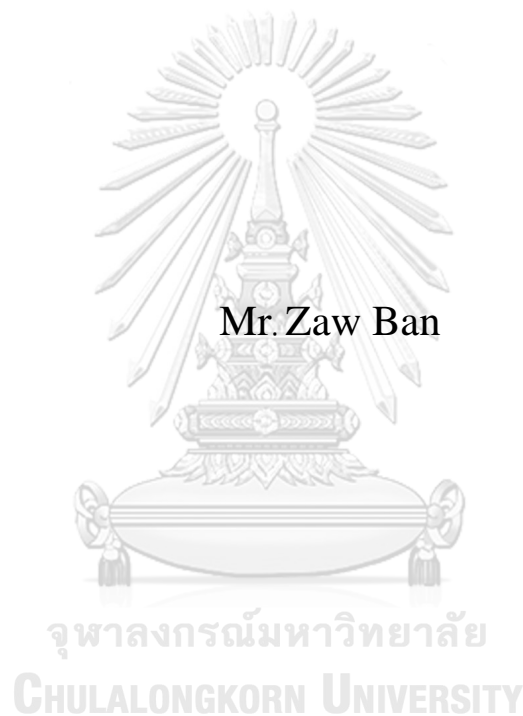


ECONOMIC SECURITY AND DEVELOPMENT: THE
IMPACTS OF INCA INCHI CONTRACT-FARMING AS AN
AGRICULTURAL BUSINESS MODEL IN KACHIN STATE,
MYANMAR



Mr. Zaw Ban

A Thesis Submitted in Partial Fulfillment of the Requirements
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ความมั่นคงทางเศรษฐกิจและการพัฒนา: ผลกระทบของเกษตรพันธสัญญาถั่วดาวอินคาในฐานะ
โมเดลธุรกิจการเกษตรในรัฐกะฉิ่น ประเทศเมียนมา



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต
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ถั่วดาวอินคาเป็นผลผลิตทางการเกษตรที่ก่อให้เกิดความเปลี่ยนแปลงต่อภาคเกษตรกรรมในหลายด้าน โดยเฉพาะอย่างยิ่งต่อ
 ชีวิตผู้คนในภาคเกษตรกรรม และผลประโยชน์ทางเศรษฐกิจที่เกิดขึ้นจากมูลค่าของถั่วดาวอินคาที่มีราคาขายสูง วิทยานิพนธ์ฉบับนี้จึง
 ต้องการศึกษผลกระทบทางสังคมและเศรษฐกิจของการทำรูปแบบธุรกิจแบบเกษตรพันธสัญญาต่อความมั่นคงและการพัฒนาโดยรวม และ
 โดยเฉพาะอย่างยิ่งผลกระทบต่อเกษตรกรที่ทำเกษตรพันธสัญญากับบริษัทที่รับซื้อถั่วดาวอินคาในรัฐคะฉิ่น โดยศึกษากลุ่มตัวอย่างในมยิตจินา
 (Myitkyina) ซึ่งกลุ่มตัวอย่างที่ใช้ในการศึกษาสามารถใช้เป็นตัวแทนของประชากรทั้งหมดของเมืองได้ การเก็บข้อมูล ใช้วิธีการเก็บ
 ข้อมูลเชิงปริมาณ โดยใช้ข้อมูลปฐมภูมิจากบริษัทเอกชน ร่วมกับข้อมูลเชิงคุณภาพโดยการตั้งคำถามปลายเปิดให้กับผู้ถูกสัมภาษณ์ ผล
 การศึกษาแบ่งออกเป็นสามส่วนใหญ่ โดยได้ข้อมูลของแต่ละส่วนจากการบันทึกการสำรวจเก็บข้อมูล การเสวนากลุ่มเฉพาะ และการ
 สัมภาษณ์แบบกึ่งโครงสร้าง โดยกลุ่มตัวอย่างหลักคือเกษตรกรผู้ปลูกถั่วดาวอินคาในรัฐคะฉิ่น ร่วมกับข้อมูลจากผู้มีส่วนได้ส่วนเสียต่างๆ
 ในบริษัทผู้สัญญา เจ้าหน้าที่รัฐบาลในระดับท้องถิ่น เจ้าหน้าที่ขององค์กรนอกภาครัฐ และผู้นำทางศาสนาในท้องถิ่น ศึกษาครอบคลุมตั้งแต่
 ก่อนการปลูกถั่วดาวอินคาภายใต้รูปแบบเกษตรพันธสัญญา กลยุทธ์และพัฒนากิจการของเกษตรกรพันธสัญญาจนถึงหลังการเข้าไปอยู่ใน
 ระบบเกษตรพันธสัญญาของกลุ่มตัวอย่าง โดยศึกษาผลกระทบต่อเกษตรกรกลุ่มตัวในสามประเด็นหลัก คือเศรษฐกิจ สังคม และสถานการณ์
 ทางการเมือง

ผลการศึกษาพบว่า การผลิตถั่วดาวอินคาภายใต้โมเดลธุรกิจแบบเกษตรพันธสัญญา ทำให้เกิดพัฒนาที่รวดเร็วเกินคาดหมาย
 (over development) ต่อทั้งเกษตรกรผู้ปลูกถั่วดาวอินคา และต่อชุมชนโดยรวม แต่การพัฒนาที่เร็วเกินคาดหมายก็ส่งผลกระทบต่อ
 ต่อเกษตรกรผู้ปลูกถั่วดาวอินคาด้วยเช่นกัน เนื่องจากโมเดลธุรกิจแบบเกษตรพันธสัญญาไม่ได้รับการควบคุมกำกับจากภาครัฐเท่าที่ควร และ
 ในส่วนท้ายของวิทยานิพนธ์นี้ ได้วิเคราะห์ความสัมพันธ์ขององค์กรต่างๆ ที่มีอิทธิพลต่อโมเดลธุรกิจแบบเกษตรพันธสัญญา และนำเสนอ
 ข้อเสนอแนะในการวิจัยเกี่ยวกับเกษตรพันธสัญญาในอนาคต รวมถึงอุปสรรคและวิธีแก้ไขในการทำวิทยานิพนธ์ฉบับนี้ด้วย

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In Myanmar, Inca Inchi is one of the new economic businesses that made changes to the agriculture sector with both its advantages to the quality of life of the people and a high selling price which generates an economic benefit. This study tries to explore the overall social and economic impact that Inca Inchi contract-farming as a business model has had on the security and development specifically for the farmers who signed the contracts with the Inca Inchi companies in the Kachin state, Myanmar. Sample size in Myitkyina Township represented total population. Quantitative data collection method based on primary data collection from private company, along with qualitative method utilized opened-ended questions which were given to respondents. The findings were divided into three major parts, and each part's conclusions was determined from records by surveys, focus groups discussion and semi-structure interviews. The primary respondents were famers who planted Inca Inchi in Kachin State, along with the other stakeholders from contracting companies, local government officers, officers from Non-Government Organizations, and local church leaders. Findings covered changes during times beginning with the premier time before the entering of Inca Inchi contract farming to villages highlighted into three economics, social, and politic situations of villages, how the business strategized and got into the villages, cost and benefits and changes that have occurred since the commencement of the contract farming into the villages. The study has revealed that even though the Inca Inchi contract farming would contribute to the over development of not only the farmers who are engaged in the Inca Inchi farming, but would benefit the larger community, which as the study has shown, had an adverse impact for the farmers who got into the Inca Inchi contract-farming due to lack of oversight from the government. Lastly, the researcher disclosed obstructions, suggested solutions, and relationship analysis among five institutions. Recommendations have been made and also suggestions that may be guided for further research on the contract-farming business model so as not to have the same situation as before for the farmers who have been involved in the Inca Inchi contract-farming.

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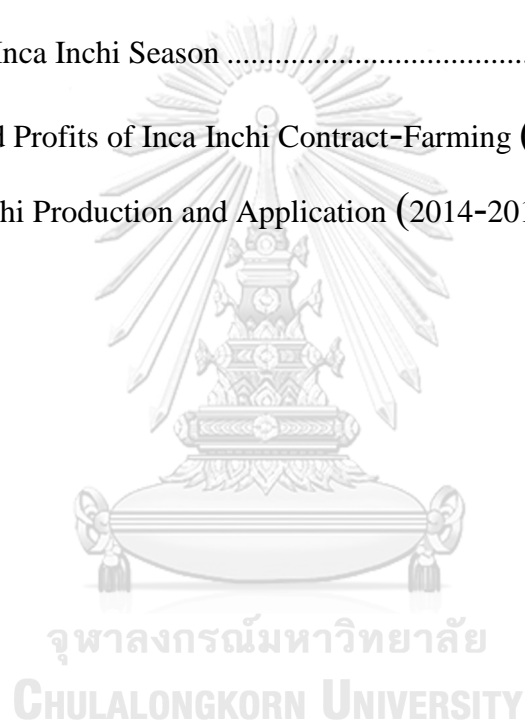
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| | | |
|--------------|---|--|
| BGF | - | Border Guard Force |
| CS | - | Community Security |
| DOA | - | Department of Agriculture |
| FDI | - | Foreign direct investment |
| FAO | - | Food and Agriculture Organization |
| FGD | - | Focus Group Discussing |
| GOUM | - | Government of the Union of Myanmar |
| GDP | - | Gross domestic product |
| HDI | - | Human Development Index |
| HDR | - | Human Development Report |
| ICRC | - | International Committee of the Red Cross |
| INGOs | - | International Non-Governmental Organizations |
| IDPs | - | Internally displaced person |
| KIA | - | Kachin Independence Army |
| KIO | - | Kachin Independence Organization |
| KBC | - | Kachin Baptist Convention |
| LIFT | - | Livelihoods and Food Security Trust Fund |
| MAPC | - | Myanmar Agribusiness Public Corporation Limited |
| NLD | - | National League for Democracy |

| | | |
|--------------|---|--|
| NAPA | - | National Action Plan for Agriculture |
| NGCAs | - | Non-Government Controlled Areas |
| NGO | - | Non-Governmental Organization |
| OHCHR | - | United Nations High Commissioner for Human Rights |
| SLORC | - | State Law and Order Restoration Council |
| UPC | - | Union Peace Conference |
| UNDP | - | United Nations Development Program |



CHAPTER I

INTRODUCTION

1.1 Introduction

The Kachin state is located in the northern Myanmar sharing with China to the east and north, India to the Sagaing Region of Myanmar to the west and the Shan state to the south inside Myanmar. The agriculture sector of Myanmar finds itself in the early stages of an accelerated growth period, but only partially completed policy of liberalization. There was tight state control over the agricultural land rights, crop choice, and production decisions, as well as marketing, trading, and pricing since the socialist regime led by Ne Win during 1962–1987. This resulted in diminishing agricultural sectors of the whole country including Kachin state. After Ne Win's dictatorship, the military junta control the country for 20 years until 2011. Fortunately, Myanmar has moved its democratic transition led by President Thein Sein's administration since early 2011 and now NLD-led civilian government has taken power through the landslide winning of election in 2015. However, the development of agricultural sectors in Myanmar has not been much progressive because the military still controls political power including all the economic sectors through 2008 constitution. In recent years, the agricultural sectors in Myanmar has soared significantly to boost in the business contexts and which has domestically impinged the national development of Myanmar. The term 'development' has been the main theme of the agricultural sectors in Myanmar, in this case, including Kachin state.

The armed conflicts between the Myanmar army and the Kachin Independence Organization (KIO) have meant that vast areas of land in Kachin state remain beyond government control because the KIO controls some areas of the Kachin state this is referred to as Non-Government Controlled Areas (NGCAs). The resumed armed conflict has between Kachin Independence Army (KIA) started since 2011 which has led to extensive loss of life, damage to infrastructure, interruption of livelihoods and prolonged displacement of thousands of people from their homes.

Recently, a new crop called Inca Inchi was introduced into the Kachin state. Inca Inchi is also called Sacha Inchi (in scientific name: *Plukentia volubiblis* L.) as well as Sacha peanut (Liu et al., 2014, p.1). However, the thesis continues to use as Inca Inchi. Most farmers were interested to engage the Inca Inchi farming particularly near Myitkyina and Waimaw townships. Consequently, the many areas in Kachin state has replaced traditional crops or empty lands by the Inca Inchi farming after the introduction of contract farming from international cooperation between the Kachin state and Chinese investors. Therefore, it is interesting to investigate how the Inca Inchi was brought and why farmers have come to be interested to engage the Inca Inchi contract-farming in Kachin state.

In fact, the Inca Inchi contract-farming can be considered as an agricultural business model because the farmers bought the Inca Inchi seeds from the Inca Inchi companies set up in Kachin state and followed the farming technics as the Inca Inchi companies instructed. Contract-farming could be a solution for smallholder to improve their market position and increase their household incomes, thereby keeping them competitive in a rapidly growing and changing livestock market" (Marites Tiongoco, 2008). However, many argue that contract-farming is perceived as a modern way of exploiting farmers. It is also perceived as perpetuating inappropriate agricultural practices as it may expose small farmers to new risks (Setboonsang, 2004) This argument can be interpreted that the companies as integrator-contractors attract for their own business interests to put the farmers at risk without guarantee for compensations when farmers have not benefited from the contract-farming. In this context, the integrator-contractor usually refuses to compensate the growers for price differences during period of volatile market prices.

This study looks at the social and economic impacts of the Inca Inchi contract-farming, as an agricultural business model towards the local farmers in Kachin state, in the lens of security and development. The security is to address perspectives of human security because the human security and state security are mutually reinforcing and are dependent on each other (UN, 2009b). This circumstance has affected livelihood security of the people who rely directly or indirectly on agriculture. On the other hand, it is to analyze how such the Inca Inchi contract-farming as an agricultural business model contributes the community development of farmers

in Kachin state. For these reasons, this study argues the social and economic impacts of the Inca Inchi contract-farming, as an agricultural business model towards the local farmers in Kachin state.

The quantitative and qualitative indicators measure the social and economic impacts of the farmers for those who have been involved the Inca Inchi contract-farming in Kachin state in the perspectives of security and development. The study analyses the cost and benefits of the farmers those who get involved in the Inca Inchi contract-farming in terms of income security. The income security signifies adequate actual, and anticipated income either earned or in the form of social security and other benefits. It encompasses the level of income, expectation of current, and future income of individuals during the times worked (Skogan, 1990).

1.2 Research Questions

According to the statement of problem, the following are the research questions;

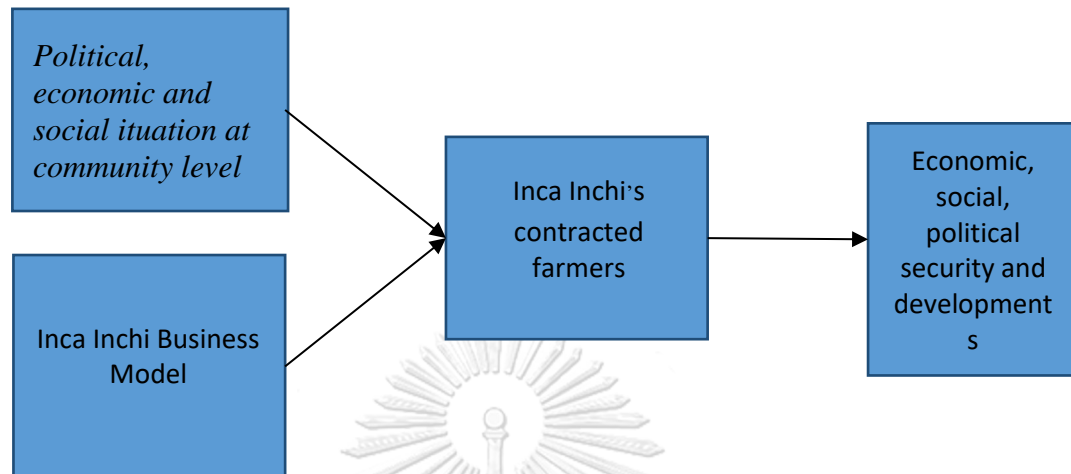
1. How was Inca Inchi contract-farming introduced in Kachin state?
2. What were the social and economic aspects before Inca Inchi contract-farming in Kachin state?
3. What were the impacts of Inca Inchi contract-farming for the security and development of farmers in Kachin state?

1.3 Research Objectives

- To explain how Inca Inchi contract-farming was introduced in Kachin state.
- To explore the social and economic aspects before Inca Inchi contract-farming in Kachin state.
- To evaluate the impact of Inca Inchi contract-farming for the security and development of farmers in Kachin state.

1.4 Conceptual Framework

Figure 1.1 Conceptual Framework



The study has applied a conceptual framework, as shown in figure (1.1), in which the dynamics of political situations affect the security and development of the communities. In other words, the more the political dynamics is stable in the areas, the more secure to implement development. Consequently, such political dynamics impinges all sectors of development for the communities and especially as the agricultural sector has been one of the key sectors that plays an important role for the community development. As a result, the Inca Inchi contract-farming as an agricultural business model has been interwoven with the agricultural sector and that affects the social and economic aspects of the community. In this framework, the years that the farmers have been involved in the Inca Inchi contract-farming considered as a significant period that contributes the social and economic impacts of farmers in terms of community development and human security.

1.5 Research Methodology

This study is to delve into social and economic impacts of the Inca Inchi contract-farming in Kachin state. The research methodology, therefore, entails a wide range of research approach to probe and analyze the data.

According to conceptual framework, the study has employed both quantitative and qualitative methods so as to probe the data and to analyze the research findings in accordance

with research objectives and questions. As mentioned in introduction, the Kachin state has a very large land territory, for which the study has no point to represent for the whole Kachin state. However, the study was able to identify the relevant areas that can provide the focus of the research in terms of research sites. It was able to select the governing areas in the Kachin State in terms of research scope. In this case, Myitkyina township was purposively picked up because the Inca Inchi contract-farming was initiated here in this township and expanded to wider scope of other townships in Kachin state.

The study has quantitatively and qualitatively analyzed on the primary data collected from the farmers as field respondents who have been engaged in the Inca Inchi contract-farming. The analysis also reflects qualitative answers from key stakeholders, namely church leaders, company staff, some NGOs and government staff those who understand or have been engaged in helping the farmers for Inca Inchi contract-farming. Moreover, the study has additionally used the secondary data from a company called Kasante, in which the company had conducted research in several villages in the Kachin state using qualitative research methodology, that has reflected the primary data of the study.

Table 1.1 Methodology Matrix and Interview Strategy

| Sr/No | | Research Questions | Data Needed | Information Sources | Data Collection Tools |
|-------|--|---|--|--|---|
| 1 | | What were the social and economic aspects before Inca Inchi contract-farming in Kachin state? | <ul style="list-style-type: none"> - On-Farm and Non-Farm Incomes of the Farmers - Social and Economic aspects of the farmers before Inca Inchi contract-farming | <ul style="list-style-type: none"> - Primary data from farmers those who engaged before Inca Inchi contract-farming - Interviews with farmers, members of farmer's families | <ul style="list-style-type: none"> - Survey - FGD - In-depth interviews |
| 2 | | How was the Inca Inchi contract-farming introduced in Kachin state? | Information on Inca Inchi contract-farming introduced in Kachin state | Interviews with farmers, church leaders, local government officers, NGOs and Companies staff | KII |
| 3 | | What are the social and economic impacts of Inca Inchi contract-farming in Kachin state? | <ul style="list-style-type: none"> - Data for Costs and Benefits from Inca Inchi contract-farming - Social and economic impacts of Inca Inchi contract-farming | <ul style="list-style-type: none"> - Primary data from farmers those who engaged before Inca Inchi contract-farming - Interviews with farmers, church leaders, local government officers, NGOs and Companies staff | <ul style="list-style-type: none"> - Survey - FGD - KII - In-depth interviews |

1.5.1 Sample Selection

As stated, the study utilizes purposive sampling method for the selected five villages namely Nanjim, Ah Kye, Nawng Nang, Pa La Na and Shadau in Myitkyina township in Kachin state as the research site, in which twenty-five farmers as field respondents were randomly identified through the rapport one after another. In fact, these villages have been engaged with the Inca Inchi contract-farming since the beginning. Aside from the farmers, the selection of research sample for key persons from NGOs staff, local government, churches and companies was based on knowledge, relationships, and expertise regarding their link to the Kachin state. Most key informants have relations with the farmers engaged in the Inca Inchi contract-farming. The study approached the church leaders and some NGOs staff those who were involved in this Inca Inchi contract-farming by contacting between Inca Inchi companies and farmers. On the other hand, some key persons from the companies and local government were also approached for the study.

1.5.2 Data Collection

With the research tools, the researcher conducted data collection for both quantitative and qualitative data. The researcher explained the respondents that data collection was for a master thesis on the Inca Inchi contract-farming. Throughout data collection, the researcher prepared a survey questionnaires and semi-structured questions for farmers. The survey was to collect the quantitative data from every individual farmer and two focus group discussions (FGD) were followed to have understanding over the perceptions of their experience of the Inca Inchi contract-farming for qualitative data. On the other hand, the researcher prepared some relevant semi-structured questions for key persons from church leaders, NGOs, local government and companies in terms of key informant interviews (KII). In some issues, the in-depth interviews were followed for some key informants in accordance with research objective. Every interview took 25-30 minutes and all interviews were taped with mp3 recorder and the researcher himself took some important notes. The research fulfilled the inform consent of all participants for data collection and all participants were free to express their views. All data collection was conducted in September and October of 2017. Types and numbers of respondents are shown in Table (1.2). In addition, the researcher requested some qualitative data from the companies in terms of secondary data and simply explained them that the data were for the study purpose.

Table 1.2 Research Respondents

| Type of respondents | Type | Number of respondents | Note |
|---------------------|------------|-----------------------|--|
| Farmers | Survey/FGD | 25 | (5Farmers) From Nam Jim Village (5Farmers) From Ah Kye Village (5Farmers) From Nawng Nang Village (5Farmers) From Pa La Na Village (5Farmers) From Shadau Village |
| Company Staff | KII | 5 | (1) from Agent of Elashaddai Company (1) Director from Myanmar Inca Inchi Company (1) Director from Star Sacha Inchi Company (1) La Nan (KBC) (1) from Agent of China Company |
| NGOs Staff | KII | 5 | (1) High level staff from Kachin Development Group (1) Support Coordinator of Norwegian Refugee Council (1) Director of Agricultural Researcher for Development Group (1) Coordinator of Metta Development Foundation |

| | | | |
|---------------------|-------|----|--|
| | | | (1) Director of Kachin Development New Wave |
| Government Officers | KII | 5 | (1) Member of Parliament in Kachin State (1) Chairman of Unity and Democracy Party in Kachin State (1) Chairman of Kachin Democratic Party (1) Staff of General Administration Department in Kachin State (1) Staff of Agriculture, Livestock and Irrigation in Kachin State |
| Church Leaders | KII | 5 | (1) Kachin Baptist Convention (KBC) (1) Lisu Baptist Church (1) AG Church (1) Department of Development from KBC (1) Nawng Nang Baptist Church |
| | Total | 45 | |

| Village | Farmer's Name | Age | M/F | Plant Acre/No. of acres | Inputs Total Cost (Kyat) | Outputs Total Income (Kyat) |
|------------|---------------|-----|-----|-------------------------|--------------------------|-----------------------------|
| Nam Jim | 1.Naw A | 45 | M | 1 | 350,000 | 550,000 |
| | 2. Ja Gun | 38 | M | 2 | 800,000 | 1,000,000 |
| | 3. Tu Ja | 35 | M | 1.5 | 555,000 | 755,000 |
| | 4. Nu Nu | 41 | F | 1 | 400,000 | 500,000 |
| | 5.Seng S | 45 | F | 1 | 380,000 | 520,000 |
| Ah Kye | 1.La R | 54 | M | 3 | 2,850,000 | 1,650,000 |
| | 2.Zau A | 47 | M | 1.5 | 1,500,000 | 900,000 |
| | 3.Doï L | 41 | F | 2 | 2,000,000 | 1,060,000 |
| | 4. Seng P | 39 | F | 2.5 | 2,125,000 | 1,250,000 |
| | 5. Hkaw | 35 | M | 2 | 1,900,000 | 1,200,000 |
| Nwang Nang | 1.Mun A | 51 | M | 2 | 1,700,000 | 1,200,000 |
| | 2.Zau L | 42 | M | 1.5 | 1,125,000 | 750,000 |
| | 3.Roi Sa | 36 | F | 2 | 1,800,000 | 1,100,000 |
| | 4.La Htoi | 35 | M | 1.5 | 1,050,000 | 750,000 |
| | 5.Ja Dim | 33 | F | 1 | 800,000 | 600,000 |
| Pa La Na | 1.Brang J | 58 | M | 1.5 | 2,000,000 | 1,000,000 |
| | 2.Hkaw | 39 | F | 1 | 1,200,000 | 650,000 |
| | 3.Dau N | 44 | F | 2.5 | 2,375,000 | 1,275,000 |
| | 4.Lum D | 48 | M | 1 | 1,000,000 | 550,000 |
| | 5.Tang S | 38 | M | 1 | 950,000 | 500,000 |
| Shadau | 1.Hkaw | 44 | M | 2.5 | 1,625,000 | 1,375,000 |
| | 2.Naw L | 37 | M | 3 | 2,250,000 | 1,800,000 |
| | 3.Yaw H | 32 | M | 2 | 1,100,000 | 900,000 |
| | 4.Bawm | 38 | F | 2 | 1,600,000 | 1,000,000 |
| | 5.Kaw | 33 | F | 2.5 | 1,250,000 | 1,375,000 |

Table (1.2.1) List of Interview: Farmers from Five Villages

1.5.2.1 Research Tools

The study employed several research tools such as survey, focus group discussions (FGD), key informant interviews and semi-structured and where it was deemed necessary specifically with the key informant in-depth interviews were conducted. All these research tools

were applied for different research respondents, as shown in Table (1.2). Survey was conducted for twenty-five farmers and two FGDs were conducted in two villages. The relevant in-depth interview questions were also prepared for some key informant interviews in accordance with research objectives.

1.5.2.2 Data Analysis

As the research will primarily set-out to be qualitative, and as the main unit for analysis were the farmers, along with the other key stakeholders including the companies who are involved in the Inca Inchi contract-farming, where the aim of the research is to delve into the social and economic impacts of the above mentioned contract-farming in terms of a business model that has been introduced in the Kachin state content analysis will be used to analyze the data that is gathered from interviews conducted. The data will be later categorized into themes and sub themes whose main advantage is to reduce and simplify the results. Moreover, content analysis gives the researcher to the ability structure the qualitative data collected in a way that satisfies the accomplishment of the research objectives.

As the study is to explore the impacts of the Inca Inchi contract-farming as a business model that has been introduced in the Kachin state, the analysis of the study, although can be generalized for the larger farming communities, its main unit of analysis as state already will be to look into the socio-economic impacts looking through the lens security and development perspectives, which will be discussed in the following chapters of this study.

1.6 Significance of the Study

Agriculture is the backbone of any country, in this case the Kachin state, Myanmar. The significance of the study aims to test whether this particular business model could bring social development the same as the rubber plantations business model has accomplished in the past. Since, rubber production is declining in demand; it is necessary to explore if other agricultural business models can be adapted in order to maintain the environment of no opium plantation.

Hence, the study of this agricultural business model states “Inca Inchi” is a suitable replacement for rubber in order to improve community development in the Nam Jim village

where the researcher will explain the success of business's in terms of social and economic development through the individual perspectives of respondents. Hence, the results and facts from in-depth questionnaires and interviews by different respondents can indicate the level of satisfactions in which the feasibility of social development can be seen in the findings.

In the end, the results of study are expected to evaluate the ability of social and economic development through the Inca Inchi contract-farming as an agricultural business model, by analyzing the impacts of this new business model through the lens of the human security and development. The key stakeholders, the farmers, Inca Inchi companies, the local authorities, NGOs and the church leaders, all of whom had some role to play in the initiation of this new business model, as the rubber plantations have been on the decline, for the farmers to have an alternate, Inca Inchi contract-farming was thought to bright out the necessary developmental changes for all those who are associated with this business model, are the main targets of whom these results may be able to make changes to their lives. Individual changes will happen significantly not only for farmers, but also for other local people, which will become more sustainable because of greater contribution. For further contribution, the significance of this study could also be a good role model as an alternative solution for creating community development under similar circumstances. Furthermore, as there are some information gaps regarding the implementation of the Inca Inchi business model giving this greater significance.

1.7 Scope and Limitations of the Study

The scope for the study areas were focused in Myitkyina township in Kachin state. The Inca Inchi contracting farmers, investors (entrepreneurs), external parties such as church leaders, NGOs, and local government staff are considered as the stakeholders those who have been associated in the Inca Inchi contract-farming as a business model. As has been mentioned, the thesis is to study the social and economic impacts of Inca Inchi contract-farming as an agricultural business model. The study covers two aspects - economic security, and community development, in which the

selection pool of economic and non-economic actors is covering the economic security and community development supports research objectives.

Limitations of this study were ability to access primary numerical data such as size of planting acres, planting activities, selling activities, and market situations, in which data had to take from Kante Co., Ltd.

The ability to scope areas of study and to analyze data relied on the existing collected data from company research. Due to a very limited study period, along with transportation and communication difficulties, and political concerns, the scope of the study has been limited by geographic conditions to only two areas which are governed by NLD. Therefore, samples from selected villages to represent the total populations may not be able to give accurate findings applying to overall people in Kachin State, give a overall picture of the Inca Inchi contract-farming as a business model in Kachin state. Another limitation was the ability of local farmers to express their thought without ethnocentric. Some farmers were disappointed from this Inca Inchi business model; they trended to respond with negative feelings. Therefore, to get effective information, it was hard for researcher to persuade farmers to respond without their bias perceptions. Statements and questions must be clarified so as to not guide neither positive nor negative points.

Due to the ability to get approach and access to respondents from institutions, the researcher tried to invited independent respondents into table of discussions. However, researcher must be ensuring that respondents knew or heard about Inca Inchi contract farming. Still, the popularity of Inca Inchi contract farming as the study will highlight was not much accepted compare to other types of commodities, yet the phenomenon existed to be discovered.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

Development and security are two interconnected phenomena. Security in this case is perceived to be that directly impinges the agricultural sectors of the farmers in the Kachin state. Development on the other hand, is a process that creates growth, progress, positive change and the purpose of development is a rise in the level and quality of life of the population¹ therefore it can be said that development is a key dimension of personal life in relation to social, political, economic, and cultural dimensions of a given community. Development cannot be achieved without security.

Agriculture is very basic and common to rural peoples for their economic and social sectors. On the other hand, an agricultural model can boost social and economic sectors. The literature review, therefore, is to reflect social and economic impacts of Inca Inchi contract-farming as an agricultural business model in Kachin state of Myanmar. Most importantly, the Inca Inchi contract-farming as an agricultural business model has been screened with the lens of security and development. In fact, it is not almost impossible to transact agricultural activities including agricultural businesses without security. In this study, the term 'security' is to address human security particularly with the aspects of economic security and political security that is directly interconnected with development including community development. The study is thus to scrutinize the political and economic security of Myanmar that directly impinge the agricultural sectors, in this case particularly Inca Inchi contract-farming as an agricultural model towards community development. For these reasons, this literature review looks at the security and development aspects under the existing conditions in Myanmar, especially in the Kachin state.

2.2 The Inca Inchi

The Inca Inchi, mostly known as Sacha inchi (*Plukenetia volubilis*), belongs to the plant family Euphorbiaceae, native to Central and South America. It is commercially cropped

in the Peruvian Amazon, and Brazil has potential to produce this plant (Araujo-Dairiki, Chaves, and Dairiki, 2018:33).

The Inca Inchi has been a new crop indigenous to the Andean region of South America nowadays spread to the lowlands of Peruvian Amazon. It is a semi perennial, semi woody twining vine yielding mostly tetra-lobular capsules, with 4 lenticular oleaginous seeds inside. It was believed that the plants were probably used by pre-Incas and the Incas 3000 years ago which is evident from the interpretation of the plant on vessels in Inca tombs. Moreover, the Chancas Indians and other tribal groups of the region extract oil from the seeds which is used for the preparation of various meals. Roasted seeds and cooked leaves are also an important component of their diets (Krivankova et al., 2007:1). The flour and oil of Inca Inchi are traditionally consumed by the Indians of Peru for various meals (Liu et al., 2014).

In terms of ingredients, the Inca Inchi oil contains over 44% Omega-3 essential fatty acids and over 32% Omega-6 essential fatty acids. Therefore, it is considered as one of the most sources for the Omega-3 essential fatty acids. In addition, the Inca Inchi has the source of antioxidants and Vitamins A (retinol) and E (alpha-tocopherol). For instance, organic Inca Inchi oil is a good source for inclusion in a wide range of personal care formulations because the organic Inca Inchi easily penetrates the skin and is highly moisturizing (Natural Sourcing, 2018:1).

2.3 Brief Political Background of the Kachin State

Burma, what is now Myanmar, got independence from the British colony in 1948 as an integration of Burma Proper and Frontier Areas through Panglong Agreement in February 1947. The Panglong Agreement was signed by ethnic representatives from Kachin, Shan and Chin for the Frontier Areas and by General Aung San as a de facto government representative of Burma Proper. According to Article (6) of Panglong Agreement, Kachin state was officially demarcated. In the beginning, Burma was ruled with 1947 Constitution. Nevertheless, the

constitution did not fulfill the principles of Panglong Agreement. Therefore, the delegates from the state governments came together to propose a federal proposal to amend the constitution in 1961. However, a coup led by General Ne Win seized the state power.

As a result, the Kachin Independence Organization appeared to challenge the central power to demand the autonomy of the Kachin and since then the armed conflicts between KIA and Myanmar army have been ongoing.

In October 1980, the chairman of the Kachin Independence Organization (KIO) asked the Burmese government for Kachin State autonomy through self-determination. But the Burmese government rejected the KIO's demand for the inclusion of autonomous rights in the Constitution, and the peace talks broke down and fighting resumed. In July 1993, KIO delegates negotiated with the Myanmar military leaders over a ceasefire in KIA controlled areas in Kachin and Shan States respectively. As a result, the KIO signed a ceasefire agreement with the ruling military regime of the State Law and Order Restoration Council. Peace returned to Kachin State. Upon ceasefire, the farmers resumed farming and harvesting goods from forests. With the livelihood and other business and trading activities resumed, the villagers were able to survive with only one or two jobs. But due to national economical purpose (fighting for natural resources e.g. jade, and other gems, including authorities on borderlines) that led political conflict, in September 2010, the KIO formally rejected the Myanmar government's plan to accept the Border Guard Force (BGF) plan which would subjugate the KIA under Myanmar military command.

As a result, Naypyidaw subsequently forced the closure of KIA liaison offices in Kachin State. In May 2011, the KIO sent a letter to the Chinese government to withdraw its investment from a massive hydropower dam project in Kachin State. KIO warned about the local resentment against this project could spark a civil war. However, it is too late for peace resettlement. Fights erupted between KIO and Burmese Army, when government forces broke the ceasefire and attacked KIA positions along the Taping River east of Bhamo, Kachin State, near the Tapein hydropower plant. In September of the same year, the KIA clashed with the

troops from the Infantry Battalion 37 and Light Infantry Battalion 438 in Winemaw Township. The fighting left two KIA soldiers dead and three others injured, there were no casualties on the Myanmar side, but KIA troops who seized weapons after the attack said they saw around six dead bodies.

Once the fighting resumed, the KIA had blown up two key access bridges to the project site, effectively bringing it to a halt, wherein President Thein Sein had to inform the Parliament that the Myitsone dam project is suspended for the duration of his government because of widespread public opposition to the Chinese project. He also announced that he had instructed the Myanmar army on December 10 to cease its offensive attacks against the KIA and only act in self-defense. Later that year, in northern most Burma, a government helicopter carrying weapons, ammunition and food to frontline troops reportedly started shelling several bases of the KIA. Finally, the clashes drove people from more than 20 villages to take shelter in 23 churches, monasteries and relief centers in the town of Hpakant. Local residents estimate the number of internally displaced around 6,000 people. A schoolgirl was killed and at least five other children were injured by a stray artillery shell. Later, it came to be known that two Kachin civilians were killed and another three were wounded by 81mm mortar shells, while Burmese soldiers were injured or killed during fighting in different places controlled by KIA Brigades. Heavy attacks resumed by five jet fighters and two helicopters gunships. In 2013 the Burmese army continued to carry out its airstrikes against the ethnic Kachin rebels in northern part of the Kachin state and were fired upon with artillery shells. Amidst the warfare going on the Myanmar government and the KIA representatives meet in Ruili, China and agreed to reduce military tension in Kachin State and hold further peace talks later. This event marked the beginning of significant reduction in fighting. It has also been reported that in 2013, warfare broke out once again and the hostilities clashes between the government and ethnic Kachin rebels, clashes were also reported. In 2014, the government troops held an operation where it managed to kill several Kachin soldiers and seized a KIA outpost in that operation. As a result, more than 5,000 people were displaced in eastern Kachin and neighboring Shan state. It was in the year 2014 that the business of growing Inca Inchi also entered into the area. The KIA and the Burmese government by that time had agreed to set up a peace monitoring commission

during a ceasefire meeting in Myitkyina, Kachin State, even though the fighting was still going on between the KIA and the Burmese military troops and during these clashes at least 4 Burmese soldiers were killed and consequently, 178 Burmese soldiers were killed.

Moreover, the conflict still resumed in the eastern Kachin state between the KIA troops and the Burmese soldiers.

Even Myanmar has moved towards democratic transition, the fighting between KIA and Burmese soldiers became even worse after NLD-led government initiated the 21st Century Panglong Conference (the so-called Union Peace Conference – UPC) because Myanmar operated the offensive attacks on KIA with massive forces while KIO was attending the first 21st Panglong Conference.

2.3.1 The Political Dynamics in Kachin State

The Kachin state has mainly been under two governments, in which one is the central military government as a de jure government and another is independent group called Kachin Independence Organization (KIO) as a de facto government. Both governments practice different policies, rules and regulations and all the political dynamics has been changing across Kachin state. The KIO was founded in 1961 as a local non-governmental organization (NGO) with its headquarters situated in Laiza, Kachin State. KIO's armed wing, the Kachin Independence Army or the KIA, has five operational areas in Kachin and Northern Shan state and is the second largest armed ethnic group in Myanmar, with militia forces anywhere between 7000 to 10000 personnel. The KIO as an organization is headed by high ranking military officials and scholars. Pragmatically speaking, the KIO is seen as an Independent governing body, and has mainly governed its base from a defensive state, and in terms of development very little information has been found.

Since 1961, the Kachin Independence Army (KIA) has been engaging with the Burmese army (Ba Khaung, 2014). 1994 was a turning point where the KIA reached a ceasefire agreement which was led by the military leaders, still as the records show, the conflicts were still ongoing although it's difficult to public records of the same. One of the causes of the conflicts was the geopolitics where the local government wanted to exploit the

natural resources of the Kachin state, with the support of the international (majorly Chinese investments) and domestic investments. Based on documentary evidence and research the Kachin leaders signed the Panglong Agreement with the Burmese regime of the time, which laid the foundation for the creation of a fully autonomous and an independent Kachin state in 1947 (Ba Khaung, Thet Ko Ko and

Paul Vrieze, 2014), where the KIA was founded by a group of young educated Kachin men who pledged to fight for the Kachin people, where intense fighting ensued with the Burmese army in the 1960s. Later in 1993s the KIO's major demand was for the regional development, but in 2010, upon the proposal of the Burmese governments plan for the KIO to be made into a Border Guard Force, which would subjugate the KIA under Burmese military command, consequently, the insistent ceasefire violations by the Burmese military, the KIO received support from China which made the Burmese military led government insecure, but the military still kept up its offensive against the KIO and the Kachin people.

Since 9 June 2011 till late 2012, there has been open warfare going on between the KIA and the Tatmadaw (Burma Army) in Kachin state. Due to the clashes as reported, there were about 20 villages with an approximate 6000 people who were forced to leave their homes and become internally displaced. Nevertheless, in May 2013, the Burmese government and the KIA came to an agreement to promote the ceasefire agreements, however the ceasefire agreements did not follow through and as a result, the fighting and killing still continue to this date as the documentary records have shown. To sum up, there has been continued conflicts going on till date in Kachin state, which dramatically amplified up to 8 times in 2011 and have steadily increased in 2014, 10 times more often that it was at the starting from the 1950s to the 60s which is almost a decade, followed by 16 years of fighting starting from 1964 to 1979, from 1981-1992 was continuous 12 years of fighting and from 1995-2009 which is 15 years of unrelenting fighting respectively.

In 2014, according to the report by Office of the United Nations High Commissioner for Human Rights (OHCHR), there were almost 90,000 internally displaced persons (IDPs) living in areas controlled by the KIO and the Burmese government respectively. Although there has been reduction in the clashes between the KIA and the Burmese government forces, most of the IPDs are reluctant and afraid to return to their homes, even though there is extreme difficulties in the living conditions in the houses provided by the Kachin state

government in Ngwe San Pyaw village in Myitkyina, where the IPDs on a daily basis have to face in the camps with shortages in food, medicines, health care services and meager conditions of the shelters they are living in, along with the disruption in the education of children due to lack of schools and educational supplies.

2.4 Security

Security is a very broad to define in essence that to give a clear understanding. Security can be looked in a traditional way that interprets strengthening the military power. At the same time, strengthening the military power of a state is to protect its people from the military threat. However, the military junta or dictatorship usually uses the military power to oppress its own people. As a consequence, the military power for the purpose of security has been insecurity for its own people. Therefore, it has become to ask whether the concept of traditional security can protect the people. On the other hand, the security perception has been debated and the perspective of human security has become the most concern among scholars, human rights activists and leaders of the international community. In this study, it is to look at a general perspective of political security towards the economic and human security of the local community in Kachin state.

2.4.1 Political Security

According to the Copenhagen school of thought, political security is the defense against any form of political oppression. It is concerned with whether people live in a society that honors their basic human rights. Communities that are oppressed, that lack political connections and influence, or that have significant segments of disempowered members face political adversity. As a lip service, the government agencies normally use community advisory boards and public hearings to show the participation at the grassroots level in decision making, where these agencies are set up to fail and to make sure community knowledge is ignored, where the community is more likely to become suspicious of and resist the decisions thereafter being made (Perkins, 1995).

The 1994 Human Development Report (HDR) sets out the definition and parameters of political security, where it defines political security as the prevention of government repression, systematic violation of human rights, and threats from militarization. This was intended so as to establish an agenda that would protect people against those states that

continued to practice political repression, systematic torture, ill treatment and disappearances.

Yet, the concept of political security has evolved in both theory and practice.

Disempowerment as a result of political beliefs contributes to all other forms of adversity. For example, the Inca Inchi business model has its economic aspects of the local development as well as political at its roots. Since 1980, the living costs have risen sharply in many areas in Myanmar, while the real federal spending for supporting the agricultural sector by the government has fallen. Shelter, which is a basic need, yet, public housing for the neediest has been all but abandoned politically. The Inca Inchi program is an attempt to empower moderate-income farmers by engaging them in a profitable method of farming which should have resulted for the owners as a means for acquiring new homes. Since the government without provision for enough agricultural support has marginalized the low-income farmers, housing difficulties have become political because occupants, especially low-income ones, have difficulty in settling with high rents that they have to incur. By contrast, homeowners are seen to participate more within their communities and are more empowered than renters, even among lower-income residents (Saegert, 1996). Exclusion from participating in political decision-making processes of course influences the community's ability to have a voice heard, which increases their insecurities. For example, the exclusion of farmers from local decision-making processes in some of the IDP committees means that the company's capability has been applied as normative in the development and design of these businesses.

2.4.2 Economic Security

The ICRC terms **economic security** as the capability of individuals, households or communities to cover their vital desires sustainably and with self-esteem. This can vary according to an individual's physical needs, the environment and prevailing cultural standards. Food, basic shelter, clothing, and hygiene qualify as essential needs, as does the related expenditure; the essential assets needed to earn a living, and the costs associated with health care and education also qualify. Economic security mentions about the ability of individuals to generate basic income which covers income from production, rewards or compensations of works, and as a last resort, even including the financial support from

the public (Tadjbakhsh, 2007). Economic security is more likely to rely on the employment (job security), and mostly depends on political tensions and violence.

As one of the indicators used to measure economic security of an individual, income security signifies adequate actual, real, and anticipated income either earned or in the form of social security and other benefits. It encompasses the level of income, expectation of current and future income, individually during the times worked, and in old age. Income security protection mechanisms include a minimum wage mechanism along with wage indexation, comprehensive social security, and progressive taxation. Economic problems may be the most pressing adversity to consider and as a result, the welfare time limits expiring since these are low-wage service jobs replacing unionized manufacturing jobs. Poverty is also a primary cause of political, social and other cultural problems discussed (Skogan, 1990).

2.4.3 Human Security

Compared to human security, state security concentrates on threats directed against the state, mainly in the form of military attacks, and on the other hand, human security draws attention to a wide scope of threats faced by individuals and communities. It focuses on root causes of insecurities and advances people-centered solutions that are locally driven, comprehensive, and sustainable. As such, it involves a broader range of actors: e.g. local communities, international organizations, and civil society as well as the state itself. Human security, however, is not intended to displace or to replace state security. Instead, these two are reciprocally complementary and correlated, where human security and state security are mutually reinforcing and dependent on each other. Without human security, state security cannot be attained and vice versa (UN, 2009b). Approaches to human security has been mainly set into two groups that are the needs in response to difficulties and interrelationships of both old and new security threats including violence from persistent poverty, human trafficking, climate change, health pandemics, internal terrorism, and sudden financial and economic collapses. These treats therefore, somehow acquire

transitional dimensions to shift beyond traditional concept. While another set of 'human security' dynamics require an extensive approach to utilize opportunity to get rid of those threats as mentioned in the previous sections. In addition, this second dynamic refers to a term of harmonizing to integrate the upcoming opportunity and trend, which links in terms of independence, human rights, national security and in terms of development (UN, 2009a).

To classify the various types of human security threats, these human securities and the threats there on are based on multi-sectored understanding of insecurities. The insecurities include economic security, food security, health security, environmental security, personal security, communication security, and political security and these are not just dependent upon one another but are cross-sectional in nature as well.

2.5 Development

The concept of development can be defined and conceit through various dimensions. In the field of social science, the concept of development is discussed in terms of the improvement of existing contexts. In 1940s to 1950s due to the Keynesian growth theory, Fletcher had mentioned that development was a process of capital formation which was determined by savings and investments when national savings were challenged in terms of investment productivity (1989). Consequently, the growth that occurred was by driven by markets. Later, in 1970s the Keynesianism theory, also known as the Neoliberal Development Theory, emphasized more on the supply chain side of development. Max Weber (1864-1920s) who was a sociologist developed the original development theory and that the economic dimension alone was insufficient and the system needed to add other theories on institutional and social changes. Another important factors of development in nineteenth-century England where it was argued that development referred to remedies on the conditions of progress and its shortcomings (Wright Mills and Hans Gerth, 2007). This included questions such as the given environment in which the population was living, loss of employment and the scope of social life of a given population. Based on this argument, progress and development are contrasted, and development differs from and complements

progress. Therefore, as Hegel argues, progress is linear and development is curvilinear and accordingly, the twentieth-century development thinking in Europe and the colonies had already traversed many terrains and positions and there was a reaction to nineteenth-century progress and policy failures where industrialization left people uprooted and out of work, with social relations dislocated.

2.5.1 Community Development

Community development according to the United Nations Development Program (UNDP) is a model that seeks to operationalize human security, human development, and state-building paradigms at the local level. The modern concept of Community Security (CS) includes both group and personal security. This approach has its motivations on guaranteeing that communities and their affiliates are free from fear. Yet, a broader contemporary definition also includes action on a wider range of social issues to ensure freedom from want as well as freedom from fear. Like community security, safety also endorses a multi-stakeholder approach that is driven by an analysis of the needs of the locals. The customization of CS programs context specific, but one of the core characteristics of this approach is a bottom-up focus on security creation and stabilization. Community development focuses on short and long-term solutions to security problems in specific communities. The immaculate emphasis of community security is to take into consideration the relations between the communities and the relevant institutions.

The procedure uses partaking valuations which seeks to contribute to a wide range of security concerns and growth developments as decided by communities themselves. Therefore, community development can also be seen as an end-state whereby people feel protected and valued as members of society. This end-state is achieved when the processes behind CS are functioning and the mechanisms in place to ensure communities can articulate their security needs in conjunction with the local and institutional capacity and their willingness to respond to them. Community Security was described as one of the seven dimensions of human security which was highlighted

in the 1994 UNDP's Human Development Report (HDR). The HDR called for a redefinition of the concept of security and moved from state centric security and putting people at its center, which was termed as human security. Consensus grew about this developmental, people-focused approach to security challenges in subsequent years. This developmental approach to promote security at community level has evolved to become a key element of both local and international efforts to promote security, stability and so as to make the institutions more responsive. It works by bringing together a wide range of state and civil society actors from the security demand and supply sides to identify root causes of insecurity collectively and develop coordinated responses to them.

As a result of the insecurities, a sizeable proportion of children in Kachin state continue to have some of their most basic needs unmet. Approximately 13 percent children in Kachin State are less likely to be underweight than an average child elsewhere in Myanmar, and are more likely to have stunted growth. Children in the Kachin State are less likely than the average Myanmar child to be born in a health facility. Almost 16 percent of births that happen in the Kachin State are still not registered and are not only deprived of their basic right to be registered at the time of birth as a legal identity but are also more vulnerable to exploitation. Concerning education-related indicators, Kachin children fare better than the national average presumably due to the abundance of faith-based early childhood development centers. The primary school enrolment rate in Kachin is slightly higher than the national average but still not on par with universal standards, and only 60 per cent of children attending primary school in the State complete their schooling on time. The role of education, which has traditionally been considered to promote cohesion and social mobility, is changing as societies become more socially and ethnically diverse. Schools can help facilitate better inter-community relations by providing equal opportunities, but it is not clear which type of school can best accomplish this.

According to Gallagher, education in divided societies explores the historical aspects of different school systems around the world and determines that the connection between school structure and outcomes depends on the local situation, and he argues that schools should promote dialogue, which is best achieved when there is an opportunity of

interconnectedness between communities as much as possible (Gallagher, 2005). A study conducted by World Bank's team of education specialists view education as key in preventing conflict and of utmost importance in the post-conflict reconstruction and reconciliation process, where they focus on practitioners and policy makers through a series of best practices that support the post-conflict reconstruction of education (World Bank, 2005). Also, it has been a well-defined principle that conflicts hinder countries from achieving the Education for all and the Millennium Development Goals.

Community development as a process uses participatory assessments and planning, and seeks to contribute to a full range of security and development improvements as decided by communities themselves. Therefore, community development can also be seen as an end-state whereby people feel protected and valued as members of society. This end-state is achieved when the processes behind community security are functioning, or rather, the mechanisms to ensure communities can articulate their security needs exist in conjunction with the local and institutional capacity and willingness to respond to them. The values underpinning these approaches are: inclusivity, accountability, empowerment, transparency, human rights, justice, capacity building, resilience, and trust. Collectively these values support the overall perspective that sustainable improvements in people's experiences of security cannot be brought about through technical and institutional reforms alone. As stated in my study, the Inca Inchi business model has helped in the provision of knowledge and skills amongst the Kachin farmers hence enabling them to effectively use resources that include people, land, and water; hence, bringing about meaningful development. For instance, one can go to many parts of the Kachin state and find Inca farmers and by any development indicator, their living standard is slightly higher than those who do not plant yet have large pieces of land.

2.6 Agricultural Business Model in Myanmar

Even though the agricultural sector in Myanmar is in its early stages of accelerated growth with the partial policy of liberalization, there has been tight state control that was initiated during the socialist period (1962- 1987), where the state controlled all aspects of

agricultural land rights from the choice of crops to be cultivated, production decisions, as well as distribution, marketing and pricing of the crops. Development has occurred in various areas and agricultural performance in recent years has created significant changes through different business models and contexts, which has allowed national development through careers domestically and internationally. To specify, essentially in terms of development, and particular activities that indicate a part of development, this paper aims to explore some priority agriculture areas where the Inca Inchi farming has created an impact on the local communities.

Myanmar Agribusiness Public Corporation Limited, known as MAPC is an innovative business model that works closely with farmers who are stepping into as primary producers of paddy rice (MAPC, 2016). The innovative contract farming model is located in Naypyidaw City, the capital of Myanmar. The model aims to specialize and involve a sustainable development model that is promoting supply chain and value chain mechanism. The business model provides for better quality raw material and quality control from milling seed stage to end consuming stage by end customers. The model provides contracts for farmers with small land holdings and regulates with pre-determined price and buy-back guarantee policy and therefore, farmers are able to enjoy minimum guaranteed revenue. In addition, access to markets, technology, and financing opportunities are promoted so as to be utilized into the business model.

2.7 Businesses in Kachin State

Businesses in the Kachin State, mainly has been operated by businessmen who had good and close relationship with the local military group. Generally, there are four types of business sectors that take part across Kachin state, in other words, these businesses have been under the political and social dynamics of both KIO and central government. To be more exact, these businesses have been interconnected the policies of both governments and the individual relationship between the businessmen and the authorities of both sides.

Agriculture has been the backbone of Myanmar economy, where it accounts for 37.8% of the gross domestic product (GDP) and totals for 25-30% of the total exports of the country (CSO, 2012). That amount of percentage accounted for 70% of employment contributionⁱⁱ. Consequently, in the Kachin State, agriculture plays an essential role in the economic progress and in poverty reduction through its role in supplying of affordable food so as to improve the purchasing power of consumers, generating farm incomes, and providing employment. Moreover, given that the majority of the country's ethnic minorities rely on the agriculture for their subsistence, developing the agricultural sector will also contribute to inclusive and regionally balanced growth and social stability. Some of the country's agricultural policies are aimed as to promote the domestic production, with the utilization of high yielding good quality seeds, training and education of the farmer's so as to have higher efficiency techniques including research and development, as well as protecting farmer's rights and benefits to promote sustainable development, and to increase incomes of the farmers.

According to research conducted by the Food and Agriculture Organization (FAO), livestock business has been included with livestock and its fishery business. The state of Kachin is a landlocked state, which is surrounded by hills and mountains, with the Irrawaddy river as an upstream water source and the Myitsone Dam and hence a rich source for natural river fish. Livestock business is the logical second option as an agricultural business for the farmer's in the state, according to the FAO. For rural area development, livestock and fishery businesses are planned so as to provide socio-economic benefits. Thus, the policies by Ministry of Livestock, Fisheries and Rural Development aims to reduce the gap between urban and rural areas. Some policies are including in the following contents: to promote domestic consumptions, improving draught cattle population for crop area expansion, livestock trading and products, and fishery business to support rural development with environmental harassment.

Logging has been one of the main profitable business for Kachin State's revenue. However, the raw materials from the forests are more important for the Kachin people at a microeconomic level, not as big profit-making business but for surviving. However, excessive logging in the forests has depleted green areas and waters were poisoned, thus creating erosion,

resulting in regular flooding and landslides. Nonetheless, the Kachin businesspersons have started to cooperate less with the Burmese military government who get authority for legally trading by the SLORC. As a result of the logging trade, roads and bridges were built for transporting the lumber by Chinese experts and workers. Due to the negative impacts of logging on the environment, the forestry principles were adopted so as to limit the logging business due to environmental issues. Hence, policies obstruct foresting and logging business; provides protection of soil, water, wildlife, biodiversity, environment, natural resources reservation; participation of the people in the conservation and utilization of the forests; and public awareness of the vital role of forests in the well-being and socio-economic development of the nation.

Jade and gold mining businesses as natural resources of Kachin's, persuaded domestic and foreign investments into the state. The mined products are sold internationally and domestically. As recorded in 2015, more than 2,000 jade mines are now operating in the Kachin stateⁱⁱⁱ. In terms of mining activities, both legal and illegal investments from national and international countries are happening, mainly from Chinese investors who come to the state for the rich resources the state has. However, mining as a business of these non-renewable is damaging the environment and has been abandoned due to the value of environmental scarcity principles in area. In 2007, as recorded by Business Week which reviewed that total value of jadeite exports to China counted as US\$ 433.2 million annually. That counted as 67% of overall Myanmar's gem exports US\$647 million in 2007 (Lawt, 2016). As a result, even the jade business is good for the Kachin state, and even contributes to the GDP of Myanmar, but still according to environmental issues and natural resource reservation, the central government decided to not renew hundreds of licenses, nonetheless, the local military government still allows jade mining businesses to run locally. As a result, more than 10% of existing jade mines will be closed by 2018 (Khet Mar, 2016).

2.7.1 The Issues of Contract-Farming Business in Kachin State

Contract farming system in Kachin state of northern Burma, has predominantly come into being since the year 2000. This shift has been driven not only by an economic incentive, but is also due to other political interests of the Burmese military government and business

elites. Initially, contract farming was mainly for rubber farming under the China's opium substitution program. In this way, rubber plantations in the Kachin State were widely cultivated from 2006 onwards (Kramer and Woods, 2012).

However, rubber plantations had been in existence since the early 1990s near Myitkyina by individual local business people. Under China's opium substitution program, it should be recognized that rubber plantations in Kachin State are owned by both individuals and private companies.

In other words, the Kachin State contract farming is also part of a large-scale contract farming scheme. The largest and most infamous contract farming in the Kachin State is that conducted by the Burmese-owned Yuzana Company which seized an estimated 200,000 acres of land in 2006 from farmers in the Hugawng Valley to plant cassava and sugarcane destined for the Chinese bio-fuel market (Woods, 2011).

This land grab of nearly 40 Kachin farmers was a severe violation of their rights that was supervised under the Burmese regional military commander at the time. Generally, smallholder contract farming for the farmers which is not yet well developed in Myanmar, although some instances have emerged.

CHAPTER III

THE SOCIAL AND ECONOMIC ASPECTS OF FARMERS BEFORE INCA INCHI CONTRACT-FARMING

3.1 Introduction

The political situation in Kachin has been constantly changing since 2011 due to the armed conflicts between the KIA and Myanmar armies, which have impacted the security and development of the local community. The political situation in Myanmar has directly affected the social and economic sectors of Kachin state. The agricultural sector plays a very important role, which has contributed to the social and economic development of the community. The Inca Inchi contract farming was introduced to the local communities in Kachin state in order to provide them with better life opportunities. This chapter, examines how the Inca Inchi contract farming was introduced in Kachin state and analyzes the social and economic aspects of the farmers in the context of security and development before the Inca Inchi contract farming, and reflects the social and economic impact of it.

3.2 The Commencement of Inca Inchi Contract-farming in Kachin State

The Inca Inchi is native to the Peruvian tropical jungles of South America. The flour and oil of Inca Inchi are traditionally consumed by the Indians of Peru. Inca Inchi was initially introduced in China because of its oil. For instance, the Inca Inchi was grown in Xishuangbanna, an autonomous prefecture of southwestern Yunnan province in China (Liu et al., 2014). The seeds of Inca Inchi were brought to Thailand and then to Laos, Cambodia and Myanmar. Companies like Elshadai introduced the seeds of Inca Inchi in the Ayarwaddy and Yangon divisions. Consequently, the company expanded the distribution of Inca Inchi seeds to Kachin and Shan states respectively.

Initially, the company approached church and community leaders. Since the Kachin communities are predominantly Christian and divided in groups such as Baptist, Roman Catholic, Evangelist, Anglican, church leaders have played a crucial role in

introducing Inca Inchi seeds across Kachin state. The companies organized the church and community leaders to hold meetings and workshops in order to inform the communities about the wide range of benefits of the Inca Inchi. The company started distributing the Inca Inchi seeds in 2014, the price was approximately 6625 - 7246 Bhat per Kilogram for those who were interested in farming the seed which promised farmers to be more economically sound and to have a sustainable growth and profit. The Government of the Union of Myanmar (GOUM) under its agro-industrialization policy^{iv} for key cash crops (Izzo, 2014). Under this policy, some farmers received these Inca Inchi seeds from different sources with different contacts.

For example, A man from Nam Jim village said:

“I got into the business of farming the Inca Inchi along with other farmers in 2014, I bought the seeds from a Chinese seller and planted them across three acres of land.” (a Farmer, interview, Nam Jin, Kachin State, 11 September 2017).

A man from Nawng Nang village said:

“We started planting the Inca Inchi in 2014 when the company Elshadai introduced it to us. We got the Inca Inchi seeds for 310000 kyats in 1 kilogram from Elshadai company. First, we soaked the Inca Inchi seeds in water, when the roots come out, we put each seed inside a plastic bag and then, we plant it in the ground when the plant reaches a height of 1 inch. We dug the ground, mixed the fertilizer and planted them. Then, we make the pillar vines” (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017).

A woman from Ah Kye village said:

“We have planted the Inca Inchi since June 2015. The church organized some seminars to learn about it and that's how we got into it. We made spoken promises. We started by buying the seed for 20,000 Kyats a kilo from the Kachin Baptist Convention (KBC) and Myitkyina Kachin Baptist Association (MKBA) (Department of Development). However, it is a lot of work; we have to peel it off which takes a long time. We also need to clean up the plants once a year and spend around kyats on material to build fences, fertilizer and to pay for the wages.” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

A woman from Shadau village said:

“We began the planting Sacha Inchi in 2015, we bought 1 kilo of seeds from the sellers who came from China. We started by planting it across 2 acres and sold them to China” (a farmer, interview, Shadau, Kachin State, 19 September 2017).

A man from Ah Kye village said:

“We first started planting it in 2014. The company Elshadai held introduced us to the seed, they gave seminars and they convinced us to plant it. We bought a kilo of seeds for 315000 kyats. First, we soaked the Sacha Inchi seeds in the plastic bag (12"x 5"), then we dug and planted it in the ground. We made compost by mixing the cleared bush with crow manure and added it as fertilizer. No longer after planting, the company came and sold the organic fertilizer its price was 20,000 kyats and also the tree's nourishment was over 30,000kyats in a big bag. We used breed chicken (1300 kg) and dug a well for the Inca Inchi planting” (a farmer, interview, Ah Kye, Kachin State, 12 September).

A man from Shadau village said:

“The mainly reason of the Inca Inchi are can see the profit result within in one year, so I can get the profit in shortly time, that's why I can say the good business and I start to doing that Inca Inchi farming.” (a farmer, interview, Shadau, Kachin State, 19 September 2017)

The study found that aside from Elshadai Company, there have been four so-called companies that have carried out the Inca Inchi contract farming, however, these companies are not as big as Elshadai Company.

A farmer from Nawng Nang village said:

“In the beginning, I don't trust the Inca Inchi farming, but I heard about Inca Inchi in 2014. At that time my neighbor house, he tries to plant inca inchi and explain me how benefit in the future if I plant Inca Inchi. Later, when I listening radio Laiza FM announce that I heard about Inca Inchi that is very useful for medicine and income. There is available international market. Like Thailand, China, USA, Europe etc. And also, I

saw about Inca Inchi a government newspaper and journals. So that's why I change and decide to plant Inca Inchi. Therefore, I ask my neighbor how can I get Inca Inchi seeds and then he introduce with the church leader who are agent for company. And then he introduces the company and give the seed for 310,000 kyat for 1 kg with sign contract.” (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017).

A man from Pa La Na village said:

“I saw a government newspaper that if the Inca Inchi plantation is successful, the government will support to substitute opium crop by technical. So that I am very happy to hear that because now our village and Kachin state has a lot of drug users. If the government support the farmers, I will appreciate for that. After I saw that I start to grow Inca Inchi that I bought the seed from Elshadai company.” (a farmer, Interview, Pa La Na, Kachin State, 18 September 2017)

The researcher found out that why farmers want to plant Inca Inchi in the beginning in the case of not only church leader and NGO but also government media and public journal and government newspaper because it is very influence to the people. Therefore, farmers deserve to have accurate information from the government about the efficacy of such projects. The Inca Inchi contract-farming business model carries a number of risks and should be approached with caution as well as due diligence.

In most cases, in the initial stage of Inca Inchi farming, the farmers signed contracts that assured them of guaranteed returns, where the companies would buy all the Inca Inchi seeds produced by the farmers, yet this turned out to be a loss making for the farmers as the companies did not accomplish their promise and were in breach of the contracts they had signed with the farmers (FGD 1 and 2, Nawng Nang and Pa La Na, 14 and 18 September 2017).

A woman from Pa La Na village shared her experienced:

“We bought the Inca Inchi from the company Elshadai, it was expensive. We had a contract. We cannot say that planting it has been a success. We invested 60 lakh kyats on the Inca Inchi program but we just made 200,000 kyats. We have not had any profit yet. When we sold the Inca Inchi to the Elshadai Company, they put the 2 kilos of seeds in 1 big bag. The two main problems are the price and that there isn't a market for it. If it costed 5000 kyats a kilo, planting it makes sense but not when we have to spend so much money purchasing it and also paying high wages. It's not sustainable. They should come up with a different strategy. We all want to have regular customers. We sold the seeds to the companies for 22000 - 25000 kyats a 1kilo)” (a farmer, interview, Pa La Na, Kachin State, 18 September 2017).

One farmer from Nam Jim village also shared his point of view related to this situation:

“I started in 2015. The Inca Inchi business model was introduced by some religious leaders, and a company from Thailand. I bought the seeds from the company, I paid 30000 kyats per kilogram. My expectations were high because the company and the church said it was a good business, especially if we exported it to other countries. The companies guaranteed that they would buy all seeds that we produced at a good prize; starting from 1700 kyats to 3000 kyats per Kg and because it is a long-term crop, we wouldn't need to buy the seed every year. So, I decided to grow this crop. I have a signed contract with a company. I spent 400,000 kyats per acre on seeds, labor, fertilizer and, building a fence. We didn't sell it to other people and there isn't a market for it. Everything has to go through the company, but they didn't buy them. So far, I have not made much profit from Inca Inchi because this is a new crop and people aren't familiar with it. The only way we can profit from it is if the companies and contractors but all the seeds that we produce at the price that we had stablished since the beginning. It's been a very disappointing situation for all the farmers. In addition, farming Inca Inchi requires systematic work.” (a farmer, interview, Nam Jim, Kachin State, 11 September 2017).

In the case of Kachin communities, the Kachin Baptist Convention (KBC) is the largest denomination, to which the development department was established to enhance the development of its church members across the Kachin state.

A Kachin businessman was concerned about the Kachin communities not being able to afford the Inca Inchi seeds. He found a Thai company, which sold the Inca Inchi seeds, and he bought the seeds for the Kachin communities. The KBC development department took the responsibility to distribute the seeds to the Kachin communities (a Church leader, interview, Myitkyina, Kachin State, 2 October 2017).

One man from Shadau village also shared his point of view related to this situation:

“We haven’t made any profit yet since we started planting the Sacha Inchi (300 plants). We bought the seed of Inca Inchi for 300,00 kyats a 1 Kilo from the Kachin Baptist Convention (Department of Development from KBC) who first created awareness and distributed the Inca Inchi. We started planting the Sacha Inchi in June 2015. The Inca Inchi contract is not good for us and the companies aren’t fair either. They didn’t buy the seeds from us again. The market is not good. The advantage of this is that as perennial plant, it bears fruit in a year.

A huge disadvantage is that the investment is expensive, and there is a huge gap between the profit we make and the expenses we sustain. If they want to improve the situation, they need to find customers who would buy it.” (a farmer, interview, Shadau, Kachin State, 19 September 2017)

As a result, farmers near and far across the Kachin state were able to get the Inca Inchi seeds to grow.

3.2.1 Inca Inchi Contract-farming as an Agricultural Business Model

Since Myanmar opened its doors for international business investment what is called foreign direct investment (FDI), the market seemed to open for products of the country. Historically in Myanmar, the agricultural sector has played an important role for the GDP of the country, in which agricultural products have been the primary products to export of the Kachin state and the country as a whole (Livelihoods and Food Security Trust Fund (LIFT),

2016). Within the agricultural sector, those farmers who have been small landholders have to focus on efficient and effective operations to produce agricultural products in terms of commodity in responding the customers' demands profitability of the products been grown. Therefore, the interaction between the market economics of demand and supply, where the producers like farmers and customers' demands are dependent upon the structure of suppliers and buyers within market structure including local market (Kelly, 2011).

In fact, for these reasons the contract farming has been introduced in Myanmar for the agricultural sector. According to Izzo, the GOUM's rural development strategy focuses on the removal of constraints to agriculture production and marketing with a focus on rural development (Izzo, 2014), for instance, CP corn plantation has which has been introduced after the year 2000 during the military junta regime. Likewise, Inca Inchi's contract farming was introduced in early 2014 in Kachin state since it was considered as a profitable agricultural business model for the local farmers since the Inca Inchi contract farming has a buyer-producer-intermediary driven approach in the context of local farmers that grew the Inca Inchi. Therefore, the initiation of Inca Inchi farming-contract in Kachin state which is seen as a profitable farming product can be approached as a business model that motivated the local farmers, in which farmers from different communities could be considered as producer-driven groups, where the Inca Inchi companies are seen as buyer-driven groups. Consequently, NGOs, church leaders and community leaders have been the intermediary-driven group (Kelly, 2011).

These producer-driven, buyer-driven and intermediary-driven groups have had a reciprocal relation to drive the Inca Inchi contract farming as an agricultural business model, as shown in table (3.1).

Table 3.1 Inca Inchi Contract-farming as a Business Model

| Model | Driver | Motivation |
|---------------------|--|--|
| Producer-driven | Farmers | Profitable products, Access to new markets, Technical assistance, secure market position |
| Buyer-driven | Processors, Retailers, Exporters, Traders, Wholesalers | Access to land, Supplies, Increase Volumes, Product supplies |
| Intermediary-driven | NGOs, CBOs, Church and Community Leaders | Community development, Social wellbeing, Community (farmers) empowerment, |

Source: (Kelly, 2011, p.6)

Church leaders and representatives from companies, in 2014, introduced the Inca Inchi as a business model, where most of the agents of Inca Inchi were from Thailand and a few from China (an NGO staff, interview, Coordinator of Norwegian Refugee Council, interview, Myitkyina, 22 September 2017).

A woman from Nawng Nang village said:

“First, I had to attend meetings with other group of farmers and the company leaders to listen to the method of growing the seed from the company. Then we had to prepare the land with no chemical fertilizers and made a fence for the Inca Inchi plants. The plants need to be watered and fertilized. We call the fertilizer dochakin. The seed dealers and the company said that it was a very good crops that we all could escape from poverty by growing this Inca Inchi. They guaranteed that they would buy all seeds produced at a good prize ranging from 1700kyats to 3000kyats per Kg. And because it is a long-term crop so that we do not need to buy the seed every year. So, I decided to grow this crop” (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017).

Following this, the farmers were given a short training, along with other groups of farmers, and also the company representatives to listen to the correct method of growing this new product for the companies with several meeting with the farmers (Livelihoods and Food Security Trust Fund (LIFT), 2016).

A woman from Ah Kye village said:

“In August, 2014, through our pastor I got to know about a company selling Inca Inchi seeds, they explained to us in detail the history of the seeds, the benefits of them, the prizing, how to grow it and the contracts terms and conditions. They sold the seeds and encouraged us to farm Inca Inchi by using organic methods. But selling them has been really difficult. I bought 30000 kyats per kg. In total, it comes to 400000 kyats per acre including seeds, labor, fertilizer and building a fence. The total costs of investing in it in 2014 were 15 lakhs and the money I made two years later was 10 lakhs” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

A man from Shadau village said:

“The company are not allowed to sell the seeds to other people or in other markets. All the seeds were supposed to be bought by the company but they never did it. We were told that there was a good market for it and that we would earn a regular income every year. I did not plant a huge amount of it because I didn't know much about it but many farmers started farming it hoping that it would change their lives” (a farmer, interview, Shadau, Kachin State, 19 September 2017).

A man from Pa La Na village said:

“The company Elshadai, which is based in Yangon encouraged the villagers to buy into the Incha Inchi farming idea. I paid 31,000 kyats per kilo. But I have not seen any profit yet. All the seeds were sold and distributed by Elshadai. I had to soak them in water, then place each seed in a plastic bag, wait for it to grow to one foot and then plant it in the soil mixed with manure. And after all the work there isn't a market to plant it.” (a farmer, interview, Pa La Na, Kachin State, 18 September 2017).

A woman from Shadau village said:

“The current situation is that the company has not found a market for the Inca Inchi. There are some advantages to planting the seed, for example, it is easy to plant and it doesn't take much for it to grow, it takes about a year. But one has to make a big investment and then selling it isn't easy. It is very difficult for people in Kachin State to save money.

There should be a company here in Kachin State, instead of having buy wholesale and retail. People were afraid to extend or change their farming business because the politic situation is not stable yet. In the farming business, there aren't any other methods to make deals and sign contracts that benefit the farmers” (a farmer, interview, Shadau, Kachin State, 19 September 2017)

The companies had to spend a lot of time with the farmers in order to gain their trust. Besides this, NGOs even found that this kind of farming might help farmers to get rid of their own economic difficulty; where they provided a stage to facilitate the meeting of the farmers and the companies so as to support this business model, but not to achieve its full potential (Livelihoods and Food Security Trust Fund (LIFT), 2012).

As stated, the Inca Inchi companies organized the local farmers by luring the farmers with incentives of Inca Inchi contract farming, in which the incentives included high profits, new market availability and a wide range of other incentives through the NGOs, CBOs, community and church leaders, who took intermediary roles. After the introduction of the Inca Inchi business model, there was a huge shift in most regions of the Kachin state because most farmers in the villages were engaged with this seed, which was believed to be highly profitable in terms of both business and personal economic growth context.

A man from Nam Jim village said:

“I don't have farm lands, but I leased the land from others in order to grow the Inca Inchi so that I would be able to engage in farming the Inca Inchi. Due to the promise of a profitable business model as suggested by

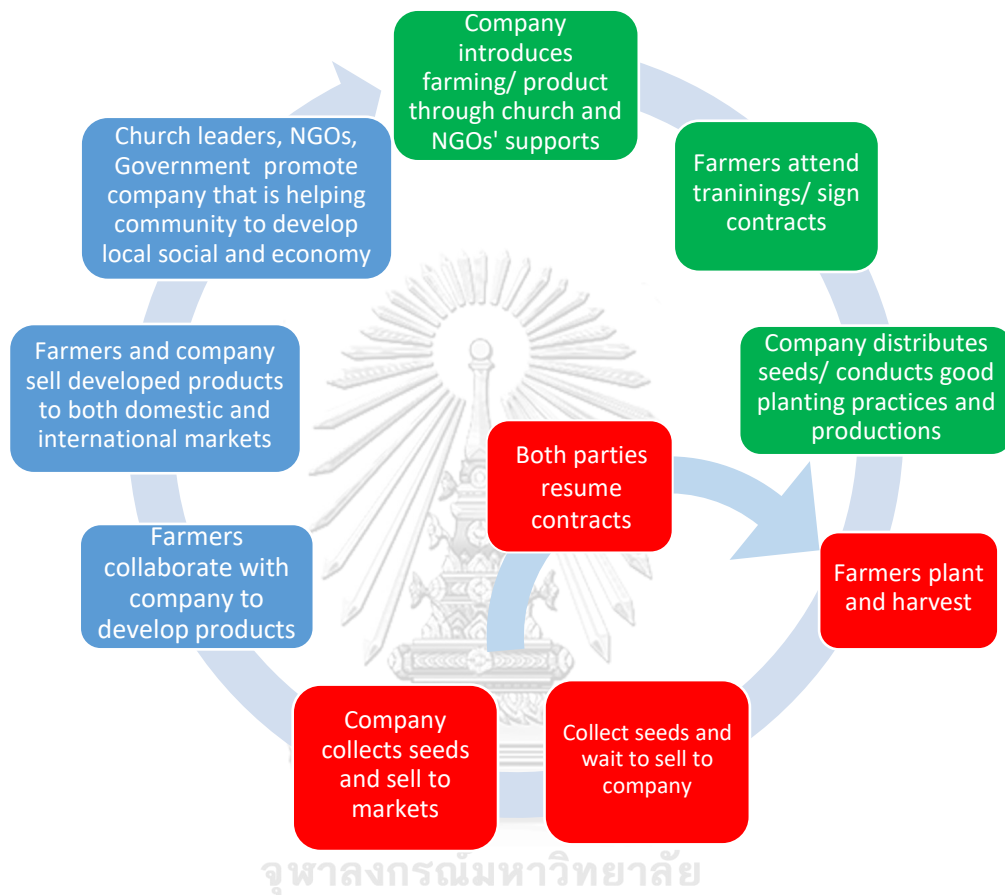
the companies and the intermediaries” (a Farmer, interview, Nam Jim, 11 September 2017).

In regard to this issue, one farmer from Nawng Nang village said:

“People bought the seeds from the Christian community from Myitkyina. They sold a kilo for 20,000 kyats. Some people bought it privately. Then one has to clean the place, build columns, buy zinc, bamboo, wire and of course one has to pay the laborers. Peanut’s seed case has too difficult to take out from the seed. So, the total investment is around 17 to 18 Lakhs. A big problem was when they started farming it. They had problems with a plague, the black leaf beetle but they managed to save the plants” (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017)

As a result, the Inca Inchi contract farming was widespread across the Kachin state since 2014. In fact, the local government of Kachin state did not know the detail transaction of Inca Inchi contract as it was directly engaged with local farmers and the companies through the intermediaries such as the Church leaders and NGOs (a Government Officer, Staff of General Administration Department in Kachin State, interview, Myitkyina, 25 October 2017).

Figure 3.1 Expectation of Inca Inchi Contract-farming as a Business



Moreover, in figure (3.1) it can be seen that the farmers were promised and expected the Inca Inchi contract farming to be an agricultural business model that would allow them to sustain the social and economic affairs of the farmers because the church leaders and NGOs staff considered the Inca Inchi farming as a profitable business model and encouraged them to get into it. More importantly, the Inca Inchi companies organized the farmers by guaranteeing the farmers that the Inca Inchi would be highly profitable for their farming business, especially with the the buy-back guarantee that the companies claimed and which was seconded by the church leaders and the local NGOs as stated already. The green and red boxes shown in figure (3.1) explain how the Inca Inchi contract farming was initiated and implemented in the Kachin state, in which Inca Inchi companies introduced the Inca Inchi contract-farming to farmers

through church leaders and NGOs staff by giving trainings and organizing workshops and then distributed the Inca Inchi seeds with the farmers signing contracts.

The blue boxes in figure (3.1) address the final outcome that was expected for all the stakeholders such as farmers, Inca Inchi companies, NGOs, church leaders and government would be able to collaborate together so as to promote the Inca Inchi seeds for national and international markets which in turn was to contribute for the betterment of the social and economic affairs of the local peoples especially the farmers as shown in figure (3.1).

3.3 The Roles of Stakeholders

The commencement of Inca Inchi farming in Kachin state can be considered as an agribusiness model for the modern contract-farming. On the other hand, contract-farming has been predominantly based on the cash-crops for mass productions to feed millions of people or for the industrialized products. In the case of Inca Inchi contract-farming in Kachin state, it is obvious that there have been many stakeholders playing a crucial role in the introduction of the Inca Inchi plantation across the Kachin state. Despite having many stakeholders, the study was not able to identify all the stakeholders, however, the study did identify the key stakeholders who have been engaged with the Inca Inchi contract-farming across Kachin state. Some institutions such as the government, Inca Inchi companies, NGOs, Churches and communities themselves can be considered as the fundamental institutions that were engaged in the Inca Inchi contract-farming. Therefore, the leaders of these institutions have been considered as the key stakeholders as detailed out in table (3.1), who are the main drivers, but playing different roles for Inca Inchi contract-farming across the Kachin state.

Although as mentioned before, there are multiple drivers and stakeholders for the introduction of the Inca Inchi in the Kachin state, primarily the Church leaders, along with the local NGOs and community leaders who were crucial in getting the farmers to start the Inca Inchi contract-farming as the farmers were very weary of the companies and their promises of guaranteed buy back and high returns if they signed the contracts and started farming.

3.3.1 The State Government

As the Inca Inchi contract-farming was supposed to be a potential profitable development scheme that attracts the Myanmar government for the farmers across the country, the government seemed to have accepted the Inca Inchi companies such as the Elshadai and many others, without getting directly involved in the sinning of the contracts and the buyback guarantees, given by these companies. As far as the responsibility to fulfill the economic development and security of the peoples are considered, the government is fully responsible to implement the economic development scheme, in this case agricultural development scheme, for the peoples of the country (Government of the Republic of the Union of Myanmar, 2016). Therefore, Myanmar government has to take the responsibility in implementing the agricultural development scheme in terms of community development. As far as agricultural business is considered for the development of the people and the GOUM, Inca Inchi contract-farming has been one of its schemes to implement as a developmental strategy for the overall economic development of the country, in which the government collaborates with other countries so as to bring FDI, in this case with the Chinese government to get investments and expertise and to provide technologies and financial investment by lending loans to the farmers with low interests. For these reasons, the Myanmar government can be considered to be not only the most important key stakeholder in the Inca Inchi contract-farming in Kachin state, but also to have the responsibility to make sure the farmers get the returns as promised in their contracts in a timely manner without having to incur losses, with proper oversight by the government and holding these companies responsible to honor these contracts that have been signed between the farmers and the companies.

As far as the administrative levels of Myanmar government are concerned, there are state and central levels, in which Kachin state government is under the control of the central government in located in Naypyitaw. Despite the fact that the central government accepted the Inca Inchi companies to run business in the country, how the state government has engaged in the Inca Inchi contract-farming is very much crucial because the state government is closely related to the local peoples, the farmers in particular and in this case of Inca Inchi contract-farming. In other words, the state government is responsible and accountable to take all processes of Inca Inchi contract-

farming, in making sure that companies that are involved in the contract-farming of the Inca Inchi hold on their promise of the buyback guarantees as originally decided and signed as contracts by the farmers.

In the case of the farmers in Kachin state, the state government since the introduction of the contract-farming, did not know what has been going for the Inca Inchi contract-farming since the companies have been directly engaged with local farmers. In fact, the state government wanted to see the Inca Inchi contract-farming to be successful, yet did not have any oversight over these companies that were directly dealing with the farmers.

If the Inca Inchi farmers organized to establish a farmer-based organization to consult with the state government including Department of Agriculture (DOA), the state government would be able to help a certain extent in terms of agricultural services and loans in making sure that the Inca Inchi farmers were able to have sustainable and profitable farming as originally thought (a Government Officer, Vice Chairman of Ministry of Health's Food and Drug Administration, interview, Myitkyina, 27 October 2017).

Although the central government accepted the Inca Inchi companies at the central level for the whole country as stated in their National Action Plan for Agriculture (NAPA) (Government of the Republic of the Union of Myanmar, 2016), it seemed that the policies that the central government implemented did not work well because the local government did not know how to engage the Inca Inchi contract-farming between the companies and farmers.

Therefore, despite the fact that the government has the most crucial role to play, the Inca Inchi contract-farming as an agricultural business model which in principle was to enhance the lives of farmers, it did not take such responsibility for the farmers those who have been engaged with the Inca Inchi contract-farming, even after the companies did not honor their contracts that were signed between the companies and the farmers.

3.3.2 The Local NGOs

The NGOs in Myanmar have played a very important role for the local people, in this case, particularly the local NGOs and their partners because Myanmar was open to FDI to a certain extent since 2010 as it has moved for a democratic country through transition from a military ruled country towards a democratically elected civilian government. The NGOs should take an interplay between government and corporations to make justice in terms of accountability and transparency. In the case of Inca Inchi contract-farming, the NGOs, particularly the local NGOs have to play an important role in making the government and Inca Inchi companies be transparent and hold them accountable for the farmers who are involved in the contract-farming of Inca Inchi. Like Metta Development Foundation^v has encouraged the farmers to grow varieties of crops to enhance community development through its livelihood and organic farming projects.

However, Metta Development Foundation itself did not much engage for the Inca Inchi contract-farming, which goes to show that the farmers involved in the Inca Inchi farming were left at the hands and mercy of the companies they were dealing with no oversight from neither the local government nor the NGOs who were key in getting the farmers to start the Inca Inchi contract-farming (an NGO staff, Coordinator of Metta Development Foundation, interview, Myitkyina, 13 October 2017).

One farmer Ah Kye village shared his point of view related to this situation:

“We were left at the hands and mercy of the companies, neither the local government nor the NGOs intervened when the agreements were not met, and they are the ones who got us into farming it” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

Concerning the role of NGOs for the Inca Inchi contract-farming, the local

NGOs are much closely related with the farmers since they have been closely working with the local peoples, the farmers in particular. Nevertheless, most local NGOs like Kachin Development New Wave was usually engaged only for contacting the Inca Inchi companies when the local farmers requested.

For example, when there needed a meeting between farmers and the staff from Inca Inchi companies, the local NGOs organized such meeting (an NGO Staff,

Director of Kachin Development New Wave, interview, Myitkyina, 16 October 2017).

A man from Nawng Nang village confirmed his experiences:

“The NGOs seemed to be very supportive, we trusted them as intermediaries. Whenever we needed to meet with the leaders of the companies, they would help us organize such meetings, especially since everyone wanted and needed the project to succeed” (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017).

Therefore, it can be said that the NGOs only act like an intermediary so as to facilitate and provide a communicating stage for both parties to meet. In fact, it would be much effective that the local NGOs had taken more role to have engaged in Inca Inchi contract-farming. For instance, the local NGOs could facilitate to establish farmer-based organization to deal government and companies for Inca Inchi contract-farming, which is a form of empowering the farmers to voice out their concerns and also, to be able to have the power of collective bargaining, which the NGOs, if would have taken the needs to the Inca Inchi farmers would have farmers for efficient and effective communication between the stakeholders, especially the companies and the farmers.

3.3.3 The Church Leaders

As far as the roles of church leaders are considered, they often hold more than one position in a given society since the Kachin societies have been Christian dominated, in which church leaders have played an influential role within the communities, especially the Kachin. Moreover, the church leaders have extensive connections within and outside the communities to provide the opportunities for economic and community development.

In the case of church leaders, the KBC has a powerful influential role among the Kachin communities in Kachin state. For instance, the Reverends and Deacons of KBC are considered as holding high moral and spiritual standards among the Kachin societies because they have been leading both spiritual and development aspects for the Kachin communities (FGD 1, Nawng Nang, 14 September 2017).

In the case of Inca Inchi contract-farming, the church leaders played a very crucial role between farmers among the Kachin communities and Inca Inchi companies, as it has been mentioned already, the farmers were very weary of the companies and the farmers did not trust the companies. It was the church leaders who were very influential in convincing the farmers to start the Inca Inchi contract-farming, with the promise of earning high profits, as the

companies has signed contract with the farmers. Even those who did not have any land holdings were lured into the Inca Inchi contract-farming, as the church leaders were the ones to convince these farmers for the same.

A village woman from Shadau said:

“We all believed this business model would help improve our lives. We don't usually trust companies just like that but they had the church leaders on their side and since we consider them people of high moral who care about the development of the communities here, in Kachin State, we thought adopting this business model would be a good idea but it wasn't.”
(a farmer, interview, Shadau, Kachin State, 19 September 2017).

The study shows that the companies were very much aware of the situation in Kachin state, in which the influential role of church leaders have been key to be engaged to initiate the Inca Inchi contract-farming. Consequently, the companies approached the church leaders from different denomination including KBC to organize awareness trainings and workshops across the Kachin societies. In those trainings and workshops for the initiation of Inca Inchi contract-farming, the church leaders were informed that growing Inca Inchi would benefit the local farmers for their highly incomes and nutrients because Inca Inchi seeds could be sold with high prices and the seeds contained high nutrients.

Moreover, the companies guaranteed that they would definitely buy all Inca Inchi seeds produced by the farmers in updated prices and the farmers those who grow the Inca Inchi would have to sell the seeds to the companies for at least 15 years, as per the contracts that were made between the farmers and the companies (a Church Leader, interview, Myitkyina, 2 October 2017).

A woman from Shadau village said:

“Then the church leaders started to believe what they were told and continued to organize the church members near and far across the Kachin societies in Kachin State. As a consequence, companies sold the Inca Inchi seeds to the local farmers at approximately 310,000 Kyats (6620 Bhat) per kilogram, with the buy-back guarantee as per the contracts signed” (a Farmer interview, Shadau, 19 September 2017).

Despite its influential role over the church, it was very obvious that the church leaders were limited knowledge to make the decision of Inca Inchi contract-farming for its church members in terms of farmers. At one-point, local businessman donated a certain extent of Inca Inchi seeds that he bought from Thailand for the local Kachin societies through KBC, in which

the KBC took the responsibility to allocate the seeds to the Kachin communities (a Church Leader, interview, Myitkyina, 3 October 2017).

A man from Ah Kye village said:

“During the initial stages, by the time the seeds were ready to be harvested, the Inca Inchi seeds were not marketable and the companies themselves bought them at low prices, thereby not honoring the contracts they had signed and the promise of high profit became a loss-making endeavor for the farmers who were engaged in the Inca Inchi farming” (a Farmer, interview, Ah Kye, 12 September 2017).

During the initial stages, by the time the seeds were ready to be harvested, Inca Inchi seeds were not marketable and the companies themselves bought with low prices, thereby not honoring the contracts they had signed and the promise of high profit became a loss-making endeavor for the farmers who were engaged in the Inca Inchi farming (a Farmer, interview, Ah Kye, 12 September 2017).

Therefore, the companies were not consistent for what they have guaranteed and the church leaders, who having no knowledge about the agricultural business model of contract-farming played wrongly their roles over the Inca Inchi contract-farming that they were not good at, but as they believed that the companies will help the communities of the farmers in their economic and community development.

3.3.4 Farmer

In Kachin, the farmers were also amongst the parties involved in the appliance and development of the Inca Inchi business model. Once they had received the seeds from either, the religious leaders or the companies, the farmers proceeded to farm them. The farming of the seeds was done in both, small and large scale, depending on the possibilities of the farmer. When the seeds had germinated, the farmers were in charge of delivering them to the company as per the contract.

A woman from Nam Jim said:

“It sounded like a good business model because the companies promised to buy all the seeds from us. But when the plants had germinated and we delivered them to the company, they did not keep their word” (a farmer, interview, Nam Jim, Kachin State, 11 September 2017).

The responsibility of the companies in Kachin State was to provide the farmers with the seeds and a secure market. The companies also provided them with the required knowledge and technology to ensure a smooth running of the agricultural process. The companies, to a very large extent served as a source of income to the farmers in Kachin, given that many of them were employed to farm this seed. However, there were a lot of restrictions and specifications to be met according to the terms and conditions of the contract.

One farmer from Shadau village shared his point of view related to this situation:

“I think there were a lot of restrictions and business traps. Sometimes the knowledge provided by the companies was not really useful, because they did not about our region because they wanted to train us bringing people from other countries. So, we needed to find out a better way, sometimes resorting to our traditional methods and that translates into a lot of money and time wasted” (a farmer, interview, Shadau, Kachin State, 19 September 2017).

As stated in the contract, the seeds had to be farmed organically; the usage of pesticides was prohibited. If the companies suspected that the farmers were using pesticides, they would not buy them. Additionally, the quality of the seeds played a major role. They were classified into three categories; A, B and C. The A-type has the highest quality and is the biggest in size, the B-type is the second one on quality and is a medium-sized seed. Lastly, the C-type is the seed with the lowest quality and is the smallest in size. The process of farming the seed and delivering it to the company had to be done within 4 to 6 months, otherwise the value of the seed decreased and the farmers were paid less for their seeds. In the case of some seeds, such as the oil pressed seed, the seed had to be absolutely dried, with no fungi, no chemicals, no gravel, no contamination, etc.

A woman from Pa La Na said:

“Actually, we didn't know about the quality of seed in detail before we bring the seed to the company when we harvest and collect to the company. The company told me that there have three kinds of quality of seeds like A, B, C. Fortunately, my seeds is almost quality of A and B because my farm land soil is very good and I take care of my farm. But the case of price I am very sad because the price is very low and I cannot send them within 6 months because I need to collect the seeds and preparing transportation to the company” (a farmer, interview, Pa La Na, Kachin State, 18 September 2017).

Once the seeds had been farmed and ready to transport, the farmers were obliged to bring them to the company by themselves. The contract also stipulated that

the farmers could not sell their seeds to anyone else, other than the company they had signed with for the next 15 years.

Regarding this issue, one farmer from Ah Kye said that:

“The companies have not kept their word. They made it very clear that we couldn't buy seeds from anyone else or sell the seeds privately. But when the time came, they didn't buy the seeds and we signed a contract for 15 years. I don't know how this is going to work. I am very disappointed” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

A man from Nawng Nang village shared his experienced:

“I thought of trying to sell the seeds privately since the companies did not buy them but I also fear that if any of the leaders know, they will never buy the seeds. But what other choices do we have if no one buys them. We need to make some money in order to live” (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017).

The research found out that if the farmers who had signed a contract with any of the companies were caught selling the seeds to other farmers, the company would not buy any seeds from them anymore.

3.4 The Relationship of Stakeholders in Inca Inchi Contract-farming

As has been explained, considering the relationship between stakeholders, namely Inca Inchi companies, farmers, NGOs, church leaders and government, they all have played different roles. The role of company can be construed that it was to mobilize the farmers to have been engaged with the Inca Inchi contract-farming as an agricultural business model for the profits of both parties i.e. the farmers and the companies.

The staff from Inca Inchi companies testified that their role was to expand the Inca Inchi contract-farming as an agricultural business for the whole Kachin state (a Company Staff, Agent of Elashaddai Company Limited, interview, Myitkyina, 12 September 2017).

Therefore, it is consistent that companies were just playing their role for their own profits rather than for the local people's development, particularly for the farmers. Based on the study, it is very clear that the key stakeholders, namely the church leaders, NGOs who played a crucial role in introducing the contract-farming of Inca Inchi, especially the government, as shown in the figure (3.2), who had a minimal role and with no oversight on the Inca Inchi contract-farming as a business model for the farmers as they failed to have any recourse for the farmers who had to incur losses, once the companies who had promised for high yielding profits with buy-back guarantees, once they started buying these at very low cost from the farmers, the farmers had nowhere to turn for their problems with the companies with whom they had signed the contracts.

One farmer from Shadau village shared his point of view related to this situation:

“The seed dealers and the company said that the Inca Inchi was a very good crops that we all could escape from poverty by growing it. They guaranteed they would buy all the seeds that we produced and that they would pay us between 1700 to 3000 kyats per Kg. Since it is a long-term crop so we wouldn't have to buy seeds every year. So, I decided to grow this crop. I hope farming this Inca Inchi works because the company and church said it is a good business and that we can export the product to other countries. I still have hope that something might change in the future. The drawback for the business is that the company did not buy all the seeds at a high price as they had promised in the beginning. It was disappointing and the farmers do not have any other markets to sell” (a farmer, interview, Shadau, Kachin State, 19 September 2017).

Figure 3.2 Connection of Stakeholders in Inca Inchi Contract-farming

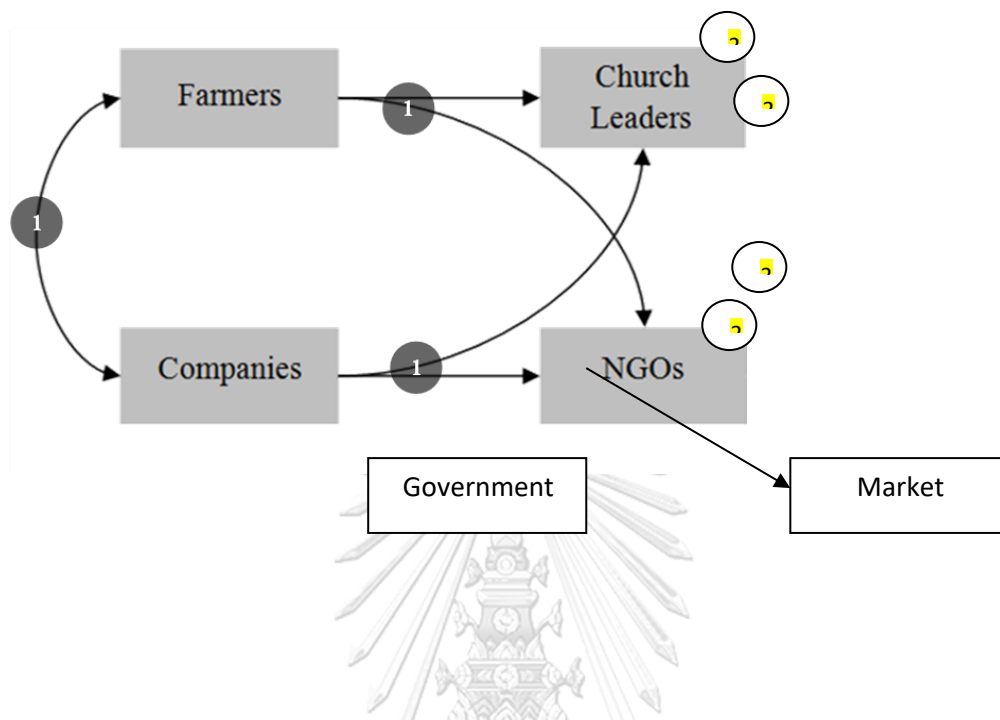


Figure (3.2) indicates the relationship between all the stakeholders those who have been engaged with the establishment of Inca Inchi contract-farming in Kachin state. Agents or staff from companies wanted to directly introduce their contract-farming projects to farmers. However, there were several obstacles for the companies to approach the farmers directly because community centers for gathering the farmers and how to convince the farmers as a trust were serious obstacles for the Inca Inchi companies.

Regarding this issue, one farmer from Ah Kye village said that:

“I had high expectations from farming the Inca Inchi because the company and church said it was a good business to export to other countries. Since the Inca Inchi business was introduced by some religious leaders, and a company from Thailand. The companies guaranteed that they will buy all seeds that we produce with good prize start from 1700ks to 3000ks per Kg and it is a long-term crop so that we do not need to buy seed every year. So, I decided to grow this crop” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

A woman from Pa La Na village said:

“I heard about the seed by our church leaders. The church leaders explained to us the many benefits of the seed, in terms of economic development for us, for the community and for our health. We bought seeds and were encouraged to farm Inca Inchi using organic methods. But now it is really difficult to sell the product. Imagine, I had to pay 20, 000 kyats per kilo of seeds and I haven't sold anything” (a farmer, interview, Pa La Na, Kachin State, 18 September 2017).

Hence, to break through these obstacles, the companies approached for the church leaders and local NGOs to convince the farmers as so to trust the companies as shown in figure (3.2) that the connection has been between Inca Inchi companies vis a vis NGOs, church leaders towards farmers.

A woman from Nawng Nang shared his experienced:

“The company's leaders were smart. They sided with church and NGO leaders who have a big influence on us. That's the reason we trusted them and why we thought this business model would really help us” (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017).

Figure (3.2) also indicates that the local government was not part of the connection in the Inca Inchi contract-farming, meaning the government was not fully aware, as has been explained.

A woman from Nam Jim village said:

“I think government doesn't know about Inca Inchi contract farming, even they know about it, they didn't take action nothing. But I saw at newspaper and Journal mentioned that if Inca Inchi would be benefit for farmers, government will be promoted to substitution crop as opium. So, I think they will just be waiting for this Inca Inchi business is good or bad” (a farmer, interview, Nam Jim, Kachin State, 11 September 2017)

One farmer from Ah Kye village shared his point of view related to this situation:

“The things I would like to improve about Inca Inchi, want to growth famers who plant Inca Inchi systematically. the output of good quality peanut, buying Inca Inchi peanut center in Myitkyina, having Inca Inchi company, having buying and selling center that can sell row material every

time. Want to have research study about Inca Inchi. Wishing the price is 5000 kyats for 1 kg. We are selling Inca Inchi peanut 2500 kyats for 1 kg. The price is very low. The main challenge and problem - As a buyer, the Inca Inchi peanuts are easy to mold when we buy the raining season because there is no peeler and no dryer device. We are difficult to peel with our hands. The key problem is market. To buy with a good price from us (farmers) and it should be a good value when we sell, that are essential thing and that may lead the farmers and the process will be able to improve the long-term success" (a farmer, interview, Ah Kye, Kachin State, 12 September 2017)

However, all stakeholders expected markets will be available in terms of national and international.

3.5 General Social and Economic Aspects in Kachin State

The whole political dynamics of Myanmar has been notorious in the international community due to its dictatorship and military junta for several decades. Current democratic transition has been not much progressive because Myanmar military keeps controlling the political power of the country. As a consequence, the social and economic aspects of Myanmar do not improve much. Therefore, in the case

of Kachin state, although social and economic aspects are better than other states such as Rakhine and Chin states in Myanmar, it is not comparable to other developing countries, namely Thailand and Philippines. For instance, the primary school enrollment rate in Kachin is slightly higher than the national average, but still not up to the universal standards and only 60 % children attending primary schools in the State

who complete their schooling on time. However, 40 % of primary school children in Kachin state are not completing their schooling on time. In addition, the standard of education in Myanmar is very low in terms of critical and analytical thinking because the students are trained to memorize what they have been thought in order to take exam. NGOs have played a greater role in the promoting educational development, yet the majority of Kachin citizens still lack the ability to emphasize an analytical thinking process (Education, 2016).

Generally looking at health situation in Myanmar, despite the fact that public hospitals have been providing healthcare services for free of charge, the patients have to take care for all the medical staff including medicines, meaning they have to buy all necessary medicines (Anwar, 2007).

In the case of Kachin state, overall public healthcare services are not much improved yet, instead the healthcare services remain unchanged compared to previous regimes except new hospitals. Most importantly, children in Kachin state are not able to receive services for basic nutrition and healthcare. Another protracted issue in relation to health situation is that drug users have been increasing and HIV/AIDS has been very serious for the local health condition (an NGO Staff, Chairman of Kachin Development Group, interview, Myitkyina, 11 September 2017).

A farmer from Ah Kye village said:

“Our village has no clinic. So that if emergency case, we need to go to Shadau village or the Myitkyina Public hospital. Sometime this is so dangerous for our village in terms of health. In addition, there is not easy to go hospital for poor people like my family” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

In fact, the Kachin state is fertile land and natural resource-rich region in Myanmar. However, all-natural resources have been extracted by the authorities particularly the Myanmar army and their partners the so-called cronies and the extraction of natural resources including gold and jade have been over harvesting, in other words, with the maximum extraction. Therefore, the local peoples in Kachin state do not benefit from such extraction of natural resources. On the other hand, the environmental deterioration has been at risk from such natural resources' extraction. Local people in Kachin state much rely on their subsistence on farming and forest products.

A woman from Nawng Nang village said:

“Actually, I believe natural resources is blessing from God but government cannot manage the right way for people. So, the rich people will become more richer and poor people are poorer than before. Most of rich people are doing business of natural resources like Jade and gold mining by the authorities particularly the Myanmar army and their

partners the so-called cronies” (a farmer, Interview, Nawng Nang, Kachin State, 14 September 2017).

In terms of farming, the local peoples grow their upland and paddy rice, however, land grabbing make them less land to grow rice and other crops as well as less likely to find forest products for their subsistence. Moreover, the local peoples just become the daily waged workers of cash crop plantations such as rubber, watermelon, banana, CP corn, and the like. These cash crop plantations are run by the cronies and their partners. The only new business model that was thought to be a profitable and would be directly between the farmers and the companies was the introduction of the Inca Inchi contract-farming, removing the intermarries and were seen by the local church leaders and NGOs as they were seen not as cronies, but companies who would like to make profit not for themselves only, but also for the farmers, which would have in-turn helped the communities in their economic and community development, since the past has shown the Kachin people, even though the Kachin state is resource rich, has never benefited the locals.

Hence the Inca Inchi contract-farming was seen by the church leaders, NGOs and the local communities will be a way for the people to truly benefit from it as they were given guarantees of high returns, which as the study has shown was not the case.

Border trade with China is the common source of the market for Kachin state since its long border shares with China. Currently, these border trades suffer from the armed conflicts between Myanmar army and KIA because local products are not able to get exported to China and the products can only be exported with highly extra costs and extra time (a Government Officer, Member of Parliament in Kachin State, interview, Myitkyina, 17 October 2017).

As a consequence, farmers those who produce agricultural products have suffered. In other words, the armed conflicts have worsened the incomes of local community in Kachin state particularly in the border areas. Therefore, the economic conditions deteriorated the local communities in Kachin state.

One farmer from Ah Kye village shared his point of view related to this situation:

“Normally, I can sell banana and corn from my farm but now the agent from china they did not collect and buy me so that I asked them and replied me that they said, because of the armed conflicts of the china border” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017)

In its controlled areas, the KIO has some business channels with the Chinese and opened up border trade with neighboring provinces. China demands many natural resources including logging, forest products and the likes. Nonetheless, the state has to exchange its rich natural resources based on the trade agreements between China and Myanmar so as to have infrastructure development and to create economic potential and sustainability for the farmers and the state (Global Witness, 2005). As a result, more Chinese investors have come into the Kachin state for further business investments. Moreover, in 2005 there were further socio-economic changes that occurred when sugarcane contract-farming was introduced in Kachin state, and with sugarcane contract-farming, the farmers now had a chance to earn good sums of income. With this international collaboration between China and Myanmar has influenced the Kachin in terms of foreign direct investment (FDI) significantly.

3.6 Social and Economic Aspects Before Inca Inchi Contract-Farming

It is very important to examine the economic and social aspects of farmers before Inca Inchi farming in Kachin state because such aspects will be compared and contrasted with the impacts since the introduction of Inca Inchi contract-farming on the social and economic aspects in terms of development and security. It was shown that before Inca Inchi contract-farming initiated, the political situation was worse in most of the remote areas where farmers concentrated due to armed conflicts between KIA and Myanmar army and the conflicts have now been for over seven years since 2011. While the difficulties and hardships in such political and economic dynamics, the living style of the local peoples has changed in Kachin state.

A man from Nawng Nang village said:

“For example, our village have many cars (without license) and motorcycles have been imported from Thailand and China and the telecommunication has improved due to the establishment of private telecommunication companies and phone sets have been imported from

neighboring countries particularly from China” (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017).

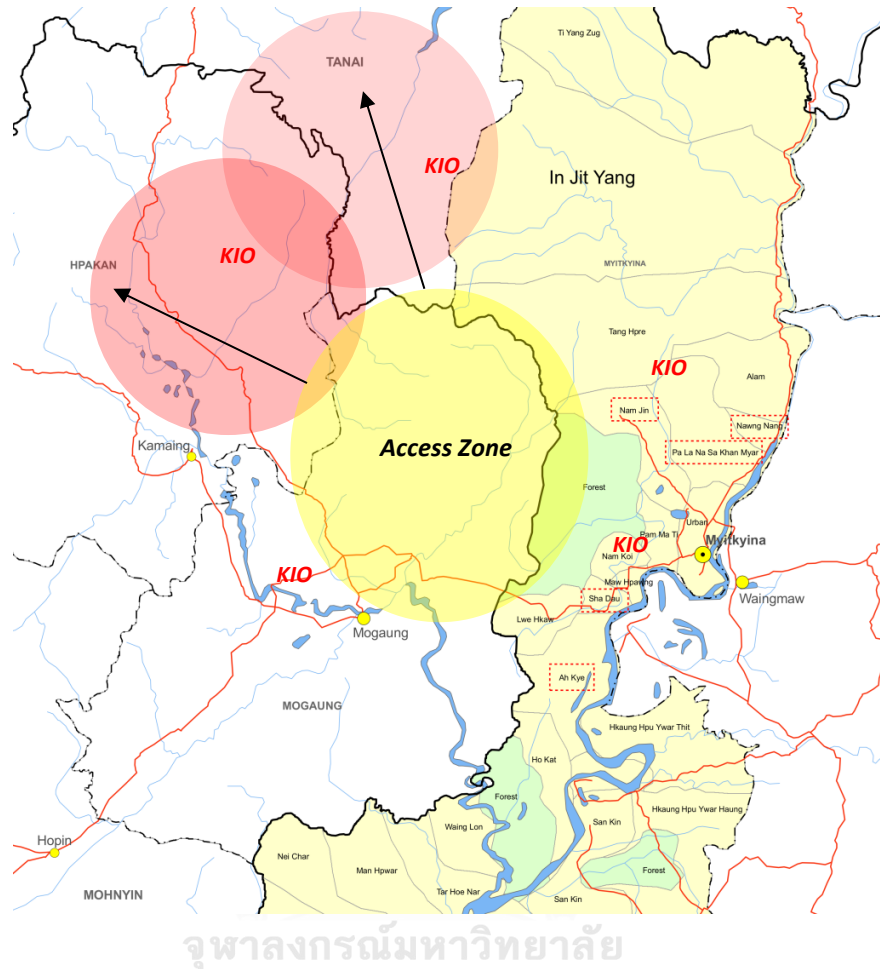
A woman from Pa La Na village shared how the impact of access to these material possessions is reflected in her daily life:

“I am really satisfied that I can communicate with my children easily by smart phone, even my children are working in the foreign countries like video calls and also now I am more comfortable transportation because of my car even without license” (a farmer, interview, Pa La Na, Kachin State, 18 September 2017).

Some local peoples have pursued such living standard without calculating their incomes for the long run. The local communities of the villages have also engaged in these social and economic dynamics (an NGO Staff, Chairman of Kachin Development Group, interview, Myitkyina, 11 September 2017).

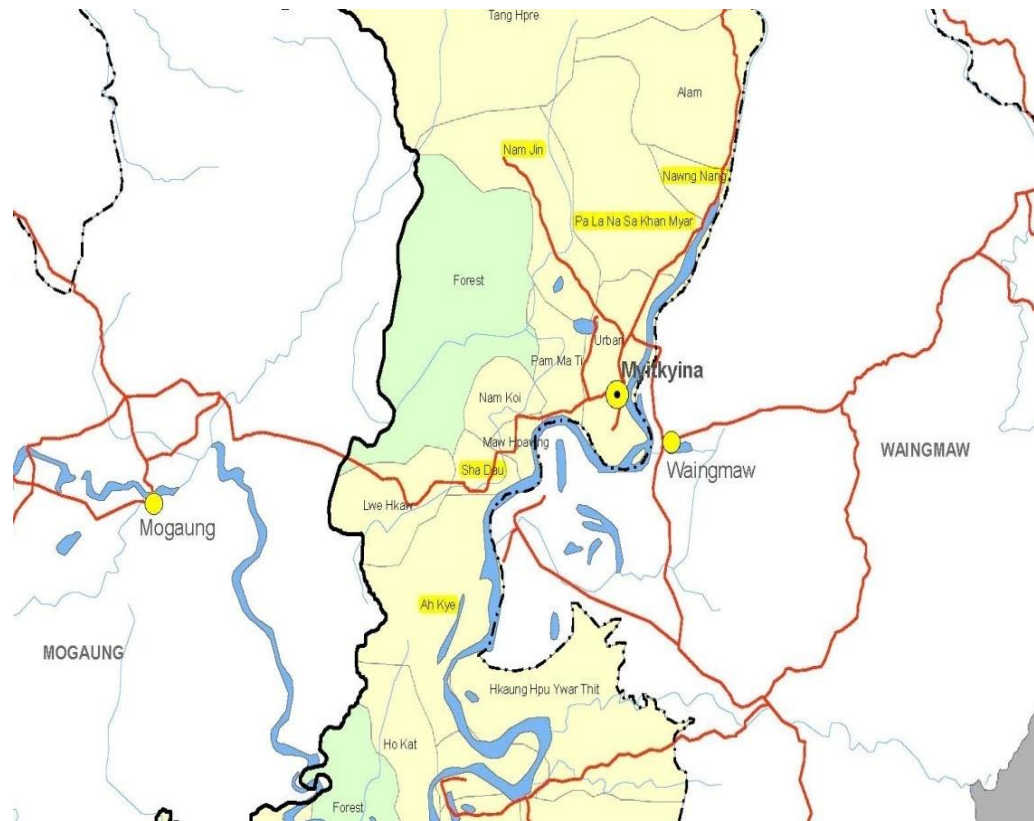
It is therefore to explore the social and economic aspects of farmers before the Inca Inchi farming.

Figure 3.3 Conflict Areas and the Studying Villages



The figure 3.3 above illustrated located research areas of the planting Inca Inchi farmings areas (in dot retriangles – included with Nanjim village, Nawang Nang, Pa La Na Sa Khan Myar, Sha Dau, Ah Kye, and so on. The conflict area x (showed in red zones), also regarded as the targeting acceding zone (showed in yellow zone). The Tanai State in the upper part in map (North) are enriched with natural resources such as Amber, and also the land quality itself is regarded as the best soil in Myanmar. Tanai state regarded as good agricultural zone. In addition, Hpakan State regarded as the world best jade zone. Therefore, conflict between local and central governments are motivated by the authority of occupying the areas insanelly (see red circled areas). Kachin where is closing to these areas were counted into conflicting zone where the KIO and Burmese governments are fighting, Kachin and the area in yellow are effective strategic roadmap to access the Tanai and Hpakan.

Figure 3.4 The Inca Inchi Farming and Studying 5 Villages in Myitkyina, Kachin State



Source: Myanmar Information Management Unit

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

3.3.1 The Socio-economic Situation in Nam Jim Village

Nam Jim village is located in Myitkyina city, Kachin State, Myanmar (see Figure 3.5). The soil is perfectly suited for agriculture. The village has an area of approximately 30,000 acres, including the village and farming lands. This figure is based on the estimations made by the village elders.



Figure 3.5 The village's board with the name Nam Jim village.
(Photograph by researcher, 11 September 2017).

In fact, the village increased in size after the 2015 NLD government, and currently the village includes 326 households and has a total population are 21,477 (see Table 3.2). Almost all residents are Kachins and are Christian that the majority of people are Protestant, and Roman Catholics are a minority group in this village (see Figure 3.6 and 3.7).



Figure 3.6 This photo shows Nam Jim's village Baptist Church.
(Photograph by researcher, 11 September 2017).



Figure 3.7 This photo shows Nam Jim's village RC Church.
(Photograph by researcher, 11 September 2017).

Forest and land are the village's main resource. Villagers have their own approach to managing natural resources that are used locally by the common people. Logging and selling charcoal are beneficial in rising the household's income.

Most people in the village work as farmers, carpenters or government employees. The villagers' livelihood mainly depends on farming and domestic livestock rearing. Farming activities are rice farming, banana and mango production in particular, and a few people have started growing perennial trees and Inca Inchi. However, the market is unstable which leads to scarce opportunities for farmers to make an income and support their families.

These crops help increase the income by no more than 2,000,000 kyat a year for those who sell their own product. In the past, a few families engaged in logging but now they work in agriculture, since most of the forest is gone. The village's socio-economic situation has not improved with the villager's involvement in the Inca Inchi contract farming (see Table 4.2 in Chapter 4 for more details on income).

However, since the ceasefire there have been significant improvements in education, healthcare and the living standards. Although, the village isn't as developed as the city of Myitkyina. The Burmese military government built two primary schools with the help of the villagers. The education system is running by them. (see Figure 3.8 and 3.9).



Figure 3.8 This photo shows Nam Jim's Primary School-1 built by the Burmese military government. (Photograph by researcher, 11 September 2017).



Figure 3.9 This photo shows Nam Jim's Primary School-2 built by the Burmese military government. (Photograph by researcher, 11 September 2017).

Nevertheless, there aren't any higher education schools in Nam Jim village. Thus, parents have to send the children to cities like Myitkyina and Yangon so that they can attend high school and then join a public university. Still, the problem isn't solved because not everyone can afford sending their children to the cities to pursue higher education. The lack of access to it, is a huge barrier over here. As a result, parents invest a lot of money on education and this has a direct impact in the family's economy.

In regard to healthcare, the Myanmar government set up a basic clinic (see Figure 3.10) The main public hospital is located at Myitkyina, approximately 5 miles from Nam Jim.



Figure 3.10 This photo shows Nam Jim's village health care centre built by the government. (Photograph by researcher, 11 September 2017).

In addition, there have been improvements in regard to housing and people's wellbeing. The roofing has changed from thatched roofing to zinc. The researcher found out that there has an only a few households left without zinc roofing sheets in Nam Jim village.

A woman from Nam Jim village said:

“We had a very difficult time since the conflict between the Burmese Army and the KIA started, but we were very happy when the Inca Inchi was introduced by agents from the Inca Inchi company and the church leader in our village. I first attended a meeting in which they told us about the benefits of farming it. It was not only me, all the farmers from our village wanted to plant this Inca Inchi because as me, they also wanted to improve their lives and make an income. We invested a lot money to plant this Inca Inchi, but when the harvest time arrived that the company did not buy all our seeds. They had a lot of restrictions for the ones they actually bought at a very low price. For example, they told us that the company wanted to collect and buy the seeds just once a month, later they changed their minds and told us it would be once every three months. This was very difficult for me because the Inca Inchi plant is very good but once needs to collect the seeds every day, dry them and peel them. When we took the seeds to the company as they had said, we receive complaints, they told us that the seeds were old, that the quality of them wasn't good. So that is why most

farmers in our village, including me don't want to take care or plant this seed anymore.” (a farmer, Interview, Nam Jim, Kachin State, 12 September 2017).



Figure 3.11 A farmer's farm in Nam Jim village looks better overall in terms of the quality plants, but he doesn't want to take care anymore because of price and market of Inca Inchi seeds. He left the Inca Inchi farm and plan to grow other crops. (Photograph by researcher, 18 September 2017).

In conclusion, the Inca Inchi contract farming was introduced in 2014 by the company and church leaders in Kachin State, at the time of the armed conflict. Most farmers received the seeds from company agents or directly from the companies and signed a contract with the company. Some farmers got the seeds from the church, friends and church leaders. However, Nam Jim village's socio-economic situation has not improved since the village became involved in Inca Inchi contract farming (see Table 4.2 in Chapter 4 for more details on income).

3.3.2 The Socio-economic Situation in Ah Kye Village

Ah Kye village is situated in Myitkyina (the capital of Kachin State (see Figure 3.11). Currently there are 411 households and 1,728 people. Ah Kye village living in nucleus families. (see Table 3.2). The majority of the village's population are Kachins and Christian (Baptist Denomination) and RC by religion (see Figure 3.12 and 3.13).

The villagers primarily depend on farming, shifting cultivation; perennial cultivation and natural forest products for their livelihood.



Figure 3.12 The village board with the name Ah Kye village.
(Photograph by researcher, 12 September 2017).



Figure 3.13 This photo shows the Ah Kye Kachin Baptist Church.
(Photograph by researcher, 12 September 2017).



Figure 3.14 This photo shows the Ah Kye RC Church.
(Photograph by researcher, 12 September 2017).

The village is led by the village committee for social and development activities. The committee is chosen by the villagers and officially appointed by the government.

The findings show that there are a number of livelihood options for the farmers, such as agricultural production and forestry products collecting. The findings show further that almost all the people in the case study area (Ah Kye village) utilize to grow a range of crops including rice, corn, maize and vegetables as short-term crop plantation in shifting cultivation.

Since the ceasefire there have been significant improvements in education, healthcare and the living standards. Although, the village isn't as developed as the city of Myitkyina. The Burmese military government built middle schools with the help of the villagers. (see Figure 3.14).



Figure 3.15 This photo shows Ah Kye village middle school of the Burmese military government. (Photograph by researcher, 12 September 2017).

With regards to healthcare, there isn't a clinic in the the village so the villagers travel to the Shadau village or to the Myitkyina Public Hospital. The main public hospital is located at Myitkyina, approximately 7 miles from Ah Kye village.

As for housing, there have been improvements in regard to housing and people's wellbeing. The roofing has changed from thatched roofing to zinc. According to the researcher's observations, there are many households left without zinc roofing sheets can currently be seen in Ah Kye village (see Figure 3.15 and 3.16). However, there are more thatched houses in Ah Kye village compared to other villages.



Figure 3.16 This photo shows the standards of living in Ah Kye village. (Photograph by researcher, 12 September 2017).



Figure 3.17 This photo shows the standards of living in Ah Kye village. (Photograph by researcher, 12 September 2017).



Figure 3.18 This photo shows an Ah Kye villager working on a seasonal crop.
(Photograph by researcher, 19 September 2018).

The Inca Inchi contract farming was introduced in 2014 by the company and church leaders in Kachin State, at the time of the armed conflict. Most farmers received the seeds from company agents or directly from the companies and signed a contract with the company. Some farmers got the seeds from the church, friends and church leaders. However, Ah Kye village's socio-economic situation has not improved since the village became involved in Inca Inchi contract farming (see Table 4.2 in Chapter 4 for more details on income).

A woman from Ah Kye village said:

“The civil war started in 2011, the Inca Inchi was introduced in our village in 2014 by an agent of the company and by the church leaders. I was really interested in it and signed a contract with the company. I bought the seeds at 310,000 kyats a kilo. I invested around 20 lakhs in an acre of land. I lost a lot of money, I truly believed this seed would benefit my family's income but the opposite of what I expected happened. The problem isn't in farming them because the soil is very good for that seed, the problem is the market price.” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

A man from Ah Kye said:

“Before planting the Inca Inchi, I went to the forest to look for amber but I wasn't able to get to where I was supposed to find it because of the armed conflict. The fights were worse than before” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

In conclusion, the situation in Ah Kye village did not change at all. Ah Kye is the poorest village in regard to housing and people's well-being (see figures 3.16). In terms of social conditions, such as education, healthcare and standards of living, there isn't a clinic, most children lack education because their parents can't afford it and the incomes are lower than other villages in the research areas. People aren't able to even meet their basic needs. One of the reasons is the very unstable political situation. Because of it, people can't look for other opportunities. In Kachin State there are a lot of natural resources, like jade, gold, and amber but people can't go look for them because they are afraid. Most people's income depends on natural resources in Ah Kye village. (see Table 3.3).

3.3.3 The Socio-economic Situation in Nawng Nang Village

Nawng Nang village is situated at Myitkyina (the capital of Kachin State) (see Figure 3.18).



Figure 3.19 The village's board with the name Nawng Nang village. (Photograph by researcher, 14 September 2017).

Currently, there are 1,573 households and 8,131 people in Nawng Nang village living in nucleus families. (see Table 3.2). The majority of the village's population is Kachins, most

of them are Christian (Baptist Denomination) and RC. (see Figure 3.19 and 3.20). The population increased when IDP camps were set up in Nawng Nang village. (see Figure 3.21). The villagers have a very strong social kinship among them and with Kachins from other villages because of their clan system. Villagers primarily depend on shifting, terrace and perennial cultivation, and on natural forest products for their livelihood.



Figure 3.20 This photo shows Nawng Nang's village Baptist Church.
(Photograph by researcher, 14 September 2017).



Figure 3.21 This photo shows Nawng Nang's village RC Church.
(Photograph by researcher, 14 September 2017).



Figure 3.22 This photo shows IDPs Camp, located inside Nawng Nang Village.
(Photograph by researcher, 17 September 2018).

There are some social group or infrastructures available in a village such as a village committee, a clinic and a cooperative primary school, road, and limited electricity. The village is led by the village committee for social and development activities. The committee is chosen by the villagers and officially appointed by the government. There is one clinic supported by Myanmar government for villagers. Before 2004, the road access to Nawng Nang village is very rugged and difficult to access, but now there is the new road available (Sumpra Bum-Myitkyina). Before there was no new road, limited electricity but now there are better than before. However, in consequence, the villagers are limited of electricity now.

The findings show there are a number of options for the villager's sustenance such as agricultural production and forestry products collecting.

The findings show that most people in the case study area (Nawng Nang village) to grow a range of crops including rice, corn, maize and vegetables as short-term crop plantation either during the rainy season or in the dry season using small-scale irrigation and persimmon and Star Anise.

A woman from Nawng Nang village said:

“We used to do regular jobs and farming. Some people who have farmlands work in their farms, some villagers sell vegetables, the situation isn't very different than before. Nowadays, some people are well-educated and support their families. Some young men work at the jade mines in Hapkant, their parents' occupation is usually gardening or farming”

(a farmer, interview, Nawng Nang, Kachin State, 14 September 2017)

However, since the ceasefire there have been significant improvements in education, healthcare and the living standards. Although, the village isn't as developed as the city of Myitkyina. The Burmese military government built middle and high schools with the help of the villagers. (see Figure 3.22 and 3.23).



Figure 3.23 This photo shows the Nawng Nang middle school of the Burmese military government. (Photograph by researcher, 14 September 2017).



Figure 3.24 This photo shows the Nawng Nang high school of the Burmese military government. (Photograph by researcher, 14 September 2017).

Regarding health care, the Myanmar government set up a clinic. (see Figure 3.24) that provides basic healthcare. The main public hospital is located in Myitkyina, approximately 10 miles from Nawng Nang village.



Figure 3.25 This photo shows Nawng Nang's village health care centre built by the of government. (Photograph by researcher, 14 September 2017).

As for housing, there have been improvements in regard to housing and people's wellbeing. The roofing has changed from thatched roofing to zinc. Some villagers have even used stronger materials. According to the researcher, there has an only a few households left without zinc roofing sheets can currently be seen in Nawng Nang village (see Figure 3.25 and 3.26).



Figure 3.26 This photo shows the standard of living of the poor in Nawng Nang village. (Photograph by researcher, 14 September 2017).



Figure 3.27 This photo shows the rich standard of living of the rich in Nawng Nang village. (Photograph by researcher, 14 September 2017)

3.3.4 The Socio-economic Situation in Pa La Na Village

Pa La Na village, like Nam Jim, is located in Myitkyina, Kachin State, Myanmar (see Figure 3.27).



Figure 3.28 The village's board with the Pa La Na village and High School of the Burmese military government (Photograph by researcher, 18 September 2017).

The village is of approximately 25,000 acres in size, including the village and farming lands. Prior to the establishment of Pa La Na village, Kachins, a few retired people from the Burma Army and retired government employees migrated and found an area called Pa La Na, very close to Nawng Nang village. Most people have migrated to other countries or to Yangon, the capital city of Myanmar. However, the village gradually expanded when several other small villagers from Sumpra Bum and Injang Yang moved to Pa La Na as IDPs (see Figure 3.28).



Figure 3.29 This photo shows IDPs Camp, located inside PA LA NA Village.
(Photograph by researcher, 18 September 2017).

Currently Pa La Na has 1,385 households and has a total population of 7,508. There are 3,688 males and 3,820 females (see Table 3.2). The female population is higher than the male population in Pa La Na village.

A Man from Pa La Na village said:

“One can see that there are a lot of single women and widows in Pa La Na village as the farmer mentioned previously. This is because most men have migrated to other countries and other men had an early death because of drugs.” (a Farmer, interview, Pa La Na, 18 September 2017).

All residents are Kachins and most of them are Protestant Christian (see Figure 3.29). The village's existing resources include the deep forest, the uplands, paddy lands or farmlands. The villagers are agrarian; their livelihood relies on cultivating rice, planting some trees like the masala tree, the banana and traditional medicine plants and herbs.



Figure 3.30 This photo shows Pa La Na Baptist Church. (Photograph by researcher, 18 September 2017).

Pa La Na also suffered due to the conflict, resulting in some people leaving their land and farm.

A Woman from Pa La Na village said:

“Ten of my family’s households worked in the forest near our village to plant for crops. The soil there is very good for planting. Unfortunately, we left our farm because of the conflict in 2011. We went back to see our farm but it is already occupied. So, we are very sad. Now we are preparing to get our farm legally.” (a farmer, interview, Pa La Na, Kachin State, 18 September 2017).

As a result, survival has been a challenge and there was no security at all.

Education, healthcare and standards of living have improved significantly since the ceasefire agreement. A high school was added to Pa La Na’s School under the Burmese military government education department but some parents send their children to the cities because they think that big cities offer better education.

The village clinic was built and opened by the government. The villagers also have access to Myitkyina’s public hospital which is approximately 1 mile away from Pa La Na village. Also, there have been improvements in terms of housing and well-being of the people over time.

3.3.5 The Socio-economic Situation in Shadau Village

Shadau village is located in Myitkyina, Kachin State, Myanmar (see Figure 3.30). The size of the village is of approximately 35,000 acres including the village and farming lands.



Figure 3.31 The village's board with the name of Shadau village. (Photograph by researcher, 19 September 2018).

Currently Shadau village has 327 households and has a total population of 1,809. There has 898 Males and 911 Females. (see Table 3.2).

A Farmer from Shadau village said:

“We can see that there are daily accessible lands to plant and farm in Shadau village. We just we want to know what kind of crops we should plant to develop and increase the agricultural production” (a Farmer, interview, Shadau, Kachin state, 19 September 2017)

All residents are Kachins and almost all are Protestant Christian and RC (see Figure 3.31 and 3.32). The population decreased when the conflict between the KIO and Burmese army took place in 2011.



Figure 3.32 This photo shows Shadau's Baptist Church.
(Photograph by researcher, 19 September 2018).



Figure 3.33 This photo shows ShaDau's village RC Church.
(Photograph by researcher, 19 September 2017).

A woman from Shadau village said:

“My son and relatives move to Myitkyina because to pursue education and because of the armed conflict. I think Myitkyina is safer than Shadau village” (a farmer, interview, Shadau, Kachin State, 19 September 2017).

As a result, survival has been a challenge and there are no guarantees of security.

The village's existing resources include the deep forest, the uplands, paddy lands and farmlands. The villagers are agrarian; their livelihood relies on cultivating rice, planting some

tress, CP corn, masala tree, banana and traditional medicine production. Also, there are rubber plantations. The research found out they all plant masala in every household. They got some extra income from masala plantations.

Education, healthcare and standards of living have improved significantly since the ceasefire agreement. A primary school in Shadau was built by the Burmese military government education department (see Figure 3.33).



Figure 3.34 This photo shows Shadau's primary school of the Burmese military government. (Photograph by researcher, 19 September 2018).

Parents have to send their children to cities like Myitkyina and Yangon, so that they can pursue higher education. However, the problem still remains; not everyone can afford to send their children to the cities so that they can go to high school and then University. Some children live and work with their parents at home even though they passed the required exams to attend middle school. Therefore, the lack of access to higher education is a barrier in this village. As a result, parents spend a lot of money on education; because the cost of sending children to other places outside the village is very high, this impacts the family's economic situation.

The village clinic was opened by government. Villagers also can access Myitkyina's public hospital which is approximately 6 miles away from Shadau village. In addition, there is a small oil production factory in Shadau village. (see Figure3. 34). In terms of housing and well-being of the people, there have been improvements over time. However, are still some houses with thatched roofs in Shadau village.



Figure 3.35 This photo shows the Small Oil Production Factory by Shadau community. (Photograph by researcher, 19 September 2018).

3.3.5 Comparison Level of Five Villages

Table 3.2 Farmers' Demographic Profiles in Researched Areas

| Village Name | No. of Households | Sex | | Total |
|---------------|-------------------|---------------|---------------|---------------|
| | | Male | Female | |
| 1. Nam Jin | 326 | 1,178 | 1,123 | 2,301 |
| 2. Ah Kye | 411 | 845 | 883 | 1,728 |
| 3. Nawng Nang | 1,573 | 3,763 | 4,368 | 8,131 |
| 4. Pa La Na | 1,385 | 3,688 | 3,820 | 7,508 |
| 5. Shadau | 327 | 898 | 911 | 1,809 |
| Total | 4,022 | 10,372 | 11,105 | 21,477 |

(Source: Village Tract of Government Administration, 2012)

The study picked up the research areas, namely Nam Jin, Ah Kye, Nawng Nang, Pa La Na and Shadau, the vicinity remote areas of Myitkyina in Kachin State, the areas likely to represent the social and economic aspects of the population in other areas across the Kachin State. The demographic data reflects the density of households as well as the population in Kachin State, particularly for the areas where the Inca Inchi contract-farming has been engaged. According to table (3.2), the households in each village there are 326 households in

Nam Jin, 411 households in Ah Kye, 1,573 households in Nawng Nang, 1,385 households in Pa La Na and 327 households in Shadau respectively.

The total population is 21,477 in all villages of the researched areas, in which the male population is of 10,372 and the female one is 11,105. This demographic data show that the household's densities are quite different from one village to another. Likewise, the population densities are distinguishable among the villages since some villages are low in population, while others are high for a certain extent. The population between male and female has been slightly different.

These demographic data indicate that the density of the households and population that have engaged with the Inca Inchi contract-farming is not a small population. It also reflects that a certain extent of labor force has been available for the production of agricultural products.

A man from Nam Jim village said:

“I have a lot of land to grow the seed and I have a lot of family members who want to work and I know a lot of farmers in the village who are hardworking people and need jobs” (a farmer, interview, Nam Jim, Kachin State, 11 September 2017).

Therefore, labor force has been extant to transact the Inca Inchi contract-farming in order to produce the Inca Inchi peanuts as agricultural products for an agricultural business, where the households have not only gone ahead and extensively started to grow the Inca Inchi, but also employed other laborers to work in the production of Inca Inchi, which was seen as a win-win situation for all the people involved in the Inca Inchi farming, but as the study shows, this was a myth that the companies tried to sell and at the end, it was the farmers who ended up incurring losses as the companies did not honor the contracts that were signed even the church leaders and the NGOs, who played a crucial role in convincing the farmers to initiate the Inca Inchi farming could not do anything once the contract-farming as a business model failed to deliver the results as was expected.

A woman from Ah Kye village said:

“I followed the contract since I started harvesting the seed. The problem is that the company didn't keep their promise and didn't buy the seeds as stated in the contract. Actually, I didn't trust the company but I did trust the church leaders and the NGO, because they usually look after us” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

Moreover, the church leaders played a crucial role in persuading the farmers to get involved in the Inca Inchi contract farming. The company leaders were aware of the villagers' distrust; therefore, they approached the church leaders since they have a lot of influence on the villagers as religion plays a significant role.

As a result, the villagers had access to the seed through the church leaders who received the seeds from the company. Some villagers got the seed from the KBC, who received the seeds from a business man. they were not charged much for the seeds. The farmers just had to pay 20,000 kyat for the registration member fee. The main sources were the church leaders and the KBC, the company's agents and the company.

In terms of housing and the well-being of the people, there have been improvements over time. However, there remains more thatched housing (see Figure 3.15 and 3.16) in Ah Kye village compared to other villages in the research area of 5 villages. Why do these can choose Ah Kye is the poorest village and Nawng Nang is the richest village.

It is clearly seen because of housing with thatched housing. Moreover, based on the findings, Ah Kye is poorest and Nawng Nang village is the richest of the 5 villages that we can see base on this research of Annual On- Farm and Non- Farm incomes of the farmers. The next factor is education which is an internal factor.

As we can see the village of Ah Kye only has a primary school whereas Nawng Nang village has a high school and the Kachin Theological College (see Figure 3.35). This is the only village with a high school and a college. Some villages just have a primary or middle school. In terms of health, Ah Kye doesn't have a clinic whereas the rest of the villages do have one. Nawng Nang village has the best one amongst them.



Figure 3.36 This photo shows Kachin Theological College and Seminary in Nawng Nang village. (Photograph by researcher, 14 September 2017).

3.6.1 On-Farm and Non-Farm Incomes of the Farmers

Looking at the incomes of the farmers those who have been engaged with the Inca Inchi contract-farming, there have been on-farm and non-farm incomes. These on-farm and non-farm incomes are to differentiate the incomes of Inca Inchi contract-farming in terms of cost and benefits. On the other hand, the on-farm and non-farm incomes are to explain the social and economic aspects of the farmers before they were engaged the Inca Inchi contract-farming so that the incomes from Inca Inchi contract-farming and other on-farm and non-farm incomes can be compared and contrasted.

The study has considered the crops including both, annual and perennial crops as well as livestock for on-farm incomes of the farmers. Most importantly, the Inca Inchi is also considered as part of on-farm crops.

In calculation, rice is the major source of income for farmers annually since most farmers grow rice in both paddy and upland fields. In addition, other crops such as corn, vegetables, fruits and the like have been the secondary income in on-farm incomes for some farmers. On the other hand, the livestock has given a certain extent of income for the farmers in terms of on-farm incomes. Considering the livestock, home-raised chicken, cattle, goat, pig and the like are considered.

Table 3.3 Annual On-Farm and Non-Farm Incomes of the Farmers

| Income Sources | | Nam Jim | Ah Kye | Nawng Nang | Pa La Na | Sha dau |
|-----------------|----------------------|---------|--------|------------|----------|---------|
| | | % | % | % | % | % |
| On-Farm | Inca Inchi | 8.1 % | 0 | 0 | 0 | 0 |
| | Rice | 16.6 % | 18.4% | 18.7% | 13.3% | 16% |
| | Other Crops | 16.2 % | 16.9% | 15.2% | 11.4% | 16.3% |
| | Livestock | 14.1 % | 15.9% | 13.4% | 10.4% | 12.3% |
| Non-Farm | Employment (Govt) | 8.2% | 6.6% | 11.9% | 15.1% | 7.1% |
| | Employment (Private) | 8.9 % | 12.2% | 14.9% | 19.1% | 15.7% |
| | Natural Resources | 18.2 % | 20.1% | 18.5% | 19.8% | 21.4% |
| | Trade | 9.7 % | 9.9% | 7.4% | 10.9% | 11.2% |

The study also examined the incomes from the employment, natural resources and trade for the farmers those who have engaged with the Inca Inchi contract-farming. Government employees includes school teachers, police officers, nurses, local administrative staff, clerks, and so on. On the other hand, private employment encompasses company agents, local NGO staff, religious work and the like. Moreover, the peoples in Kachin state have searched and used natural resources such as jade, goal, logging, forest products and so on. As a result, their income from natural resources have been much higher in terms of non-farm income. The local peoples transact trade activities such as selling and buying local products at the local

markets, in some cases, the products are traded from one town to another. Some set up the grocery stores. Therefore, it is said that the non-farm incomes are the incomes of those activities and transactions.

Table (3.3) shows that the income of Inca Inchi contract-farming did not contribute much for the whole income of farmers, only 8.1 % out of 100 % for the whole income of the farmers in Nam Jin. Even if the income of Inca Inchi contract-farming were deducted from the whole income of farmers, other on-farm and non-farm income of the farmers hugely remain higher. Therefore, the incomes of Inca Inchi contract-farming is not significant, in other words, the income of farmers before Inca Inchi contract-farming can be reflected as the status quo.

3.6.2 Social and Economic Aspects of Farmers

The social and economic sectors have always relied on the political dynamics that dictate all sectors of a state. Therefore, it is crucial to understand the dynamics in Kachin state that impinge the social and economic aspects of the local peoples including the farmers in Kachin state. The political dynamics in Kachin state became worse after 2011 since the armed conflicts between KIA and the Myanmar army resumed and the armed conflicts have been ongoing until now.

A man from Ah Kye village said:

“In our village the political situation is not stable. I left the farm because I was afraid of the fighting that started in 2011 and continues up until now. If the Myanmar military suspects you they will at least come for you and interrogate you. This has caused a lot of unrest and problems in our village” (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

Story 1: La Raw, 54 years old man, has been Inca Inchi planting from Ah Kye village

“My name is La Raw and I live in Ah Kyi village Since I was young at the age of 10 years old. For my Opinium, political is very important to business especially, agriculture farming and trading business that trading that drives local economy stopped the border trade with China. In addition, most of people plants are far from the village in the forest.

If political is not stable, most of farming was afraid to go their farm. So that's why we need to peace in our village. There isn't anything special about the economic situation here in Ah Kye village. We plant are rice farming, banana, corn, maize and vegetables and shifting cultivation. Most people in our village work as farmers, carpenters, very few trade businessman and government employees. The villagers had access to the seed through the church leaders who received the seeds from the company in 2014. Some villagers got the seed from the KBC and company's agents and company. For me, I got from Elshadai company. I cost 900,000 kyats for the Inca Inchi seeds of 3 kg.

At first, the Elshadai Company's purpose of planting Inca Inchi was that the peanuts were substituted for opium in planting. Then, we also have become knowing how the Inca Inchi is useful plants and the Inca Inchi plants should be planted but the buyer or customer of Inca Inchi disappeared. Then, Elshadai Company could not pay a suitable price too. However, as we know the plants has many advantages, we still extended planting. It goes fine its way when we experiment the Inca Inchi's leaves, fruits, seeds with new methods. Actually, there are many advantages it can be used as wound healing, disease on skin are gone (just need to daub with it). Oil from Inca Inchi is good for hair. Yes. I have a signed contract too. But the price that they pay is not okay. Company buy as limited, just pay 2200 kyats in a kg throughout a year. So, some people cut the plants since we have not equal. It is no marketplace. If the company bought 5000 kyats in a kg, the Inca Inchi plants would be fantastic.

If it were good markets, the plants would be well. Benefit of Inca Inchi is that we can eat fruit, fried leaves, and drink dried leaves. Did not succeed planting rubber because it was not match with Kachin weather. Dragon fruit are planted. They have to sell dragon fruit within 5 days after picked. If they did not sell in within 5 days, they will be rotten. Dragon fruit farmer are not very fine for business.

There were more farmers who disappointed and out because they could only produce raw material and could not aim to have a good marketplace. That is the main point of Kachin state. They plant as what others say but they face troubles when the products came out since there is no market. Cow does not eat Inca Inchi plant so, the Inca Inchi farm don't need fence. Hence, I like planting Inca Inchi, the trees will plant new ones and crop fruits in next year. The drawbacks are the plants can be died if the farming place are flood and sometimes insects might give a problem. That's all.

The government said "support" but they just support with mouth not with in hand. I talked about Inca Inchi when I am invited to preach at the showing local products festivals at Kachin State. I talked about it just like that. Farmers just planted timber tree from company as they said, now they

also planted Inca Inchi, they just work but they do not get profit when they get output. Farmers share the half of an acre if they cannot afford for all. However, there is nobody who support their work in practice.

After I was not ok with them, I started roasting seeds, selling the dry leaves with the product's sign. I have not earned many profits but still doing. If the market is fine, it will be better. I do not content with the fruits too.

There are no problems with the plants, just need to post for vine and remove weeds. I faced difficulties in 2015 and 2016, lost the marketplace. People from Mandalay and Naypyidaw who are working successfully. There used to be many people who planted Inca Inchi, it could say the most people compare to others. Even the plants are good that it can say they are success in planting but they don't keep going because of low price in our village.

I do not get investments (money) back till now. The agriculture situation is good. I have not earned many incomes yet because the produces are produced too much. If there is only planting there will not be income money. About kyats 50 lakh might be spent for 500 plants in acres. As me, I spent more money for concretes post. But the bamboo post might not be cost.

No help. Just satisfy if they don't disturb. Example: we need their lenience to sell our products at supermarket. So, when I went to gov office, they did not help anything instead of supporting us. It is impossible as this way, we may cost 150,000 kyats even we got permit from Naypyidaw. They do not understand for country. Their acting is like just do what they want, but it is disturbing for us. The cost in Naypyidaw is only 20,000 or 30,000 kyats but 150,000 kyats in Kachin State it means they do what they like.

Now, I am trying to get registration at Kachin FDA (Food and Drug Department deputies). They said the food could be produced after testing and getting result as the food must be flawless for consumers, also need to be sent to Naypyidaw and it would take a long time." (a farmer, interview, Ah Kye, Kachin State, 12 September 2017).

From the perspective of economy for the local people, the trading that drives local economy stopped the border trade with China and the local peoples were not able to transact the natural resources-based businesses.

Local peoples fled from their villages due to military operations in the Kachin State. For instance, more than 260 Kachin villages left their homes and farm land and became IDPs not to mention how local peoples including children, elderly, pregnant women, and the like suffered (an NGO Staff, Agricultural Researcher for Development Group, interview, Myitkyina, 10 October 2017).

The dire political situation has made the local people insecure for days and nights. In addition to inadequate healthcare services in Myanmar, the local peoples particularly the IDPs received under minimum standards of health services because the government usually restricted the international agencies those who work for healthcare services.

Moreover, the education for children has been hopeless because teachers are not sufficient for that of the students in the remote areas. In the case of IDPs, no proper schools were not provided in most cases (an NGO Staff, Agricultural Researcher for Development Group, interview, Myitkyina, 10 October 2017).

Although current peace process led by NLD government has been ongoing, the political situation in Kachin state remains unchanged. Therefore, the farmers were not able to freely move one place to another, even within their regions because both armies from KIA and Myanmar army have been usually engaged and the soldier from the Myanmar army have been roaming around.

The Myanmar army has been usually suspicious over the local Kachin people by accusing them that they have relation with the KIA or pro-KIA. As a consequence, the Kachin people can be tortured or extra-judicially killed by Myanmar army (FGD 1, Nawng Nang, 14 September, 2017).

This can be reflected that the political situation in Kachin is not stable, instead it has been turbulent particularly the remote areas in Kachin state. By the time the Inca Inchi contract-farming was introduced in 2014, the political dynamic in Kachin state was already unstable, however, the Inca Inchi contract-farming was seen by the Kachin people, as a way to alleviate their present situation, especially when the church leaders got involved in convincing the farmers to initiate the Inca Inchi contract-farming as they are seen as holding high moral ground in the Kachin community as was seen as it would be able to bring about some semblance in the form of development and security among the Kachin people.

On the other hand, there was no armed conflict between KIA and Myanmar army before 2011 because the KIO and military junta signed a ceasefire agreement in 1994 and that lasted for 17 years until early 2011.

Therefore, the political situation in Kachin state was more or less stable, however, it was under military junta. Despite under the military junta regime before 2011, local peoples particularly the farmers were able to work on their farms and were able to go one place to another. Nevertheless, the cronies, as the partners of Myanmar army, had already monopolized the economy of the country since then, in which the agricultural sectors including agricultural businesses were in the hand of Myanmar army and their partners.

In Kachin state, the contract-farming for the agricultural businesses such as the plantations of rubber, banana and watermelon were in the hand of Chinese businessmen. As a consequence, the land had been grabbed for thousands of acres including farm land of local peoples across the Kachin state and many villages were evacuated (an NGO Staff, Director of Kachin Development New Wave, interview, Myitkyina, 16 October 2017).

Regarding this issue, one farmer from Pa La Na said that:

“In our village it is very common for a group of households to get together in order to farm. Usually the farming area is far away from the village and we had more than 30 acres of land to farm but we left it because of the conflict that has taken place since 2011. In 2015 with the new NLD government we thought of claiming our land back but when we tried doing it, the Burmese army had given the land to their relatives” (a farmer, interview, Pa La Na, Kachin State, 18 September 2017)

Story 2: Hkawn Ling, 35 years old woman, has been Inca Inchi planting from Pa La Na village

“My name is Hkawn Ling. I am 53 years old. There are around 80 households are farming in Pa La Na village. People here used to do regular jobs; farming, trading, fishing, mining. There are

some families who drive car and have trading business. There are about 60 households who are working as casual workers, and digging gold.

There are around 5 or 6 people are NGO staffs. I started planting an acre Inca Inchi peanut since 2015. After the introduction of the Inca Inchi seed nothing has changed much.

The main crop is rice and other vegetable like corn, sesame, masala, and butter are also planted in this area. In our village, it is very common for a group of households to get together in order to farm. There are some farmers who go other places which is far away from village for farming. But now most of farmers, they don't want to go back and plant far away from village because of the conflict that has taken place since 2011.

We have heard about Inca Inchi from Sara Ying and Sara La are came to our village and introduced about Inca Inchi peanut at seminar in Pa La Na village.

In the beginning, we planted Inca Inchi peanuts hopefully as they told us that we could pick the seeds three times a year, earn money kyats 50-60 lakh but in reality, the price is very low. We bought a pack with 310,000 kyats. We have to sell them back to company when we have seeds. They pay 700 kyats in a kg if there're with shell. They pay us the same price with outside rate. We spent 1,200,000 kyats in an acre for implements but we got back 650,000 kyats back. We don't want to plant it again. We used our family member as workers. Some people say that it is used for medicine. We use natural compost. We pick and collect the seeds three times a year.

We could not earn as much as we work. We cut all the Inca Inchi plants and replace with corn. We are not interested in planting Inca Inchi again anymore in the future.

We could give them to relatives as gift. As it is also a kind of energy, we could provide them to unwell people. Ahh... I just forgot! We got around 150-160 kg in a year. We earned 2200 kyat in a kg if the peanuts are without peel. We can eat its leaf, seed and use it as medicine. Treatment for diabetes disease. Company told that they use it mostly for energy medicine.

We cut Inca Inchi plants because we were deeply disappointed about it. I think it is unfair. They came once time. We tried to negotiate to get 3000 kyats in 1 kg but it was not impossible. We just only got 700/2000 kyats in 1 kg. Its price could not even cover for transportation (three wheels car). We had to pay 5000 kyats to a worker per day but we could not earn money back as we spent. My friend Ah Dau also cut his Inca Inchi plants and replaced with dragon fruit." (a farmer, interview, Pa La Na, Kachin State, 18 September 2017).

While such situation in Kachin state, it can be considered that the Inca Inchi contract-farming was introduced as an agricultural business so as to improve the situation of the Kachin communities, especially the farmers and was thought to have a spill-over effect for the larger community.

In fact, the local peoples in Kachin state rely on the extraction of natural resources. Table (3.3) shows that at least more than 18 % of incomes have been derived from the natural resources in terms of non-farm incomes. Of course, the local peoples relied much on their on-farm incomes as well. However, generally, more than 80 % of local peoples are engaged with natural resources-related businesses of work aside from on-farm income.

For example, at least a member from a family usually go to Hpakant where jade is being extracted during dried seasons, meaning more than half of a year (an NGO Staff, Support Coordinator of Norwegian Refugee Council, interview, Myitkyina, 22 September 2017).

A woman from Nam Jim village said:

“Our family doesn’t just earn from the agricultural business. My husband works in the jade mines in Hpakant. He spends more than half a year over there” (a farmer, interview, Nam Jim, Kachin State, 11 September 2017).

**Story 3: Naw Aung, 45 years old man, has been Inca Inchi planting from
Nam Jim village**

“I live in Nam Jim for 20 years. I have one daughter and one son. My daughter is married and she lives with her husband in Nawng Nang village. My son is studying for high school in Myitkyina.

There isn’t anything special about the economic situation here in Nam Jim village of us work in agriculture, we plant are rice farming, banana, mango and a few people have started growing perennial trees and Inca Inchi. In addition, logging and selling charcoal are beneficial in rising our income. Most people in our village work as farmers, carpenters or government employees.

The Burmese military government built two primary schools and a basic clinic for our village. However, there aren’t any higher education schools in Nam Jim village. Therefore, I have to send my son to cities like Myitkyina to attend the High School. In our village, there is not easy everyone can afford sending their children to the cities to pursue higher education. We invest a lot of money on education. We had a very difficult time since the conflict between the Burmese Army and the KIA started in 2011, but we were very happy when the Inca Inchi was introduced in 2014 by agents from the Inca Inchi company and the church leader in our village. I first attended a meeting in which they told us about the benefits of farming it. It was not only me, all the farmers from our village wanted to plant this Inca Inchi because as me, they also wanted to improve their lives and make an income. We invested a lot money to plant this Inca Inchi, but when the harvest time arrived that the company did not buy all our seeds.

They had a lot of restrictions for the ones they actually bought at a very low price. For example, they told us that the company wanted to collect and buy the seeds just

once a month, later they changed their minds and told us it would be once every three months. This was very difficult for me because the Inca Inchi plant is very good but once needs to collect the seeds every day, dry them and peel them.

When I took the seeds to the company as they had said, we receive complaints, they told us that the seeds were old, that the quality of them wasn't good. So that is why most farmers in our village, including me don't want to take care or plant this seed anymore." (a farmer, Interview, Nam Jim, Kachin State, 12 September 2017).

Most private employment is found in natural resources-related businesses since the local peoples have been employed by the jade companies, mining companies, other rubber, watermelon, CP corn and banana plantation in terms of contract-farming for varieties of labor force (a Company Staff, Director of Star Sacha Inchi Company Limited, Interview, Myitkyina, 25 September 2017).

Therefore, natural resources have played a primary role for the economic aspect of farmers. The income for the local peoples is their daily subsistence, however, it does not cover serious issues as health for most farmers. The healthcare system in Myanmar is free in policy, but it is very costly in practice. In terms of education, particularly higher education and higher education has become very costly.

As the natural resources have depleted, that will definitely diminish the income of the local farmers because the local peoples in Kachin state mostly rely on the natural resources for their income.

At the same time the plantations such as CP corn, watermelon and banana have damaged and have contributed to the environmental degradation including top soil depletion since such plantations demand extraordinary amount of chemical fertilizers,

insecticides and herbicides. Consequently, such plantations started to affect the health of the local peoples. Even some workers have died from improper usage of herbicides (FGD 2, Pa La Na, 18 September, 2017).

This reflects that the local peoples in Kachin state are have been at risk and not secure for their lives impinged by political dynamics that has threatened not only their economic aspects of their lives, all aspects of the their social and community life as well, such as health, education and development.

In addition, as far as the social aspect is considered, the number of drug users has increased. Religious organizations particularly the KBC has organized public-based teams across the Kachin societies so as to eliminate drugs by different means. The teams applied the means such as awareness, establishing rehabilitation centers, arresting drug dealers, and the like in eradicating the drug issues. Therefore, farmers considered that drug issue has been the worst social issue making every family for protracted issues such as theft and robbers (a Church Leader, interview, Myitkyina, 2 October).

Regarding this issue, one farmer Pa La Na said that:

“My neighbor’s second son is a drug user. He has stolen money and things from his family and also from other neighbors. He is not the only one. A lot of young people are becoming drug users. Some streets in the village do not have electricity, therefore we are afraid of going far away, because the streets are dangerous at night because of these addicts who steal and threaten us” (a farmer, interview, Pa La Na, Kachin State, 18 September 2017).

As a consequence, HIV/AIDS has been part of protracted social issue from the drug issue. In terms of education, the children particularly from the remote areas are not able to go to school. In this case, current armed conflicts become the major issue that deters children going to school because many villages have disappeared and they cannot afford to move into the town areas, instead almost all have been trapped in the IDP camps.

In other words, quite a few families those who have establish their home in the outskirts of the towns were able to send their children to schools (an NGO Staff, Support Coordinator of Norwegian Refugee Council, interview, Myitkyina, 22 September 2017).

While having the above-mentioned situation for the social and economic aspects, the Inca Inchi contract-farming was introduced with high incentives for the profits in terms of an agricultural business. With the commencement of Inca Inchi contract-farming, the farmers were not able to invest for that because the seeds were quite expensive.

For instance, some farmers stated that they were not able to afford buying the Inca Inchi seeds to grow despite the fact that the farmers were told that the Inca Inchi contract-farming would likely be highly profitable (a Farmer, interview, Shadau, 19 September 2017).

A man from Shadau village said:

“I wasn't able to afford the Inca Inchi seeds despite the fact that the church leader and company were told this contact-farming would likely be profitable” (a farmer, interview, Shadau, 19 September 2017)

In fact, Inca Inchi contract-farming has motivated the local farmers since they have been told that it has a high market demand for their agricultural business. Most farmers expected that the Inca Inchi contract-farming were a stable agricultural business that would improve their social and economic lifestyles.

As a result, the farmers decided to engage with the Inca Inchi contract-farming, even if they had to borrow money to buy the seeds in order to start the Inca Inchi farming, but that also led to their economic hardships, as the companies that signed contracts with the farmers for guaranteed high returns, did not do so and the farmers had to bear losses (FGD 1, Nawng Nang, 14 September, 2017).

Therefore, it shows that the farmers have considered the Inca Inchi contract-farming as good and profitable agricultural business model that will change their social and economic aspects.

3.7 Summary

Firstly, based on the findings in this chapter, looking at the social and economic aspects before Inca Inchi contract-farming was introduced, farmers had several sources of income. Rice, and other crops including vegetables, annual and perennial crops and livestock have been the on-farm sources for the incomes of farmers. In addition, the Inca Inchi contract-farming has been part of on-farm sources. However, the income of Inca Inchi contract-farming has contributed to a maximum of 8.1 % of the whole income of the farmers.

Non-farm sources such as natural resources, trade, government and private employment have been the income sources of the farmers, in which natural resources have contributed to the income of farmers. These sources, from both on-farm and non-farm provide the subsistence of most farmers, but they do not help them cover health or education and or drug abuse. For instance, the drug issue is widespread across Kachin state.

Consequently, the armed conflicts between the KIA and Myanmar armies have impacted the social and economic aspects of the local peoples including the farmers because hundreds of villagers have fled from their regions. In other words, thousands of IDPs, including children, elderly people and women have sought safety in IDP camps across the Kachin state. The armed conflicts have been ongoing so far, therefore, border trade between China and Myanmar has decreased. As a consequence, the local markets across Kachin state are not stable for the local people including farmers to sell their farm products.

On the other hand, land-grabbing is widespread across Kachin state. It has made local farmers become landless people. In addition, the extraction of natural resources is at its peak and the plantations such as banana, watermelon, CP corn and rubber have exacerbated both, health and environmental issues across the Kachin state. As a consequence, the local people, especially farmers, have suffered from such issues in terms of health.

Moreover, based on the findings, with these dire social and economic aspects, the Inca Inchi contract-farming was introduced by giving incentives for high profits in terms of agricultural business.

With the commencement of Inca Inchi contract-farming, some companies including Elshadai Company approached local community and church leaders to organize the local farmers to establish the Inca Inchi contract-farming. As a consequence, church leaders, the local NGOs' staff and community leaders have become the intermediaries between the Inca Inchi companies and local farmers. Therefore, local farmers believed that the Inca Inchi contract-farming would be profitable as an agricultural business model, which as the study has shown, is not true leading to direct negative consequences in terms of their economic conditions.

The thesis found out that the commencement of the Inca Inchi contract-farming has not contributed to the development of the community even for those who were not directly linked to the contract-farming such as the church and community leaders as well as the NGOs, as they all belong to the larger Kachin community and had to bear the consequences as well, as they were the ones who convinced the farmers to get into the Inca Inchi contract-farming business model in the first instance.



CHAPTER IV

ECONOMIC SECURITY AND DEVELOPMENT – THE IMPACTS OF INCA INCHI CONTRACT-FARMING

4.1 Introduction

The Inca Inchi contract-farming, which was originally initiated as an agricultural business model due to its hype of profitability, was introduced to the farmers by the intermediary stakeholders, particularly the church leaders, NGOs and the community leaders who were contacted by these companies so as to lure and convince the local farmers to sign contracts with the Inca Inchi companies as a guaranteed profitmaking business. Therefore, farmers have been organized to get engaged with the Inca Inca contract-farming and which has been considered as the agricultural business model that would enhance the social and economic aspects of not only the farmers, but also the spill-over of this contract farming was understood to enhance the overall socio-economic dimensions of the Kachin peoples.

As the study has revealed, the companies mobilized the stakeholders that Inca Inchi contract-farming would be highly profitable for the farmers and would have been a sustainable profit-making business for the local people throughout the cross-cut transaction in Inca Inchi contract-farming, as a one-stop-shop from the production to marketing, to the final sale. However, the Inca Inchi contract-farming worked properly only in its first year of inception, i.e. in 2014 and then it has decreased since 2015 because the companies failed to keep their promise to buy all Inca Inchi products at higher rates, rather the farmers who were involved in the farming of the Inca Inchi seeds had to bear losses as the companies were not buying the harvested pants as the rates that were originally guaranteed to these farmers. For these reasons, this chapter is to look at the impacts of Inca Inchi contract-farming in security and development perspectives.

4.2 The Inca Inchi Farming

As discussed in chapter (3), the process that companies tried out in order to get approach to local farmers was to sell seeds to the farmers in the beginning. It is found out that five companies have been involved in farming the Inca Inchi peanut over the last 2 years, and some of church base organizations are also been involved in certain aspects of the Inca Inchi contract-farming. The first planters were distributed and the farming started between April-July 2014, shortly before or during the rainy season. The plants were ready for harvest after 5 months, and the second round of planting was done during the months of April-September 2015. Most farmers were able to harvest the plants at least 4-5 times per year and it was estimated that the total output would be around 148 kg of oil per that was harvest per acre over a single harvest cycle of five months (Kante Research, 2016, p.3).

Table 4.1 Annual Inca Inchi Season

| Stage | Activity | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar |
|-------|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. | Clearing & burning of bush | | | | | | | | | | | | |
| 2. | Preparation of soil for planting | | | | | | | | | | | | |
| 3. | Planting | | | | | | | | | | | | |
| 4. | Maintenance | | | | | | | | | | | | |
| 5. | Harvest | | | | | | | | | | | | |
| 6. | Post-harvesting | | | | | | | | | | | | |

A farmer from Nawng Nang village said:

The plant is very good but just problem is price and market because we can harvest at least 5-6 times is mean that we can harvest continuous since the seeds appear about 5 or 6 months (a farmer, interview, Nawng Nang, Kachin State, 14 September 2017).

Concerning with the Inca Inchi farming, table (4.1) shows that the preparation of Inca Inchi seeds includes clearing and burning of bushes as well soil preparation, these processes has to be accomplished in April and once the field was ready planting seeds followed in May. Consequently, there needs to follow maintenance for the Inca Inchi farming, in which weeding, feeding fertilization in order to keep the Inca Inchi plants healthy. Moreover, clearing insects have been part of maintenance because the insects deteriorate seed products. Then the scaffolding followed as the Inca Inchi plants growing and the materials of scaffold vary, in which some farmers used wood and bamboo and some those who are affordable used the iron bars or bricks for the scaffolds.

A villager from Shadau village shared his experienced:

“The church and company leaders told us that there were a lot of benefits in farming the seed. We just had to plant the seeds once and the tree would last at least 15 years but it could last up to 50 years. That’s why I didn’t want to use bamboo or wood, because they deteriorate. So, I invested in iron bars and bricks, I thought I would eventually get the money back from my investment but I ended up losing. My friend used wood and bamboo, he lost a lot of money but definitely not as much as I did” (a farmer, interview, Shadau, Kachin State, 19 September 2017).

Harvesting time came from December and harvesting can continued since Inca Inchi seeds grow indeterminably throughout the year and it depends on the plants that bear seed pods.

4.3 Costs and Profits of Inca Inchi Contract-Farming

The Inca Inchi contract-farming has been decreasing at the end of 2015 due to lack of market availability in the local areas also because the contractual agreement signed by the farmers with the companies that did not allow for them to sell it to other companies other than the one, they signed the contracts with, in this case particularly in the Kachin state.

However, the Inca Inchi products including seeds were quite popular until 2015. For example, most companies bought the Inca Inchi seeds with a certain extent of prices. Moreover, the local peoples were interested to try the nutrients of the Inca Inchi seeds as well as its leaves and stalks as tealeaves (FGD 2, Pa La Na, 18 September, 2017).

The study, therefore, attempted to examine the costs and profits of the Inca Inchi contract-farming that the farmers were engaged in 2014 and 2015, as shown in table (4.2).

Table 4.2 Cost and Profits of Inca Inchi Contract-Farming (2014-2015)

| Village | Plant Acres | Inputs (investments) | | | | Outputs (Profitability) | | |
|------------|-------------|----------------------|-------------|--------------|-------------|-------------------------|--------------|---------------|
| | | /Season | | /Season | | /Season | | |
| | | Total (Bhat) /Acre | Cost (Bhat) | Total (Bhat) | Cost (Bhat) | Income (Bhat)/ Acre | Total (Bhat) | Income (Bhat) |
| Nam Jin | 6.5 | 6,090 | | 51,771 | | 8,269 | | 69,271 |
| Ah Kye | 11 | 8,996 | | 216,146 | | 5,265 | | 126,250 |
| Nawng Nang | 8 | 10,417 | | 134,896 | | 7,161 | | 91,667 |
| Pa La Na | 7 | 15,179 | | 156,771 | | 8,185 | | 82,813 |
| Shadau | 12 | 5,642 | | 163,021 | | 4,601 | | 134,375 |

1 Bhat = 48 Kyats

As the study chose Nam Jin, Ah Kye, Nawng Nang, Pa La Na and Shadau for the research areas, the costs and profits of Inca Inchi contract-farming have been based on the surveys of those villages. As discussed in chapter (1), the study conducted the surveys for five farmers from each village and table (4.2) represents the costs and profits of each village for the research areas.

According to table (4.2) of the survey, the farmers in Nam Jin approximately costed 6,089 Bhat per acre and the total costs can be calculated as 51,770 Bhat in total 6.5 acres for five farmers. On the other hand, the income of farmers in Nam Jin was 8269 Bhat per acre and the total income 69,271 Bhat in total 6.5 acres for five farmers, therefore, the profits were 2,180 Bhat per acre and 17,500 Bhat in total of 6.5 acres for the farmers in Nam Jin. This explains

that the farmers in Nam Jin received a certain extent of profits from the Inca Inchi contract-farming in 2014 and 2015.

Looking at Ah Kye in engaging the Inca Inchi contract-farming, the costs can be estimated as 8,996 Bhat per acre and 216,146 Bhat in total costs for 11 acres of farmers. On the other hand, the income was 5,265 Bhat per acre and total income was 126,250 Bhat for 11 acres in Ah Kye. Therefore, the loss has been 3,731 Bhat per acre and 89,896 Bhat in total in Ah Kye. Likewise, the losses were that 3,256 Bhat per acre and 43,229 Bhat in total for Nawng Nang, 6,994 Bhat per acre and 73,958 Bhat in total for Pa La Na, and 1,041 Bhat per acre and 28,646 Bhat in total for Shadau respectively.

The reasons why a big gap of total cost between one place to another is that the farmers those who used bamboo sticks for scaffolds and use their own labors had less investment in terms of cash, on the other hand, the farmers those who hire labors and used brick or iron bars for scaffolds had a very high investment because the Inca Inchi is perennial crops and they considered that if one time is established for the scaffolds, no worries for the future (FGD 1, Nawng Nang, 14 September, 2017).



Figure 4.1 A farmer's Inca Inchi farm in Shadau village, using with bamboo fence, less investment in terms of cash. (Photograph by researcher, 19 September 2017).

As the numbers shown in the above table (4.2) the farmers who have been involved in the Inca Inchi contract-farming had to bear hefty losses during the years of 2014 and 2015, whereas the companies claimed that this was going to be a

15-year contract and the farmers were ready to invest their own money for the

same hoping to get profits in every harvest of the Inca Inchi seeds that were going to be produced, as they were only supposed to grow the Inca Inchi and the companies were responsible once the seeds were harvested for the rest of the process from production, marketing and the final sales. Hence, as discussed already that the majority of the farmers ended up with losing their investment in the Inca Inchi contract-farming during the years of 2014 and 2015.

Table 4.3 Inca Inchi Production and Application (2014-2015)

| Inca Inchi Seeds | Nam Jin | Ah Kye | Nawng Nang | Pa La Na | Shadau |
|--------------------------|---------|--------|------------|----------|--------|
| | % | % | % | % | % |
| Commercial Use | 30 | 21 % | 13.8 % | 15.9 % | 14.1% |
| Consumption | 9.1 % | 7.4% | 7.7 % | 9.4 % | 7 % |
| Wasted Production | 60.9 % | 71.6% | 78.5 % | 74.7 % | 78.9% |
| Total Harvest | 100 | 100 | 100 | 100 | 100 |

It is very obvious that the farmers have faced with losing their capitals rather than earning additional incomes from Inca Inchi production except a very few farmers received a certain extent of profits.

Therefore, it is very important to understand the reasons that the farmers ended up with incurring of losses than profits as guaranteed by the companies.

In fact, the farmers were able to produce a certain extent of Inca Inchi production for the market, but the problem was that there was no market for such amount of production that the farmers produced and the contractual restrictions that were there which did not allow for the sale of the same to any other parties even if they were not being given the prices as per the contracts (an NGO Staff, Chairman of Kachin Development Group, interview, Myitkyina, 11 September 2017).

For instance, the survey of Kante research stated that the total production of Inca Inchi seed yielded 1,800 kg per hectare^{vi} and total seed oil was 600 kg per hectare (Kante Research, 2016, p.3). The Inca Inchi production and application as shown in table (4.3) vividly explains the reason why the farmers have ended up losing in engaging the Inca Inchi contract-farming in Kachin state. Therefore, the study explains the production and application of Inca Inchi in years of 2014-2015 in terms of commercial use, consumption and wasted production by the farmers of the research areas such as Nam Jin, Ah Kye, Nawng Nang, Pa La Na and Shadau, for which the study continues to analyze the survey as shown in table (4.3).

According to table (4.3), commercial use addresses that the farmers were able to sell their Inca Inchi production to both companies and local markets and the consumption has been

indicated that the farmers consumed the production themselves and considered as part of usefulness for their nutrients.

In contrast, wasted production has been that the farmers were nothing to do with the Inca Inchi production, in other words, it has just been wasted without usefulness for the farmers. Looking at the commercial use of Inca Inchi production, it just ranges from 13.8 % to 30 % out of total harvested yield in 100 %. Likewise, consumption only ranges from 7 % to 9.4 %. In contrast, wasted production has been increasingly high from 60.9 % to 78.9%. For these reasons, it has to be said that the farmers have lost their investments in Inca Inchi contract-farming not because of low yield, but because of lack of market availability, and also the lack from the companies' side to procure the harvested product at profitable prices as originally guaranteed by them to the farmers, which was the foremost reason why the farmers stated the Inca Inchi farming at the first place.

It was the companies who were supposed to buy-back the entire yielded produce from the farmers, which as the study has shown is not the case and the farmers had to lose their investments.

4.3.1 The Implications of Inca Inchi Contract-Farming

It can be understood that the farmers and buyers, in this case the Inca Inchi farmers and the companies have a common purpose when engaging in contract-farming. The arrangements are based on the principle that the contract will protect the parties from risks that may occur during the fulfillment of duties and facilitate the execution of contractual obligations.

The aim is that the agreement is to promote agricultural production and guarantee a secure market for the commodity, thereby allowing farmers to earn increased incomes and buyers to obtain a return on their investments as the so-called win-win situation (an NGO Staff, Coordinator of Metta Development Foundation, interview, Myitkyina, 13 October 2017).

In order to regulate their agreements, the farmers (who are the producers of the Inca Inchi seeds) and companies which are buyers agree to enter into a contract. In fact, Inca Inchi contract-farming as a business model is based on the sale of Inca Inchi peanuts of the farmer and the incentives that the companies would follow as the seed buyers. There exists clear documentation in form of a contract stated in writing, stating that the farmers and companies have agreed to and the right to obtain enforcement of their obligations, as outlined in its terms.

The contract contains guidelines regarding agreed quality of products, conditions regarding prices, payment and product delivery and to prevent conflicts arising due to misunderstandings. The contracts are concluded well in advance of the commencement of an agricultural season and Kachin farmers agree to it.

The contracts contain the quantity of the commodity to be supplied by the farmer over a period of time, the quality standards required and the means of assessing these on delivery, along with the pricing that will be paid to the farmers by these companies as buyers so that they are not the sole party in the contract who will have to bear the losses, but guaranteed of a profit by these companies as per their contractual agreement (FGD 2, Pa La Na, 18 September, 2017).

Given the implications of the Inca Inchi contract-farming, it has to be kept in mind that the Inca Inchi contract-farming has been considered as an agricultural business model. On the other hand, concerning the business model, the concepts enhance pragmatic business achievement. A business model is more likely to be a set of assumptions or hypotheses to be successful (Osterwalder, 2013). The Inca Inchi business model is a form of a contract farming that refers to the production and supply of Inca Inchi peanut seeds for the farmers to provide the Inca Inchi peanuts in the required quantity that the companies would have to buy as well as for the local markets. This basically involves four elements: pre-agreed price, quality, quantity, and time as per the contractual agreement which is signed and agreed upon by both the parties involved.

The Inca Inchi business model for the farmers in Kachin state largely depends on state policies for agricultural development in general, and for regulations and management of cash flow in particular, besides the promotion of local institutions. Therefore, it is important to recognize the role of the state in encouraging or discouraging agribusiness firms and in protecting the producers in contract situations. In addition, there are certain sectors that may require a more effective public sector or state intervention especially in technological and institutional innovations, instead of a private agribusiness effort.

However, the implications of Inca Inchi contract-farming indicates that the Kachin state government has not committed for its roles in terms of institutional, financial and technological capacities for the Inca Inchi contract-farming as a business model, also these have been no oversight or intervention from the local government during and after the contracts have been signed with no channels recourse for the farmers in the case where the companies do not fulfill

their contractual agreements as in the case of Kachin farmers who have been involved in the Inca Inchi contract-farming.

Despite the fact the companies educated the local peoples including farmers from consuming Inca Inchi peanuts.

For instance, the plant has huge health benefits such as controlling of cholesterol and diabetes, weight loss, fighting depression, preventing heart disease, improving brain and bone functions as well as improves the quality of skin and hair. It can be consumed in whole form, or extracted oil, or manufactured in cosmetics as well as medicine. The local markets have not been available for a certain extent of the Inca Inchi production that the farmers have produced (a Farmer, interview, Ah Kye, 12 September 2017).

In fact, in the case of Inca Inchi, it has been very obvious as the study has shown that farmers took a very high risk in getting into the Inca Inchi contract-farming business model, as the companies failed to honor their contracts in taking risk for higher market availabilities. Therefore, it is very important that the stakeholders that have been engaged with the Inca Inchi contract-farming, such as the church leaders, NGOs and the community leaders who played a crucial role in getting the farmers to start the

contract-farming of Inca Inchi should do more research in order to inquire the information of Inca Inchi including about the companies that they were signing contracts with.

The higher the levels of risk, the more that farmers need to be reassured about the reliability of the company. They also need to make sure that legal protection for farmers is built for the contract between farmers and the companies, for which the state government should enforce with rule of law, which as has been seen have no oversight in any of the processes that involved the initiation of the Inca Inchi contract farming (an NGO Staff, Director of Kachin Development New Wave, interview, Myitkyina, 10 October 2017).

4.4 The Impacts of Inca Inchi Contract-Farming in Security

Perspective

In this study the term security is understood in terms of human security as it links both the security perspective which is a very broad term as discussed in chapter (2) as well as links with development which is seen as an inherent part of development even though it has different meanings for different peoples in different contexts. The lack of human security has adverse consequences and it also touches all aspects such

as political, social, cultural and economic sectors and the security eventually ends up at security for the individuals in terms of human rights.

However, in this case, human security focuses on economic, social, community, personal, food and livelihood security under the framework of human security, where it forms an important part of people's overall well-being and is therefore a very important objective of development which is discussed in terms of 'freedom from fear' and 'freedom from want' and has been outlined as well in the UNDP human development report of 1994 (United Nations Development Programme (UNDP), 1994). Both these form the overarching human security framework is very much relevant to people everywhere and in every situation, be it in rich nations and in poor. The threats to their security or insecurity may differ on the well-being and consequently their development, such as –poverty, hunger and disease in poor nations and drugs and crime in rich nations – but these threats are real and growing (UNDP, 1994, p.34). All these issues are also relevant for the peoples in Myanmar and in this case the peoples including the farmers in Kachin state. In the case of Kachin state, the armed conflicts between KIA and Myanmar army have been ongoing, as stated already, in which peoples have been physically insecure, both in terms of freedom from fear and freedom from want (Commission on Human Security, 2003). Subsequently, they are not able to work and move freely. Therefore, their incomes and livelihoods have been severely affected and have been living under dismal conditions for daily survival which has led to the locals who were already having difficulties to sustain themselves, many falling below the poverty line as defined in the international human rights standards for all peoples across the globe.

In the case of Inca Inchi contract-farming, the impacts have indicated that the farmers were left worse than before for their security in terms of economic, social and community security, since the initiation of the Inca Incai contract-farming as they had to spend money with hopes of high returns for the investments they made for the farming of these plants.

4.4.1 Economic and Social Security

In terms of the socio-economic security of the local peoples, especially the farmers, initially farmers were educated that they do not need to plant the Inca Inchi seeds every year and it would be sustainable, both in terms of financial security and jobs will be available for the local peoples as well so that the local peoples will be able to sustain their incomes with the hopes of improving their living standards and contributing to the overall development of the local communities were this was being done.

In the case of Inca Inchi contract-farming, it can be considered as green economy. In fact, green economy was basically friendly to natural environment and if the Inca Inchi contract-farming would have been successful, it would have benefited to both local peoples and environment in Kachin state.

A farmer from Nawng Nang village said:

“In the beginning, I also encouraged that the Inca Inchi contract-farming would become as a sustainable and a profitable business model that would be important since there was a lot of possibilities and available fertile soil and land in Kachin state” (a Farmer, interview, Nawng Nang, 14 September 2017).



Figure 4.2 This shows that Inca Inchi is suitable soil for Kachin State because the Inca Inchi looks good overall in terms of plants. However, the problem for Inca Inchi farmer is the price and market. (Photo from Nawng Nang village). (Photograph by Researcher, 14 September 2017).

These can be concluded that the Inca Inchi contract-farming was expected to enhance economic security not only for the farmers but also for the local peoples, as was assured by the companies, who had approached the church leaders, NGOs and the community leaders, for convincing the farmers to get into the Inca Inchi contract-farming for these companies.

Keeping in mind the human security framework, economic security touches on several issues such as employment, poverty reduction, household incomes, and increased crops yields for the farmers. In this case, a new crop that is Inca Inchi which was introduced as a new as a business model has been highly motivated for the enhancing of the economic security of local peoples including farmers. Economic security requires primarily an assured basic income – usually from productive and remunerative work, eventually leading to the rise in the incomes of the people directly involved in the activity, in this case the famers and the spill-over effect would also help the larger community, such as job opportunities for others as well (UNDP, 1994, p.25).

Therefore, the Inca Inchi contract-farming should have not only assured the basic incomes of the farmers from the productive and remunerative work of the Inca Inchi contract-farmers as has been expected. As it is in contract-farming business model where the farmers would have been able to not only have an assured income, but also to make profit from the Inca Inchi contract-farming, as originally assured by the companies that were getting the farmers to sign contracts.

However, the results have shown that it has been the exact opposite from what was expected, where most of the farmers had to incur losses and the companies were not even able to pay the basic costs of investments that the farmers that put in the hopes of better earnings there by securing themselves in terms of socio-economic security.

The political situation of Myanmar is relatively considered as instable since Myanmar army still takes a dominating role in the political power through (2008) Constitution. Therefore, achieving political security has not been in Myanmar yet.

In the political aspect, military dictatorships and one-party system have been insecure for the political situation, which is true for Myanmar as well. In the case of Kachin state, armed conflicts between KIA and Myanmar army continues and these affected much on the farming activities including Inca Inchi contract-farming (a Company Staff, Agent of Si Suang Ban Nan Company, interview, Myitkyina, 29 September 2017).

Apart from the companies not fulfilling their contractual obligations which has directly impacted on the economic and social security of the farmers and the spill-over effects of this on the local peoples in the Kachin state especially the farmers, the political situation is also another reason where, the Inca Inchi contract-farming is not able to guarantee for the economic security of the peoples including farmers in Kachin state.

In fact, social security which is an intrinsic part of human security is one of the basic needs of the Kachin peoples, and they expected that once they got engaged in Inca Inchi contract-farming, the social security would be enhanced for the local peoples including farmers in Kachin state.

A farmer from Ah Kye village said:

“I expected that after I had got involved in the Inca Inchi contract-farming, it would lead to a positive outcome in terms of economic security so that I would be able to move social security for a certain extent” (a Farmer, interview, Ah Kye, 12 September 2017).

Social security is the protection that a society provides to individuals and households to ensure access to healthcare and to guarantee income, particularly in cases of old age, unemployment, sickness, invalidity, work injury, maternity or loss of a breadwinner (ILO, 2018, p.1).

In this case, the local peoples expected that parents would be able to pay school fees including tuition fees for their children as well as support the family member those who did not have incomes including elderly and pregnant women for their communities (FGD 1, Nawng Nang, 14 September 2017).

Moreover, activities such as church building and supporting charity works which are aimed to support refugees in the Kachin state of Myanmar (FGD 2, Pa La Na, 18 September, 2017).

However, the result has indicated that the impacts of Inca Inchi contract-farming for the social security have been unchanged for the local peoples including the farmers in Kachin state, rather as leady discussed the farmers had to face severe negative consequences thereby

increasing their insecurities once they started Inca Inchi farming as originally it was thought it would be a way to have a secure and regular income for the farmers and others who were indirectly involved with the Inca Inchi farming.

4.5 The Impacts of Inca Inchi Contract-Farming in Development

Perspective

“The human security approach is instrumental to sustainable development, inclusive peace, justice and the well-being and dignity of all people” (Amina J. Mohammed, Deputy Secretary General^{vii} (July 7, 2017).

As the above statement from the Deputy Secretary General of the United Nations denotes, development is a crucial facet, yet development has to be ideologically debated in different perspectives since development has been historically evolved across the global history. For instance, the scholars used to call countries across the world into three categories such as first world countries, second world countries and third world countries during the cold war between the United States and the Union of Soviet Socialist Republics (USSR).

However, after cold war era, now the countries across the world have been scholarly divided into three categories with different terms, in which first world countries have been categorized into developed countries, second world countries into developing countries and third world countries into least developed (under-developed) countries.

In all cases, the development perspective by the west has been debated or even rejected because the modernization concept of development perspective has been problematic and even the term “development” itself has been considered as a problematic idea unless it is interpreted within the regional and local contexts. For instance, World Bank’s development perspective looks at the GDP of a country, however, if the GDP of the country does not trickle down or contribute to the peoples across the given country, the GDP as a measurement of development could be unfair for the peoples.

The concept of development implies advancement or improvement in human well-being when specifically looking from a human security perspective is basically about sustainable development and can be further debated for a certain people within a certain region of the world, in this case, the peoples in Kachin state those who have been engaged in the Inca Inchi contract-farming. The new concept of the sustainable development process marked as a departure from the old one in two basic respects.

First the process was viewed in the unity of all aspects governing the well-being of humans – specifically but limited to the environmental, personal, economic, social, and community development. Secondly, there was a very keen awareness of man (human being) as the central link and principal agent of the whole development process (UNESCO, 1982, p.11).

In other words, as has been already stated above, human has to be the center of the development process that the organizations, institutions, the state and many others should attempt to implement.

The new demands of global human security require a more positive relationship among all nations of the world – leading to a new era of development cooperation (UNDP, 1994, p.4). The UNDP human development report stated that the basic objective of development is to create an enabling environment for the people to enjoy long, healthy and creative lives (UNDP, 1994, p.10), accordingly individual and community security are important facets of development.

In the case of Inca Inchi contract-farming, the companies entered from neighboring countries particularly from Thailand and has been considered as a cooperation among nations for the betterment of peoples in Myanmar, including the peoples in Kachin state to move towards a new era of development. In fact, development can be addressed as another approach to ensure human security for the peoples in terms of human development.

Considering the human development, it is very important to look at the global context for human development, in which the peoples are provided with at least the very basic human

development needs including social services such as primary education and healthcare and it also includes people have equitable access to the assets – such as land and credit needed to permit a decent standard of living (UNDP, 1994, p.77).

But in the case of the Kachin peoples, especially when it comes to the farming communities of the Inca Inchi farmers, the role of government has been missing throughout the Inca Inchi contract-farming. In fact, the government should take pro-active role although the people did not inform them, but this is not the how it should be done, where the people have to inform the government, rather it should be vise-a-versa (an NGO Staff, Coordinator of Metta Development Foundation, interview, Myitkyina, 13 October 2017).

A man from Shadau village said:

“I think, in the case of Inca Inchi contract-farming, the government should have played the leading and an effective role in implementing and having an oversight in the Inca Inchi contract-farming across the country including the Kachin state” (a farmer, interview, Shadau, Kachin State, 19 September 2017).

While taking such governmental roles for the Inca Inchi contract-farming, it has to make sure the full and proper implementation of the contracts that farmers received from the companies and should make sure that the Inca Inchi contract-farming has been properly implemented in terms of rule of law. Moreover, the government needed to make sure the equitable access to land and financial investment for the farmers, especially the companies who have contractual obligation in fulfilling the terms of the contract.

In case the companies are in breach of the contracts, the governments should have in place mechanism for the grievances that may arise due to the non-fulfillment of the contractual agreement as signed between the farmers and the companies, but as the study has shown this has not been the case in the Inca Inchi contract-farming between the farmers and the companies as they did not uphold their side of the contractual obligations which in turn led to the farmers bearing the losses.

When the Inca Inchi contract-farming as an agricultural business model has been screened through the development perspective, it has been very likely that the Inca Inchi contract-farming could boost the incomes of the individual households as well as creating jobs for the local peoples across Kachin state. One of the core purposes of a contract-farming business model is to not only have an assured income, but also to be able to earn profit and to have a sustainable and a long-lasting business model that would have a trickle-down effect for the wider community as well.

The Inca Inchi contract-farming was very promising for the agribusiness across the levels of the local peoples including farmers, workers, merchants, brokers, businessmen, and the like if it had been marketable in both local and neighboring countries (a Government Officer, Chairman of Unity and Democracy Party in Kachin State, interview, Myitkyina, 21 October 2017).

Consequently, as the companies had claimed and how the people also responded with many getting into this business model in the belief that the socio-economic conditions of the local peoples in Kachin state would benefit from the impacts of the Inca Inchi contract-farming. *In other words, the increased Inca Inchi production in an agricultural sector would help to raise the per-capita income of the farmers and the trickle-down effect of the Inca Inchi contract-farming would be able to benefit across the local peoples in terms of the impacts of the Inca Inchi contract-farming. As a consequence, the local peoples particularly the local farmers would be able to take care their basic needs such as education and healthcare of their families.* Accordingly, the impacts of Inca Inchi contract-farming as an agricultural business model could help enhance the standard of living for the farmers to raise up from a low to a higher standard of living.

In terms of human development, the Inca Inchi contract-farming has been very likely to contribute the human development of the local peoples particular the farmers. Focusing on the human development, the UNDP has established the human development Index (HDI) is a

composite index focusing on the people and their capabilities which should be the ultimate criteria for assessing the development of a country and has three basic dimensions of human development: the ability to lead a long and healthy life (measured by life expectancy at birth); the ability to acquire knowledge (measured by mean years of schooling and expected years of schooling); and the ability to achieve a decent standard of living (measured by gross national income per capita) (UNDP, 2018, p.1). Therefore, the impacts of the Inca Inchi contract-farming could contribute to the human development of the local peoples including farmers in Kachin state.

Unfortunately, the result of the study shows that the impacts of the Inca Inchi contract-farming have not contributed the human development of the peoples in Kachin state, rather have negatively impacted them, where the farmers had to incur losses not only in terms of the companies buying the Inca Inca seeds as lower costs that it had originally said it would, but also as the contracts were long term, the farmers had invested their own money in the hopes of not only recovering what they are investing in the long run but to be able to make profit as claimed by the companies. It can be construed that even under a dire political situation, the Inca Inchi contract-farming was less likely to be established due to unstable political situation.

In fact, farmers, company representatives, church leaders, and NGOs believed that the Inca Inchi contract-farming as an agricultural business model would be very successful. If the Inca Inchi contract-farming has been successful, definitely the impacts of Inca Inchi contract-farming would have helped the human development of the communities those who engaged the Inca Inchi contract-farming.

However, the results have shown that the Inca Inchi contract-farming as an agricultural business model failed and human development remains not only unanswered, but has had a negative impact not only on the farmers but the wide community, just as it would have benefited if this business model had not failed.



Figure 4.3 A farmer's farm in Pa La Na village, he doesn't want to take care anymore because of price and market of Inca Inchi seeds.
(Photograph by researcher, 18 September 2017).

Story 4: Dau Naw, 53 years old woman, has been planting in Shadau village more than 2 years.

“There isn't anything special about the economic situation here in Shadau village. Most of us work in agriculture, we plant aromatic tress, or masala in November and sell it from November to January. They've been planting masala since I arrived this village. They sell Masala and CP corn too. Also, there are rubber plantations. The villagers of Shadau do not have much knowledge about planting but they all plant masala in every household. Planting masala helps us make some extra income.

We can sell Masala leaves every day. Its price used to be 100k yats a pound but now it's over 2000 kyats a pound. The customers who buy masala are more reliable than other buyers. They pay up front in August and then, the plants can be harvested in November.

There has been some development in other areas. Most children nowadays attend school. There are also night classes for 8,9,10 standards students in our church place. The kids here live in between poor businesses and a difficult political situation. The church helps when we need help.

Also, there are trainings provided by the church throughout the year, even during rainy season. In the trainings we have learned how to manage money better and we are more aware of other things. There are plans of building a big clinic, they're rebuilding the school and now, there also is a middle school.

We don't earn much and don't spend much as we are servers of God and work for the church. We do plant some vegetables in our house's land plot, there's a fish pond, and they breed chickens and pigs in our house. We also planted some rubber trees near our place. We invest the money we make from the rubber into breeding the chickens and pigs, the profit we make from breeding them is our household income, we use it to cover the family's

needs. We recently started making bricks. We also invest in children's education. Although there aren't many students here, we support the ones who come from the highlands.

We were taught about the benefits of the Inca Inchi seed. We hoped planting it worked, not only to improve our economic situation but the village's situation as it has a lot of health benefits. The villagers were enthusiastic about planting it and followed all the instructions that were given by the KBC Kachin Baptist Convention and provide by companies. We started planting the seed as soon as they had trained us. We bought seeds at an expensive price. We were all interested in planting it since our church leader talked to us about it. Everyone planted it. Some families just had 3 or 4 plant but some people planted acres.

Our plantation was near a place where we had access to water. Inca Inchi plants like water, but not too much of it. Taking care of them isn't difficult. We added fertiliser as they taught us. Our plants were not very good, some died. The plants of Sara Ying are still germinating there in the highlands. Some people don't want to plant the seed anymore because the market isn't good, they want to plant other things. Sara Ying said we could have more interest if we could find a market. Now, Sara Yaw and Sara Ying costume many kg a month in our Shadau village. They also talk about how finding a good marketplace. We are also investigating. There are customers who buy the Inca Inchi from them. Some customers are from Yangon.

In regard, to the political situation, the conflict isn't near us unlike in the past. If there were a war we wouldn't live here. But we do face difficulties. We can't go to other plantations freely or farm in other areas, for example, we used to farm near the Nam Koi River but now we cannot plant there anymore, we had to move to other places in special occasions, like the Army's school closing ceremony, and if there were bulls or cows, they would take them. We can't leave our bulls and cows roaming around freely because the Burmese Military is always around. So, if we want to go anywhere, we and our animals need to be always alert.

We can't go anywhere so, during the past 2 years we have been planting and taking care of the Inca Inchi. Nowadays, we can't even work quietly in the farm. Some of the boys or men that work there, have been frightened by the Burmese Military many times. We now earn over 1 lakh kyats from the Inca Inchi seeds. We can cook it as soup and every family member eat Incha Inchi as it is very good for health. If there were a market for it, we would be willing to plant more of it" (Dau Naw, interview, Shadau, Kachin State, 19 September 2017).

Story 5: Kaw Bu, 45 years woman, has been living for 42 years and planting Inca Inchi in Nawng Nang village.

“I have been living here for 42 years, people here used to do regular jobs; farming, trading, manual jobs etc. Some young men work at jade mines in Hapkant and their parents' is either gardening or farming. So, we have been working in agriculture for the past 10 years. Most farmers relied on farming mustard, soybean and corn. After the introduction of the Inca Inchi seed nothing has changed much.

My husband is a carpenter, he makes 200,000 kyats a month (7000/8000 kyats a day). He started working recently, about 2 months ago. Sometimes, he works with his groups in others' farms when they need to and share the extra money they make. Our income comes from breeding animals like chickens and pigs. I go to the market to sell vegetables every morning. Then, I take the children to school. We don't have any land to farm. We spend most of our money on our children's education.

A long time ago, in 2001, the UNDP helped us plant coffee. Our villagers got involved in the coffee project. Some people borrowed land to plant coffee, we also planted coffee in half plots of our land. Unfortunately, the project didn't succeed because there wasn't a market. The coffee plants were healthy and produced a lot of beans.

The church and community leaders of our village introduced the Inca Inchi to us. We believed in what they said and were eager to plant it. We want to have money, be rich, change our lifestyle. They said the plants would germinate after 8 months, that we could earn lots of money after those months. We were told we could make 50 to 60 lakh kyats if we invested money for a year. We believed in their words, they motivated us to farm the seed. In fact, some people used their own money to buy the Inca Inchi seeds and some others used informal loans systems, at a high interest.

Also, to plant this seed we used natural fertilizers such as scarab, chicken manure and compost. We did not use any pesticides as they told us not to. They could tell if pesticides had been used. We were afraid of them not buying the seeds as they had costed a lot of money. They told us to use chilli and alcohol as pesticides, so we needed to cook chilli, mix it with alcohol and water the plants. Taking care of the plants is not very difficult, the main challenge is selling them. I would say that the main point is finding a market for it and adjusting the price. There is a huge gap between our investment and our profit. 50 years is a long-term investment. We invested 20-kyat lakh on an acre of land, it's written in our spending record. Our family isn't big and most of them are students, so we had to hire workers. Before planting the seeds, we had to pull the weeds, prepare the soil and water it. We played the workers 1lakh and some rice for a month's work.

We spent around 20 lakhs on buying seeds and paying workers and only received 1 lakh back.

We spent 20 lakhs on weeding, renting a tractor and on food for the workers. We picked and kept the fruit for 2 months. Then, we collected the seeds and tried selling them. They were worth over 300,000 kyats. Sometimes we just received less, between 20,000 and 30,000 kyats.

Sara (one of our leaders) came and gave us a can with 50 or 60 seeds (its value is over 10000kyats). We have to eat 3 or 4 seeds when we eat (not more than 7 seeds).

I now think that if we also apply our knowledge, we can improve selling the seed. It tastes good when it's roasted. I have sold roasted seeds at 1000 kyats for a can in the morning market and have made around 50,000 to 60,000 kyats in a morning. There's a very big difference in earning 60,000 kyats instead of 20,000.

We pick fruits in the rainy season when we need to. I sometimes roast and sell the seeds, as a result, we're still getting some money. I want to leave the farming business but I am supposed to work because we invested a lot of money.

The Inca Inchi is a long-term plan. I think it could work if the price of the raw seeds were 2000-3000 kyats per kilogram. We could make 2 or 3 lakhs for 1 kilogram and cover the labors' wages. The workers' wage is 1 lakh; we couldn't make any profit. We have been working without making any profit. If the seeds cost were between 2000 and 3000 kyats, it would work well" (Kaw Bu, interview, Nawng Nang, Kachin State, 14 September 2017).

4.6 Summary



The thesis found out that the Inca Inchi contract-farming as a business model that was introduced in 2014 with the help of the church leaders and the NGOs due to the promise from the companies of having high profitability and which would enhance the security and development of not only the farmers but also the larger Kachin community, even though with an unstable political situation, the Inca Inchi contract-farming farmers, church leaders, and NGOs believed that the Inca Inchi contract-farming as an agricultural business model would be very successful, but as the study has shown has not been the case.

Security and development are two sides of the same coin. The term security since the UNDP human development report in 1994 shifted the lens of security from the state being at

the center to human, it is now understood in terms of human security and is seen as an inherent part of development.

The study has shown, and other studies that have been done in the past [(Woods, 2013) (Izzo, 2014) (Livelihoods and Food Security Trust Fund (LIFT), 2016)] the lack of governments oversight over the agricultural sector, especially the Inca Inchi contract-farming, the farmers who initiated the contract-farming of Inca Inchi seeds with the companies have had negative impacts and increased insecurities in terms of socio-economic and overall decrease in the development of the lives of the peoples who were partially secure before the initiation of the Inca Inchi contract-farming.

We can see that the losses farmers had to incur was unexpected by all the stakeholders who have been involved in the contract-farming, directly or indirectly, except the companies who made the farmers sign the contracts based on the guarantee that they will be reaping profits from the farming of the Inca Inchi seeds.

But the contracts and the contractual agreements that were there limited the sale of the final output by the farmers to any other companies or in the local markets but only the company they had signed the contracts with, especially when the government as part of pursuing its agro-industrialization policy for key cash crops for small land holding farmers as part of their rural development strategy in focusing on the removal of constraints to agricultural production.

Since the country has been on the path of democratic transition (Izzo, 2014), to increase the agricultural output so as to enhance the socio-economic development in the country's remote hilly regions, in this case the Kachin state.

The development and security perspective as outlined and introduced by UNDP in its 1994 Human development report on human security, where the shift from state centric security to putting human at the center of security paradigm is crucial in terms of the states to have their programming with the human centric development agenda with the different dimensions on human security.

Therefore, the thesis found out there is in the case of Inca Inchi contract-farming, the government should have taken effective role in implementing the Inca Inchi contract-farming across the country including the Kachin state and the study results have shown that the Inca Inchi contract-farming as an agricultural business model has not only failed but has also had a negative impact not only to the farmers but as well as the larger community in terms human development and security.



CHAPTER V

ANALYSIS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The study has delved and focused on the socio-economic impacts of Inca Inchi contract-farming as an agricultural business model for the people, particularly the farmers in Kachin state. The study found that the Inca Inchi contract-farming was introduced in 2014 and therefore the study has tried to examine how the agricultural business model of Inca Inchi contract-farming was introduced to the local people in Kachin state, along with its impacts on the farmers as it was a new agricultural business model that was introduced to the farmers belonging to the Kachin state. The researcher chose the villages, Nam Jin, Ah Kye, Nawng Nang, Pa La Na and Shadau as the research areas.

In fact, the study has highlighted that the Inca Inchi companies who wanted to initiate the Inca Inchi as business model distributed the Inca Inchi seeds to the farmers and approached church leaders in order to initiate the Inca Inchi contract-farming. As the local farmers in the Kachin state were wary of these companies and the contract-farming business model, as there was a trust deficit from the farmer's side towards these companies.

As a result, the local NGOs, the church and community leaders have played the intermediary roles between the Inca Inchi companies and farmers on engaging the Inca Inchi contract-farming. However, the government, particularly the Kachin state government, did not pay much attention to implementing the Inca Inchi contract-farming. Also, they were not involved in the formulation of the contracts and had no oversight over this business model.

The study focused on identifying the socio-economic impact of Inca Inchi contract-farming as an agricultural model through the lens of human security and development perspectives. Specifically, the study took into account the socio-economic parameters for security along with looking at the costs and benefits of the Inca Inchi contract-farming for the farmers who were engaged and signed the contract through the development perspective.

Therefore, the study examined the social and economic aspects of the lives of the farmers and the wider Kachin peoples/populations before and after the Inca Inchi contract-

farming was initiated. As far as the economic and social sectors of Myanmar is concerned, political stability has been the key for economic growth and social welfare. However, the political situation in Kachin state has been politically unstable due to the prolonged armed conflicts between KIA and the Myanmar army.

Importantly, the research results have shown that the Inca Inchi contract-farming as an agricultural business model has failed in its second year; the companies did not fulfill their contractual obligations. This has been construed as the Inca Inchi business model not contributing to the social and economic aspects of the farmers in Kachin state.

One key finding has been the non-availability of the different demands in the local markets as eventually envisioned by all the stakeholders, including the big companies who have a certain stake in the local economy of Myanmar. The farmers were promised the project would be very profitable for them when it was introduced in 2014.

However, as the study showed, the companies failed to keep their contractual agreement that they would buy all the Inca Inchi seeds that the farmers produced with a considerable profit to the farmers; this was the reason why the farmers started the Inca Inchi contract farming in the first instance. This chapter, therefore, attempts to conclude and make recommendations on the Inca Inchi contract-farming in Kachin state based on the research findings of this study.

5.2 Analytical Conclusion

This thesis will answer three research questions with its analytical impression using security and development concepts to take in for questioning the Inca Inchi contract farming in Kachin State of Myanmar.

As discussed in chapter 3, the political security of Kachin people has not improved much despite the fact that Myanmar has been part of the democratic transition led by the NLD government. The Tatmadaw (Myanmar army) has kept control of political power by means of the 2008 constitution.

Even though the peace process has continued to develop for more political dialogue between the NLD government and the ethnic armed organizations (EAOs) since the war broke out between the KIA and the Myanmar army in 2011, the peace process has not made much headway in terms of bringing an end to the fighting. The fighting between the Myanmar army (Tatmadaw) and the ethnic armed groups (KIA) has been ongoing, specifically in the KIA controlled areas. This made more anxiety to Kachin people even if they do not live in the conflict zones.

Linking between economic security and the present political situation, Inca Inchi contract-farming was introduced in Kachin state in 2014. The state government, however, did not take any role in implementing the Inca Inchi contract-farming for small scale farmers; and it has only been the policy gap, especially from the government's side to implement the Inca Inchi contract-farming for economic security and community development, meaning to increasing economic livelihoods of the farmers in Kachin state through the agricultural sector policy. In fact, when it comes to the natural resources management and land used policy in Kachin state, the government was more focus on utilizing resources for giving concession to big business and large plantation. In Kachin state, particularly, the area has been one of the most resourceful states in Myanmar for its very fertile land. Not only the agricultural productivity is high for crops, the overall yield has also been high which in turn has been monetarily rewarding for most of the crops grown - not only to the farmers but also to the contribution toward the development of Kachin state. As a consequence, the commercial plantations for growing banana, sweet corn, watermelon, and the like, have developed across the land in Kachin state with support from the state government. Most of these plantations belong to Chinese businessmen, who have been dealing directly with the local authorities. Hence, all the agricultural products have been exported to China. This is to show that the businesses, including agricultural businesses, have been monopolized by the oligarchs and businessmen in the Kachin state with the clear nexus between these Chinese businesses and the local authorities being directly or indirectly involved.

The introduction of the Inca Inchi contract-farming in Kachin state, in particular, has been made by the companies which officially entered into Myanmar and reached out in the Kachin state. Consequently, the companies who wanted to start the Inca Inchi contract-farming

began to contact the local farmers through church leaders and those who had influential roles in the communities. During the initiation process, the local people, including farmers, were given incentives and were lured into the farming of the Inca Inchi seeds as the companies claimed that this would not only be highly profitable in terms of family's income as well as the seeds being nutritious when consumed in various forms and having multiple medicinal uses that would be beneficial for the farmers as well as the local community. Even if they were not able to sell the produce to the companies, the companies may not hold their end of the bargain to buy the whole produce at prices which were agreed upon based on the contracts the farmers and the companies had fixed before starting the Inca Inchi plantation.

Church leaders and the companies involved organized meetings and workshops to motivate and educate the local farmers on how to implement the Inca Inchi contract-farming. As a result, the companies sold the Inca Inchi seeds to the local farmers. This study considered the Inca Inchi contract-farming as an agricultural business model because it has been a new model to promote the overall economic and social development in the local affairs through higher incomes not only for the farmers but also the larger community where this business model has been implemented.

In fact, the income has been sustainable since the Inca Inchi is a perennial crop. In this study, the impacts of Inca Inchi contract-farming have been looked at to relate and analyze security, particularly for human security and the development of farmers. The study attempted to generalize the human security and development of the local people, in particular the farmers who have been engaged in the Inca Inchi contract-farming in Kachin state.

Therefore, the Inca Incha contracts were introduced through collaboration between church leaders, NGOs and companies. Church leaders, as trusted members of the community, encouraged farmers to sign contracts for the seeds with the hope for economic security and community development for the farmers.

Second, to look at the social and economic aspects of farmers before the Inca Inchi contract-farming, the on-farm and non-farm incomes of the farmers vividly show a clear picture of income sources that the local people have relied on. One of the core things that came out during the study was that the local farmers relied on the incomes from natural resources. The

findings have shown that incomes from natural resources have been around 20 % (see table 3.3). As far as the claims of the companies, profitability of the Inca Inchi contract-farming as an agricultural business model has been taken into consideration. The income from Inca Inchi contract-farming has been very low - 0.8 % at a minimum to 8.1 % as a maximum from the Inca Inchi contract-farming (see table 3.3).

Hence, the farmers who engaged in the Inca Inchi contract-farming did not get reliable incomes from the Inca Inchi contract-farming; therefore, as the study has shown, the farmers who were originally been told by the companies and church leaders that the project would be highly profitable found out it is not a good source for the farmer's income. This agricultural business model cannot produce economic security and community development as promised.

According to Kante research (2016), the farmers were able to produce the Inca Inchi seeds with a certain extent of productivity since the Inca Inchi can be harvested throughout the year, in which around four to five yields can be considered for harvesting within a year. However, the study has also revealed that the commercial use and consumption within the Kachin state has been very low, and on the other hand, the wasted production has been very high since there was no continuous market availability. The Inca Inchi companies claimed that this would not only be for the development of the farmers who were engaged in farming of the Inca Inchi, but for the wider community as well. This proved not to be the case. One of the most important things that the study has shown is that the Inca Inchi farming had low commercial use. The companies failed to keep their promise in buying the Inca Inchi seeds that the farmers produced. The farmers have also lost their investment in engaging the Inca Inchi contract-farming.

In fact, the Inca Inchi companies that started this contract-farming had considered this as an agricultural business model that would benefit the local people - particularly the farmers - and thereby the social and economic affairs would be improved in terms of security and development. These companies were very aware of their strategy to engage the church leaders and the local NGOs to introduce the contracts. As has been argued, the impacts of Inca Inchi

contract-farming did not much contribute to the social and economic aspects: the security and development of the farmers has not changed.

The study has also shown that the situation for the farmers has become worse. The farmers have lost their original investment and have not yet received the income they were promised. These were to be long term contracts (15 years), which was also one of the reasons that many farmers who did not even have lands, went ahead with the promise from the companies signing contracts to improve their socio-economic aspects - not only for themselves but the larger Kachin communities.

Third, using perspective of human security, the local population has been put at risk as a consequence of taking on the farming's contracts. Consequently, this can be addressed as human development for the local people, particularly the farmers. The farmers were supposed to be able to access at least the very basic human development needs including social services such as education and healthcare from the Inca Inchi contract-farming in terms of social and economic impacts. However, the impacts of Inca Inchi contract-farming has not contributed to the human security and development of the local people - particularly the farmers. Their subsistence and socio-economic security have been adversely affected as a result of the Inca Inchi contract-farming. The results of the study have highlighted the flaws in the Inca Inchi contract-farming business model, which should be addressed by not only the local authorities, but also the national and state governments to make sure such instances do not occur in the future.

Therefore, finally, it can be argued that the Inca Inchi contract-farming has had a negative impact for farmers and for the local population in terms of security and development in Kachin state. Farmers deserve to have accurate information from the government about the efficacy of such projects. The Inca Inchi contract-farming business model carries a number of risks and should be approached with caution as well as due diligence.

5.3 Recommendations

It was very obvious that the Inca Inchi companies officially entered into Myanmar with the help of the church leaders. It would be totally impossible for such companies to expand their businesses into other local areas, in this case particularly into the Kachin state. However, the result of the study has shown that the Kachin state government did not take any effective role in the Inca Inchi contract-farming. The farmers were left at the mercy of the companies who had no oversight from either the national nor the state government. Hence the contractual obligations were not fulfilled by these companies as the study has shown.

Therefore, it is recommended that the government at national level and state level should be closely working together in terms of policies, with proper monitoring and implementation mechanisms to be put in place for the agricultural sectors, in this case, particularly the Inca Inchi contract-farming so that the contract-farming would be effectively implemented to benefit the local people, including farmers.

The results of the study have shown that the church leaders - including community leaders and local NGOs - have played the intermediary role in contacting the Inca Inchi companies and farmers so as to engage the Inca Inchi contract-farming. It can be recognized that the leaders and NGOs were very much concerned for the welfare of the local farmers. However, they seemed to get involved in introducing the Inca Inchi contract-farming without having concrete knowledge.

As a consequence, they put the farmers at risk from engaging the Inca Inchi contract-farming, by being the intermediaries as the first point of contact for these companies. The local farmers did not believe the companies would hold their end of the bargain and the study has shown, even with the local NGOs and the church leaders bringing the companies and the farmers together, they had no role in the signing of these contracts between the Inca Inchi companies and the farmers.

This has shown that the church leaders and NGOs should have done proper research on the Inca Inchi contract-farming in terms of costs and benefits so that they might not have put the farmers at such risk. For these reasons, the study recommends that the church leaders and the local NGOs should do proper research whenever they would like to introduce for the sake of the development of their communities in the future. Local authorities should always get involved throughout the process.

In this case of Inca Inchi contract-farming, the Inca Inchi companies were the ones who are responsible for putting the farmers at risk. The companies attempted to organize and sell their Inca Inchi seeds for their own profits, instead of local farmers because they were the ones who broke the contracts. For these reasons, the state government, local NGOs and church leaders should make the companies accountable so that the farmers can be compensated and such transactions will not be repeated in the future. Having proper channels of redressal in case such situations arise in the future so that the farmers don't have to take the burden of being the only ones who have to face losses when the companies do not fulfill their contractual obligations.

For these reasons, the study recommends that further research should be conducted into the Inca Inchi contract-farming. There should be more diligence in understanding and writing the contracts between companies and local farmers.

Moreover, as this study was looking into the social and economic impacts of the Inca Inchi contract-farming and not looking into the role of the National and state government, further research should also be conducted as to why the Kachin state government has not taken an effective role in this matter. The relationship between the Kachin state government and national government in implementing the agricultural sectors in relation to the Inca Inchi contract-farming should be further explored.

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Inventory and Planning.



APPENDIX

APPENDIX A

Inca Inchi Productivity and Production

(Table 1 APPENDIX A) Inca Inchi Productivity and Production

(This survey questions are to ask for every individual farmer)

- (1) Name:
- (2) Age:
- (3) Gender:
- (4) Number of years in growing Inca Inchi:

| Year | Planted Acres | Inputs (investments) Season | | Outputs (Profitability)/ Season | |
|------|------------------|--------------------------------|--------------------|------------------------------------|----------------------|
| | | Total Cost (Ks)/ Acre | Total Cost (Ks) | Total Income (Ks)/ Acre | Total Income (Ks) |
| 2014 | | | | | |
| 2015 | | | | | |
| 2016 | | | | | |
| | | | | | |

APPENDIX B

Inca Inchi On-Farm and Non-Farm Incomes of the Farmers

(Table 2 APPENDIX B) Inca Inchi On-Farm and Non-Farm Incomes of the Farmers

| | | Nam Jin | | Ah Kye | | Nawng Nang | | Pa La Na | | Shadau | | Total | |
|-----------------|----------------------|---------|---|--------|---|------------|---|----------|---|--------|---|-------|---|
| | | Ks | % | Ks | % | Ks | % | Ks | % | Ks | % | Ks | % |
| On-Farm | Corn Inca Inchi | | | | | | | | | | | | |
| | Rice | | | | | | | | | | | | |
| | Other Crops | | | | | | | | | | | | |
| | Livestock | | | | | | | | | | | | |
| Non-Farm | Employment (Govt) | | | | | | | | | | | | |
| | Employment (Private) | | | | | | | | | | | | |
| | Natural Resources | | | | | | | | | | | | |
| | Trade | | | | | | | | | | | | |
| Total | | | | | | | | | | | | | |

APPENDIX C

Inca Inchi production and Application

Village:

Date:

(Table 3 APPENDIX C) Inca Inchi Production and Application (2014-2015)

| Name | Plant Acres | Commercial Use | Consumption | Wasted Production | Total Harvest |
|--------------|-------------|----------------|-------------|-------------------|---------------|
| | | Kg | Kg | Kg | Kg |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Total | | | | | |

APPENDIX D

Cost and Profits of Inca Inchi Contract-Farming

Village:

Date:

(Table 4 APPENDIX D) Cost and Profits of Inca Inchi Contract-Farming (2014-2015)

| Name | Plant Acre | Inputs (investments) /Season | | Outputs (Profitability)/Season | |
|--------------------------|---------------|---------------------------------|--------------------|-----------------------------------|----------------------|
| | | Total Cost (Ks)/ Acre | Total Cost (Ks) | Income (Ks)/ Acre | Total Income (Ks) |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Average Total | | | | | |

APPENDIX E

Field Images



Figure 1 APPENDIX E The photo was taken from Focus Group Discussion with 5 farmers in Nawng Nang Village. (Photograph by researcher, 14 September 2017).



Figure 2 APPENDIX E Inca Inchi plantation near rice farming with the bush because they don't want to take care anymore due to the low price and market (Photo from Nawng Nang village). (Photograph by researcher, 14 September 2017).

APPENDIX F

Field Images



Figure 3 APPENDIX F The company board with the name Star Sacha Inchi Company Limited. (Photograph by Researcher, 18 September 2017).

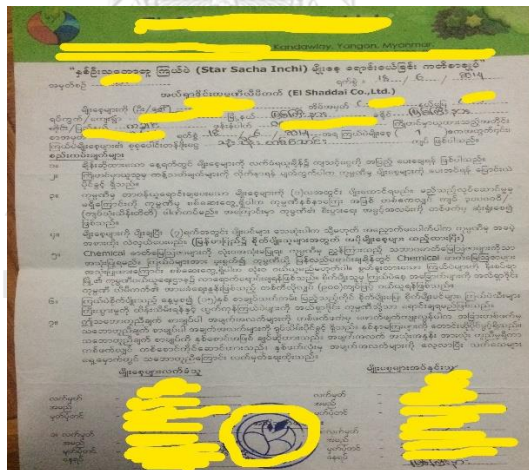


Figure 4 APPENDIX F This show the contract paper between farmer and company. The photo was taken from the farmer in Nawng Nang village (Photograph by researcher

VITA

NAME

DATE OF BIRTH 24 Jan 1982

PLACE OF BIRTH

INSTITUTIONS ATTENDED Myitkyina University, Kachin Theological College and Chulalongkorn University

HOME ADDRESS No. 61, 1/3 Suthiphong, Soi jipdamri, Suthisan, Bangkok, Thailand.

PUBLICATION 5th International Conference on International Relations and Development (ICIRD 2017)

AWARD RECEIVED Certificate of Presentation from the 5th International Conference on International Relations and Development (ICIRD), a Certificate of Diplomacy Training Program's Indigenous Peoples, Human Rights Advocacy and Development issued from Sydney, Australia, and The Certificate of Project Cycle Management at the Metropolitan University from Prague, Czech Republic

i <https://www.sid-israel.org/en/Development-Issues/What-is-Development>.

ii For more information refer to FAO Myanmar country page at:

<http://www.fao.org/myanmar/fao-in-myanmar/myanmar/en/>.

iii For further information regarding jade mining refer to

<https://www.researchgate.net/project/GEOLOGICAL-COLLECTION-ABOUT-MYANMAR-JADE-MINE>

iv GOUM has yet to publish detailed agriculture development plans under the 2013 Strategic Framework for Rural Development, the International Fund for Agricultural Development (IFAD) has agreed to implement a Fostering Agricultural Revitalization (FARM) program in the capital region of Myanmar, located in the predominantly Burman central dry zone. The

Livelihood and Food Security Trust Fund (LIFT) are working to scale up the design of the FARM project in the central dry zone as well. International Fund for Agricultural Development (IFAD). “Fostering Agricultural Revitalization in Myanmar (FARM) Final Project Design Report.” 2012, Yangon.

v For more information on the works of Metta Development Foundation, visit <http://www.metta-myanmar.org/>.

vi 2.47 acres constitutes as 1 hectare.

vii The full speech of the Deputy Secretary General of the United Nations is available online at: <https://news.un.org/en/story/2017/07/561142-human-security-approach-central-achieving-sustainable-development-un-officials>

