies and approaches to development and economic growth have also been covered, as well as the unique role its constitutional monarchy plays in its development and in rural social dynamics. Finally, this small-scale research project aimed to understand how all these aspects converge at the local level by speaking intimately with rural smallholders. Their responses to questions related to their goals, history, and livelihoods have helped identify some key strengths and weaknesses of SE and organic farming in relation to economic vulnerability and the disparity problem. This research process has also allowed me to identify some key players and practices that may be magnifying economic vulnerability in the area.

The philosophy of SE can easily be challenged for a number of inherent weaknesses regarding practicality, hypocrisy, and direct relation to a King who cannot, by law, be criticized. However, in the case of these rural farmers, detaching from large-scale chemical farming has proven to have some significant benefits. Based on Eakin & Luers (2006), and Eriksen et al.'s (2005) definition and description of economic vulnerability, the participants

have decreased their economic vulnerability through their involvement with a project whose values are aligned with those of SE. They have decreased or eliminated debts, increased and created savings, and have lowered their expenses. There have been some additional benefits such as: less stress, more confidence, more free time, better family life, and better health. Their involvement in the project based in this philosophy also put heavy emphasis on reducing costs through support in the community.

Organic farming played an important role as it can easily be paired with the principles of SE. As awareness of the harmful effects of chemicals to the consumer, producer, and environment increases, the presence of organic farming becomes more powerful. The added benefit of good health is directly linked to the removal of chemicals from the air, soil, and water rural people are immersed in. In addition, farming organically allows farmers to earn a premium for their produce in the market place, and reduces the expenses they would be incurring if they depended on chemical inputs and the purchase of seeds.

The research project aimed to understand the perspectives of farmers. Their overall satisfaction with their decision to farm organically and live a sufficient lifestyle is overwhelmingly high. ISAC has guided these farmers effectively and has successfully used organic farming principles based in SE to help farmers manage their economic positions. This indicates how an NGO can be a useful tool in decreasing economic vulnerability. Their major weaknesses lay in low funds, and some communication issues. The project's design allows farmers to sell produce year round in markets they can only penetrate because of ISACs network. This allows farmers to earn a steady and relatively predictable income. Despite a number of tangible benefits, there is some demographic data, and an increased interest and enrolment in education that leads me to believe that this organic farming project is guilty of short-term sustainability (defined in section 5.1). The youngest generations are reaching high levels of education that were beyond the reach of their parents and grandparents. They will likely find opportunities outside of farming, leaving this community with fewer family members to pass their land and farming practices down to. Furthermore, the SE lifestyle is not likely to attract young people regardless of their level of education. At the moment, living simply and sufficiently appears to appeal to older generations, further discouraging the involvement of younger generations in farming with the values of SE.

In small communities, the results of implementing the philosophy of SE can clearly have some economic benefits, despite the fact it is not guaranteed to survive passed the next generation. An added problem is the capacity of this philosophy to be applied on a large scale. Organic farming is slowly growing and can certainly afford to spread more, but if too many farmers cultivate just for themselves with little surplus, the agricultural sector would not be producing enough to supply the rest of the country with food, and would certainly not have the capacity to export produce. Therefore, the lifespan of these projects may likely be quite short, and their capacity to expand is limited. Additionally, farmers are benefiting from higher market prices in exchange for their labour, but if organic production becomes too widespread, higher productivity will drive prices down and diminish the benefits for organic farmers.

Participant's stories helped point out one of the major factors that caused them to struggle financially in the first place. Conversations with individuals who abandoned chemical contract farming in order to farm organically with ISAC revealed that, in this area, contract farming with chemicals can easily trap farmers in a debt cycle. The way these companies are working with farmers has clearly magnified their precarious economic problems. The systems they control and impose as well as some dishonest tactics are catalyzing the problem. However, other case studies in nearby areas have shown that contract farming can have the opposite affect. They can help farmers be more financially secure through systems that favour the farmers' wellbeing. I identify poor power relationships between agricultural companies and their farmers in Don Chiang and San Pa Yang, and not contract farming itself, as a major source of negative economic pressure on smallholders. As I suggest in the chapter 5, best practices must be put in place by a third party, and must be monitored to ensure that power relationships are not being abused. If unhealthy power relationships in agriculture continue to persist, farmers will find themselves in increasingly helpless positions, and companies may lose a foothold if farmers identify the problem and choose alternative strategies in high numbers.

Although these findings merely represent a reality in two villages, the findings can contribute to discourse on economic vulnerability in emerging economies. My findings have shown that with an intimate relationship between project managers and farmers, the philosophy of SE can be used to decrease economic vulnerability, and can allow farmers to feel satisfied with their livelihoods. From the perspective of Thai policy makers, this is a

significant effect of SE, regardless of its drawbacks or criticisms. The power of the King's influence and the incorporation of Buddhist principles into SE cause it to be even more appealing in Thailand than it would anywhere else.

Despite its potential to decrease economic vulnerability, my research does not suggest that applying SE in rural areas has a significant effect on disparity. An income gap still exists and is still increasing even when a farmer can get out of debt. As the income gap increases, and dissatisfaction regarding other political issues pile on, farmers will continue to rebel and political instability in a country that has experienced enough political unrest will persist. Ways forward are unclear as the disparity problem balances two contradictory problems, but the implementation of SE does provide an interesting option that can, at the very least, ease the minds of those farmers who have used SE to improve their lives and find more financial stability. If the Thai government cannot manage to close the income gap soon, the reality will remain that rural dwellers have low relative incomes. If a philosophy can allow farmers to be fulfilled with these incomes, and they can be free of severe economic stress, political unrest can soften to a certain degree. A movement of farmers outside of agriculture is already underway and younger generations, as seen in the literature and supported by my findings, will likely find careers in cities. Older farmers can use SE to smoothen out economic stress and downsize. Through SE these farmers can find satisfaction, decreasing political tension, and their descendants can lead lives outside of farming. Of course, supporting farmers through policy reform and grassroots projects are necessary, but perhaps a different way of thinking can help farmers find satisfaction, and could assist the country in surviving this period of transition. The philosophy helps farmers find satisfaction in a less commercially oriented life. Compared to other forms of production, such as contract farming, it gives them greater control over key farming decisions.

In the eyes of a policy maker who is looking for strategies to handle the disparity problem, supporting organic farming and the Philosophy of SE is an attractive option with some potential short-term benefits (described above). The need for older farmers to adopt a SE lifestyle through organic farming or otherwise is likely to phase out when the Thai economy is strong enough to employ new policy that would significantly increase the income of the agricultural workers who were powerful and resilient enough to survive the transition and fit in a modern agricultural sector. It is important to note here, however, that this is built on the

assumption that there is nothing else the government can do to support its farmers today. There is a possibility of other strategies that aim to support farmers other than price support schemes, or grassroots projects. This research project did not have the breadth to cover corruption within the government, or the possible approaches that could close the gap soon. This research project merely looked at the role SE is playing in tandem with organic farming in decreasing economic vulnerability and coping with the disparity problem.

The research project shed some light on the importance of focusing on the practices of contract farming companies, as it appears to be a key factor in the economic vulnerability of rural farmers involved in such working relationships. If this added stressor could be removed by establishing regulations and monitoring business practices, farmers could increase their economic stability, improve their incomes, and keep more control over decision-making. Fewer farmers would seek alternative livelihoods if business practices with companies were regulated in order to protect the wellbeing of the farmer as well as the economic benefits of the company.

Thailand's current experience is typical of an emerging economy. The Thai economy continues to grow quickly, and the country is forced to react to change far faster than rich economies ever had to. Their experience is unique, as it will be for any country, but its actions during this time will serve as a learning tool for other developing countries. Thailand's successes and failures will inform up and coming economies, especially those similar in size with plenty of agricultural land. This research paper has helped answer questions regarding livelihoods and economic vulnerability in the agricultural sector. This information can be used to further analyze Thailand's current situation and political decisions, give some insight on policy decisions, and help foresee some of the obstacles other developing countries can expect to face.

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