FACTORS RELATED TO THE DECISION MAKING OF THE AGRICULTURISTS' HOUSEHOLDS IN THE AGRICULTURAL EMPLOYMENT OF CAMBODIAN MIGRANT LABOR FORCE IN TRAT

NIYOM SUTTIPORN

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR
THE DEGREE OF DOCTOR OF EDUCATION
(POPULATION EDUCATION)
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
2001

ISBN. 974-04-0308-5

Thesis
entitled

FACTORS RELATED TO THE DECISION MAKING OF THE AGRICULTURISTS' HOUSEHOLDS IN THE AGRICULTURAL EMPLOYMENT OF CAMBODIAN MIGRANT LABOR FORCE IN TRAT

Niyom Suttiporn
Miss Niyom Suttiporn
Candidate

Nawarat Phlainoi
Assoc. Prof. Nawarat Phlainoi,
Ed. D.
Major-advisor

Mr. Kasemsun Chinnavaso,
Ph.D.
Co-advisor

Kanda Paranakian
Assoc. Prof. Kanda Paranakian,
Ph.D.
Co-advisor

Prof. Liangchai Limlomwongse,
Ph.D.
Dean
Faculty of Graduate Studies

Nawarat Phlainoi
Assoc. Prof. Nawarat Phlainoi, Ed. D.
Chairman
Doctor of Education Programme
in Population Education
Faculty of Social Sciences and
Humanities

Thesis
entitled

FACTORS RELATED TO THE DECISION MAKING OF THE AGRICULTURISTS' HOUSEHOLDS IN THE AGRICULTURAL EMPLOYMENT OF CAMBODIAN MIGRANT LABOR FORCE IN TRAT

Was submitted to the Faculty of Graduate Studies, Mahidol University
for the degree of Doctor of Education (Population Education)

on
March 6, 2001

Niyom Suttiporn
Miss Niyom Suttiporn
Candidate

Nawarat Phlainoi
Assoc. Prof. Nawarat Phlainoi,
Ed. D.
Chairman

Yongyuth Chalamwong
Assoc. Prof. Yongyuth Chalamwong,
Ph.D.
Member

Mr. Kasemsun Chinnavaso,
Ph.D.
Member

Supavan Phlainoi
Assoc. Prof. Supavan Phlainoi,
Ed. D.
Member

Assoc. Prof. Kanda Paranakian,
Ph.D.
Member

Prof. Liangchai Limlomwongse,
Ph.D.
Dean
Faculty of Graduate Studies
Mahidol University

Assoc. Prof. Suree Kanjanawong,
Ph.D.
Dean
Faculty of Social Sciences and Humanities
Mahidol University

ACKNOWLEDGEMENT

First of all, a very special thanks and respects go to my parents for their love and encouragement during my long study.

I would like to express my sincerely thanks to my advisory committee, Assoc. Prof. Dr. Nawarat Phlainoi, Dr. Kasemsun Chinnavaso and Assoc. Prof. Dr. Kanda Paranakian. They provide much their guidance, supervision, comments with moral support throughout the times of study.

I would like to extend my thanks to Assoc. Prof. Dr. Yongyuth Chalamwong, Assoc. Prof. Dr. Supavan Phlainoi, Assoc. Prof. Dr. Chaiwat Panjaphongse. They devoted much times in offering constructive suggestions and comments. To all of them, I am exceedingly indebted.

I must say a special thanks to Dr. Mukda Samnuanklang and Dr. Yongyut Trisurat who had kindly corrected my English.

Finally, I would like to thank all others experts related to my success whose names were not mentioned here.

Niyom Suttiporn

3837790 SHPE/D : MAJOR : POPULATION EDUCATION; Ed. D : (POPULATION EDUCATION)
KEY WORDS : DECISION OF THE AGRICULTURISTS' HOUSEHOLDS/ HIRING IN AGRICULTURE SECTOR/ CAMBODIAN MIGRANT LABORS

NIYOM SUTTIPORN : FACTORS RELATED TO THE DECISION MAKING OF THE AGRICULTURISTS' HOUSEHOLDS IN THE AGRICULTURAL EMPLOYMENT OF CAMBODIAN MIGRANT LABOR FORCE IN TRAT. THESIS ADVISORS : NAWARAT PHLAINOI, Ed. D., KASEMSUN CHINNAVASO, Ph.D., KANDA PARANAKIAN, Ph.D., 160 P. ISBN. 974-04-0308-5

This crossectional study aimed to examine factors which determined the decision made to hire the Cambodian laborers among agriculturists' households, and to present the appropriate policy strategies to solve the problems of hiring foreign laborers. The samples for the study were 392 agriculturists' households who had done the para rubber and fruit tree planting in the area of Trat in the crop year of 1999/2000. The research instruments used were interview questionnaire for 392 households and in-depth interview guidelines which were used to obtain data from 14 significant related persons. Descriptive statistics were employed to describe the sample's characteristics. The logistic regression analysis was used to determine the factors related to the decision.

The results indicated that the following factors related to the decision making of the agriculturists' households at a significant level (.05) as follows :

1. The production factors and the size of the planting area, affected in a positive direction, while the household's members was negatively related.
2. The factors of the characteristics of the laborers required, the labor experiences and capacities were positively related and the wage rate was negatively related.
3. The factors of the characteristics of hiring among the households, and the experiences of the households were positively related.
4. The socio-economic factors, the net income and the policy perceived were positively related.

The result of the study suggests that those households who made a decision to hire foreign laborers did so because of the large area used to plant rubber or fruit trees, and insufficient labor from the households' members, including the local labor force. Therefore, the promotion of fruit processing would then decrease the demand for cheaper migrant labor. The replacement of rubber pad sale to rubber trees sale is another suggestion in order to reduce labor force.

3837790 SHPE/D : สาขาวิชา : ประชากรศึกษา; ศษ.ด. (ประชากรศึกษา)

นิยม สุทธิพร : ปัจจัยที่สัมพันธ์กับการตัดสินใจของครัวเรือนเกษตรกรในการจ้างงานภาคเกษตรกรรมจากแรงงานย้ายถิ่นชาวกัมพูชา ศึกษาในเขตพื้นที่จังหวัดตราด (FACTORS RELATED TO THE DECISION MAKING OF THE AGRICULTURISTS' HOUSEHOLDS IN THE AGRICULTURAL EMPLOYMENT OF CAMBODIAN MIGRANT LABOR FORCE IN TRAT.) คณะกรรมการควบคุมวิทยานิพนธ์ : เนาวรัตน์ พลายน้อย, กศ.ด, เกษมสันต์ จิณณวาโส, Ph.D., กานดา ผรณเกียรติ, Ph.D., 160 หน้า IBSN. 974-04-0308-5

การวิจัยเรื่องนี้มีวัตถุประสงค์เพื่อศึกษาถึงปัจจัยที่สัมพันธ์กับการตัดสินใจของครัวเรือนเกษตรกรในการจ้างงานภาคเกษตรกรรมจากแรงงานย้ายถิ่นชาวกัมพูชา และเพื่อเสนอนโยบายมาตรการในการแก้ไขปัญหาการจ้างแรงงานต่างชาติ การศึกษาครั้งนี้เป็นการศึกษาภาคตัดขวาง (Crossectional study) กลุ่มตัวอย่างเป็นครัวเรือนเกษตรกรที่ประกอบอาชีพทำสวนยางหรือสวนผลไม้ในเขตพื้นที่จังหวัดตราด ปีการเพาะปลูก 2542/2543 จำนวน 392 ครัวเรือน เก็บข้อมูลโดยใช้แบบสัมภาษณ์และสัมภาษณ์แนวลึกบุคคลที่เกี่ยวข้องกับการจ้างแรงงานต่างชาติ จำนวน 14 คนวิเคราะห์ข้อมูลโดยใช้สถิติร้อยละอธิบายค่าหรือคุณลักษณะของกลุ่มตัวอย่างและใช้สถิติถดถอยโลจิทวิเคราะห์ปัจจัยที่สัมพันธ์กับการตัดสินใจของครัวเรือนเกษตรกรในการจ้างแรงงานต่างชาติ

ผลการศึกษาพบว่ามีปัจจัยที่สัมพันธ์กับการตัดสินใจของครัวเรือนเกษตรกรในการจ้างแรงงานต่างชาติที่มีนัยสำคัญทางสถิติที่ระดับ (.05) ได้แก่

1. ปัจจัยด้านการผลิตซึ่งประกอบด้วยขนาดที่ดินที่ใช้ในภาคเกษตรกรรมและการทำสวนยางหรือสวนผลไม้ซึ่งมีความสัมพันธ์ทางบวก ส่วนจำนวนแรงงานในครัวเรือนมีความสัมพันธ์ทางลบ
2. ปัจจัยด้านคุณลักษณะของแรงงานที่ครัวเรือนเกษตรกรต้องการจ้างประกอบด้วย ประสบการณ์และความสามารถซึ่งมีความสัมพันธ์ทางบวก ส่วนอัตราค่าจ้างมีความสัมพันธ์ทางลบ
3. ปัจจัยด้านลักษณะการจ้างงานของครัวเรือนเกษตรกรได้แก่ การมีประสบการณ์ในการจ้างซึ่งมีความสัมพันธ์ทางบวก
4. ปัจจัยด้านเศรษฐกิจและสังคม ประกอบด้วย รายได้สุทธิต่อปีจากภาคเกษตรกรรมและการรับรู้ต่อนโยบายและขั้นตอนในการจ้างแรงงานต่างชาติ ซึ่งมีความสัมพันธ์ในทางบวก

ผลการศึกษาชี้ให้เห็นว่า การทำสวนยางหรือสวนผลไม้ต้องใช้แรงงานจำนวนมากในขั้นตอนการเก็บเกี่ยวผลผลิต ข้อเสนอแนะต่อผู้เกี่ยวข้องกับนโยบายแรงงานต่างชาติ คือ

1. เปลี่ยนเป้าหมายการเก็บเกี่ยวผลผลิตยางพาราจากการขายยางแผ่นหรือน้ำยางไปเป็นขายต้นยางจะทำให้ลดการใช้แรงงาน
2. ส่งเสริมอุตสาหกรรมการแปรรูปไม้ยางพารา และการแปรรูปผลไม้ ทำให้ผลผลิตมีราคาสูงขึ้น ครัวเรือนเกษตรกรสามารถจ่ายค่าจ้างแรงงานในอัตราที่สูงเป็นการจูงใจให้แรงงานในประเทศและสมาชิกในครัวเรือนสนใจที่จะใช้แรงงานในการทำสวนยางหรือสวนผลไม้

CONTENT

CONTENTS (Cont.)

LIST OF TABLES

LIST OF TABLES (Cont.)

LIST OF TABLES (Cont.)

LIST OF FIGURES

CHAPTER I

INTRODUCTION

1. Significance of the problem

As the end of Thailand's National Economic Plan (1961-1966), the government realized that it was essential to develop the country not only the economy but also the society as a whole. Social development affected the quality of the population who significantly improved the growth of the country. The more quality of the people were, the more growth of Thai's economy was than the monetary capital or unskilled labor investment. It was quite clear in the case of those developed countries that they were the developed countries with higher economic growth because of their higher skills labor forces (Niphon Puapongsakorn, 1995: 442). In formulating the policies for economic and social development, various policies affected the deficit agriculture labor forces.

The first one is the policy aimed to lower the population growth. Before the first National Economic Plan, the population growth rate was higher than 3 percents. The Thai government predicted the various problems such as the family burden in raising more children, the government itself would hardly earn for higher fiscal budget for education, health services and other facilities. This serious situation would lead to lower other the national development. The policy of lowering the population growth rate, then, was implemented from the second National Economic and Social Development Plan (1967- 1972) (Kusol Soonthornthada, 1996: 1). This policy affected rapidly the population growth rate which was lower than the replacement level, leading to smaller family size with 5.2 persons in the household in

1980 to 4.4 in 1990 (Household and Population Census, 1980 and 1990) and 3.8 in 1995 (The Population Change Survey, cited in the Institute of Population and Social Research, Mahidol University,1997: 69). The situation affected the deficiency of the labor forces in agriculture. Because under the development of Thai's agriculture in higher technology used, therefore it was needed the huge labor forces.

The second is the industrial development. The government formulated the policy aimed to promote and develop the industry such as free tax for those industrial owners, higher tax for ready-made goods import which lead to higher prices in the country and higher labor hired. Contrastly, no free tax in agriculture, the goods export owners transfer indirectly this burden to the manufacturer by the way of buying the agricultural goods with lower prices. This situation lead to lower salary hiring. Therefore, the more the industrial hires are, the more people work in the industry. So the population moved from the agriculture to the industry.

The third is the intra-country immigration policy. As the consequences of the previous national development, came up with disproportion of the economy between the rural and urban area, the social disparity of the people in the country (The National Committee on Economic and Social Development, 1987: 19-26; 1989: 26-27). The huge of people move to Bangkok Metropolitan and their vicinity, no enough residences. The congested areas occurred in Bangkok, the capital of Thailand. The government could not afford sufficient infrastructures. The negative consequences, traffic congested, criminal and education, could be seen. Therefore, the Forth and Fifth National Economic and Social Development (1977-1982 and 1983-1988), the policy on migration was formulated and implemented. The industrial areas expanded to the rural areas in order to reinforce the people back to the new areas of industry (The

National Committee on Economic and Social Development, 1977: 222-223). The industrial areas and other economics infrastructures expanded induced more labor forces hiring. Many agricultural labor forces turned to employ in the industrial and service sectors. Therefore, the labor forces in agriculture are deficiency (Kasemsan Chinnawaso, 1995: 14-15).

The forth is the policy of promoting Thai labor forces working abroad. With regard to the crisis of unemployment on the socio-economic and political problem, and the prediction of the Fifth National Economic and Social Development (1983-1988) on the severity of unemployment status, various policies are implemented. The increasing rate of employment in both rural and urban areas are planned such as labor relation administration programme, the seasonal unemployment decreasing rate (Niphon Puapongsakorn, 1995: 401-409). The policy of promoting labor forces working abroad is also implemented in order not only to release the burden of the government but also to import the monetary (Praphaphan Un-Ob, 1994: 1). The Thai labor worked abroad mostly were those males from the rural areas of Thailand.(Praphaphan Un-Ob, 1994: 1). These labor forces actually ever worked as the farmers. So, the policy affected the agricultural employment.

The fifth is the education policy. As the beginning of the Second National Economic and Social Plan (1963-1967), the policy of education focused on manpower development in response to the industrial needs. The policy aimed to expand the technical education 25 percents, the secondary education level 13 percents, the teaching education 12 percents and the degree education level 12 percents. Later on, the Third Plan (1968-1972) was implemented to expand the compulsory education to cover all the primary education level. The policy is still implemented aimed to develop

the labor force capacities for industrial sectors. In the Forth Plan (1973-1977) emphasized on the mass education program " the education opportunity expansion". The goal of this policy served for the industrial needs. The compulsory education was further expanded 6 percents, the secondary education 11 percents and the vocational education 15 percents. According to the policy, the learners were in the educational system longer. With regard to the expansion of education level, the education at the subdistrict level was covered without tuition fees. The farmers' children had more chances to study in secondary schools. Therefore they loss labor forces from their children. Most of their children enrolled the higher education after that. They engaged the labor market as soon as they ended the study. This affected the labor shortage in agricultural sectors.

The consequences of the policy aimed to improve the nation both the economic and social aspects, but they unexpectedly neglected the structure of employment and economy with the agricultural sector as the heart of them. It lead to the main mistakes in predicting the manpower requirement (Nipon Puapongsakorn, 1995: 462). From the 4 conclusion of the cabinet on policy and the regulation of foreign labor correction, on 25 June 1996; 2 July 1996; 16 July 1996 and 6 September 1996, it was certified to hire the foreign labor forces in 11 cases of any kinds of labor shortage. Agriculture is one of those categories defined because of the labor shortage.

In term of the industrial sector, it was shortage of the high skilled laborers such as the engineers, the scientists, and semi-skilled laborers. With regard to high technology utilization in some production activities affected the unemployment due to stop hiring and retired the workers. The data revealed that the hiring stopped in 14 garment factories in the year 1993 and in 1996, some factories retired the workers and

transfer to use the new and advance technologies (Kuson Soonthornthada, 1996: 5-6). Later on, in the year 1997 Thailand experienced the economic crisis, especially the non-agricultural business. Those businesses had to stop their offices and this situation greatly affected the unemployment. Many major problems could be seen, the government conducted the policy to push out the foreign workers in order to employ the unemployment Thai workers. The facts are that the one's decision in migration or work any jobs depended on many factors as follows.

First, the household's decision affected all the family member.

Second, the individual differences on skills, knowledge, capacity and the experiences including healthy status. Most of the Thai labor forces are unskilled.

Third, the migration's difficulties is another one factors because the migrants felt of loneliness and homesick. They used to move all family's member if it is possible (Anchalee Kohkongka,1995: 191).

Forth, the wages of the agricultural sectors is quite lower than the industrial sectors. Therefore, the laborer worked in the industry have no motivation to engage in the agricultural sectors.

Fifth, working in the industry regulated by law that the workers do the job not more than 48 hours a week. However, they also have paid extra day-off. But this could not be found in the agricultural sectors. It depends on the agreement between the employers and the employees (Rong Charoensiri,1995: 806-807).

Lastly is the habit of Thai labors who used to do the jobs that they prefer. They find only the most easy and comfortable jobs more than the dirty and difficult work, one of the 3-D jobs (Anchalee Kohkongka,1995: 191; Yongyut Chalamwongse,1996: 40-90).

With regard to the above situation, Thai government faces with the unbalance labor forces between the agricultural and industrial sectors. The shortages of labor forces are found in agricultural sectors. The ministry cabinet (Cabinet meeting conclusion on 15 July,1997) had the agreement to expand the hiring of foreign workers another one year in 54 provinces. Trat province is one of those provinces that the workers in agricultural sectors are short. Therefore, the foreign workers from Mynmar, Loas, and Cambodia are permitted to work in rubber field, fisheries and rice mills. When the permission was ended in 1998. The workers from Cambodia were also permitted in 6 jobs. They were rubber fields, construction, gardening, farming, fisheries, and other fisheries related.

Some reasons behind the shortages of workers in agricultural sectors in Trat province are as follows:

First, because the huge areas of Trat, 500,764 Rai are planting areas of main cropping plants of the province such as rubber, rambutan, durian and mangosteen. They are produced income of the province about 3,250 thousand million Baht in the year 1993-1994. Therefore, the large amount of workers are needed because such kinds of jobs could not be replaced by any machine or animals.

Second is the government policy on the national economic and social development. The policies affected the shortage of labors such as the reduction the population growth rate policy, the education extension policy, and the policy of the industry development.

Third is the shortage of family's labor. From the provincial statistics, there are 3.8 members in a family and they are dependent labor 1.7 and the less 2.1 are labor age in the family. Therefore, there are only 2 who are able to work in the farm.

However, some kinds of jobs like wood sewing and climbing are men's works. While the rambutan field need women's work.

According to the shortage of workers in Trat province, the laborers are able to find from 3 sources. They are:

Firstly, from the unemployment in the province itself.

Second, from the immigrants from other provinces.

Third, the laborers are from the foreign workers, especially from Cambodia. Because of the civil war in Cambodia that push the Cambodians move to Thailand at the first time more than 300,000. While the pull factors are better lifestyles among Thai than the Cambodians, the geographical areas and the way of communication. Thai and the Cambodian can communicate each other quite well. They transport to each other quite easily.

However, the positive and negative consequences are seen from the foreign workers migration as follows (Institute of Population and Social Research, Mahidol University, 1995: 322)

First is the economic consequence (Yongyut Chalamwongse, 1995: 45-99). The benefit seen is the replacement of Thai workers shortage, especially in the 3-D jobs. The lower wages affected the lower costs. Because of the cheaper labor force, it is advantage in production process.

Second is the social consequence. The foreign workers affect some criminal and addictive problems including the minority group culture differences. This affect the security of the country as a whole.

Third is the health consequence. The migrants bring with them some diseases such as malaria, elephantiasis.

However, some consequences found in Trat provinces are not quite different from the above mentioned. Therefore, the investigator realizes that the problems of workers shortage in agricultural sectors and the foreign workers are not yet really solved. Those who concern in this problem needs some more relevant data on other context related and those household employers who hire the foreign workers. In order to support the significantly data, the study of factors related to the decision of the farmer's household to hire the Cambodian workers in Trat province is needed.

2. The objectives of the study

2.1 To determine the following factors that are related to the Thai agriculturist' households decision on hiring the Cambodian labors in agricultural sectors:

2.1.1 the production of the agriculturist' households

2.1.2 the labors' characteristics that the employers need

2.1.3 the labors' characteristics who contact with the farmer's household in order to work

2.1.4 the work hiring characteristics of the agriculturist' households

2.1.5 the socio-economic of the agriculturist' households

2.2 To imply the national policy and the practical resolution in hiring the foreign labors both short and long terms.

3. The research conceptual framework

The factors related to the decision from the literature review in chapter 2 can be summarized as the research conceptual framework as follows.

3.1 The production of the agriculturist' household factors are;

3.1.1 The land is defined in term of the size that the household use for the farm.

3.1.2 The labor is the number of member in the household who works either in the farm or both in the farm and other field.

3.1.3 The capital are the chemical substances the production tools animal and other related technologies.

3.1.4 The owner is the agriculturist' households who owns the land and the capital. For this study, the strategies the agriculturist' households used would be named as the production characteristics. They consist of rubber field, fruit planting.

The production characteristics are related to labor both positive and negative direction.

3.2 The labors' characteristics that the employers need.

3.2.1 The capability and work experiences in the agricultural sectors which is positively related to the hiring decision.

3.2.2 The hiring rate that is negatively related to the hiring decision

3.2.3 The population characteristics such as sex, age and the marital status. The relation between the population characteristics and the hiring decision depend on the production characteristics and the production process.

3.3 The labors' characteristics who contact with the agriculturist' households in order to work

3.3.1 The labor force in the province.

3.3.2 The internal migrants.

3.3.3 The foreign migrants.

3.3.4 The related others.

3.4 The work hiring characteristics of the agriculturist' households.

3.4.1 The subcontract.

3.4.2 The directly hiring.

3.4.3 The past experiences that ever hired.

It could be observed that the hiring characteristics of the agriculturist' households are the hiring through the subcontractor for the first times. The later, they hired from their previous experiences. Finally they develop the network automatically.

3.5 The socio-economic of the agriculturist' households.

3.5.1 the yearly net income from the agricultural sector in a household

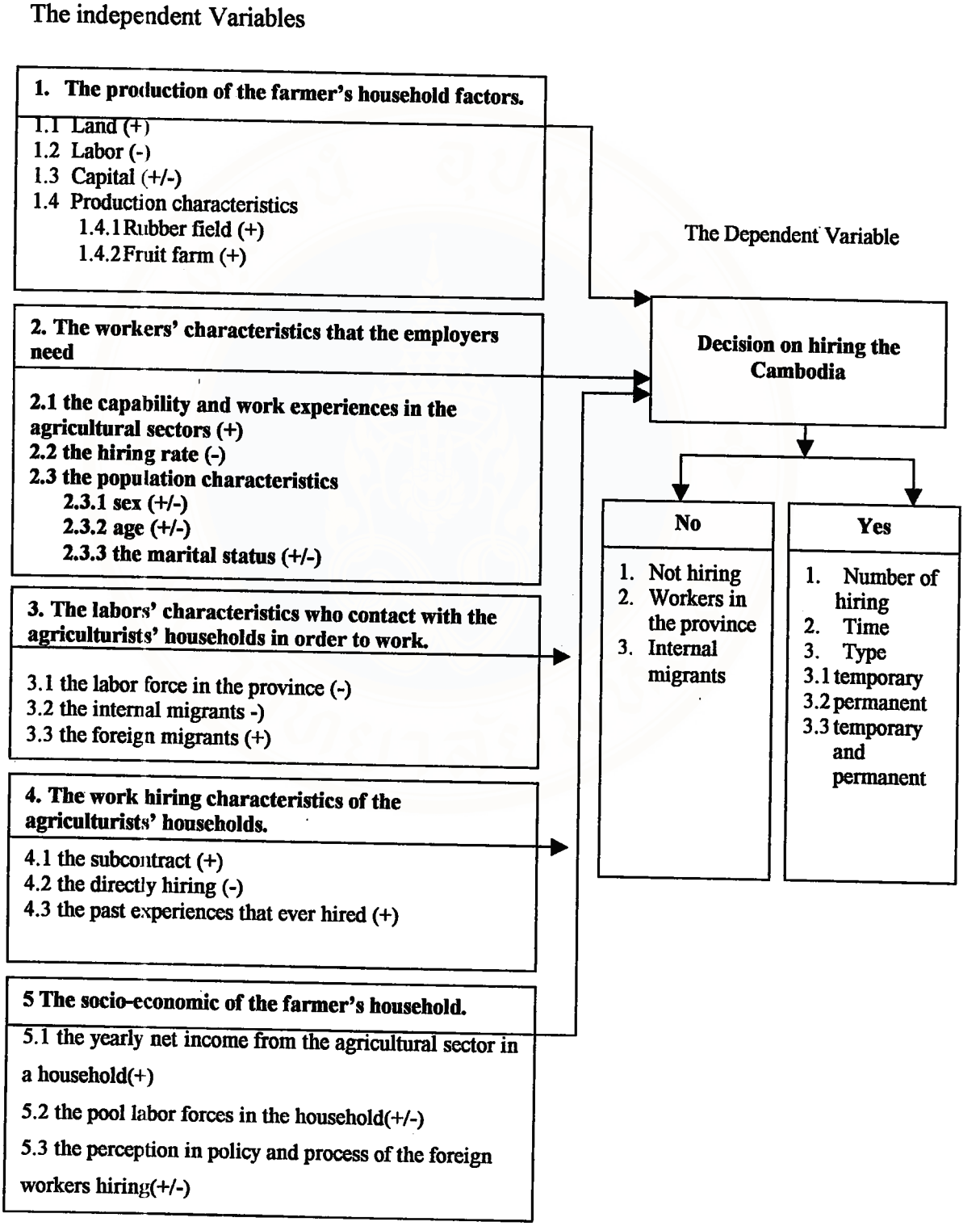
3.5.2 the pool labor forces in the household.

3.5.3 the perception in policy and process of the foreign labors hiring.

It could be said that those households with higher yearly net income would decide to hire workers more than the lesser. The more pool labor force in the household affect lower decision. The perception in policy and process of the foreign labors hiring would bring to more decision on hiring.

The dependent variable is the decision of the agriculturist' households in the agricultural sectors who hire the migrants from Cambodia. In case of making decision to hire the migrants from Cambodia, labor to be hired, and the time range in hiring will be measured. The time range in hiring are defined in terms of the temporary, permanent, and permanent - temporary. For the case of decision not, the internal migrants will be determined. The research conceptual framework can be diagrammatically shown below;

Figure 1 The research conceptual framework



+	refers to the some direction relation.
-	refers to the opposite direction relation.
+,-	refers to the uncertain direction relation.

4. Hypothesis

Factors expected to be related to the Thai agriculturists' households decision on hiring the Cambodian labors in the agricultural sectors were as follows.

4.1 The production of the agriculturists' households, by mean of the size, the types of production (para rubber and fruit tree planting) which expected to be positively related. While the amount of labor force in the households was expected to be negatively related and the capital (technologies used and working animals) was related whether positively or negatively to the decision.

4.2 The labor force's characteristics that the employers needed which were consisted of the labor's capacity and experience, the wage rate and the population characteristics (sex, age and marital status). They were expected to be related respectively to the decision positively, negatively and whether positively or negatively.

4.3 The labors' characteristics who contacted with the agriculturists' households in order to work. It was consisted of the migrant Cambodian labors which was expected to be positively to the decision. While the local and domestic migrants was negatively related.

4.4 The characteristics of labors hiring of the agriculturists' households, consisted of the hiring via networks or brokers and the past experiences in hiring,

which were expected to be positively related. The direct contact with the labors was expected to be negatively related to the decision.

4.5 The socio-economic status of the agriculturists' households, consisted of the net annual income, which expected to be positively related. The participation among the households and the policy perceived were expected to be whether negatively or positively to the decision.

5. Operational definition

5.1 The agriculture sectors refer to the agricultural production on planting crops

5.2 The agriculturists' households refers to the family member or members who spend their lives in the same residence. They share all facilities together. At least one of the family's members work in the agriculture sector as the main job.

5.3 The decision refers to the agriculturists' households who makes the decision on hiring the migrants or not.

5.4 The Cambodian migrants refer to the Cambodian who came to Thailand in Trat province and seek the job to earn their lives.

5.5 The size of land refers to the amount of land (Rai) where the agriculturists' households uses in agriculture, growing plants.

5.6 The number of the labor forces in the household refers to the amount of the household's member whose ages are higher than 12 years. They mainly work in the farm or for sometimes.

5.7 The capital refers to the technologies used in planting crops. They consist of any chemical substances, tools, animal and other related technology.

5.8 The production characteristics refer to the production facilities used in agriculture such as the land, labor force, and the capital.

5.9 The fruit farm refers to the various kinds of fruit that are planted in the farm such arambutan, durian, mangosteen, orange, and longon.

5.10 The capacity and experiences in agriculture sector refers to the previous jobhat the employee ever did.

5.11 The wages refer to the salary or other incentives paid to the workers, daily paid or monthly or depend on the agreement.

5.12 The labor in the province refers to the workers whose ages are above 12 years and their permanent residence is in Trat province.

5.13 The internal labor force refers to the workers who move from the other provinces.

5.14 The hiring characteristics refer to the method of contact with the workers which would be direct or subcontract.

5.15 Hiring from the subcontract refers to the method that the employer used to seek the workers through the mediators such as relatives, friends or the subcontractor.

5.16 Hiring from their experiences refer to the employer used to hire or perceive the experiences of the employee before the decision made.

5.17 The annually income of the farmers' household refers to the net income gained from the production.

5.18 The pool labor forces in the household refer to the shared labor forces among the households.

5.19 The perception on the political policy and steps in hiring refer to the perception on work categories defined that the government permitted to hire the foreign workers. The employers have to concern on the practices about hiring the foreign workers.

5.20 The decision made on hiring refers to the acceptance the labors work with the benefit agreement between the agriculturists' households and the labors.

6. The scope of the study

This study aimed to examine the decision of the agriculturists' households in hiring the foreign labors who planted para rubber or fruit trees in Trat province area. It was the crossectional study which was studied in the crop year 1999/2000.

7. The outcome to be obtained

7.1 To obtain the baseline data on agriculture of rubber and fruit farm in Trat province.

7.2 To obtain the factors significantly related to the decision of the agriculturists' households in hiring the Cambodian labor force migrants.

7.3 The result of the study provides the insight to the policy makers to develop the appropriate policy in response to the real needs of the agriculturists' households.

CHAPTER II

LITERATURE REVIEW

This chapter presented the literature review and precious research related to factors determined the decision making of the agriculturists' households in hiring the Cambodian migrants to work in the agricultural sectors in Trat Province. Those research review drawn from various text, documents and research findings as the conceptual framework of this study. It consisted of the following key theories and concepts.

1. Related concepts on the agricultural production.
2. Concepts on the decision making
3. Concepts on labor used in agricultural sectors.
4. Concepts on the labor demand in agricultural sectors.
5. Concepts related the foreign labor force policy.

1. Related concepts on the agricultural production.

Starvation among the world population had emerged as global interests since the English economist "Malthus" had analyzed the relationship between the population and food. He recognized the shortage of food for world population because the capacities in food supply was decreased, in relatively to the higher demand. While the world's production of food was arithmetic progressional incrementation, the increased world population was geometric progression. The key of production , land, was very limited. While other production factors in economy such as labor force and

the capital lead to lower the increased rate of productivity of labor played the important roles in the production process. (Thongroch, On-chan, 1987: 30-52)

However, others commented that the capacities of world production would be increased because of the utilization of new and advanced technologies in production process. The world's population were well supply. The lesson learned from the developed countries such as the United States of America and Europe countries revealed these situations. But the developing, underdeveloped countries, the starvation was the countries crisis the failures of production was always caused by the natural events as flooding and low technologies in agricultural activities.

1.1 Agricultural Production Economics.

Production defined as the changes of at least 2 production factors related. The production factors are land, labor force, capital and the owner. Land is one important factor, whether in agricultural or industrial sectors. Especially in agriculture, land is very important. The differences in characteristics wealthy of the land including the climate or temperature in each area is the key determinants for the land utilization purposes.

Land factor is both physically and psychologically characteristics. Physically concerns are the attitudes, responsibilities and accountabilities which are relevant related to health, the strengths to work, psychologically for production.

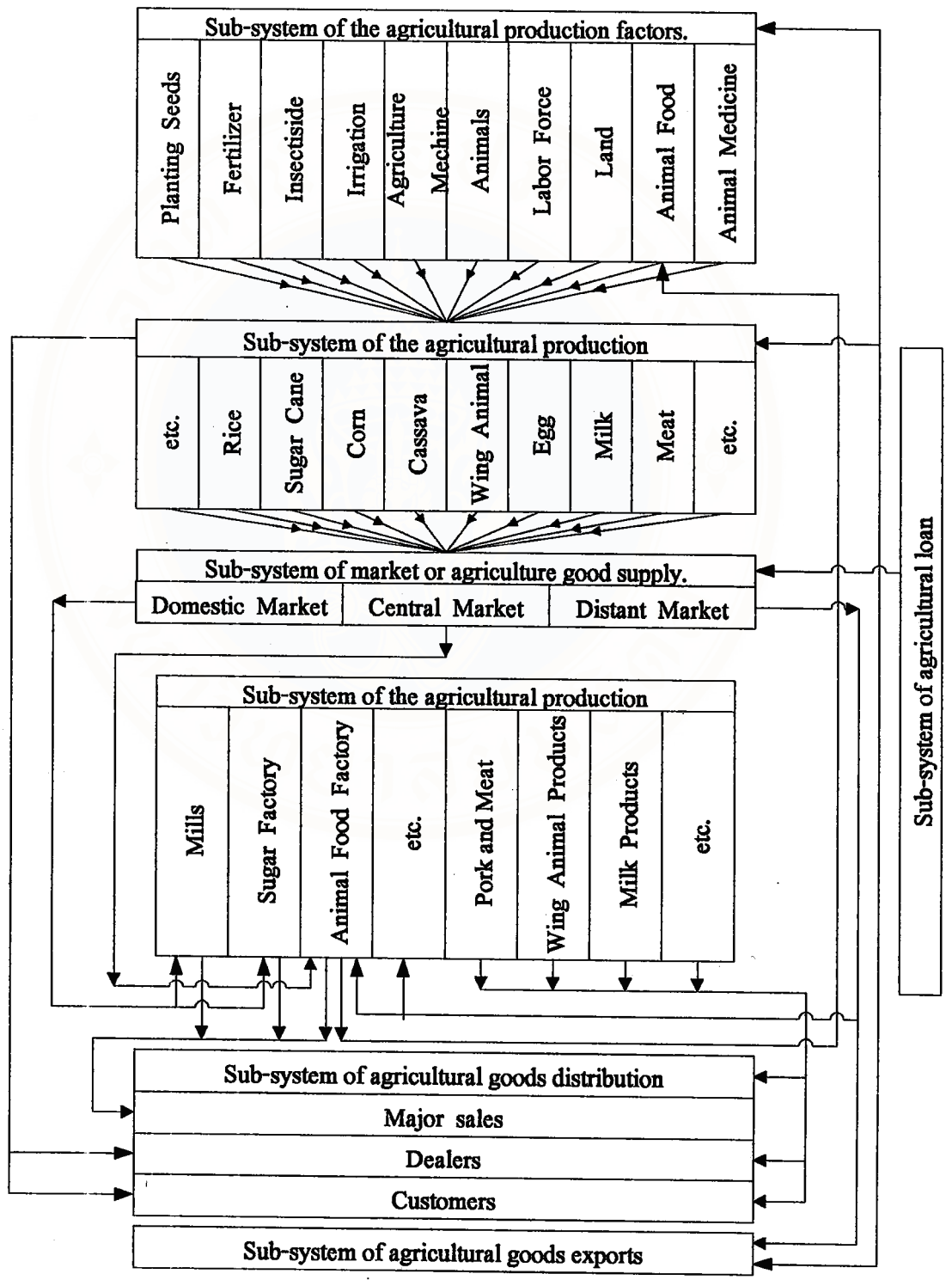
The capital refers to machines, agricultural tools and equipments, planting seeds including cashes. The capital is quite important in production. The characteristics and other capital related in production process point the method of production. For example, the utilization of machine in agricultural sectors indicate of

the modern of new technologies used. Therefore, the capital mostly used in agricultural sectors in the United States of America and Japan, the developed countries.

The owner refers to the person who makes decision in production factors used, land, labor force and the capital. The owner's capacities in production factors used is important factor to increase more benefit in production.

1.2 The agricultural business system in Thailand.

Figure 2 The agricultural business system in Thailand.



Source : Tongroch On-chan, the agricultural economy, 1987: 28

The figure 2 indicates that the agricultural business system consist of 7 subsystems. They are closely interrelation and vertical structuring. It begins from the manufacturer, distribute the products to the agriculturists, the agriculturist use that products with land, labor force and the knowledges of the farmers in order to produce the agricultural goods. Such goods are distributed to the mediated merchants who gather the goods to factories or the distant market, finally to the consumers, the last system of the agricultural business.

1.3 The agricultural economic structure in Thailand.

Thailand is the developing country. Most of the national economy depends on the agriculture. Although the agriculture is the long-term important aspect of the national economy, the agricultural production is still a traditional farm, a land and labor-based more than the capital-based production. Therefore, the products per land and labor are quite low leading to lower incomes. Most of the production is a household production and the production for household consumer. The production for marketing is not relevant because most of the production process is up to the natural events. The utilization of the agricultural technologies is quite low, although the world's agricultural technologies are more developed the farmers are still lack of education and the monetary capital.

1.4 The agricultural production factors in Thailand.

All kinds of business, the agriculture is included, need the production factors; land (natural resources), labor force, the capital and the owners in order to

produce the foods. The reward in turns on land is "rent", labor force is "wage", the intay capital is "the interests" and the owner is "profit".

1.4.1 Land

The area of Thailand is about 321 million Rais. The owner area for agriculture is about 100 million Rais. Most of the owner land in each region is for rice farming, the less for cultivating. The South and the East region's areas are fruit planting because of the appropriated climate to plant both fruit and rubber plantation. The planting area in the South is about 50 percents of the agricultural land while 10 percents and 2 – 3 percent in the east and other region respectively.

1.4.2 Labor

Labor used in the agriculture consists of agricultural labor force which it refers to the owner, the household labor and wage labor force. They are decided into 2 categories, the full-time waged employment and the seasonal labor. The seasonal labor are waged monthly, daily, hourly or with regard to the places of work. Most of the waged employment in production are the household labor and the members. The waged employment is needed in the process of cultivating. (Kaisorn Permpoonpong, 1990: 85–90)

The agricultural labor used depends on the structure of production. According to the agricultural activities are seasonal which they depend on the weather. The rainny season or the cultivating period, the process begins from soil preparation to cultivating. The labor forces are needed especially in the irrigation areas.

However, the waged labors depend on the kinds of crops, planting method and the technology used. (Harwood, 1979: 63 – 66)

The agricultural labor force is related to income and the poverty of the agriculturists in order to raise the employment. Besides from increasing the agricultural production, the non-agricultural job such as the industrial goods production within the household or employ in the local industry is leading to lower the rate of unemployment (Tongroch On-chan, 1987: 97)

1.4.3 Capital

The capital, the economic term, refers to tools and equipments used in production process such as tractors, mechanical buffalo, and etc.

1.4.4 Entrepreneur

The entrepreneur refers to the owner of the agricultural products which derived from land, labor and capital altogether used in goods and services production respond to the human need supply.

Doing farm, the farmer would act as the entrepreneur who make the decision to what kind of products will be processed, how much to be processed. Therefore, the goods or services production is more successful if the farmer is the entrepreneur of land, labor and capital. If not, they have provided the production factors from other resources and they have to pay much more to the resource's owners. Thus, the net income gained will be reduced.

1.5 The agricultural production factors.

1.5.1 Land. Trat province's area is all about 2,819 square kilometers or 1,761,875 Rai (The Strategic Development Plan of Trat Province, 1996: 8). The land of the owner is about 598,259 Rai, 99.77 percent of the agricultural area in Trat. (Trat's Agriculture Census, 1993: 9 – 10) The agricultural area of Muang Trat district

is about 33.59 percents, Kaosaming district, Klong Yai are about 32.22 and 1.3.4 percents respectively. Table 1 shows the details.

Table 1 The agricultural proprietor in Trat in the crop year of 1993/1994.

District and cultivating classified	The proprietor's area (Rai)	
	Area	Percentage
1. District classified	598,640	100.00
Muang Trat	201,10	33.59
Branch of Koa Kood	21,029	3.51
Kaosaming	192,879	32.22
Klong Yai	8,031	1.34
Bor Rai	113,115	18.90
Laem-Ngob	62,476	10.44
2. Cultivating classified	598,640	100.00
Planting	597,259	99.77
No Planting	1,381	0.23

Source: Trat's Agricultural Census 1993, Table 1: 9 – 10

1.5.2 Labor refers to the member of the household labor, the proprietors for agriculture aged 13 years and above in 1993. They are 56,334 persons. Almost half of them (47.71 percents) or 26,877 persons work exclusively in the farm

of theirown. Estimately 8,286 or 14.71 percents work in both non and agricultural sectors. Table 2 details the data.

Table 2 Number of the agricultural household's members aged 13 years and above, classified by work characteristics.

Items	No. of members	Percent
Total	56,334	100.00
Exclusively agricultural work	26,877	47.71
Agriculture and non	20,223	35.90
- agriculture only	8,286	14.71
- agriculture in other land	2,389	4.24
- non-agriculture	9,548	16.95
Non proprietor	3,332	5.91
- agriculture in other land	325	0.57
- non-agriculture	3,007	5.34
No economic productive work	5,902	10.48

Source : Trat's Agriculture Census, 1993 Table 3: 11

With regard to insufficient the household labor, at most half of the household (49.05 percents) hire the labor to plant the crop. (Agriculture Census 1993: 14)

At present, Trat province is shortage of the agricultural labor force. The waged labor are divided into 3 groups with respect to their native rescidence. Firstly is the local labor force. It refers to the laborers who settle in Trat province, the labor force population. They are 108,854 and 417 among these are unemployed (Labor Survey, the Third Round, August, 1997). Thus, 417 laborers are needed. The second group is the internal migrants. They move from other provinces of Thailand to Trat. The amount of them is about 1,468. (Labor Survey, the First Round, February, 1997). Table 3 details the data.

Table 3 The Migrants to Trat, classified by origin and cause of migration.

The province place of origin	Total	Causes of migration				
		Job seeking	Job	Accompany the family	Return home	Others
Chiengrai	88	54		33		
Lamphun	437			437		
Khonkhen	194	194				
Udonthani	74			38		36
Sakolnakorn	89	89				
Mahasarakam	468	30	54	384		
Nakornrachasima	121		57	35		29
Sri-Saket	148	148				
Ubol Ratchatani	636	33		230	74	

Table 3 The Migrants to Trat, classified by origin and cause of migration. (Cont.)

The province place of origin	Total	Causes of migration				
		Job seeking	Job	Accompany the family	Return home	Others
Nong Bua Lampoo	75					75
Kanjanaburi	90		90			
Saraburi	203	117	41		45	
Sinkhaburi	46		46			
Chantaburi	1,304	198	154	273	152	526
Rayong	1,061	118	297	253	293	
Cholburi	484	65	318		101	
Prajinburi	83	83				
Srakaew	98			98		
Bangkok	379	34		345		
Choomporn	40			40		
Suratthani	751		751			
Nakornsrithamarat	281		155	126		
Abroad	279	279				
Total	7,427	1,747	,922	2,434	619	710

Source : Labor Survey Report (first round) February, 1997: 55-75

The third group is the foreign labor force. It mostly refers to the Cambodian migrants. The Labor Survey in February 1997 reported that the foreign migrants moved to Trat were about 279 persons, and 10,008 in April, 1997.

1.5.3 Capital. The capital in the agricultural business system of Thailand refers to the fruit seeds, fertilizer, insecticides, irrigation system, agricultural machine, working animals, and the animal drugs. (Tongroch On-chan, 1983: 28)

The fertilizer and insecticides used in plantation is about 83.32 and 66.09 percents respectively. (See Table 4)

Table 4 Percent distribution of the fertilizer and insecticides used by the owner.

Items	Percentage
1. Fertilizer	83.32
Chemical	41.37
Organic	4.52
Both	37.43
2. Insecticide	66.09

Source : Trat's Agriculture Census, 1993, Table 5: 12

Machines used in agriculture are electrical water pamper. 41.30 percents of the owners used it. The manual and electrical insecticides sprayers are also used 38.51 and 29.54 percents respectively. (See Table 5)

Table 5 Percent distribution of the machine used by the owner.

Item	Percentage of the owners	No. of machine used
Two – Wheeled car	20.80	2,987
Pumper		
- machanical	41.30	8,642
- electrical motor	13.97	2,792
- electrical power	0.30	4
Sprayers		
- manual	38.51	6,665
- machanical	29.54	4,523
2 Wheel track	45.56	4,241
3 Motorcycles	41.43	8,464

Source: Agriculture Census, 1993. Trat Table 6: 13

The irrigation in Trat both medium and small size are about 9 projects. (See table 6)

Table 6 The medium size of irrigation project

Project	District	Water Storage (Million Metre^2)	Irrigation Area
1. Klong Yai	Laem-Ngob	Sea Water Protection	3,000
2. Klong Rang Wai	Kaosaming	Sea Water Protection	6,000
3. Ang Kao Rakam	Muang	Plain Water Storage 23.00	20,000
4. Ang Danchoompol	Bor Rai	Plain Water Storage 5.60	3,000
5. Ang Banmanow	Bor Rai	Plain Water Storage 2.38	1,500
6. Wang Kracha	Muang	Sea Water Protection	7,000
7. Na Klua	Muang	Sea Water Protection	3,000
8. Klong Taleon	Muang	Sea Water Protection	20,000
9. Kao Rakam	Muang	Plain Water Storage 5.00	17,000

Source : The Strategic Development Plan of Trat , 1994: 13

1.5.4 Entrepreneur refers to the person who brings together land, or the natural resources, labor force and capital for the goods and services production in response to the consumer's needs. The entrepreneur processes the production and is the one who makes decision about the economic based problems such as the products, the process and the customers. (Preeda Naknawatim, 1992: 83) The agricultural entrepreneur on cultivation in Trat ware all about 17,791 persons in 1993 (See Table 7)

Table 7 Number distribution of the land owners.

Item	The land owners	
	No.	Percentages
1. District Classified	17,960	100.00
Muang Trat	6,812	37.93
Branch of Koh Koods	221	1.23
Kao Saming	5,308	29.56
Klong Yai	444	2.47
Bor Rai	2,813	15.66
Laem-Ngob	2,362	13.15
2. Planting Classified	17,960	100.00
Planting	17,791	99.06
No planting	169	0.94

Source: Agriculture Census of Trat, 1993 Table 1: 9

The Agricultural entrepreneur mostly is the land's owner for agriculture. They process the products by capital, labor force and land used as Table 8

Table 8 The land owned by the utilization

Utilization	Owner (Rai)	Percentage
Total	598,640	100.00
Rice growing	61,151	10.21
Cultivating	48,728	8.41
Vegetable and flower	3,001	0.50
Planting	195,315	32.63
Rubber planting	207,470	34.66
Grass field	7,387	1.23
Forestry	8,351	1.39
Public Area	55,588	9.29
Others	11,649	1.95

Source : Trat's Agriculture Census, 1993 (Table 4): 12

1.6 Main economic crop in Trat and the production cycles.

1.6.1 Main economic crop in Trat. (The Strategic Development of Trat, 1995: 25 – 26) There were various kinds of plantation

Five of the 12 kinds were rambutan, rubber, durian, pineapple, and mangosteen. The first rank of plantation are rambutan, durian and mangosteen in Kao Saming district. Rubber and pineapple are mostly planted in Muang district. The data summarizes in Table 9

Table 9 Croping Area, Production Value and Production areas of main economic crop, Trat, 1993/1994

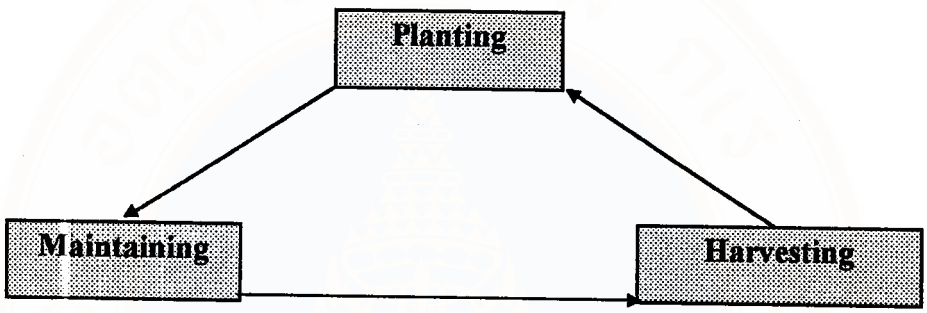
Main Crop	Area (Rai)	Product (Ton)	Valve (Million Baht)
Rubber	210,486	38,802	698
Rice	64,988	26,000	91
Rambutan	39,792	131,239	1,181
Durian	32,324	38,578	579
Pineapple	33,008	238,600	277
Coconut	30,397	13 Million	39
Mangosteen	10,120	8,950	165
Cassava	11,290	21,451	23
Orange	7,571	11,556	46
Zalacca	4,066	863	17
Bamboo	10,700	16,600	12
Total	455,097	-	3,128
Vegetables	45,667	-	135
Grand Total	500,764	-	3,250

Source : The Strategic Development of Trat, 1996: 26

1.6.2 The economic crop cycle of Trat. (The manufacturer's report)

The economic crop cycle, generally divided into 3 key steps, planting, maintaining and harvesting as figure 3 shown.

Figure 3 The main economic crop cycle of Trat province.



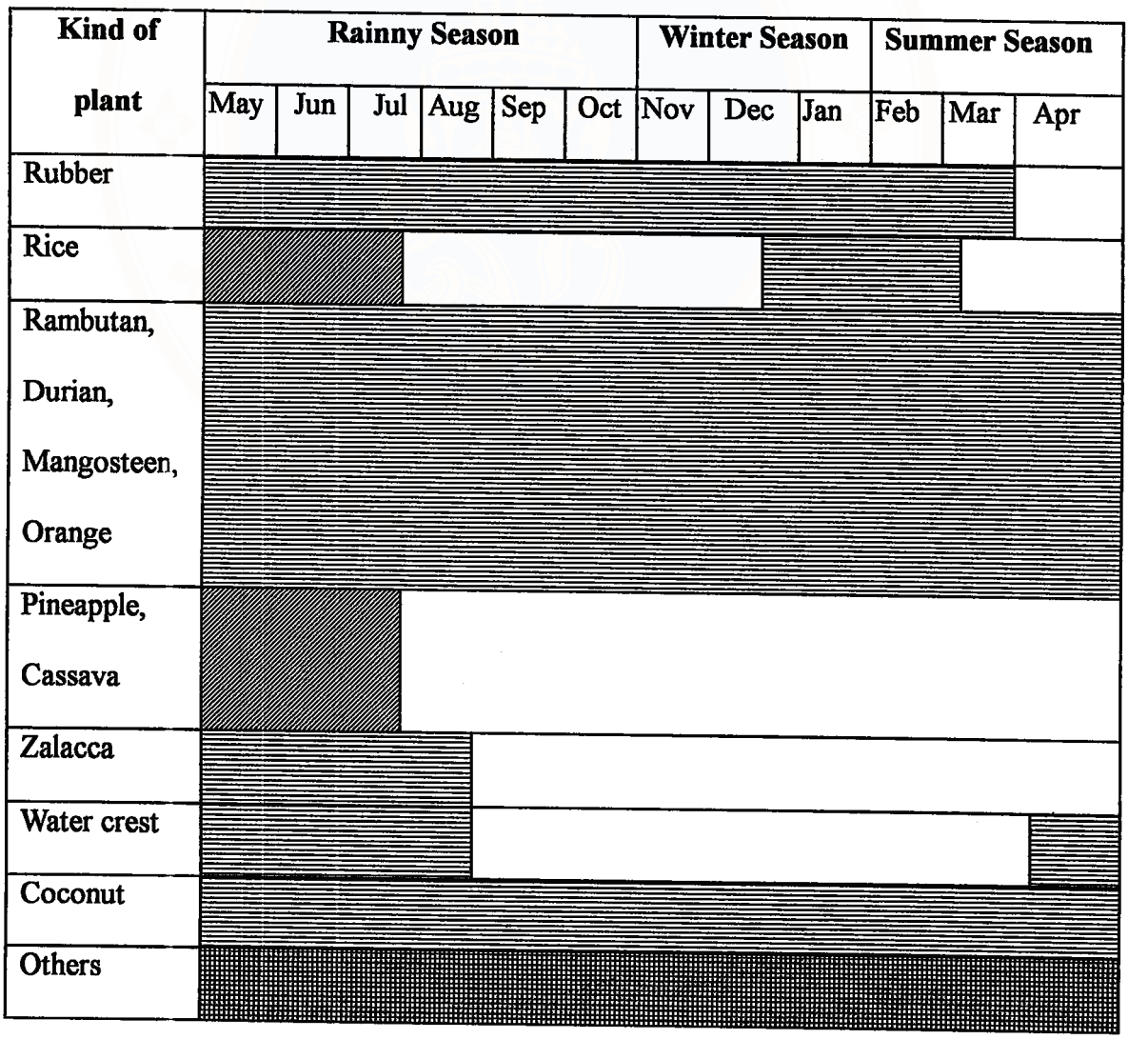
The first step of cycle is planting, soil preparing for planting, eradicating the foreign body plants, developing the area by digging and etc. in relation to croping. Then preparation for the fertilizer, planting seeds/branches are needed. At the beginning of May – June, the cultivating starts. The labor, working animals, machine and chemical substances are used.

The second step is the maintaining. All kinds of planting needs the maintenance which produce more products. The maintenance is the eradicating the foreign plants and the unwanted insects, filling the fertilizer, watering, digging providing human and branching. Some activities need both labor and the chemical substances or machines. Some need only human labor force. To maintain the planting, the agriculturists make decision on activities and time ranged which they depend on the environmental context and kinds of plantation.

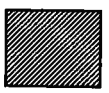
The last step is harvesting. Some kinds of crop need harvesting as soon as possible, other wise. They are damaged or decreased the quality. So, both human labor force and machines or working animals are needed.

The production of the main economic crop, the production cycle of some plants are different as detailed in figure 1

Bar Figure 1 The production cycle by stable plants.

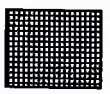


Planting



Maintaning

Harvesting



All steps

2. Concepts on decision making.

The decision making process has emerged in the managerial and administration process, from formulating the objective, operation and evaluation.

2.1 The definition of the decision making.

Herbert A. Simon (1960: 2 – 3) defined as the 3 process of the chance of decision making, the possible alternative and the selection of the alternatives as follows.

2.1.1 Intelligence activity refers to the information gathering for the decision making.

2.1.2 Design activity refers to the analysis of various alternatives for the implementation.

2.1.3 Choice activity refers to the selection of alternative most practically.

Plunkett and Raymond (1994: 142 – 191) defined as the basic administrative process though the alternative analysis in 7 steps as follows.

1. Identifying the problem
2. Alternative development
3. The limitation of factors and resources
4. The alternative analysis
5. The selection of best alternatives
6. Making choice of the alternatives
7. Monitoring and evaluation

Ricky W. Orittin (1984: 197) defined as the process of selection of several alternatives for the best problem solving. The decision made is decided into 3 as follows.

1. Decision making under certainty. The decision has based on the expected outcome.

2. Decision making under risk. The decision was based on the certain outcome less than the first method.

3. Decision making under uncertainty. The decision can not expect the outcome or the possibility. The decision makers had no enough information. Therefore, the decision makers should pay more attention before the decision made.

Amos Tuersky (1967: 1) defined as the selection of behavior's response to the problem solving.

Fremont Shull (1970: 31) defined as the process of human relationship.

William J. Gore & J.W. Dyson (1974: 77) defined as the selection of the alternatives to achieve the goals.

Delton El Mc Farland (1970: 76) defined as the performance of the manager to choose the best alternatives.

George R. Terry (1964: 107) defined as the selection based on the criteria from various alternatives.

Vichai Tosuwanchinda (1992: 185) defined the decision making as one option in response to goal or the need of those who choose the option. The elements of decision making are :

1. The decision makers face in with a set of options. If no options, no decision made.

2. The consequences depend on the option.

3. The consequences are different and unequal.

4. The decision maker remind of value, benefit or the significance of each option which affects the decision maker.

Vithoon Simachokdee (1995: 88) referred to the process of the option of sets of tasks or activities in order to solve some specific problems. The 8 decision making process are as follows:

1. Problem identification is the first step of decision making process.

2. Listing of alternatives. Since the decision makers find out the problems and causes, they list the alternatives which are practical. The practical alternatives includes not the expensive long-term and fine problem solving methods.

The best practical alternative is listing all alternatives and delete one by one. Therefore, the alternative left is the decision made-based next decision. This method helps the decision maker findly out the most appropriated options.

3. The unexpected underlying conditions searching. The unexpected conditions should be occurred, whether the alternative is chosen. The conditions maybe either positives or negative effects.

4. Data collection is the process of gathering the facts. Related to the problems decision made need.

5. Assessing the value of the alternatives. Since the data is examined, the decision maker have to diagnose what would be happened by the ways of each options, the consequences are included. the risky, uncertainty, illiteracy are needed to consider.

6. Selecting the method of problem solving. The decision makers have to make one choice among various alternatives or make compromising. The selection of alternative depend on the decision maker's experiences, precious diagnosis, other's suggestions, and even the hunch. Facts always helps the decision making.

7. Implementing of decision. Time ranged from decision made (planning) and the implementation is quite far. The decision maker, as the lead of the offices, must plan, formulate and control the performances. In order to gain effective

implementation, the two-way communication, motivation and leadership skills are needed.

8. The follow-up method. After the implementation, the decision makers should monitor and evaluate the problem-solving methods. Various way to perform depend on the decision made, the environmental context, the underlying condition of tasks, the employer's demand, other related employees and any technical problems. The report is essential for the employers to learn more the outcome of the decision made.

It is concluded that the decision making refers to the planning of action through the fine consideration leading to the implementation to achieve the objectives.

Chayaporn Vichawut (1982: 340) classified the theory described the method of human's decision making into 2 types.

1. Normative or prescriptive theory. It definds the human's decision making in order to achieve the goals. It decided into 3 groups.

Firstly, the national comprehensive decision making comprises of 2 principles. They are the policy formulating, goal setting prioritized, needs and related values and the best alternatives.

The second group is the theory of incrementalism. This theory refuses the first group concepts. They reason that theory is impossible to practice because of the limitation of times, knowledges, budget resources and information.

The third is the mixed scanning. The theory brings all the advantages of both theories. If the decision makers choose any options, they should consider the options.

The above theories come up the conclusion of the decision making stage into 6 scientific methods as follows:

1. Define the problem.
2. State of objectives.
3. Formulate hypothesis
4. Collect data
5. Classify analysis and interpret the data.
6. Conclusion.

The limitations of the theory are found such as the complexity of data collection and various alternatives. The decision makers find it difficult to choose. In the other hand, the emotion is another factor affects the decision making since the human being can not analyze either rationales or emotions. Bias occurred, and some decision makers behave the patterns they used to perform.

2. Descriptive theory. The theory describes the decision making among the human being that the decision made by feelings and thoughts are more correct and certain than the above theory. Since the theory focuses on the actual behaviors that leading to choices making relevance to the real situations.

2.2 Model of decision making behaviors.

The following 2 models are often seen in decision behaviors.

2.2.1 Economic Man Model is the model defined the decision makers as follows.

2.2.1.1 Rational behaviors

2.2.1.2 No bias

2.2.1.3 The certain criteria in decision.

2.2.2 Administrative Man Model is the model of the administrators generally use in decision

2.2.2.1 In selection of the alternatives, the decision makers choose the alternatives that they think satisfaction and good enough with regard to the criteria setting in mind.

2.2.2.2 The decision makers perceive the environment, information or data in relation to their understanding.

2.2.2.3 The criteria in decision is the satisfaction not the maximum benefit as the above theory defined. Therefore, the decision makers don't seek various options for decision making.

2.2.2.4 Such a decision behavior, the decision maker will delete the unnecessary out and if the selective option fit not the criteria, the criteria are decreased. So it is practical. This administrative model are used in cased of uncertain options and complexity situations, leading to irrational decision. The decision makers choose the options they satisfy with regard to the criteria in mind. The satisfaction depends on the decision maker's personality and values. According to uncertainity of the decision criteria and various options lead not to maximum benefit. Therefore, the administrative model can be easily seen.

2.3 Theory of decision making.

Since the decision is various alternatives that the decision makers expect the maximum benefit. The following methods help the decision makers to gain that benefit.

2.3.1 Experience and Judgement. It can be found in the decision makers who experienced the repeated mistakes. They used their previous learned lessons in order to make better choice.

2.3.2 Delay tactics.

It is the methods of time used in relaxing the problem crisis. It is suitable for same problems and maybe damage in some cases.

2.3.3 Quantitative model.

The theory of the probability is used with regard to the maximum benefit from the decision made. Practically used in accordance with the decision maker's feeling and thought.

2.3.4 Creativity.

The method of individual or group performances. But the groups' performance is much better if it is included the following methods.

2.3.4.1 Brain storming. It is the participative meeting, which everyone willingly to share the ideas how to solve the problems. The decision made is based on the participative action.

2.3.4.2 Participated Decision Making.

This method is based on the concept of the human nature. The human eagers to express their ideas and participate with others, especially in decision making.

2.3.4.3 Delphi technique.

It is the modern and popular method, even-though it consumes much time and power. The experts express the ideas with top secrets, don't let anyone who they are. This prevents the embarrassment. They present all two rounds of the ideas. Finally they all choose the related alternatives. The method provides the integration of the expert's knowledges.

2.3.4.4 Nominal group. The method is quite similar to the delphi technique, but it is used for the organization's purposes in order to safe times.

2.3.4.5 Heuristic is also similar to the delphi and nominal and nominal group. But it should be trial before the implementation in order to lesser the unexpected mistakes.

The decision made is the core element of the management. Any performances needs the decision, even in the routine daily lives in order to meet the maximum benefit. The recommendation is that the decision made is based on the complete information, various alternatives which gain the maximum benefit and lesser mistakes. The data collection depends on the decision maker's capacities and experiences. Any decision making or organizations, the goods of decision are quite similar. Therefore, the decision makers are ones who make the optional choices to achieve goals.

Thus, the decision made on the agricultural production is quite different from other decision, because of the variation of natural events, such as the climate. The agricultural goods are easily damage, the management or planning on production is quite complex. The agricultural productions mostly are the household business. Every decision made is interrelated. The decision made on the capital used

and the consumer can not be decided from each other. The decision on consumer greatly affects the decision on production. Contrary to the industrial sector, the household decision is separated from the business's decision.

2.4 Producer's decision making

The agricultural producers are farmers who are the entrepreneurs and own the production factors, such as land, labor and capital in order to get the maximum benefit from plantation. The producers' decision making classified into 5 categories as follows.

2.4.1 What to produce ?

2.4.2 How to produce ?

2.4.3 How much to produce ?

2.4.4 When to exchange goods ?

2.4.5 Where to exchange goods ?

What is produced is also important. In case of shortage or limited of the production factors, the goods produced are also limited. The options are based on the consumer's demand. The goods produced can make the higher income. The consumer's demand can be considered from the goods prices that the prices are high or what the trends of prices is.

How to produce. Several methods are used for one goods production. The production cost of each method is different. The farmers usually choose the method of lowest the production cost.

How much to produce. The decision made on this item depends on the amount of goods produced that maximize the highest profit to the farmers. The most optimal amount of goods production depend on the method of production. The more amount of good produce maybe because of the traditional method of production.

When to exchange goods. The farmers have to buy some production factors to make goods. In the other hand the farmers have to sell their goods in turn. The farmer's profit or income depends on the goods exchanging time durations, goods prices. Because the production factors have changed with regard to times. So, it is important to consider the time ranged of goods exchanging.

Where to exchange goods is another considerations. The farmer's options are different with regard to each market. Therefore, it is essential to follow-up the market states which finally affects the farmer's income.

2.5 Types of the decision making on goods production.

With the goal of the maximum benefit, not only the general producer, the agricultural producers have to make the decision on the following issues.

2.5.1 Input and Output decision. The farmers have to choose one of the production factors used to produce goods.

2.5.2 Input and Input decision. The farmers have to use all production factors to produce goods.

2.5.3 Output and Output decision. The farmers have to choose the products to be produced from the existing production factors.

2.6 The decision on Input – Output Relationships.

The agricultural productions depend on one or several production factors. The input – output relationship are the production function.

The production function refers to the amount of goods which depend on the amount of production factors the relationship, in term of types and the amount of goods, depends on the types and the amount of the used production factors.

Factors affected the land demand is the amount of population, technologies, education and social culture. The population is the most essential because the developing countries' population increased with a higher rate.

The land demand in agriculture depends on the technologies. The more modern of the technologies that produced more goods are, the lesser land demand is. In the other hand, if new technologies emerged, the land demand is also high. That why new technology affected the higher land demand.

The education and culture in each society affected the different land demand. In the society with lower level of education, their belief and attitudes towards land demand for the non-economic productive purposes but as the indicators of social and political power and previlage in that society.

The labor used, then, depends on types of crop (planting seeds are included), the irrigation system and the level of the agricultural technologies. The more mechanical utilization is, the lesser used of human labor force is.

Some other reinforcing agents are the education, the agricultural loan, the area extension, group forming and the national agriculture policy.

Damrongsak and Korkiert (1987: 40) reported the factors influenced the increasing of the effectiveness in the agricultural production as follows:

1. Knowledges and new advanced technologies.
2. The adequacy of water supply and land.
3. The management method on production.
4. Marketing and loaning.
5. The lower cost of production factors.
6. Services and other facilities in production.

Harwood (1979: 29 – 75) indicated various factors limited the farmer's food production. They are the inadequacy of land, the shortage of labor force, the lower quality of land used, limited of water supply, high variated of climate and weather, poor quality of planting seeds, shortage of the production factors, marketing problem. Therefore, all the factors related to production are essential for good considerations. They are the quality of land, the motive force on conserving the resources and energies, water supply, the temperature, sunlight, soil structure and quality. The economic factors related are croping land, labor, mechanical machines, monetary capital, the management and the market.

The success of the small farming's entrepreneur development is the development of the quality of life of the farmers. The indicators of the farmer's quality of life are as follows.

1. The family status.
2. Health status.
3. The household structure.
4. The agricultural assets such as, domestic animals, working animals, the food storage amount, capital for production.

5. The communication between the communities.
6. The participation.
7. The attitudes.

Preeyamas Pangpan (1990: 40 – 45) had studied on the consequences of the different perception on advanced technologies to the labor demand among farmers in suitable and non-suitable area of Khonkhen in the planting year 1987 – 1988. The result indicated that the irrigation area demand the labor force per rai more than the non-irrigation area.

Dechwat Sookkamnerd (1987: 60 – 62) studied on the technologies used for safer energy, the case study of the harvesting machine of farmers in Supanburi province in the crop year 1991/1992. He found that the machine could reduce the human labor force.

Sopin Tongpan (1994: 71 – 75) reported the study results on the changes of labor force structure and jobs in agriculture sectors in Thailand. The result should that the proportion of labor force moved with regard to season and the nature of labor used. Most were the household labor and the less were labor force in agriculture. Because the labor force in agriculture was limited and shortages with regard to the lower income, no enough welfare.

Chaiyut Maneechai (1994: 108 – 121) analyzed the labor demand and the wages in sugar-cane plantation in the crop year 1992/1993 in Supanburi and Lopburi provinces. The result revealed that the determinant factor affected the labor demand in sugar-cane plating was the amount of land area for planting.

Angkana Supriyasilp (1996: 60 – 117) studied on factors affected demand and supply of the agricultural labor force in rice and vegetable production in Nonthaburi province. The result should that the following factors affected the labor demand.

1. The labor wages rate negatively affected the labor demand. The higher the wages were, the lower rate of labor demand. When lower the cost of production, in contrarily, the lower the wages were, the higher rate of labor demand.

2. The goods price produced by the laborers were positively related to the labor demand. The higher goods prices were, the higher production the producer produced, leading to higher labor demand for production.

3. The machine labor was both positively and negatively related to labor demand, depending on the characteristics of machine used. The more replacement between human labor and the machine, the negative relation it was. The positive relation were seen in turns of the utilization of both machine and human labor.

4. The other technologies used in production were both positively and negatively related to the labor demand, depending on the technologies used and type of production. The pesticide and chemical substances used in rice family world safe the labor, the labor demand was lower. The chemical substances used in vegetable planting needed more labor. The more fuel used, the more labor demand, because the machine needed the labor to control.

5. Wages and incomes of owner who ran the production. The more income from their own farm were, the more household's members would in their farm, then, the less labor demand.

6. The farmer's characteristic backgrounds, such as their experiences positively affected the labor demand. Since they could expand their production and lead to higher labor demand.

7. The number of the household members were both positively and negatively related to labor demand, depending on the values and altitudes on agriculture jobs.

8. Planting land was positively related to the labor demand.

Meunchai Leelasilpasat (1988: 24 – 266) studied on the farm planning aimed to increase the farmer's income in the land reform area Beungraknam Subdistrict Chaiburi District Pratumthani province in the planting year 1987/1988. The finding indicated that the activities of labor demand were positively related to the amount of household labor.

Kanjana Pantiya (1991: 98) studied the planning of cultivating under risk situation in Nakornrachasima province. The finding indicated that the occupation as farmers confronted higher risky because of the variation of products, changing the government policy. Therefore, the decision made on planning depended on several factors, such as level of education, the understanding of the risky situation and the farmer's preference to take the risks. The study also reported that the activities used in the production were also related to the labor demand and affected the cost of production. Normally, the labor used in production was the household labor. The labor demand was needed when the household labor was shortage.

Chutasini Kamuilai (1984: 45) studied the effectiveness of the production factors used and the non-agricultural working of the small size land owners. The

study indicated that the wages in agricultural sector were significantly related to the products' price ($p \leq 0.05$)

Kob-chai Chimkul (1987: 77) studied the model of agricultural production under risky situation, the case study some kinds of planting in the central region the finding indicated that the activities of labor demand in croping was divided into 4 phases. They were, the phase of soil preparation, planting, maintaining and harvesting period.

Vilawan BoonRun (1990: 51 – 53) have done the economic analysis on the consequences of the disparity of new technology acceptance in producing rice to labor demand both in the risky and non-risky area. It found that the new breeds of rice, the pesticides used, the fertilizer used and the land reforming were positively related to the labor demand.

Thanomsak Sornralum (1986: 47) analyzed the economic of rubber production in Rayong Province in the year 1985/1986. The study found that the production factors, such as the chemical fertilizer, labor for maintenance needed less labor demand. While the labor used in deriving rubber, storage and drying the rubber, the labor demand were quite higher.

Suthep Ratanapun and others (1993: 65 – 68) studied factors affected the acceptance the chemical fertilizer used in rice farming of the irrigation area in Pattalung province. The study revealed that the farmers whose less members accepted the chemical fertilizer used than the more members in the household.

Pathummas Daengbupha (1993: 23) studied the environment factor related the orange farming Radburana district of Bangkok. The finding indicated that the labor used were quite hard working, skilled labor and highly patience,

responsibilities, otherwise damaged the production. Therefore the farm's owners prefer the household labor. For those bigger farm, the full time employment were needed because of higher waste of money to train the new labor.

Wayan S.I. (1985: 18) studied the impact of tractor utilization on Crop Production and Employment in South Sulowesi, Indonesia. The study found that the less land was, the less the labor demand was.

Phelinas, P. (1994: 18 – 20) studied on Farm and Off-Farm Employment in Rural Thailand about the factors affected the labor demand in the farms. The secondary data used, obtained from the survey of 300 farmer's households in Supanburi Pichit and Roi-Et in 1991. The study indicated that the labor demand was positively related to factors, such as the land's owner, products' price and the technologies used, irrigation system, the fertilizer used and the reforming. Other related factors in negative direction to the labor demand were the land lending, the number of the household members, the size of land and wage rate.

Suran Watanatchariya (1992: 17 – 38) had done the analysis on agricultural production. The study reported the concepts and theory on expected demand of the production factors into 2 methods as follows.

1. Direct estimation. The production factors would be estimated without calculating the production function.

1.1 Regression method used. The advantages and disadvantages the method used were as follows.

The advantages

- easily calculated the demand function because the production function was not needed.

- The maximum profit was not calculated. The factor demand is the real one not the expected factors.

The disadvantages

- The structure of production was not known.

- The relationship problems between the variables used in the equation.

- Applied not to other business.

1.2 Linear Programming. This method depended on the assumption that the producers used the existing production factors to gain maximum profit.

The advantages

- Several factors demand were available.

- No problem of the variable's interrelationship.

- Suitably for to retrospective data for several years.

The disadvantages

- The limitations were different and inadequate.

- Error found in gathering the data.

- Taking no risky situation and the other objectives of the producers related not to monetary.

2. Indirect estimation. It refers to the estimation of factor demand, starting from estimating the production function then calculating the factor demand, under the assumption of the maximum profit. The cost of products produced would equal to the income or products' prices. This method, the producers choose the factors affected the products such as labor land and fertilizers. After the production function were calculated, leading to factor demand calculating were the assumption of the maximum profit.

The advantages of this method was the beginning from the baseline structure of the production. All the factors related to production were known. Finally, application to the business can be.

The disadvantages were the estimation under the underlying conditions of the maximum profit and no statistically significance.

3. Concepts on labor used in agriculture sectors.

3.1 Roles and significance of labor.

Labor is the most important in production process, both being production factor and gather other factors for production Labor is a vital factor. Besides, they gain the monetary wages, they need the psychosocially support, the welfare is also included. The labor force is also individually different in the knowledges, skills and experiences. Some production needs only labor because human labor can not replacement with other technologies. Therefore, labor as most important. In the other hand, labor as the roles of production factors used, They bring all production factor to produce goods with low cost but high profit. In order to get high profit, the production is depending on. (Warongsak Thanaviboonchai, 1995: 17 – 23)

The producer's knowledges and capacities. However the labor is relevant as a consumer, with regard to the 4 human basic life's needs. More than 50 percents of the population are labor population. Working makes income. Therefore they have higher power of purchase, leading to improve the economic states. Therefore, the shortages of labor is crucial problem, because the labor is an important element of economic system. (Chamnong Somprasong & Pradit Chasombat, 1976: 1) The

shortage of labor in agriculture sector is the important problems because the economic structure of Thailand is based on the agriculture (Niphon Puapongsakorn, 1996: 462)

3.2 Factors affected the shortage of labor in agriculture.

Several factors affected the shortage of labor. They were the administrative policy of the country and other related to the structures of agriculture. However, only the National policy is presented.

3.2.1 The population policy.

Before the National Social and Economic Development plan, the policy and popular values are the population increased rate support. The higher population demand aimed to increase power in military force and labor force in agriculture. Since the population policy implementation the policy tranfered to decrease the population growth rate from 3 percents to 1.5 percents in 1986, lower than the replacement level of fertility rate, lead to small size of household with 3.8 person.

3.2.2 The Industrial Development Policy.

The Thai government declared the success of the implementation of the first to Forth National social and Economic Development Plan, especially in Bangkok and its vicinity. Which leading to the disparity between urban and rural area. (The National Committee on Social and Economic Board, 1987: 19 – 26; 1989: 26 – 27) While the ecosystem in the Northeast of Thailand had changed. It was not appropriated for planting crops. The Northeastern moved to Bangkok and vicinity. The Migration Policy was formulated in the Forth and Fifth Plan focused more on main province development in and to expand the industrial sectors to the rural area.

With regard to the migrants survey to Cholburi 1997 (National Statistic Office) revealed that from September 1975 to August 1977, 12,125 migrants moved to Cholburi Province.

3.2.3 The policy on promoting Labor working abroad.

With regard to the estimation of the unemployment crisis of the Fifth Plan (1982 – 1986). Several policies related to labor force were formulated, such as the policy of employment extension both in urban and rural area, Labor relation Administration Policy, Decreased the seasonal unemployment, promoting labor to abroad. (Niphon Puapongsakorn, 1995: 401 – 409) The policy decreased burden of the government and import also the monetary income to Thailand. Most of the out migrants were males. (Pharaphan Un-OB, 1994: 1) therefore, this policy affected to the shortages of labor in agriculture sector (See Table 10)

Table 10 The estimation of Labor abroad in 1996

Country	Legally	Illegally	Total
Saudi-arabia	20,000	15,000	35,000
Isarael	17,000	500	17,500
Gatar	4,500	-	4,500
Bahrehn	1,500	-	1,500
Arab Emirate	3,500	-	3,500
Kuwait	2,401	-	2,401
Li-bia	6,000	-	6,000

Table 10 The estimation of Labor abroad in 1996 (Cont.)

Country	Legally	Illegally	Total
Oman	400	-	400
Yemen	100	-	100
All countries in Middle East	55,401	15,500	70,901
Malaysia	5,490	104,335	109,825
Singapore	42,000	28,000	70,000
Brunei	35,000	30,000	65,000
Hongkong	8,944	2,000	10,944
Japan	8,303*	70,000	78,303
Taiwan	200,000	3,000	203,000
Korea	453*	1,740**	2,193
All Asian countries	300,190	239,075	539,265
USA	721*	-	721
England	71*	-	71
German	278*	5,000	5,278
Denmark	36*	-	36
Australia	43*	-	43
Greece	300	-	300
Italy	1,200	-	1,200
France	-	30,000	30,000
Other	2,649	35,000	37,649
Total	358,240	289,575	647,815

Source : International Thai labor Office, Thai Embassy Soul Korea, August, 1995

3.2.4 The policy on education

Before the notional Education Plan in 1960, The education philosophy focussed on moral of the learners. The household hired the members, the professionals for their business. The second plan was promoted manpower development in accordance with the socio-economic needs. The policy also focus on the extention of the education to higher education in the university. (Niphon Puapongsakorn, 1995: 462)

4. Concepts on the labor demand in agriculture sectors.

4.1 Determinants of the demand for labor.

The labor demand refers to the amount of labor demand at various level employment with regard to the production factors are the production factors, the magnitude of demand for labor. To measure the demand is based on 3 conditions.

Firstly is the important. The more labor demand is, the more important the labor force is.

Secondly is nature of demand for product. It refers to goods demand for production. Higher demand needs more labor forces place to higher labor demand.

Thirdly is the essentiality. If the production can not use other production factors, the labor demand is higher. (Boonkong Hanchangsit, 1995: 38; Preeda Naknawatim, 1987: 332 – 334)

4.2 Determinants of supply for labor.

Labor supply refers to the amount of labor entering to the labor market. The higher wage rate is the higher labor supply is. The amount of labor supply more of less depends on the following factors.

The population base, the growth rate of the population determine the labor supply. The higher the population growth rate is, the higher the labor supply is.

The labor force participation rate refers to the proportion of the population who decide to work, leading to higher labor supply. The more the children enrolls the schools is, the lower of the labor supply is.

Hours of work is the determinants of labor supply. The amount of labor is measured by hours of work depending on the amount of labor force and hours of work in a week.

Labor force quality refers to the different quality of the labor force which affect the different work output.

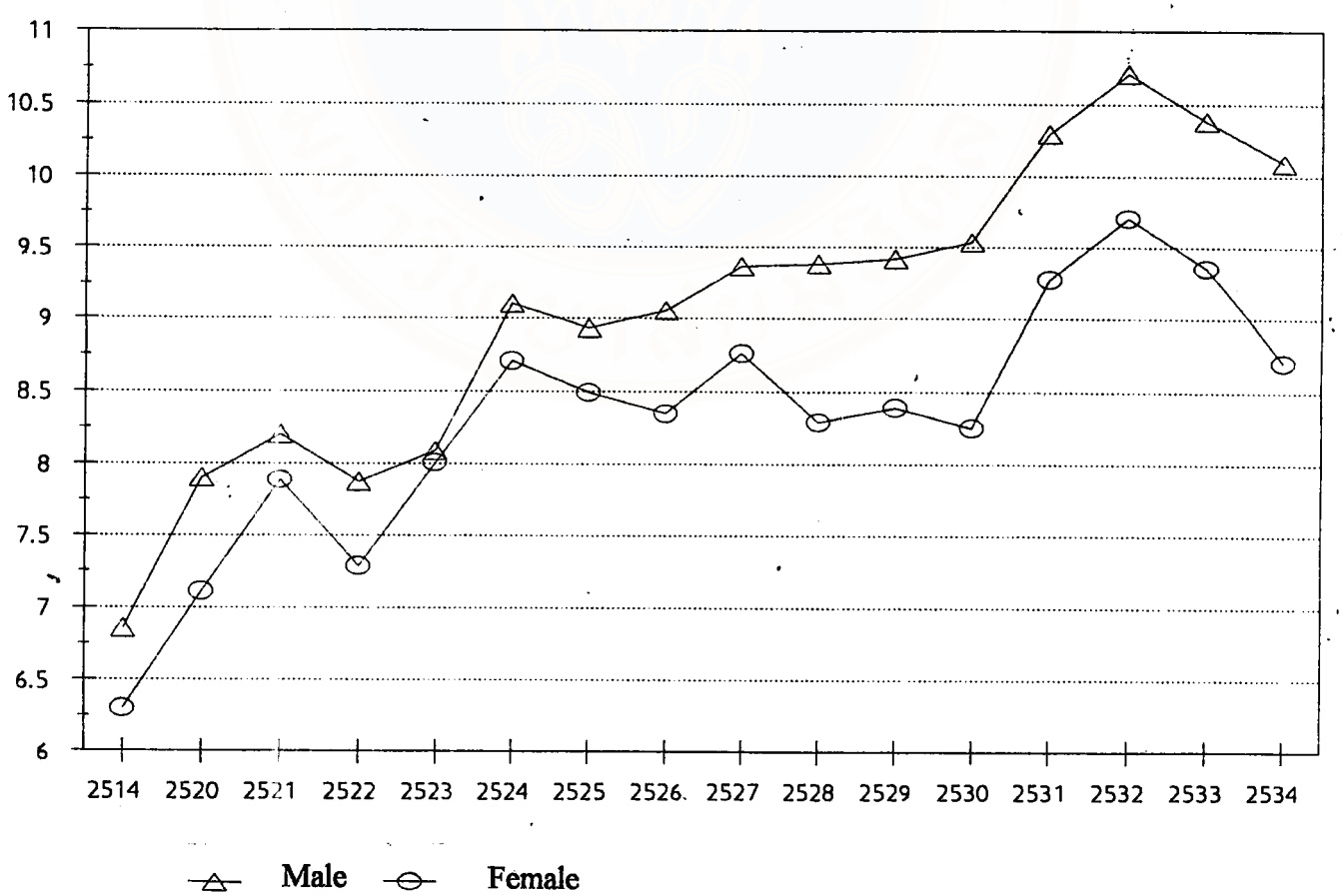
Work intensity refers to the amount of labor force, measure the intensity of working. Since the higher work intensity produce more work effectiveness, it seems like to have more labor force. (Preeda Naknawatim, 1987: 334, Sukanya Nithangkorn, 1995: 80)

4.3 Labor supply in agriculture sectors.

Voravit Charoenlert and Bundit Thanachai-Setawut (1997: 28 – 29) reported on the labor supply in agriculture sectors. They concluded that the government had promoted the agricultural production for export.

The economic production crop were promoted, and it depended on the world's price, but lack of the technologies used promotion. Therefore, the labor supply was high. The farmers were interested more in planting the economic production crops than technologies refer. The Thai agriculture remained the traditional labor supply. (Niphon Puapongsakorn and Patama Suzuki, 1992: 13) concluded the labor supply that the higher labor supply is because the variation of seasoning was reduced. The irrigation system provided the plantation all the year rounds. (See Figure 4)

Figure 4 Graph presentation of Thai agricultural employment during 1971 – 1991.



Source : Niphon Puapongsakorn and Patama Suzuki, 1992: 13

4.4 The production system and the labor market.

4.4.1 The production system.

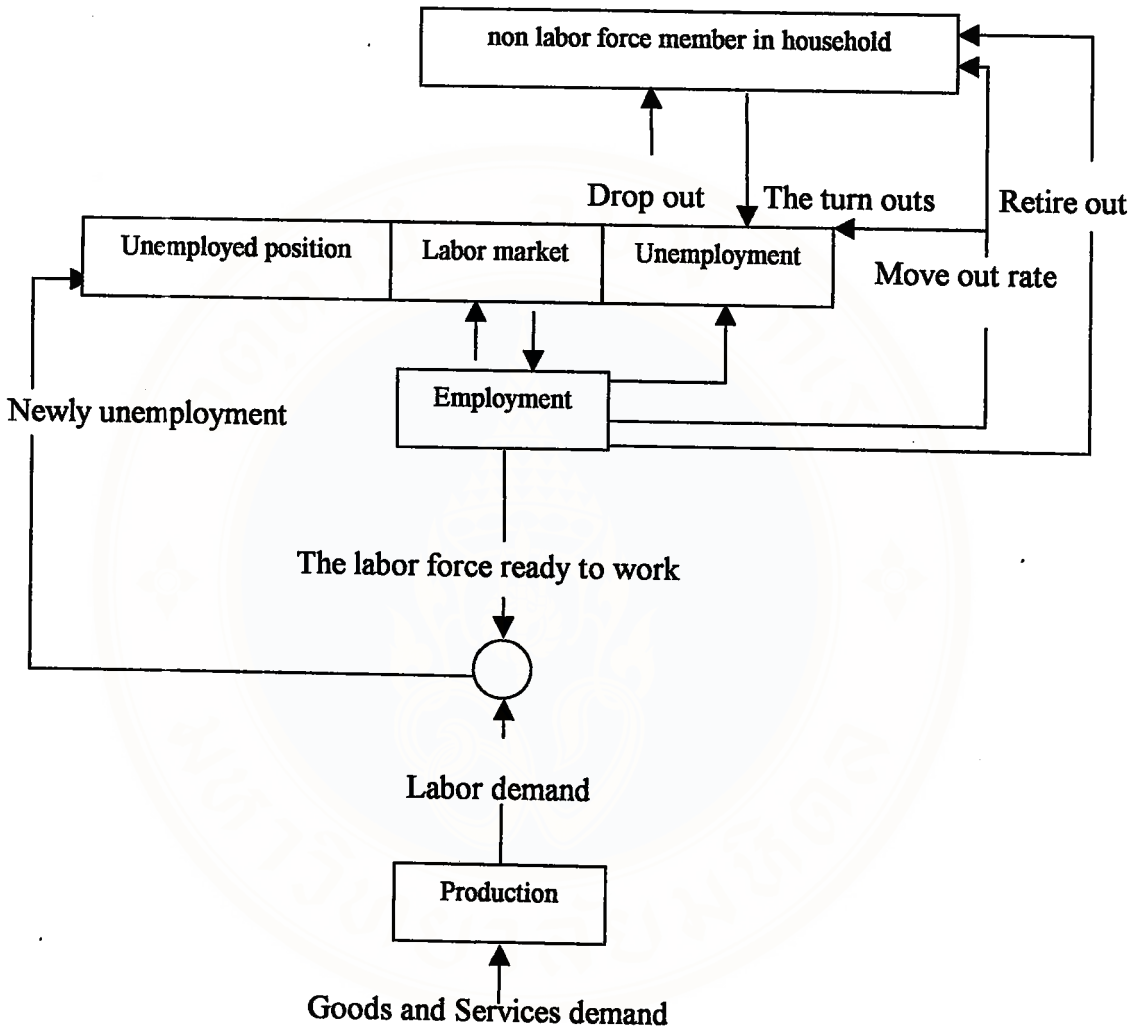
Time period is important to the production and the cost of production. Short-term or long-term period is not really definite. It depends on the production factors used such as the problem of labor supply, the amount of unskilled labor may easily find than the skilled labor.

4.4.2 The labor market.

The labor market refers to the place where the employers need the workers, or the place where labor supply and demand is.

4.4.3 The labor market flows. (Niphon Puapongsakorn, 1995: 304) as figure 5.

Figure 5 Model of the movement of labor Market



Source : Niphon Puapongsakorn, 1995: 304

The reasons, that the workers seek for the jobs and the employers seek for the workers, are as follows.

Firstly, because of the differences of the jobs

Secondly, because of the seek cost, the employer and employee try hard to seek the job or workers.

4.5 Theory on hiring according to labor economy.

Based on the theory of Marginal Productivity of labor concluded that under the assumption of profit maximization, the decision on increasing or decreasing will consider the following issues.

4.5.1 The amount of production increased should assess from the Marginal Physical Product of Labor or MPPL.

4.5.2 The income increased is equal to MPPL multiply by the market price, called Value of Marginal Product of labor or VMPL. It is the total income gained from the increased rate of 1 unit of employment.

4.5.3 In case of big size of business, the amount of the products affect the goods prices in the market. In such case, income calculated by MPPL multiply income gained from the increased rate of 1 unit of the products sale called Marginal Revenue (MR). The outcome is Marginal Revenue Product of labor (MRPL).

4.5.4 Comparing the VMPL in the competitive in market is equal to wages from 1 unit of employment increased and equal to wage rates. The rate is equal to wages in the market. Wherever the labor increased more the income (MRPL) or the added values (VMPL) to the business than the cost, the business would hire more labor force. Contrarify, if MRPL or VMPL is lower than wages rates, so no more employment.

The decision making for employment based on the theory of marginal productivity of Labor, Bomkong Hanchangsit (1995: 62 – 75) indicated that even this theory were widely accepted, the weakness of the theory could be awared. Since labor was the semi-stable factor, decision to hire did not depend on the marginal productivity of labor, wage rate and products' price in the market, but also other related factors such as cost for labor demand, and training the new workers.

4.6 Theory of wage and pattern of wage.

4.6.1 Theory of wage refers to the wages is the essential production capital, especially industry sector.

4.6.1.1 Subsistence theory of Wage or Iron Law of Wage of David Ricardo which was affected by Malthus' population concept. It referred that "Wage is optimal for preserving life." Wherever the wage was cheaper and the standard of living higher than the optimal level of life, the higher of marriage and safe childbirth was. The population more increased than the jobs which leading to lower wage rates until lower than the subsistance level.

4.6.1.2 Wage-Fund theory was the John Stuart Mill's concept. Wage was equal to the amount of wage funds divided by the left workers.

4.6.1.3 Standard of living theory referred to wage should be equaled to the cost of living with regard to the standard of living. This concept was widely accepted and used after the second world war. But the complexity found in determine the level of standard of living in each social groups.

4.6.1.4 Bargaining Power Theory.

Wage was determined by bargaining between the employer and the employee. Those groups with higher bargaining power would be the advantage group to determine the wage

4.6.1.5 Productivity theory.

Wage was determined with regard to the products that the worker produced. The more products the worker did, the more wage the worker got. Adam Smith David Ricardo and Karl Marx referred that good prices calculated from wage paid for productivity. The theory was not accepted at present because several production factors were used.

4.6.2 Pattern of Wage.

The patterns of wage was divided into 3 categories.

4.6.2.1 The individually wage which depended on productivity. Wage rate depend on times, productivity and extra wage.

Wage rate in agriculture usually is time period, hourly or monthly. Wage rate in industry is depend into 3 pattern such as time rate, price rate and product rate.

4.6.2.2 Group Wage.

Wage is considered with regard to the group's productivity, the contractor, and extra wages.

4.7 Related research findings about the agriculture employment.

Kees Bot and Wilbert Gooneratne (1982: 69 – 116) studied on labor absorbent to agriculture sector in term of rice farming in Thailand. The study found that Thailand had 3 labor problems.

4.7.1 The labor mostly was women and the old age person.

4.7.2 No participative action as before.

4.7.3 The price of the products was low

5. Concepts related the foreign labor force policy.

5.1 The definition of labor and foreign labor.

Thai dictionary 1983 defined labor as the labor population included not the disabled, mental retarded, students, housewives, monks, soldier and those in the jails.

Sumalee Pitayanon (1992: 1) defined as follows

5.1.1 physically energy and thoughts

5.1.2 labor class

5.1.3 all person in the labor force

5.1.4 man-day or man-hour

5.1.5 Both physically energy and thoughts leading to business.

While the international migration (Penporn Theerasawat, 1986: 111) indicated that the mobility of the population cross the other country's boundaries UNESCO (1982: 21) reveral countries defined the international migrants as "Guest Workers". Kritaya Archavanichkul and others (1998: 9 – 16) defined the person who traveled across from countries to other countries, the non-nationality were included. The foreign migrants were classified into 2 groups. They were the legally migration and illegal foreign migrants.

5.2 Policy and regulation related to solve the foreign labor

5.2.1 Making them legally defined.

5.2.2 Limitation of the boundaries.

5.2.3 Waking in concertion among the employees, employers and the government officers.

5.2.4 Those regulation implemented with the regulation of pushing back to hometown.

The regulation are concluded as follows

1. Expanding the foreign labor employment in 43 provinces.
2. Nationality such as Mynmar, Loas and Cambodia
3. Employment for labor demand only
4. Employment in 11 kinds of jobs
5. Time of employment is 2 years
6. The Thai labor force first

5.3 Policy of the foreign employment

Policy determined to hire the foreign labor in 11 kinds of jobs. They are agriculture, fishery, other fishery related, construction, mineral business, water transportation, housewife, salt field, water storage factory, cement factory and production business.

5.4 Policy of Trat's foreign labor employment.

By permitted to employ the foreign labor in another 1 year. The labor force from Mynmar, Loas and Cambodia are permitted to work in rubber field, rice

mills, fishery and other fishery related. The Cambodia were permitted also to work is vegetable planting, ice factory, fish factory, shrimp related factory, sand factory, construction and the animal raising.

5.5 The consequences of the foreign employment affected to Thai society. (Institute of Population Social and Research, Mahidol University, 1996: 322)

5.5.1 The economic impact. The advantages found were the labor replaced the shortage of labor in 3-D business, such as labor, fishery, construction and agriculture.

5.5.2 The social impact on some criminal cases such as illegal migration, addictions, forestry damage.

5.5.3 The health impact. The preventable diseases were found such as malaria, diarrhea.

According to the above mentioned theory and concepts, the conceptual model of this study was formulated identifying the independent and the dependent variables. The conceptual framework underlying the study can be explained diagramatically as shown in chapter 1.

CHAPTER III

MATERIALS AND METHODS

The study design was a survey research aimed to determine factors related to the decision made of the agriculturists' households in agricultural hiring the Cambodian migrant labor force.

1. The target population and the sample size

1.1 The target population

Trat province was purposively selected for the site of study because of the following reasons

Firstly, Mostly of the population in Trat are the agriculturists. Those 17,760 of the people are the owner of the land with 598,640 Rai. Almost 100 percent (99.06%) of the owners are plant cropping.

Secondly, Trat province faces with the shortage of the labor force in the agriculture sectors.

Thirdly, A large amount of the Cambodian moves to Trat province.

Forth, Trat province's border is close to the Cambodia in the north, the south and the west direction. Therefore, it is very convenience for those Cambodian to move in and out Trat province both by bus and by boat.

The target population in this study was those 17,960 agriculturists' households who own the land for planting in Trat (The agriculture Census of Trat, 1993: 9)

1.2 The sample size and the sampling technique

1.2.1 The sample size

The sample size was calculated by the Yamane's formula (Turo Yamane, 1973) as follow:

$$n = \frac{N}{1+N(e)^2}$$

where n= sample size

N= total number of population(17,960)

e = sampling error(=.05 was set for this study)

Thus

$$n = \frac{17,960}{1+17,960(.05)(.05)}$$

$$= 391.29$$

$$= 391$$

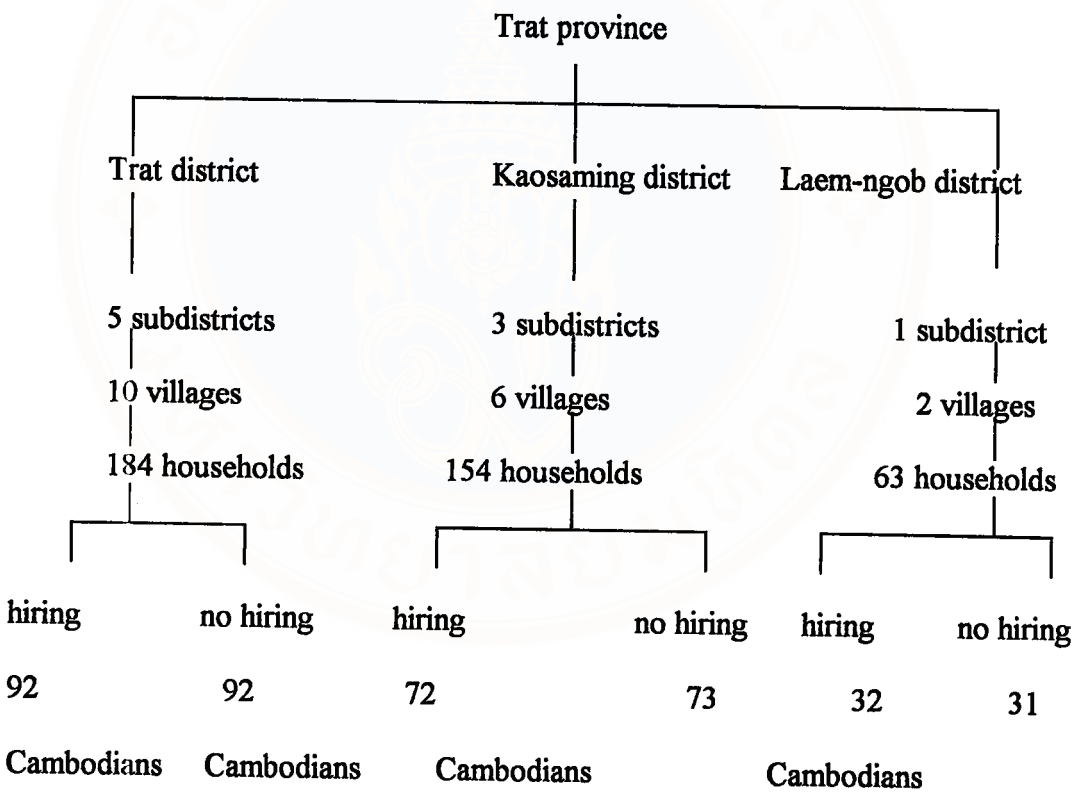
The sample size is 391 households. With regard to the purpose off the study, 392 households are determined to be the sample size for this study.

1.2.2 The sampling technique

The sampling method used to obtain the sample was multistage stratified random sampling. First of all, the 3 districts were purposive sampling, which were Muang Trat, Kaosaming and Laem-ngob. Secondly, in sub-district level, the list of each sub-district was proportional randomly sampling. It came up that 5 subdistricts in Muang Trat, 3 subdistricts of Kaosaming and 1 subdistrict of Laem-ngob. Lastly, the households were sampling. The list of Cambodian names in each subdistrict which were registered at the Provincial Office of labor were drawn out 18 – 19 households per subdistrict and from those households who did

not hire another 18 – 19 households. Figure 6 and Table 11 - 14 detailed this procedure as follow.

Figure 6 The sampling size of 392 was divided into two groups. One was the 196 households who hired the Cambodian labor force migrants and the other 196 was the household who did not hire the Cambodian labor force migrants.



The followings were the steps of sampling.

First, the district level was purposive sampling. They were Trat, Kaosaming, and Laem-ngob. Because Most of the land's owners (80.63 percent) were in the 3 districts including the large amount of planting areas. The sample size was proportional formula as follow:

$$P = ni/N$$

Where P = the proportion of sample in each district

ni = the population size in each district

N = the summation of the population of the 3 districts

The result of the sampling was shown in Table 11.

Table 11 The number of the population, the proportion, and the sample size by districts

District	No. of the pop.	Proportion	No. of the sample
Muang Trat	6,812	0.47	184
Kaosaming	5,308	0.37	145
Laem-ngob	2,362	0.16	63

Source: Trat's Agriculture Census, 1993: 31-90

Second, the proportional stratified random sampling was obtained for the subdistrict level. Night sub-districts were samples as shown in Table 12

Table 12 The number of sub-district, proportion, and the number of the sample by districts.

District	Sub-district	Proportion	No. of the sample
Muang Trat	13	0.52	5
Kaosaming	8	0.32	3
Laem-ngob	4	0.16	1

Source: Provincial Administration Office of Trat

Third, the proportional stratified random sampling was obtained for the village level. Eighteen villages were samples as shown in Table 13

Table 13 The number of villages, proportion, and the number of the sample by districts.

District	Sub-district	Proportion	No. of the sample
Muang Trat	5	0.56	10
Kaosaming	3	0.33	6
Laem-ngob	1	0.11	2

Forth, the systematic sampling was obtained for the household level. Eighteen villages were samples as shown in Table 14.

Table 14 The size of the sample by districts and subdistricts.

District/ Subdistrict	Hired the Cambodians (no of households)	Hired not (no of households)	Total (no of households)
Muang Trat			
Nongsano	18	18	36
Heuyrang	18	18	36
Wangkaje	18	18	36
Leamklad	19	19	38

Table 14 The size of the sample by districts and subdistricts. (Cont.)

District/ Subdistrict	Hired the Cambodians (no of households)	Hired not (no of households)	Total (no of households)
Chamrak	19	19	38
Total	92	92	184
Kaosaming			
Santung	24	24	48
Tasoom	24	25	49
Satau	24	24	48
Total	72	73	145
Leam-ngob			
Leam-ngob	32	31	63
Total	32	31	63

2. The research instrument construction and testing

2.1 The research tools were as follows:

2.1.1 The interview was formulated with regard to the question items that achieved the objectives of the study, the hypothesis testing and response to the outcome expected from this study. The questions were into 9 parts which were related to each variable studied, except the first part.

Part 1 was the information on general characteristics of the samples such as sex age and the education level.

Part 2 was the statement on the production tools such as land, labor, the capital and the kind of production.

Part 3 was the statement on the characteristics of workers hired such as the wages, the capacities and their past work experiences.

Part 4 was the statement on the kind of labor who requested for working.

Part 5 was the statement on the hiring characteristics such as hiring through network or subcontractors.

Part 6 was the statement on the socio-economic status of the agriculturists' households such as the income.

Part 7 was the statement on the data that the household did not hire the Cambodian workers. The questions were about the internal hiring.

Part 8 was the statement on the data that the household hired the Cambodian labors. The questions were about the number of workers, the time of hiring and the duration.

Part 9 was the open-ended questions for the sample to share any ideas, the recommendations and the problems found.

The questionnaire was both the open and closed questions. It depended on the question items formulated. This interview questionnaire was used to interview the 392 samples of the study.

2.1.2 The in-depth interview guidelines were also used to draw out the following data.

Part 1 Regulations and the practical steps related to hire the foreign labor force.

Part 2 The agricultural policy related to para rubber and fruit tree planting.

Part 3 The impact of the foreign labor force toward the society in Trat province.

Part 4 The agricultural process of production of para rubber and fruit tree planting including the process of hiring.

Part 5 The way of job seeking among the foreign labors and the local labors.

The above item of questions was used to interview the 5 target groups, separately interview of each group.

2.2 The instrument test for validity and reliability

2.2.1 The contents of the interview questionnaire validated by those 5 experts in economy, population, social and labor force. The lesser index of congruence than 0.5 was re-considered.

2.2.2 The t-test of discrimination power was used to test the discrimination power by items. Those items with higher t-value than 2.0 were used.

2.2.3 The Cronbach's Alpha coefficient was also used to test the reliability of the questionnaire. The questionnaire used in data gathering was pre-test with the appropriated 30 households in Trat province. The test for reliability by items and all the set of the questionnaire were analyzed with the SPSS/PC version 7.5. The reliability coefficient 0.6 and above was accepted. Those items less than 0.6 was corrected. Finally, the reliability coefficient of the questionnaire was 0.8976.

3. The data collection

The two main procedures of the data collection were as follows.

First, the data was gathered by interviewing the samples.

- The 12 filed researcher assistances were selected. They were 9 health personnels, one of them collected the data at subdistrict and 3 were the co-ordinators. The others were the technical health staff of Trat, Master degree students of Mahidol University, deputy of the school principals of Laem-ngob school who co-ordinated the field work in Muang Trat, Leam-ngob and Kaosaming.

- Meeting conducted aimed to clarify the purpose of the study, the importance of facts drawn from the data collected, introduced and explained the methods of interviewing and also discussed other related issues that the team raised.

- Conducted the project survey in order to try out the interviews questionnaire, 2 sets per each, by mean of interviewing both the household who hired the Cambodian labors and the household who did not hire.

- Revised the process of data collection among the team and then started collection for 19 days during 28 November till 16 December 2000.

The second, data collection obtained from the in-depth interview. The investigator gathered the data by own self from those 5 groups of 14 respondents as follows.

Group 1 The 3 government officers related to the foreign labors were interviewed about the following issues.

1. Rules and regulations related to the Cambodian labor force of Trat province area.

2. The practical steps of the employers related to employ the Cambodian labor force.

3. Problems and constraints related to the Cambodian labor force.

Group 2 One government officer related to the agricultural sector of para rubber or fruit tree was interviewed about the policy, regulations relation to the promotion of para rubber or fruit tree planting including the problems or constraints of the promotion of para rubber or fruit tree planting.

Group 3 The 2 people of Trat province were also interviewed about the impact of the foreign labor force toward Trat population.

Group 4 The 6 agriculturists of para rubber and fruit tree planting which 3 of them hired the foreign labors and the others did not hire. They were interviewed about the following issues.

1. The process of labor used in para rubber planting.
2. The process of labor used in fruit tree planting.
3. The problems and needs of the foreign labor used.
4. The process of the foreign labor hiring.
5. The agreement relation to wages and welfares.
6. The attitudes towards the foreign labors.
7. The consequences of hiring the foreign labors.

Group 5 the 1 Cambodian and 1 local labor were interview about :

1. The process of work
2. The agreement relation to wages and welfares.
3. Reasons and motives to work.

4. The attitudes towards the employers who planted the para rubber or fruit tree planting.

5. The attitudes towards the Trat population.

4. The statistical used

4.1 Descriptive statistics such as frequencies, percentage, arithmetic means, and standard deviations were used to describe the independent variables including any recommendations and problems met.

4.2 Inferential statistic, logit regression analysis was to determine factors related to the decision of the agriculturists' households in hiring the Cambodian labors. Households were the unit of analysis.

5. The methods of the analysis

Since the data collected from 392 respondents and 14 samples of the in-depth interview were edited, coding guidelines were formulated, the analysis began. Data analysis were processed by the package of SPSS for window version 7.5 for microcomputer. The two parts of analysis were descripted as follows.

Part 1 was the analysis of data drawn from the interview questionnaire among the agriculturists' households. The analysis was divided into 2 sets.

First, the descriptive statistics such as the arithmetic means, standard deviations, variation co-efficient and mode were used to describe the distribution of the variables. They were the general characteristics of the respondents, the households who hired the Cambodian labors group and the group who did not hire.

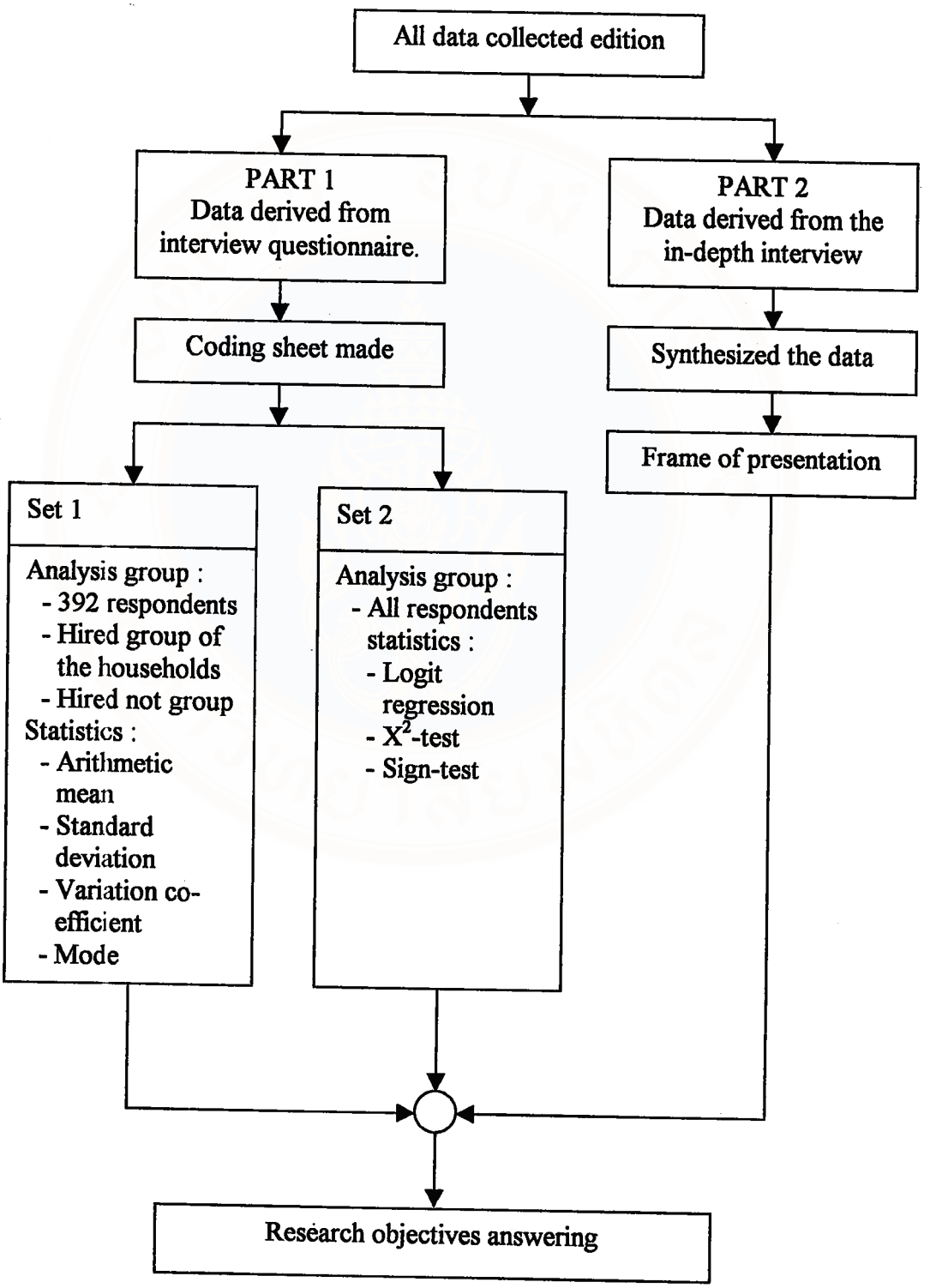
Secondly, the inferential statistic, logit regression model was performed to find out the equation of the decision on hiring the Cambodian labors. Since the analysis aimed to infer to the Trat population, To apply the logit regression, test for collinearity using Pearson's coefficient (y) were used. Finding indicated that no multicollinearity existed among the independent variables. Then the logit regression was performed. X^2 –test was used to test the research hypothesis.

Finally, sign-test was used to test the direction of the relation between the independent and dependent variables. The model and equation drawn from this study, the logit model used was

$$\text{Log } [M_{ij}/(1\text{-}DM_{ij})] \quad = \quad \sum B_k X_{ij}$$

Part 2 Data derived from the in-depth interview was synthesis by the investigator. In order to complete the result of the study, the frame of presentation the data was formulated.

Figure 7 Frame of data analysis presentation.



CHAPTER IV

RESULTS

This chapter presented the research results, devided into 2 parts as follows.

PART I presented the results derived from the respondents' interview questionnaire, which consisted of 3 sets.

The first was the comparative study between the Cambodian labors and the non-Cambodian labor hiring groups.

The second was the result of model of decision to hire the Cambodian labors among the agriculturists' households.

The last one was the research hypothesis testing.

PART II presented the findings derived from the respondents's indepth interview.

Symbols used in data analysis were as follows.

$\overline{X}$ was the arithmetic mean.

S.D. was the standard deviation.

C.V. was the coefficient of variation.

X^2 was the statistical significance of the relation between the independent and the dependent variables which were the nominal scale and above.

γ was the pearson's correlation.

Table 15 The description of symbols, signs (+,-) and the characteristics of the independent variables analyzed.

Label	Signs	Variable description
LAN	+	Sign of farm holding land (unit : RAI).
HLF	-	The household's member labor force.
CAP	+,-	The capital and technologies used in farm production.
RP	+	Para rubber planting.
FP	+	Fruit trees planting.
EXP	+	The Cambodian's experiences in agriculture.
W	+	Wages.
GE	+,-	Respondent's sex.
AGE	+,-	Respondent's age.
MS	+,-	Respondent's marital status.
LLF	-	The local labor force.
ILF	-	In-country labor force.
CLF	+	The Cambodian labor force.
WN	+	Via network.
WI	-	Via workers directly.
WE	-	Via household's past experiences.
NI	+	Net income derived from the agriculture section per year among the agriculturists' households.
CLF	+,-	Labor exchange among the agriculturists' households.
PPL	+,-	The perception of the abroad labor force among the agriculturists' households.

+ refers to the some direction relation.

- refers to the opposite direction relation.

+,- refers to the uncertain direction relation.

PART I The results derived from the respondents' interview.

The first was the comparative study between the Cambodian labors and the non-Cambodian.

Table 16 Percentage distribution of the general characteristics of the agriculturists' households head by the hiring of the Cambodian labors.

The characteristics	**The hiring group**	
	Hiring	**Not Hiring.**
Sex		
Male	80.2	76.2
Female	19.8	23.8
Total	100.0	100.0
Age (year)		
Below 30	8.0	7.1
30 – 39	11.5	14.2
40 – 49	43.7	46.8
50 – 59	32.5	30.5
60 and UP	4.3	1.4
Total	100.0	100.0

Table 16 Percentage distribution of the general characteristics of the agriculturists' households head by the hiring of the Cambodian labors. (Cont.)

The characteristics	The hiring group	
	Hiring	Not Hiring.
Marital status		
Single	1.2	1.4
Married	79.5	85.2
Widowed	10.3	13.4
Divorced	0.5	0.0
Total	100.0	100.0
Number of children aged 15 years and Above in the households		
Below 2	77.6	23.7
2 – 4	22.4	58.9
more than 4	0.0	17.4
Total	100.0	100.0
Education level		
Elementary	96.7	95.3
Secondary	2.4	1.7
Higher than	0.9	3.0
Total	100.0	100.0

The table 16 indicated the findings as follows.

Sex. Heads of the households, hired the Cambodian labors and non-hired, were males, 80.2 and 76.2 percent respectively.

Age. The age among heads of the households, both groups, ranged from 40 – 49 (43.7 and 46.8 percent) of which, the lowest rate was the old age groups (60 years and above)

Marital status. Most of the respondents were married, among the hiring group was 79.5 percent and the non-hiring was 85.2 percent. While lowest rate in divorced was found among the hiring group, and was not found among the non-hiring group.

The number of children age 15 years and above in the household.

The findings indicated that most of the household's Cambodian hiring group (77.6 percent) had less than 2 children in the households. Non had 4 children in the households. The household's non-Cambodian hiring group, more than half of them (58.9 percent) had 2-4 children in their households and 17.4 percent of them had more than 4 children.

The education. Almost all of the household's Cambodian hiring group (96.7 percent) completed the elementary school. Only 0.9 percent accomplished higher than the secondary school. While most of the non-Cambodian hiring group (95.3 percent) completed the elementary school and 3.0 percent accomplished higher than the secondary school, a little bit higher than another group of the respondents.

Table 17 Percentage distribution of size of land holding by the Cambodian hiring groups, crop year 1999/2000.

Size of land holding	**The hiring group**	
	Hiring	**Not hiring**
Size of land (RAI)		
Under 15	0.0	73.9
16 – 30	2.7	12.6
31 – 45	10.8	8.5
46 – 60	19.3	3.7
More than 60	7.2	1.3
Total	100.0	100.0
Characteristics of holding		
Owner	100.0	99.7
Rent	0.0	0.3
Total	100.0	100.0

Table 18 Percentage distribution of member of labor force of the households and labor force distribution by the Cambodian hiring group, crop year 1999/2000

No of labor force/distribution	The hiring group	
	Hiring	Not hiring
Number of labor in the household		
among those with 15 years and above.		
Below 3	10.1	9.8
3 – 5	87.3	77.6
more than 5	2.6	12.6
Total	100.0	100.0
The distribution of labor.		
For their household only		
Below 3	6.3	8.1
3 – 5	21.4	60.7
more than 5	0.0	8.1
Both for their own and others		
Below 3	2.2	1.2
3 – 5	12.7	13.5
more than 5	0.5	3.3
For other only		
Below 3	1.6	0.5

Table 18 Percentage distribution of member of labor force of the households and labor force distribution by the Cambodian hiring group, crop year 1999/2000 (Cont.)

No of labor force/distribution	The hiring group	
	Hiring	Not hiring
3 – 5	53.2	3.2
more than 5	2.1	1.2
Total	100.0	100.0

Table 19 Percentage distribution of capital used in production by the Cambodian hiring group, crop year 1999/2000

Capital value (Baht)	The hiring group	
	Hiring	Not hiring
Animal labor		
Below 1,000	0.1	0.2
1,000 – 5,000	0.3	0.5
more than 5,000	0.1	0.8
Agricultural tools/machines		
Below 1,000	1.2	4.5
1,000 – 5,000	4.4	6.8

Table 19 Percentage distribution of capital used in production by the Cambodian hiring group, crop year 1999/2000. (Cont.)

Capital value (Baht)	The hiring group	
	Hiring	Not hiring
more than 5,000	**10.2**	**40.7**
Fertilizer		
Below 1,000	0.5	8.2
1,000 – 5,000	5.2	9.3
more than 5,000	**70.7**	**40.6**
Other technologies		
Below 1,000	0.2	0.8
1,000 – 5,000	3.5	19.9
more than 5,000	3.6	9.3
Total	100.0	100.0

Table 20 Percentage distribution of production types by the Cambodian hiring group, crop year 1999/2000

Types of production (RAI)	The hiring group	
	Hiring	Not hiring
Para rubber planting		
Below 15	0.2	86.3
16 – 30	4.5	10.4

Table 20 Percentage distribution of production types by the Cambodian hiring group, crop year 1999/2000. (Cont.)

Types of production (RAI)	The hiring group	
	Hiring	Not hiring
31 – 45	10.7	1.8
46 – 60	14.3	1.5
more than 60	70.3	0.0
Total	100.0	100.0
Fruit tree planting		
Below 15	0.1	9.1
16 – 30	1.7	4.8
31 – 45	8.4	3.5
46 – 60	15.1	2.3
more than 60	74.7	0.3
Total	100.0	100.0

From table 17 – 20, the Cambodian hiring's households group owed the following production factors.

Size of land holding. More than half of the household (67.2 percent) owned more than 60 Rai, 2.7 percent owned only 16 – 30 Rais of which all had their own lands.

Labor force. Most of the household (87.3 percent) had 3.5 household's members aged 15 years and above and only 2.6 percent of the households had more than 5 household's members.

Their distribution of labor.

Three to five members worked for their own farming only 21.4 percent, both for their own and others 12 percent and others out of the farm 53.2 percent (Table 18).

The capital used in agriculture production consisted of the animal labor which was valued highest 1,001 – 5,000 Baht, the agriculture tools/machines was higher than 5,000 Baht and other technologies was also higher than 5,000 Baht. The highest capital used was fertilizer (70.7 percent), while the lowest capital used was the animal labor, only 0.1 percent (Table 19).

The production characteristics of the agriculture's household.

Those households of 70.3 percent who planted para rubber used land more than 60 Rais, and 0.2 percent of them used less than 15 Rais.

Those who planted fruit trees, most of them (74.7 percent) used land more than 60 Rais and only 0.1 percent used less than 15 Rais.

The non-Cambodian hiring groups owed the following production factors as follows.

Size of land holding. Three-forth of the households (73.9 percent) owned less than 15 Rais, only 1.3 percent owned more than 60 Rais of which almost all (99.7 percent) had their own lands and 0.3 percent rent the land.

Labor force. Three-forth of the households (77.6 percent) had 3-5 household's members aged 15 years and above.

They distribution of labor force as follows.

Three to five members worked for their own farming 60.7 percent, only 13.5 and 3.2 percent respectively worked both for their own and others and out of their farm (Table 18).

The capital used in agriculture production consisted of the animal labor which was valued highest (more than 5,000 Baht) as the same as fertilizer used. Value of other technologies used ranged from 1,000 – 5,000 Baht. The highest capital used was tools/machines (40.7 percent) and the lowest was the animal labor (0.2 percent) as table 19.

Types of the household's production, most of those who planted para rubber (86.3 percent), used land for planting less than 15 Rais. None planted para rubber more than 60 Rais. Those planted fruit trees, most of them (89.1 percent) also used land less than 15 Rais, and only 0.3 percent used land more than 60 Rais (Table 20).

Table 21 Percentage distribution of the labor's characteristics needed to hire among the agriculturists' households by the Cambodian hiring group, crop year 1999/2000

Characteristics	The hiring group	
	Hiring	Not hiring
Labor's characteristics		
Knowledge and experience based in agriculture	97.8	95.6

Table 21 Percentage distribution of the labor's characteristics needed to hire among the agriculturists' households by the Cambodian hiring group, crop year 1999/2000 (Cont.)

Characteristics	The hiring group	
	Hiring	Not hiring
Knowledge and experience based needed not	2.2	4.4
Total	100.0	100.0
Pattern of wages		
Daily	8.2	65.2
Monthly	1.1	4.8
Lump sum paid	20.5	5.6
By pieces of work	70.2	24.4
Total	**100.0**	**100.0**
Population's characteristics		
Sex		
Male	97.2	20.6
Female	2.8	79.4
Total	100.0	100.0
Age (year)		
Below 30	76.9	70.8
30 – 40	20.5	25.3
more than 40	2.6	3.9
Total	100.0	100.0

Table 21 Percentage distribution of the labor's characteristics needed to hire among the agriculturists' households by the Cambodian hiring group, crop year 1999/2000 (Cont.)

Characteristics	The hiring group	
	Hiring	Not hiring
Marital status		
Single	40.3	80.5
Married	55.6	19.2
Widowed	4.1	0.3
Divorced	0.0	0.0
Total	100.0	100.0

Table 21 indicated the findings as follows.

Almost all of the hiring group (97.8 percent) needed to hire the labor who had both knowledges and experiences in agriculture.

Most of the wages' pattern (70.2 percent) was by pieces of work.

The population's characteristics among the labor force, most of them (97.2 percent) were malls. Their age group was below 30 years (70.8 percent) most of them (80.5 percent) were single.

Table 22 Percentage distribution of the labor contacted the agriculturists' households to find the job by the Cambodian hiring group, crop year 1999/2000

Types and Methods	The hiring group	
	Hiring	Not hiring
Types		
Local labor	0.4	0.6
Domestic	3.2	80.9
Cambodian migrants	96.4	18.5
Total	100.0	100.0
Labor's contact affected the employers' decision.		
Made decision easier	70.5	53.6
No affected decision	29.5	47.4
Total	100.0	100.0
Methods of hiring		
Via network or broker	17.0	5.6
Via the employers themselves	0.1	7.1
Via the past experiences of the employers	82.9	87.3
Total	100.0	100.0

The table 22 showed that the Cambodian hiring group, almost all of them (96.4 percent) experienced the contact from the Cambodian labor, of which 70.5 percent of the household's decision were affected by the labor's contact.

Among those who hired not the Cambodian labor, 80.9 percent were the domestic labor who contacted. Half of the household's decision (53.6 percent) were affected by the labor's contact.

The methods used for hiring the labor, the Cambodian hiring group used their past experiences (82.9 percent) and also the non-Cambodian hiring group (87.3 percent).

Table 23 Percentage distribution of the socio-economic factors among the agriculture households by the Cambodian hiring group, crop year 1999/2000.

Socio-economic factors	The hiring group	
	Hiring	Not hiring
Economic status		
Net income (Baht/year)		
Less than 10,000	0.0	25.1
10,000 – 50,000	0.5	42.6
50,001 – 100,000	0.6	21.9
more than 100,000	98.9	10.4
Total	100.0	100.0
Income from agriculture sector (Baht/year)		
Less than 10,000	0.0	10.9
10,000 – 50,000	0.3	20.3
50,001 – 100,000	0.4	10.5

Table 23 Percentage distribution of the socio-economic factors among the agriculture households by the Cambodian hiring group, crop year 1999/2000. (Cont.)

Socio-economic factors	The hiring group	
	Hiring	Not hiring
more than 100,000	91.2	6.1
Total	100.0	100.0
Income from non-agriculture sector (Baht/year)		
Less than 10,000	0.0	14.2
10,000 – 50,000	0.2	22.3
50,001 – 100,000	0.2	11.4
more than 100,000	7.7	4.3
Total	100.0	100.0
Social status		
Labor exchange between households		
Ever	2.1	16.8
Never	97.9	83.2
Total	100.0	100.0
The perception of non-local labor's policy		
Clearly perceived	2.3	0.0
Moderate	96.7	52.5
None	1.0	47.5
Total	100.0	100.0

Table 23 Percentage distribution of the socio-economic factors among the agriculturists' households by the Cambodian hiring group, crop year 1999/2000. (Cont.)

Socio-economic factors	The hiring group	
	Hiring	Not hiring
The policy following		
All steps were practiced	48.2	
Partially practiced	50.2	
Not at ale	1.2	
Total	100.0	

The table 23 indicated the findings as follows.

The economics, the net income among those households who hired the Cambodian labor, was more than 100,000 Baht per year (98.9 percent). The highest net income was from the agriculture sector (91.2 percent) and the less (7.7 percent) was from other sector.

The social status, no labor's exchange between the households among those who hired the Cambodian labor (97.9 percent). Half of them (52.5 percent) partially perceived about the non-local labor's policy, so they partially practiced along the policy.

While the economic status among the non-hiring group, it was found that less than half of them had net income ranging from 10,000 – 50,000 Baht per year and their income were from the agriculture sector (20.3 percent) and the non-agriculture

sector (22.3 percent). For the social status, most of the non-hiring group (83.2 percent) have no experiences in labor's exchanging. Half of them (52.5 percent) also partially perceived the policy.

Table 24 Percentage distribution of types of labor force that the non-Cambodian hiring group hired for the agriculture sector, crop year 1999/2000

Type of labor	**The agriculturists' households**
No hiring	**37.7**
Local labor	32.5
Domestic labor	29.8
Total	100.0

The table 24 indicated that among those who did not hire the Cambodian labor, also hired not any labor (37.7 percent). But they (32.5 and 29.8 percent) hired the local labor and the domestic labor respectively.

Table 25 Percentage distribution of the Cambodian labor who were hired by the agriculturists' households, crop year 1999/2000.

The Cambodian's labor characteristics	**The households**
Number of labor hired	
Less than 2	5.7
3 – 5	78.9
more than 5	15.4

Table 25 Percentage distribution of the Cambodian labor who were hired by the agriculturists' households, crop year 1999/2000. (Cont.)

The Cambodian's labor characteristics	The households
Number of days hired (working days)	
Less than 730	6.2
730 – 1,825	79.1
more than 1,825	14.7
Time span	
Temporary	18.6
Permanent	43.1
Both	38.3
Type of work	
Planting	0.5
Maintenance	10.1
Harvesting	89.4
Total	100.0

From table 25, It was found that 78.9 percent of the households hired 3 – 5 Cambodian labors, the working days were between 730 – 1,825 days (79.1 percent), and almost half were permanent hiring. 89.4 percent of type of work was for harvesting.

Comments and suggestions from the agriculturists' households about the Cambodian migrant for agriculture purposes.

The benefits. The households who hired the Cambodian labor perceived benefits, because some agriculture activities were refused by Thai migrants, such as para rubber cutting, Durian harvesting. While those who hired not the Cambodian labor, also perceived the benefits of hiring the Cambodian labor in case of shortage of Thai labor.

The harms. Both groups of the households perceived the Cambodian labor as poor hygiene and were the carrier of the transmitted diseases such as malaria and other communicable diseases.

Therefore, both groups of the household suggested that it was permitted to hire the Cambodian labors, but they should be the Thai blood, by means of Thai offsprings because of the politics reasons. These offsprings could speak Thai, their culture seemed alike Trat people. The households needed not the large number of the Cambodian labors because of the unsecurity feelings.

Table 26 Percentage distribution of the agriculturists' households who hired the Cambodian labor by number of labor hired, crop year and types of planting.

Crop year	No of labor hired	Types of planting	
		Para rubber	Fruit trees
1997/1998	less than 2	6.8	88.2
	3 – 5	79.4	10.7
	more than 5	13.8	1.1

Table 26 Percentage distribution of the agriculturists' households who hired the Cambodian labor by number of labor hired, crop year and types of planting. (Cont.)

Crop year	No of labor hired	Types of planting	
		Para rubber	Fruit trees
1998/1999	less than 2	7.2	90.1
	3 – 5	80.2	9.4
	more than 5	12.6	0.5
1999/2000	less than 2	5.7	87.0
	3 – 5	78.9	11.6
	more than 5	15.4	1.4
1 May.2000 – Nowaday			
	less than 2	70.6	89.4
	3 – 5	22.9	8.6
	more than 5	6.5	2.0
Total		100.0	100.0

The table 26 indicated that most of the households (79.4 percent) in the crop year 1997-1998 hired 3 – 5 the Cambodian labors, only 6 – 8 percent of the households hired less than 2 Cambodians. In the year 1998/1999, 80.2 percent of the household hired 3 – 5 Cambodians which was the same as in the crop year 1999/2000. But from 1 November 2000 till December, the pattern of hiring was changed 70.6 percent of the households hired less than 2 Cambodians and only 6.5 percent hired more than 5 Cambodians.

Among those who hired Cambodian for fruit planting, it was found that in the crop year 1997/1998. Most of the households hired less than 2 Cambodians, and only 1.1 percent hired more than 5 Cambodians. The pattern of hiring was quite the same until the time of study.

The Comparison between the households who hired labor for para rubber planting and fruit planting, it was found that those who hired for fruit planting hired less than 2 Cambodians nowaday. While the para rubber's households hired 3 – 5 Cambodians.

Table 27 Percentage distribution of the agriculturists' households who provided welfares to Cambodian labors in crop year 1999/2000 by types of planting.

Types of welfare	Value(Baht/month/person)	Types of planting	
		Para rubber	Fruit
Housing	None	1.2	0.2
	Less than 500	60.4	20.1
	500 – 1,000	30.5	70.6
	more than 1,000	7.9	9.1
Rice	None	96.1	59.1
	Less than 100	2.3	30.6
	100 – 150	1.2	10.1
	more than 150	0.4	0.2
Clothes	None	97.1	80.6
	Less than 100	1.6	82.7

Table 27 Percentage distribution of the agriculturists' households who provided welfares to Cambodian labors in crop year 1999/2000 by types of planting. (Cont.)

Types of welfare	Value (Baht/month/person)	Types of planting	
		Para rubber	Fruit
	100 – 200	0.4	3.9
	more than 200	0.0	0.8
Medicine	None	97.1	0.0
	Less than 100	2.8	80.6
	100 – 200	0.1	17.2
	more than 200	0.0	2.2
Total		100.0	100.0

The table showed that the para rubber's households (60.4 percent) provided housing valued less than 500 Baht/month/person. Almost all of the households (94.1 percent) provided rice 100 – 150 Baht. No clothes was provided by 98.0 percent of the households, which was also the medicine.

While the fruit planting's households, most of the households, (70.6 percent) provided housing ranged from 500 – 1,000 Baht/month/person, higher than the rubber planting's households. They also provided rice (41.9 percent) medicine (100 percent), but a little bit provided the clothes.

Table 28 Percentage distribution of the Cambodian labors requested for the welfare from their employers, crop year 1999/2000 by types of planting.

Types of welfare	Value (Baht/month/person)	Type of planting	
		Para rubber	Fruit
Housing	no request	87.3	80.4
	Less than 500	6.1	10.6
	500 – 1,000	5.1	7.8
	more than 1,000	1.5	1.2
Rice	no request	96.6	92.1
	Less than 100	2.4	2.7
	100 - 150	0.2	1.6
	more than 150	0.8	3.6
Clothes	no request	90.2	84.7
	Less than 100	7.9	10.6
	100 - 200	1.6	3.9
	more than 200	0.3	0.9
Medicine	no request	90.4	95.3
	Less than 100	2.1	1.3
	100 - 200	6.3	2.8
	more than 200	1.2	0.6
Total		100.0	100.0

The results indicated that the Cambodian labors (87.3, 96.6, 90.2 and 90.4 percent) requested not the housing, rice, clothes or medicine. Only 1.5, 0.2, 0.3 and 1.2 percent requested for the housing, 1,000 Baht/month/person, rice 100 – 150 Baht, clothes more than 200 Baht and medicine more than 200 Baht respectively.

Table 29 Percentage distribution of labor and the hiring among the agriculturists' households, crop year 1999/2000

Labor hiring	Type of planting	
	Para rubber	**Fruit**
Never hired before crop year 1999/2000	3.6	2.1
Hired before crop year 1999/2000	94.6	97.9
Time of Hiring continuously (year)		
Less than 2	60.5	40.6
2 – 5	35.7	51.2
more than 5	3.8	8.2
No labors needed	1.8	0.2
Labors needed	98.2	99.8
Thai labor compared to Cambodian		
Cambodian better	70.9	63.8
Thai better	29.1	36.2
Thai better than Cambodian (reason)		
Honesty	80.7	92.6
Work hard	2.6	4.3

Table 29 Percentage distribution of labor and the hiring among the agriculturists' households, crop year 1999/2000 (Cont.)

Labor hiring	Type of planting	
	Para rubber	Fruit
Patient	1.7	0.0
Cheaper wages	0.0	0.0
In case of Thai labor contacted		
Refuse Cambodian labor	20.6	80.4
No refuse	79.4	19.6
In case of hiring Thai labor		
The same conditions as Cambodian	92.8	96.5
The conditions were changed	7.2	3.5
Inspecting from the Government officers/policemen		
Ever	7.6	10.8
Never	92.4	89.2
1 May, 2000 – Interview date		
No change in hiring	10.3	80.6
Not hire to Cambodian labor hiring	2.6	2.3
Hire to not hire	87.1	17.1
Total	100.0	100.0

The table 29 indicated that the para rubber planting's households (94.6 percent) ever hired the Cambodian labor before crop year 1999/2000, of which 60.5

percent of them hired the Cambodian less than 2 years. Almost all of the households (98.2 percent) preferred to continuesly hired the Cambodians because they perceived the Cambodian would better, Even Thai labors were available. While the result of the fruit planting's households was also alike.

Both households reported that no policemen inspected the foreigner labor (92.4, 89.2 percent). It was also found that from 1 May, 2000 till the date to interview, the rubber's households (87.1 percent) stopped to hire the Cambodians, while 80.6 percent of the fruit planting's households still continued hiring the Cambodians.

The second results of Part I was the result of model of decision to hire the Cambodian labor among the agriculturists' households

Table 30 Matrix of Pearson's coefficient correlation (r) between each pair of the variables.

	Lan	Hlf	Cap	Rp	Fp	Exp	Ge	Ag	Ms	Llf	Ilf	Clf	Wn	Wi	We	Ni	Clfh	Ppl
Lan	1.000																	
Hls	.0330	1.000																
Cap	.0865	-.0251	1.000															
Rp	.1755***	-.0806	.1081	1.000														
Fp	-.0099	.0909	.1128*	.0421	1.000													
Exp	.0530	-.0343	.0508	.0553	.4303***	1.000												
Ge	.2565***	.0287	-.0472	-.0766	.0599	.1278*	1.000											
Ag	.1258*	-.0154	.1579**	-.0703	-.0248	-.1672**	.0046	1.000										
Ms	.2654***	.0336	-.1186*	.0367	-.2973***	-.3000***	-.1015*	.0866	1.000									
Llf	.0564	-.0233	.1375**	-.0012	.3404***	.2204***	-.0052	.0678	-.1405**	1.000								
Ilf	.0865	.0176	.0441	.0487	.0905	-.0108	-.0722	.0468	.0655	.1362**	1.000							
Clf	-.1938***	-.0839	-.0317	-.0452	.0674	.0780	.1207*	.1002*	-.0796	.4299***	.0079	1.000						
Wn	.2762***	.0040	.0139	.2448***	.1037*	.1927***	-.1890***	-.1760***	.0266	.1169*	.1773***	-.0676	1.000					
Wi	.2037***	.1028*	.0707	.1231*	.1726**	.1470**	-.1020*	-.0876	-.0057	.0773	.2043***	-.0813	.4962***	1.000				
We	.1158*	.0321	.0299	.1766***	.0223	.1208*	-.0717	-.1267*	-.0509	.0267	.0924	-.1034*	.2495	.3224***	1.000			
Ni	.1334**	-.0504	-.0268	-.1682**	-.1733**	-.0963	-.0559	.1791***	.2135***	-.1418**	-.0373	-.1420**	-.1457**	-.1636**	.0048	1.000		
Clfh	.1664**	.0705	.0732	.3488***	.1617**	.1183*	-.0984	-.1703**	-.0478	.2041***	.1132*	-.0195	.4933***	.4371***	.3800***	-.4124***	1.000	
Ppl	.2026***	.0077	-.0686	.1356	.0502	-.0056	-.0946	-.0778	.0890	.0810	.2006***	-.0173	.3074***	.2846***	.1842***	-.1512**	.3456***	1.000

*p<.05 **p<.01 ***p<.001

Table 31 presented the test for collinearity between the independent variables using Pearson's correlation Matrix. Finding indicated that no any independent variables had the large correlation coefficient more than 0.5. This finding suggested that no multicollinearity existed among the 19 independent variables. Therefore all independent variables were applying in the Logit model.

Table 31 Descriptive statistics of the independent variables studied.

Independent variables	$\bar{x}$	S.D.	C.V.	Minimum	Maximum	Kurtosis	Skewness
Production Factors of the agriculturists' household							
Size of land (LAN)	98.2	40.4	26.90	9.0	395.0	0.8	0.2
Number of labors in the household (HLF)	3.2	0.1	0.03	1.0	6.0	0.4	0.2
Capital (CAP)	11,500.0	567.6	0.04	1,500.0	25,000.0	2.6	0.9
Para rubber planting (RP)	0.7	0.2	0.28	0.0	1.0	-0.8	-0.7
Fruit planting (FP)	0.3	0.1	0.33	0.0	1.0	-1.3	0.9
Labor's characteristics Factors							
agriculture experiences (EXP)	0.8	0.2	0.25	0.0	1.0	-1.7	0.4
Wages (W)	271.5	130.5	0.22	120.0	300.0		0.3
Sex (GE)	0.7	0.1	0.14	0.0	1.0	-1.0	0.6
Age (AG)	24.3	2.3	0.09	18.0	42.0		
Marital status (MS)	0.7	0.2	0.28	0.0	1.0	-1.2	0.4
Labors who contacted the households Factors							
The local labor force (LLF)	0.3	0.1	0.30	0.0	1.0	1.3	0.7
In - country force (ILF)	0.6	0.2	0.33	0.0	1.0	-1.1	0.1
Cambodian force (CLF)	0.4	0.1	0.25	0.0	1.0	1.5	-0.5
Factors fo hiring characteristics of the households							
Via network or brokers (WN)	0.3	0.1	0.33	0.0	1.0	-1.7	0.2
Via workers directly (WI)	0.2	0.1	0.50	0.0	1.0	1.4	0.8
Via household's past experiences (WE)	0.5	0.2	0.40	0.0	1.0	-1.6	0.3
The socio-economic factors of the households							
Net income per year (NI)	75,000.5	1,005.5	0.01	32,578.5	1,105,000.0		0.6
Labor exchange between the household (CLF)	0.2	0.1	0.50	0.0	1.0	1.2	0.1
Perception towards labor's policy (PPL)	0.4	0.2	0.50	0.0	1.0	-1.8	0.4

From table 31 indicated that the respondents used the land for agriculture approximately 98.2 Rais, the standard deviation was 40.4 Rais. Labors in the household were 3.2 (S.D. = 0.03). The capital used were 336 Baht/Rai (S.D. = 22.5). The wages were 271.53 Baht/person/day (S.D. = 60.8) and net income was about 75,000.50 Baht/year (S.D. = 1,005.5)

Finally, the following was the model studied of decision made of the agriculturists' households to hire the Cambodian migrants, crop year 1999/2000.

$$\begin{aligned}\text{Log}[DM_{ij}/(1-DM_{ij})] = {} & 6.465\text{LAN} - 3.245\text{HLF} + 2.146\text{CAP} + 8.062\text{RP} + 3.251\text{FP} \\ & + 4.253\text{EXP} - 12.657\text{W} + 1.254\text{GE} + 1.456\text{AG} + 1.025\text{MS} \\ & - 4.368\text{LLF} - 3.256\text{ILF} + 3.478\text{CLF} + 1.286\text{WN} - 1.025\text{WI} \\ & + 4.826\text{WE} + 12.504\text{NI} - 0.152\text{CLFH} + 2.435\text{PPL}\end{aligned}$$

The third set of Part I indicated hypothesis testing results between the independent and dependent variables of decision made model.

Variables	Coefficient	X^2
LAN	6.456***	7.856
HLF	-3.245**	4.251
CAP	2.146	3.514
RP	8.062***	15.146
FP	3.251**	4.876
EXP	4.253**	3.972
W	-12.657**	6.734

Variables	Coefficient	X^2
GE	1.254	0.752
AG	1.456	1.436
MS	1.025	2.183
LLF	-4.368	2.567
ILF	-3.256	1.894
CLF	+3.479	2.432
WN	1.286	3.025
WI	-1.025	3.674
WE	4.826**	4.021
NI	12.504**	4.784
CLFH	-0.152	0.468
PPL	2.435**	3.957

*** = statistical significance at 99 percent of reliability level.

** = statistical significance at 95 percent of reliability level.

The result after the non significant variables were deleted.

Model of decision analyzed by Logit regression was as follows.

$$\text{Log}[DM_{ij}/(1-DM_{ij})] = 6.456LAN - 3.245HLF + 8.062RP + 3.251FP + 4.252EXP$$
$$-12.657W + 4.826WE + 2.435PPL + 3.478CLF$$

$$\text{Log}[DM_{ij}/(1-DM_{ij})] = 6.456LAN - 3.245HLF + 8.062RP + 3.251FP + 4.252EXP$$
$$(7.856)^{***} \quad (4.251)^{**} \quad (15.146)^{***} \quad (4.876)^{**} \quad (3.972)^{**}$$
$$+3.478CLF - 12.657W + 4.826WE + 2.435PPL$$
$$(3.852)^{**} \quad (6.734)^{**} \quad (4.021)^{**} \quad (3.957)^{**}$$

The result of Logit Model revealed that 9 independent variables found to be no statistical significance. They were the capital used (CAP), sex of labor (GE), age (AG), the marital status (MS), the local labor force (LLF), In-Country labor force (ILF), hiring via network (WN), hiring via worker directly (WI), and labor exchange between the household (CFF).

Therefore, the 9 statistical significance were applied in the model. They were size of land (LAN), the household labor force (HLF), para rubber planting (RP), fruit planting (FP), labor's experiences in agriculture sector (EXP), wages (W), the households' past experiences in hiring the Cambodians (WE), Net income per year (NI), and the perceptions to the labor's policy (PPL).

The research findings with regard to the objectives of this study, it was found that factors related to the decision made of the agriculturists' households to hire the Cambodian migrants were as follows.

1. Production factors of the agriculturists' household consisted of size of land, number of labors in the household, para rubber planting and fruit planting.

2. Factors of labor's characteristics consisted of labor's agriculture experiences and wages.

3. Factor of hiring characteristics of the households' was the hiring from the household's past experiences.

4. The socio-economic factors of the households, consisted of the net income per year, and the perception to the labor's policy.

Factor found no relation to the decision was the labors who contacted the households.

The result of the households used to make decision to hire the Cambodian migrants.

$$\text{Log}[DM_{ij}/(1-DM_{ij})] = 6.456\text{LAN} - 3.245\text{HLF} + 8.062\text{RP} + 3.251\text{FP} + 4.252\text{EXP}$$
$$(7.856)^{***} \quad (4.251)^{**} \quad (15.146)^{***} \quad (4.876)^{**} \quad (3.972)^{**}$$
$$+3.478\text{CLF} - 12.657\text{W} + 4.826\text{WE} + 2.435\text{PPL}$$
$$(3.852)^{**} \quad (6.734)^{**} \quad (4.021)^{**} \quad (3.957)^{**}$$

LAN = Size of land

HLF = Labor in the household

RF = Para rubber planting

FP = Fruit planting

EXP = Labor's agriculture experiences

W = Wages

WE = Hire via the household's past experiences

NI = Net income/year

PPL = The perception to labor's policy

Sign + means the same direction to decision.

Sign - means the different direction to decision.

PART II Findings derived from the in-depth interview.

The data was analyzed derived from issues of the in-depth interview among 14 respondent, presented as descriptive results without identify any name or status of the respondents to aware of the research ethics.

The general data of Trat Province.

Trat is the remote area of the eastern part of Thailand, 315 kilometers far from Bangkok. The geographic area is plant area and river, up hills and seaside area. The weather is rainy almost all of the year. Plenty of the natural resources and source of water. The irrigation system is also suitable for the agriculture.

Population characteristics and labor status.

Less population density of Trat is found. Last 5 – 6 years, the huge of Cambodians migrated to work for para rubber and fruit planting, fishery and related, housemaid and so on. Today less Cambodians found to work for vegetable and fruit planting, fishery. The para rubber planting was found to be to Mynmar and Non labors.

The socio-economic characteristics.

The respondents reported that Trat people planted para rubber and fruit for a longtime ago, but not too much as present. In the farmer time, they planted for their own household and other relatives, no special maintenance. Some breeds of Rambutan were disappeared. It was replaced by other breads of pink type and

Rongren type. As the same as the para rubber planting, so they could plant not far from the houses.

Besides, rubber planting, Trat people also farmed, fishery and only for the household's consuming. The agriculture production they exchanged were rice and para rubber. Fruit was planting for consuming only. But today, they planted for the purposes of trading.

The social status had changed. Once they had big family of 5 – 10 children. The rich families with more size of land holding would have many wills in order to have more children's labor the government also supported the more children families. Some of the respondent ever got the silver basin as they had more children. The children could do many robs with regard to their capacities. The 6 – 7 years children would geed the ducks or children. So the households needed not the labor outside the households. Any families had more labor, they would other relation's families. They, then, got food and agriculture tools in turn. Today, Trat people perceived that the family had less children and used more money in planting. The children have to go to school. When they finished the school, they found another occupation. Those who could not enroll higher school would work in the factories.

The government policy related to para rubber and fruit planting.

The respondents reported that there were plenty of project related to promote the planting. They were para rubber and fruit funding, data from satellite Landsat 5 TM, money funding for lower rate of interest (3 percent/year) loan, project of rubber promotion and other related projects.

The process of para rubber and fruit planting.

The para rubber planting today is quite convenient, because of the funding that provided the money and materials. They also provide the breeds, maintenance, fertilizers and soon. Time for funding is from planting till seven years and a half. The household will pour the fertilizer them selves, but chemical spraying is done by the enertheustern or Cambodian labors, because the households are afraid of the harmful of the chemicals. Table 32, 33 summarized the process of para rubber and fruit planting.

Table 32 Activities of para rubber planting and harvesting.

Times	Activities	Labor used
21.00–01.00 A.M.	- Start cutting	
05.00–06.00 A.M.	- Finish	- 10 Rais/person
06.00–10.00 A.M.	- Collect rubber milk. Some had breakfast before collect rubber milk.	- Mose who cut should collect, sometimes other member of the family would collect e.g. the children do before they go to school.
10.00–15.00 P.M.	- Processing the rubber pad, start from filtering rubber milk and mixed with acid and water	- The labor are together help each other. In case of the household's labor, wife was the one who prepared food and husband processed this

Table 32 Activities of para rubber planting and harvesting. (Cont.)

Times	Activities	Labor used
	- Lunch break within 15 minutes, otherwise the rubber get harder. - The rubber will be rubber strengthened until being the squared – shape. This procedure has been done for two times, after that being dried by sunlight.	procedure. But the process of rubber strengthened, everyone had to help each other, because they could not do it alone.
04.00–05.00 P.M.	- Clean all the materials used in the process - Sharpened the knife used to cut the para rubber which sport much time and special technics. Because if the knife was not sharpened, only like rubber milk was coming out.	- The one who cut the rubber was the one who cleaned. In case of family, women were the ones who should do and men would sharpen the knife.

Table 32 Activities of para rubber planting and harvesting. (Cont.)

Times	Activities	Labor used
05.00–09.00 P.M.	- Having dinner and then going to sleep in order to cut the rubber on the next day.	

The process of fruit planting.

Those who planted fruit trees repented that fruit planting started from planting till maintaining as following activities.

Table 33 Process of fruit planting.

Steps	Activities	Labor used
- Planing	- Dug the soil - Made the roof - Poured daily	- North-eastern of local labor used and their own.
- Maintaining before yield	- Poured water fertilizer - Pesticide used - Got rid of other unwanted plants	- Human labor and machines.

Table 34 Process of fruit planting. (Cont.)

Steps	Activities	Labor used
- Fruit yield	- Poured water, fertilizer, some hormones and pesticides.	- Human labor
- Harvesting	- Harvested	- Local labor and migrants labor used.
- After harvesting	- Cut some branches, Poured fertilizer and pesticides.	- Local or household's labor used.

Background of foreign labor used in para rubber and fruit planting.

Those who hired the Cambodian labors reported that background and labor needed because they had planted para rubber in the area more than 2,000 Rais. Their 3 of 5 children were government officer. Them selves and writs, both, were old aged. Thus, they could not work in the field, because it was the hard work. Some were assigned to take care of this business from one retired government officer of Trat which owned rubber area about 10,000 Rais. 300 Cambodian labors, both males and females, used, some of labor were Mynmar.

The answers of why not hire Thai labor, they reported that Thai workers were lazy, come to work lately and stopped working early. But the Cambodians and Mynmars were patient, work hard. Whenever the employers still worked, they also work together, although. The.times were over. Even after lunch, they started working immediately, no after lunch time rest as Thais.

Those who did not hire the Cambodian labors, because they were poor, only less than 20 Rais rubber planting. So they had to do them selves in order to pay money for the children study. They themselves could not do any jobs because. They had low education.

In case of fruit planting, durian and rambutan, 60 Rais of planting, they also planted themselves. They hired not the foreign labor because they were afraid, but they hired one northeastern family to take care of some tools and plants maintenance.

Process of labor hired among the para rubber and fruit planting's owner.

When the para rubber aged 7 years after planting, the owners contacted the unemployed Thai to cut the rubber. The labors would stay in the field, the house that the owners built for them, because the field was quite far from the own's houses. Normally, the local labor refused, because they also had children or old aged to take care. So the owners should find other labors, especially the northeastern labors last 10 years. But now no northeastern labor, they did not know the reasons. They had heard about the Cambodian labors, so they contacted the relatives or neighbors to hire the Cambodians. The Cambodians had worked for 2 – 3 years then they went back then home country. Today the owner had to hire other labors, such as Mynmar or Mon. Both Mynmar and Mon came to owners and asked for jobs themselves.

Among those who owned the fruit planting reported that once, they over hired the local labor. Now the local labors preferred not to work. Other reasons were that they preferred to work close to their houses that they could go back on the day.

But the owners needed the labors who could stay in the field's houses, because it saved the working times. So other migrants were needed, especially those who came with their families, because they stayed longer. The owners preferred to hire more the Cambodian labors than the Mynmar or Mon, because they were afraid of harmfulness.

Wages agreement.

Those who owned the para rubber planting reported that they started half of the production to labors, after the owners bought the production. Some small pieces of rubber would be given to labors. While the labor should have their own knives and lamps. The owners provided acid, fillers, trays and machine that made the rubber longer. The owners took care of the rubber and bought.

Because the process of cutting rubber was not stable, it depended on the climate. So the labor hired according to the activities not daily or monthly wages. Rubber cutting was process every 5 days and stopped for 1 day. If it was rainny, they could not cut, so, they cut rubber throughout the year. In the year of dry season, they stopped one month. Therefore, local labor or mortheastern or foreign labor had the same agreement.

For fruit planting, the owner reported the different wages agreement. In case of staying in the field, the wages would be paid monthly or yearly with some selfares such as rice. The process of maintenance, the wages were 120 Baht per day, 200 Baht/day/person for pesticides spraying, the paying rates was cheaper if the labors were foreign labors (estimately 120 – 150 Baht/day/person). The process of harvesting the Rambutan, 2 patterns of wages were seen, daily paid, 120 Baht/day or one Baht per kilogram. Mangosteen harvesting, the owner would do themselves, if

they hired, the wage would be daily paid. Durian harvesting, the ones who bought should do themselves.

Regulations pulls related to the foreign labor hiring.

The respondents reported the steps of hiring the foreign labor as follows.

According to the cabinet agreement on 3 August and 2 November 1999, it was permitted to hire the foreign labors for 18 business in 37 provinces. Trat province was permitted for 6 types of business which were para rubber planting, construction, vegetable planting, fruit planting, fishery and fishery related.

Those who hired the foreign labors had to bring the labors for physical check-up. Those who did not pass the requirement would then going back their home countries. The owners paid 700 Baht/labor for the physical check-up. Then they brought the receipt to do the Health Insurance Card. The owners had to pay another 1,000 Baht/labor. The owners also paid for the permission certificate about 1,000 Baht and life insurance another 1,000 Baht. Therefore, the owners had to pay for hiring one labor all about 3,700 Baht. The owners should process within 30 November, if they did late, the owners would be paid 20,000 Baht and the foreign labor had to move to their own countries.

Social and labor status of Trat.

The respondents reported that the Cambodian labors came to Thailand in group with their leaders. They lived peacely like other Thais, kindly and like singing songs, dark skin but they liked red clothes and accessories. They liked to hunt birds for their meals. When they familiered with the owners, they talked some jokes. When

they got sick, they went to the hospital themselves. Some Thai sires married with Cambodian males. Many Cambodian couple gave births in Trat province. They always spent all the wages they got for clothes, radio-taped, visiting.

Today, it emerged more Mynmar labor and quite replaced the Cambodians in rubber cutting. Mynmar always quarreled each others and killed. Mon and Mynmar were afraid of policemen, had raw food, sometimes they vomit out the warms. They tried to adapt their costumes like Thai but they spoke higher fore sound. While the Cambodian spoke lower sound, kept silence, no expression. Many Mynmar males married Thai females, but not Mynmar females married Thai males, Mynmar labors seemed to work harder and more patient than the Cambodians. They sent back the money earned about 10,000 Baht monthly. Whenever they got sick, they seldom went to hospital but to the health centers.

The employers and the foreign labors' attitudes towards each others.

The foreign labors, Mon, Mynmar and the Cambodians reported that they appreciated the employers. The employers were quite fair and kindly wind, provided them housing, medicine. When soe of them died,

The employers also provided them ceremony. They preferred to stay and work in Trat, because they got what they worked e:g. they spent their labor for 1 Baht, they also got 1 Baht in turn. When they worked in Mynmar, they got only half.

Althought the Cambodians reported that they came to Thailand because of sight-seeing, their country seenned to have plenty of resources, some Thais went there for fruit planting.

While the employers reported about the labors that those foreign labors were hard workers, patient, and requested not any welfares. Most of Mon labors worked better than the Cambodians or Thai labors. Thai labors were more honesty than other labors. Mon and Mynmar labors always were cheating. They kept contact each other all the times, they also knowed where the natives lived. Sometimes the employers asked the policemen to inspect them.

Finally, the employers concluded that they still needed the foreign labors, especially for para rubber planting. While the fruit planting's owners preferred to hire more Thai labors. They needed not to hire the foreign labors especially Mon and Mynmar labors.

CHAPTER V

DISCUSSION

The findings of the study presented the factors related to the decision making of the agriculturists' households in the agricultural employment of Cambodian migrated labor force in Trat. The results would then be discussed as follows.

5.1 Factor of the production of the agriculturists' households. The finding indicated that the size of land used, the production characteristics were positively related to the decision. While the amount of labor force in the households was negatively related. This finding found to be related to the research hypothesis.

While the capital and technologies used were not related to the hypothesis. It could be discussed that technologies could not be used in the para rubber and fruit tree planting. It required more the labor force.

5.2 The factor of labor force's characteristics that the employers needed. The findings indicated that the labors' capacities and experiences were significant and positively related the decision. While the wage rate was negatively related. They were related to the research hypothesis.

While sex, age and the marital status of the labors were not related to the hypothesis. It is because of the various steps of the labor used in agricultural sector for para rubber and fruit tree planting, e.g. planting, maintaining, harvesting. The planting required both males and females, working and old-aged group, single and married labors which was depended on the types of work.

5.3 Factors of the labors' characteristics who contacted with the agriculturists' households in order to work. The findings indicated that whether local, domestic labor or the Cambodian labors were not related to the decision of hiring. It was not related to the hypothesis set. The reasons were that all the labors hired for para rubber and fruit tree planting had to stay in or nearby the site of planting, closed to the agriculturists' residence. The agriculturists' had to aware of the life safety first.

5.4 Factors of the characteristics of labor hiring of the agriculturists' households. The findings indicated that the agriculturists' past experiences in hiring was positively related to the decision which was also related the hypothesis.

While the hiring via the network or broker found not to be related to the hypothesis. The reasons were that the agriculturists could not trust the foreigners who the life histories and backgrounds were unknown.

5.5 The socio-economic factors of the agriculturists' households. The findings indicated that the net annual income and the policy related to the foreign labor's perception were positively related to the decision. They were related to the research hypothesis.

While the participation among the household's members found not to be related to the hypothesis. The reasons were that the socio-economic status at present were greatly changed. The labor exchange between the households or mutual assistance were seldom found. Estimately 97 percent were found not exchange the labor. Therefore, the households expected not to depend on the exchanging labor between the neighbor households.

The discussion could be summarized that factors significantly related to the decision in hiring the Cambodian labors were size of land used (LAN), the amount of labor force (HLF), para rubber planting(RP), fruit tree planting (FP), labors' capacities and experiences (EXP), the wage rate (W), hiring from the past experiences (WE), the net annual income (NI), and the policy related the foreigner hiring (PPL). The finding found also the appropriated model used to further investigate factors related the decision making of the agriculturists' households in the agricultural employment of Cambodian migrant labor force as follow.

$$\text{Log}\,[DM_{ij}/(1-DM_{ij})] = LAN - HLF + RP + FP + EXP - W + NI + WE + PPL$$

DM_{ij} = the decision making.

LAN = size of farm holding land.

HLF = the household's member labor force.

RP = para rubber planting

FP = Fruit tree planting

EXP = the Cambodian's experiences in agriculture.

W = wages.

WE = via household's past experiences.

NI = Net income derived from the agriculture section per year among the agriculture's households.

PPL = the perception of the foreign labor force among the agriculturists' households.

CHAPTER VI

CONCLUSION

The study of factors related to the agriculturists' households decision on hiring the Cambodian labors in the agricultural sectors of Trat province could be summarized as follows.

1. The objectives of the study

To determine the following factors that were related to the agriculturists' households decision.

1.1 The production of the agriculturists' households.

1.2 The labors' characteristics that the employers need.

1.3 The labors' characteristics who contacted with the agriculturists' households in order to work.

1.4 The work hiring characteristics of the agriculturists' households.

1.5 The socio-economic status of the agriculturists' households.

2. The research hypothesis

Factors expected to be related to the agriculturists' households decision were as follows.

2.1 The production of the agriculturists' households.

2.2 The labors' characteristics that the employers need.

2.3 The labors' characteristics who contacted with the agriculturists' households in order to work.

2.4 The work hiring characteristics of the agriculturists' households.

2.5 The socio-economic status of the agriculturists' household.

3. The sample used in the study.

The sample in this study was the 392 agriculturists' households who planted para rubber and fruit trees in Trat province. They were divided equally into 2 groups, those 196 households who hired the Cambodian labors and another 196 households did not hire. While the in-depth data was drawn from the 14 significant others related to Cambodian labors who participated well in data gathering.

4. The research tools used in the study.

The interview questionnaire and the structured in-depth guidelines were used to interview the 392 respondents. The in-depth interview was used to interview those 14 significant others related to Cambodian labors.

5. The data collection.

Those who gathered the data in the field were 9 health officers of Trat province and other 3 research assistances. They collected the data within 19 days.

6. The data analysis.

6.1 The descriptive analysis was used to compare the decision among the agriculturists' households who hired the Cambodian labors and those who did not hired. While the logit regression model was performed to find out the model of model of the decision on hiring the Cambodian labors.

6.2 The in-depth interview was also content analyzed.

7. The research conclusion.

Factors related to the agriculturists' households decision on hiring the Cambodian labors in Trat province were significantly at level 0.05 as follows.

7.1 The production factors; the size of planting area, the number of the household's members.

7.2 The characteristics of labors required; the labor experiences and capacities, the wage rate and age of the labors.

7.3 The characteristics of hiring among the households; the past experiences of hiring the labors.

7.4 The socio-economic factors; the net income and the policy perceived.

The factors mentioned above were both positively and negatively related to the decision factors positively related were size of planting area, the labors' experiences and capacities, labors' age, the hiring experiences of the employers, the net annually income and the policy perceived. While the number of household labors and the wage rate were negatively related to the decision.

8. The recommendations.

The above results of the study leading to 2 key findings as follows.

8.1 The size of the planting area used were more than 60 Rais for para rubber (70.3 percent) and fruit trees (74.7 percent).

8.2 The shortage of labors among the 78.9 percent of the agriculturists' households. They hired 3 – 5 Cambodian labors.

Therefore, the 2 key findings leading to the resolutions of hiring the Cambodian labors problems as follows.

The problems of the land used in planting the large amount of para rubber which required the higher member of labors. Because the geographic and climate of Trat province was suitable for para rubber planting, lasting 5 – 7 years of planting. The harvesting process was taken times, risky to snakes and need the patient person. Therefore, the local or the domestic labors refused such job. Only 0.4 and 0.2 percents of the local and domestic labors entered such job. So, the agriculturists' households who planted the para rubber can fronted with the shortage of labors. Even though the government prolonged the policy of permission the Cambodian labors used.

To resolve the problem related to the hiring of the foreign labor in para rubber and fruit tree planting, the significant others should follow the following guidelines.

1. The short-term policy.

1.1 Postpone the employers to hire the foreign labors in order to decrease the labor force shortage in the agricultural sector.

1.2 Correct the practically rules and regulations related to the foreign labors hiring and enforce the motivation force instead of the compulsory in the case of no harmful to the Thai society.

1.3 Promote the high technologies used in the process of production.

1.4 Expand the market of fruit and para rubber.

2. The long-term policy.

2.1 Promote the agriculturists who plant the para rubber shifted from rubber pad sale to the whole rubber tree sales, which could be planted in replacement.

2.2 Promote the rubber and fruit from formation industry including marketing promotion.

BIBLIOGRAPHY

Anu, Daowarat. (1998). Pattern of Migration to Cholburi Province. Master Thesis Mahidol University. (in Thai)

Association of Thai population and Human Resource Institute, Thammasart University (November, 1982). Seminar on Population Changes and ago-industrial development in Thailand. (in Thai)

_____. (November, 1995). National Meeting on Population Science 1995. (in Thai)

_____. (November, 1996). National Meeting on Population Science, 1996. (in Thai)

Chai, Podhisita. (1985). Risks, Uncertainly and agricultural behavior. Acceptance of farmer culture. Institute of Population and Social Research, Mahidol University. (in Thai)

Chaiwat, Panjaphongse. And Narong, Tiensong. (July – September 1976). "Migration." Journal of Population Education. Vol.3 No.4 pp. 5 – 24. (in Thai)

Chaiwat, Panjaphongse, Praphapen, Suwan. and Narong, Tiensong. (1978). Population Education. Bangkok, Thai Watanapanich Co., Press. (in Thai).

Chalermsri, Thammabut. (1974). The Migration among ploy digging workers Banrai district Trat Province. Faculty of Sociology and Humanities, Thammasart University. (in Thai)

Copalovitz, D. (1983). The states of social research. The city university of New York: John Willy & Son, Inc.

Dechwat, Sukkamnerd. (1983). The study report of the technology used for safety labor: The case study of rice cutting machine used among farmers in Supanburi Province Major rice planting crop year 1992/1993. Bangkok. Faculty of Economy, Thammasart University. (in Thai)

Department of Labor, Ministry of Interior. (1991). Income and expenditure of the low income labor' households. (in Thai)

Dotoit, Brian. M. (n.d.) Migration and Urbanization: Model and Adaptation Strategics Paris: Mouton Publishers, 175.

ESCAP. (1982). "Trends and pattern of Urban growth." In Migration, Urbanization and Development in Thailand. Thailand.

Eastern Sea Development Board Office. (1985). Appropriateness and advantages of the development the eastern sea. (in Thai)

Gold cheider, Calvin. (1983). Urbanization, Migration and Developing Nations. Colorado: Westview Press.

Health Provincial Office of Trat. (n.d.) Policy and Plan. (in Thai)

ILO. (1996). Labor Statistic in Cambodia: International Labor Organization.

Industry Board and Faculty of Economy, Thammasart University. (1988). Thai becoming Nics or NAICS, What the society would get. The Seminar Brief. (in Thai)

Industrial Capital Co-op. (1988). The golden area of eastern development sea Board. Unpublished manuscript. (in Thai)

K. and et.al. (1997). The Synthesis of the newcomers situation and the alternatives of foreign labor Policy. Nakornpathom: Institute of Population and Social Research, Mahidol University. (in Thai)

Kajatpai, Burutphat. (n.d.). "Migrants Problems and illegally migrants" Unpublished manuscript. (in Thai)

Kanjana, Polachan. (1982). Urban Economy. Thammasart University. (in Thai)

Kantachai, N and et.al. (1987). Impacts of The Industrial development on Labor force Movement. Training Program of Social Researchers, The Graduated Research Office of the administration Development.

Kasemsun, Chinnavaso. (1992). The Decision to Migrate: A comparative Study of Rural Migrants From the North and the Northeast Regions in Thailand: Ph.D. Dissertation Faculty of the Department of Economics of the University of Notre Dame.

Kobchai, Chimkul. (1998) Model of Agriculture Production under the risks. Thai case study of some plant in the central part of Thailand. Master Degree of Economic field of study, Chulalongkorn University. (in Thai)

Kothom, Areeya. (1983). "Industry for job" The seminar on the Industrial development for jobs in Metropolitan area. Social Research Institute. Chulalongkorn University. (in Thai)

Kriangsak, Phanpranee. and Pramot, Suwanmongkol. (1981). The productivity of fertilizer used for the riped para rubber. Soil and fertilizer Research. Para rubber Research Center. Department of Agriculture Research. Ministry of agriculture and Co-operatives. (inThai)

Kritaya, Archavanichkul. (1985). Migration and Urbanization in Thailand, 1980: The urban rural continumn Analysis. Bangkok.

Kusol, Sonthornthada. and Hanjangsithi, O. (1981). Pattern of the determinants and consequences of Migration in Khonkhan Province. Institute of Population and Social Research, Mahidol University. (in Thai)

Manuchai, Ch. (1995). The analysis of Labor Demand and Benefit of sugar cane crop year 1992/1993. Bangkok, Master degree Thesis, Kasetsart University. (in Thai)

Military Operation Center 315. (1976). Basic News of Cambodia. (in Thai)

Ministry of Interior (March, 1991). The Statistics of Migrants/Illegally immigrants. (in Thai)

National Education Board. (1986). Report of the study of socio-cultural background in the area of eastern part of Thailand. Prime Minister Office. (in Thai)

National Institute of Statistics, Ministry of Planning Phanom Penh Cambodia. (n.d.). Demographic Survey of Cambodia 1966.

National Statistical Office. (1987). Survey of Population Migration to Cholburi Province. (in Thai)

_____. (1989). Social and Economic Indicators. Office of Prime Minister. (in Thai)

_____. (1990). Collectives of key statistics of Thailand. Office of Prime Minister. (in Thai)

_____. (1989). Survey of Population Changes. Office of Prime Minister. (in Thai)

Nawarat, Phlainoi. (1986). Relationships between Rural Development Strategies and Migration. Ed. D. Dissertation Faculty of Graduate Studies, Srinakarin-travirot University. (Prasanmitr)

Niphon, Puapongsakorn. and Pattama, Suzuki. (December, 1991). Changes of Labor Market to shortage of labor. Annually Seminar Report 1991. Ambassador City, Chomthien, Cholburi Province. (in Thai)

Nov-Tov-Nov. Vov-Rar-Tov-Rar, 21th March. (1989). Cambodian Leader Problems. Navy Press. Vol. 2 (mid year), The Institute of higher Military academic, Bangkok. (in Thai)

Orasa, Supakitkosol. (1989). The analysis of economy of Production between agriculturist who participated in planting extension and other agriculturist in Pattalung Province crop year 1989/1990. Master thesis, Kasetsart University. (in Thai)

Pantip, Saisinthorn. (1997). Immigration of foreigners for jobs : The law survey problems and policy alternatives. Nakornpathom: Institute of Population and Social Research, Mahidol University. (in Thai)

Phelinas, P. (1994). Farm and Off-Farm Employment in Rural Thailand. Journal of social Research.

Phillip, Guest. and Sureeporn, Punpuing. (1997). Demand and Supply of Thai labor force and foreign labors. Nakornpathom: Institute of Population and Social Research, Mahidol University. (in Thai)

Piempiti, S. (1986). "Law of changes in model of migration in Thailand 1960 – 1970." Journal of administrative development, pp. 385 – 413. (in Thai)

Planning and Manpower Section, Office. (1985). Migration, Urbanization and Development in Thailand. National Economic and Social Development Board. (in Thai)

Poopetch, M. (1996). The study of manpower requirement Training and Research for eastern development sea board. (in Thai)

Prachum, Somboonsarakit. (1991). Strategic News of Cambodia. Curriculum of Strategic News 24th Batch Safety Guard Center. (in Thai)

Pradid, Chasembat. and Sophin, Tongpan. (1995). The study report on structural changes of manpower and employment in agriculture sector of Thailand. Bangkok. The Institute of Human resource, Thammasart University. (in Thai)

Praphaphan, Un-ob. (1995). The Out-migration of male heads of household and its consequences on the household economic decision making of their spouses. Doctoral thesis of education (Population Education), Mahidol University. (in Thai)

Preyamas, Pangpan. (1989). Economic Analysis of The Impacts of disparity of modern technologies acceptance to labor demand among agriculturist under suitable and unsuitable areas in Khonkhen Province crop year 1987/1988. Bangkok: Master Thesis Thammasart University. (in Thai)

Provincial Industry of Chonburi Province. (n.d.). Movement of NGO sector about investment 1988 – 1990. Unpublished manuscript. (in Thai)

Passorn, Limanond. and Penporn, Therasawat. (1989). Migration and Population planning development of Asian. Institute of Population Science Chulalongkorn University. (in Thai)

Rangsun, Thanaporapan. (eds.)(n.d.). Thai agriculture Economy. Bangkok: Kledthai Press. (in Thai)

Ratchanewan, U-Thaisri. (July – December 1982). Industrial growth, employed labor and uncivilized rural area". Journal of economy. Vol. 2 No. 5, pp. 85 – 69. (in Thai)

Royal Thai Airforce Press, Department. (1994). Weekly strategic Press in Brief Vol. 5-39 Indo-China-Mynmar. (in Thai)

Saisuree, Chutikul. (1983). Population Problems and the eastern sea development project. Office of Prime Minister. (in Thai)

Safety Operation Center. (December – April, 1991). Brief Security News of Cambodia. Vol.2. (in Thai)

Santabut. (n.d.). "Mynmar Union: Unpublished Manuscript. Air Force College 27th Batch. (in Thai)

Sarun, Vathanatchariya. (1991). The Economic analysis of agricultural production. Bangkok, Faculty of economy and business administration, Kasetsart University. (in Thai)

Sathit, Niyomyat. (1985). Problems of Migration to Urban and Resolution. Faculty of Sociology and Humanities, Thammasart University. (in Thai)

Secretariate Office of Representative House. (1987). The eastern sea development. Library of Representative House. (in Thai)

Somboon, Siriprachai. (1985). Rural Migrants to Bangkok: Knowledge status survey. Faculty of Economy, Thammasart University. (in Thai)

Suchat, Prasithirathasint,(1986). Urbanization, Urban Growth and Urban movement. NIDA. (in Thai)

_____. (1982). Population and Development in Thailand. NIDA. (in Thai)

Sukothaithammathirat. (1997). History and Economic. Nonthaburi. (in Thai)

_____. (1997). Fundamental Principles of Economy. Nonthaburi. (in Thai)

_____. (1990). Educational Background. Nonthaburi. (in Thai)

_____. (1997). Thai Studies. Nonthaburi: Sukothaithammathirate Press. (in Thai)

Sumaree, Pitayanon. (1992). Labor Economy. Bangkok: Chulalongkorn University Press. (in Thai)

Thanormsak, Soralump. (1986). The economic analysis of para rubber production in Rayong Province, Education year 1985. Bangkok, Master Thesis of Kasetsart University. (in Thai)

Thongrot, On-chan. (1987). Agriculture Economy. Bangkok. Thai Watanapanich Publishing. (in Thai)

Union of Mynmar. (1992). Report on Mynmar Labor Force Survey 1990. : UNFPA.

Udsanee, Puengpan. (1986). Factors related to Adaptation of Migrants to Urban area. Master thesis of social science, Chulalongkorn University. (in Thai)

Vachira, O-chaiwatana. (1982). Factors affected rural's household labor demand non-agriculture sectors in Thailand 1990 – 1991. Bangkok: Master Thesis, Thammasart University. (in Thai)

Vilawan, Boonkun. (1990). The economic analysis of influences of the disparity in acceptance modern technologies in rice planting to labor demand of agriculturist in suitable and unsuitable area in Supanburi province crop year 1987/1988. Master thesis, Kasetsart University. (in Thai)

Voravit, Chareonlert. and Thanachaisethavuth, B. (1997). The policy of government industrial development and Foreign Labor Hiring. Nakornpathom; Institute of Population and Social Research, Mahidol University. (in Thai)

Wayan S.I. (1985). The Impact of Tractor Utilization on Crop Production and Employment in south Sulawesi, Indonesia. Bangkok: Master thesis Kasetsart University.

Wilbert Gooneratne. (1982). Labor Absorption in Rise-Base Agriculture Case Studies from Southeast Asia. ILO.

APPENDIX A Name of the experts

APPENDIX A : Names of the Experts

1. Dr. Kasemsun Chinnavaso, Ph.D.
2. Assoc. Prof. Dr. Yongyuth Chalamwong, Ph.D.
3. Assoc. Prof. Dr. Kanda Paranakian, Ph.D.
4. Assoc. Prof. Dr. Nawarat Phlainoi, Ed. D.
5. Assoc. Prof. Dr. Chaiwat Panjaphongse, Ph.D.

APPENDIX B - I Instrument

APPENDIX B - I : The instrument

The interview questionnaire of agriculturist' households

For the research

of

Factors related to the decision making of the agriculturist' households in the agricultural employment of Cambodian migrant labor force in Trat

Case study : Trat Province

Respondent No..... □□□ 1 – 3

The instruction for the interview :

The interview aimed to gather the data from the interview for the study. It is your kindness to answer the questions correctly.

The interviews' instruction

1. The interviewee who hires the Cambodian Labors, is not allowed to be interviewed of PART 7. The interviewee who hires not the Cambodian Labor, is also not allowed to be interview of PART 8.

2. Crop year 1997/2000 is the period from May 1999 to 30 April 2000.

3. Fill words or data in the blank box or mark √ in O correctly according to the interviewee's answer.

PART 1. The respondent's personal information.

1.1 Age .....years (full number) □□ 4 – 5

1.2 Your highest education level. □ 6

O Elementary O Secondary O Other specify.....

1.3 Marital Status □ 7

O Single O Married

O Divorced O Separate

1.4 In the crop year 1999/2000, Your children in the household are.....persons □ 8

1.5 Family status of the interviewee □ 9

O Head O Spouse

PART 2. Production Factors of the agriculturist' household in the crop year 1999/2000.

2.1 The amount of Land used for agriculturing .....Rai □□□10–12

2.1.1 Your own land is .....Rai □□□13-15

2.1.2 Rent .....Rai □□ 16-17

2.1.3 Other (specify.....).....Rai □□ 18-19

2.2 The household member aged 15 years and above are... persons □ 20

O 2.2.1 Only household's agriculture labor .....persons □ 21

2.2.1.1 Male .....persons □ 22

2.2.1.2 Female.....persons □ 23

O 2.2.2 Both household's agriculture labor and others.....persons □ 24

2.2.1.3 Male .....persons □ 25

2.2.1.4 Female.....persons □ 26

O 2.2.3 Out – agriculture sector ..... persons □ 27

2.2.1.5 Male .....persons □ 28

2.2.1.6 Female.....persons □ 29

2.3 Capital used in the crop year 1999/2000 (more than 1 item are needed)

O 2.3.1 No.of animal labor (specify.....).....units 30-31

O 2.3.2 Agriculture machine (specify .....).....units □□ 32-33

O 2.3.3 Fertilizer (specify .....).....tons □□□34-36

O 2.3.4 Other agriculture technologies

(specify .....).....units □□□37-39

2.4 Types of Production

O 2.4.1 Rubber plantation.....Rai □□□40-42

O 2.4.2 Fruit Field (specify .....).....Rai □□□43-45

O 2.4.3 Other (specify .....).....Rai □□□46-48

PART 3 Factors on the characteristics of labors which the agriculture household prefer to hire.

3.1 Labor hiring, which of the following characteristics needed?□ 49

O Capacities and experiences in agriculture.

O Capacities and experiences in agriculture are not needed.

(specify others .....)

3.2 How did you pay? □ 50

O Daily.....Baht/day O Monthly.....Baht/month

O Estimation wage O Depend on the output

O Others (specify.....)

3.3 Population characteristics of labor the number of labor hired.....person □□ 51-52

O Male ..... person □□ 53-54

O Female ..... person □□ 55-56

Marital Status □ 57

O Single O Married

O Divorced O Separated

PART 4 Factors on the relation between labor and owners. What factors did you make decision to hire the labor?

O 4.1 The labor directly contact the employer. □ 58

O Make you decide to hire □ 59

O No affect

O 4.2 Kinds of labor to be hired in the crop year 1999/2000 □ 60

O Local labor O Domestic labor □ 61

O Migrants' Cambodian labor O Other (specify.....)

PART 5 Factors on the hiring characteristic of the agriculture household.

5.1 How did you contact the labor? □ 62

O Through the network or Contractor.O Directly hire the labor.

O Through the owners' experiences. O Other(specify.....)

PART 6 Socio-economic factors of the agriculture household.

6.1 In the crop year, your household's net income

was .....Baht/year □□□□ 63-66

6.1.1 Income from agriculture..... Baht/year □□□□ 67-70

6.1.2 Income from non-agriculture..... Baht/year □□□□ 71-74

6.2 Your household and neighbors ever shared labor

force wagelessly. □ 75

O Yes (specify.....)

O None

6.3 What method did you share? □ 76

O Equal labor

O Help each other until finish.

6.4 Have you ever heard about the policy and practical

steps in hiring the foreign labor? □ 77

O Clearly understand (specify the step.....)

O Ever heard but not clear (specify the step .....)

O None

6.5 Did you know that it was illegal to hire the foreign labor?□ 78

O Yes

O No

6.6 Did you have the permission from the labor office of Trat province to hire the Foreign labor in the crop year 1999/2000. □ 79

O Yes

O No

PART 7 Decision on hiring not the migrant Cambodian labor.

7.1 In case of you did not hire the Cambodian labor, from what source you get the labor? □ 80

O Do the farm ourselves.

O Hired the local labor.....persons

O Hired the domestic labor from province

(Specify province.....and

no. of labor hired .....persons)

PART 8 Your decision on hiring the migrant's Cambodian labor in the crop year 1999/2000. (more than 1 answer are also needed)

8.1 The amount of labor you hired.....person □ 81

8.1.1 Male.....person □□ 82-83

8.1.1.1 The amount of days hired.....days □□□ 84-86

8.1.1.2 The period hired □ 87

O Temporary O Permanent O Both

8.1.1.3 Hire labor for what kind of work. □ 88

O cultivation O Maintenance

O Harvesting O Others (specify.....)

8.1.2 Female.....person □□ 89-90

8.1.2.1 The amount of days hired.....days □□□91-93

8.1.2.2 The period hired □ 94

O Temporary O Permanent O Both

8.1.2.3 Hire labor for what kind of work. □ 95

O cultivation O Maintenance

O Harvesting O Others (specify.....)

8.1.3 Please detailed the Cambodian labor hiring since 1997/1998 till 1999/2000.

1997/1998

The amount of labor hired.....person □□ 96-97

1998/1999

The amount of labor hired.....person □□ 98-99

1999/2000

The amount of labor hired.....person □□ 100-101

1 May 2000 - present

The amount of labor hired.....person □□ 102-103

8.1.4 The welfare that the labor gained. (more than 1 answer)

O Housing, its costs .....Baht/month □□□104-106

O Rice, its costs .....Baht/month □□□107-109

O Clothes .....Baht/month □□□110-112

O Health Insurance .....Baht/month □□□113-115

8.1.5 Have the Cambodian labor claimed for any welfare?

And what were they? (more than 1 answer)

O Housing, its costs .....Baht/month □□□116-118

O Rice, its costs .....Baht/month □□□119-121

O Clothes .....Baht/month □□□122-124

O Health Insurance .....Baht/month □□□125-127

8.1.6 Did the Cambodian labor you hired ever

hired before? □ 128

O Yes, it longed.....years □□ 129-130

O No

8.1.7 Did you continue hiring the labor?

O Yes, the period was.....years □□ 131-132

O No

8.1.8 Compare the Cambodian and Thai labor, which was better?

O The Cambodian labor □ 133

O The Thai labor

8.1.9 Which characteristics was better?

O Honesty □ 134

O Diligent □ 135

O Patience □ 136

O Lower wage □ 137

8.1.10 If Thai labor contacted you, would you stop hiring the Cambodian labor?

O Yes □ 138

O No

8.1.11 If you hired Thai labor instead of the Cambodian labor, what conditions did you make? □ 139

O As the same as the Cambodian labor (specify.....)

O Changed the conditions (specify .....)

8.1.12 Did the police or the government officer ever inspect the labor you hired? □ 140

O Yes

O No

8.1.13 From 1 May 2000 till the date of interview, Did you change the labor hiring? □ 141

O No

O Change from no hire to hire the Cambodian labor.

(Continued answer PART 8)

O Change from hiring the Cambodian labor to not hire.

(Continued answer PART 7)

PART 9 Opinion and other suggestions related to labor hiring in agriculture sector from the migrants' Cambodian labor.

9.1 Benefit.....

.....

.....

.....

9.2 Crime.....

.....

.....

.....

9.3 Suggestions.....

.....

.....

.....

9.4 Situation and Trends in hiring decision. .....

.....

.....

.....

****

APPENDIX B - II The In-depth Interview Guidelines.

APPENDIX B – II : The In-depth Interview Guidelines.

The in-depth interview guidelines consisted of 5 parts of questions as follows.

Part 1 Regulations and the practical steps related to hire the foreign labor force.

Part 2 The agricultural policy related to para rubber and fruit tree planting.

Part 3 T The impact ohe foreign labor force toward the society in Trat province.

Part 4 The agricultural process of production of para rubber and fruit tree planting including the process of hiring.

Part 5 The way of job seeking among the foreign labors and the local labors.

The above item of questions was/used to interview the 5 target groups, separately interview of each group.

BIOGRAPHY

NAME	Miss Niyom Suttiporn
DATE OF BIRTH	1 February 1950
PLACE OF BIRTH	Trat, Thailand
INSTITUTIONS ATTENDED	Khon Kaen University, 1971 – 1974; Bachelor of Education (Mathematics and Biology) Ramkamhaeng University, 1983 – 1984; Master of Education (Measurement and Evaluation) Mahidol University, 1995 – 2001; Doctor of Education (Population Education)
POSITION & OFFICE	1983 - Present, Rittiyawannalai School Bangkok, Thailand Position : Teacher 1974 – 1983, Kaosaming School Trat, Thailand Position : Teacher