



**DAMPAK KEBIJAKAN PENJAMINAN BERAS TERHADAP
PEMASARAN BERAS DI THAILAND**

SKRIPSI

Oleh:

**Puji Agustin
NIM. 111510601072**

**PROGRAM STUDI AGRIBISNIS
FAKULTAS PERTANIAN
UNIVERSITAS JEMBER
2015**



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Diajukan Guna Memenuhi Salah Satu Persyaratan untuk Menyelesaikan Program
Sarjana pada Program Studi Agribisnis Fakultas Pertanian
Universitas Jember

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**IMPACTS OF RICE PLEDGING POLICY ON RICE MARKETING IN
THAILAND**

**By:
PUJI AGUSTIN 5620000061**

**Submitted to:
Dr. Rapee Dokmaithes**

**DEPARTMENT OF AGRICULTURAL EXTENSION AND COMMUNICATION
FACULTY OF AGRICULTURE AT KAMPHAENG SAEN
KASETSART UNIVERSITY
2014**

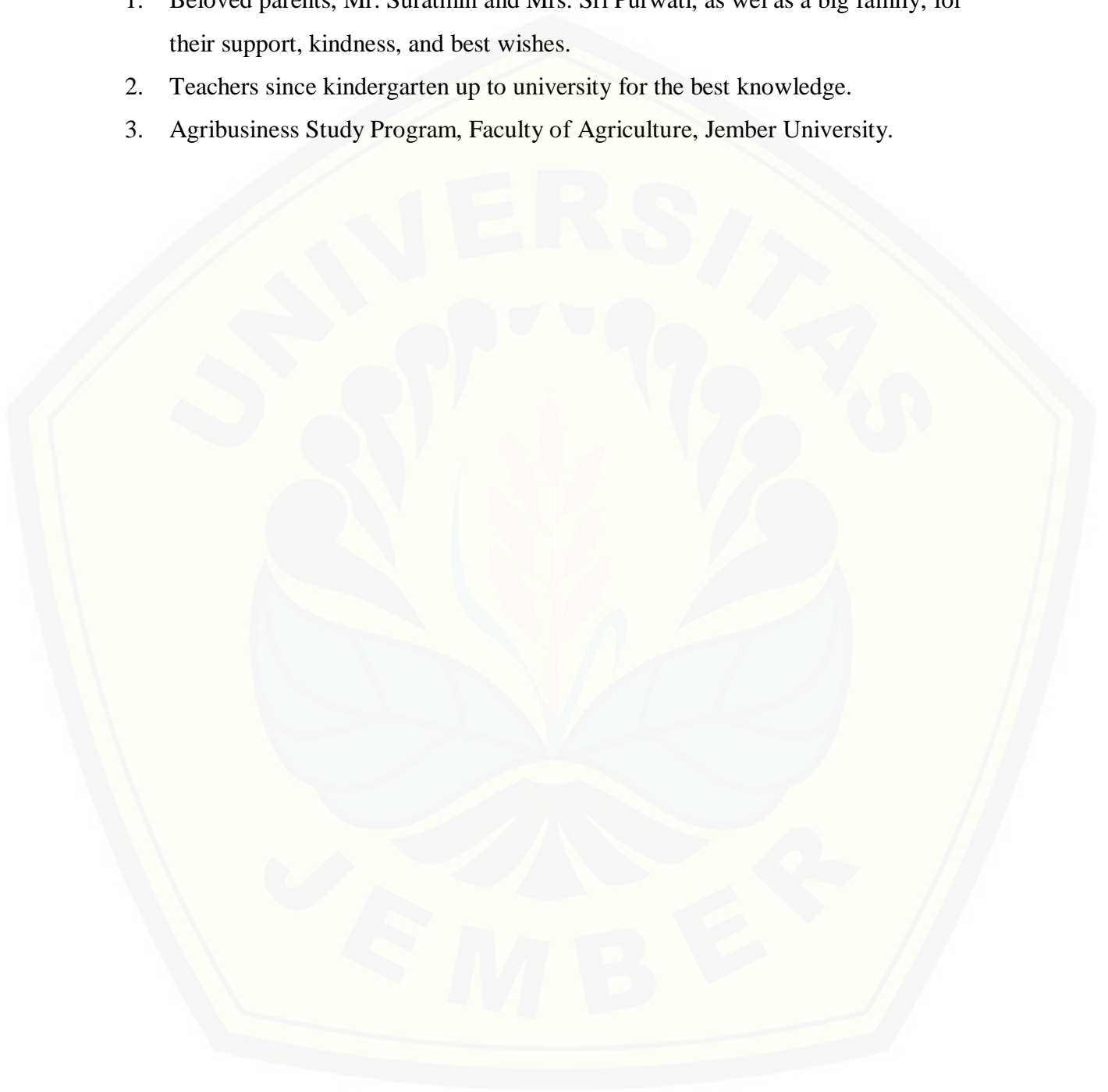
VALIDATION

The present undergraduated thesis entitled “*Impacts of Rice Pledging Policy on Rice Marketing in Thailand*” has been done as the result of Join Degree Program between Jember University and Kasetsart University. It has been examined by Research Supervisor Dr. Rapee Dokmaithes and Research Co-Advisor Associate Professor Dr. Am-On Aungsuratana and published in Faculty of Agriculture Kasetsart University and futher validate by examination committee in Faculty of Agriculture Jember University by Dr. Ir. Evita Soliha Hani, M.P., Ati Kusmiati, S.P., M.P., Dr. Triana Dewi Hapsari, S.P., M.P., and Mustapit, S.P., M.Si.

DEDICATION

In the name of Allah SWT, this research has been dedicated for:

1. Beloved parents, Mr. Suratmin and Mrs. Sri Purwati, as well as a big family, for their support, kindness, and best wishes.
2. Teachers since kindergarten up to university for the best knowledge.
3. Agribusiness Study Program, Faculty of Agriculture, Jember University.



MOTTO

“Allah will not change the condition of a people until they change what is in themselves”

(QS Ar-Ra'd : 11)

“Its faith in something and enthusiasm for something that makes a life worth living”.

(Oliver Wendell Holmes)

“Everything change when you change”

(Jim Rohn)

DECLARATION OF UNDERGRADUATED CANDIDATE

This declaration is made by:

Name : Puji Agustin

SID : 111510601072

I declare that this undergraduate thesis entitled “Impacts of Rice Pledging Policy on Rice Marketing in Thailand” is a true copy of my thesis, including any final revisions as approved by my thesis committee and that this thesis has not been submitted for a higher degree to any other university or institution.

Jember, June 2015
Author,

Puji Agustin
SID 111510601072

UNDERGRADUATED THESIS

**IMPACTS OF RICE PLEDGING POLICY ON RICE MARKETING IN
THAILAND**

By:

Puji Agustin

SID 111510601072

Advisors from Thailand

(Kasetsart University Kamphaeng Saen Campus)

Research Supervisor : Dr. Rapee Dokmaithes

Research Co-Advisor : Associate. Prof. Dr. Am-On Aungsuratana

Research Co-Advisor from Indonesia

(Jember University)

Research Co-Advisor 1 : Dr. Ir. Evita Soliha Hani, MP
NIP. 196309031990022001

Research Co-Advisor 2 : Ati Kusmiati, SP., MP
NIP. 197809172002122001

PENGESAHAN

Skripsi berjudul “*Impacts of Rice Pledging Policy on Rice Marketing in Thailand*”
telah diuji dan disahkan pada:

Hari : Rabu

Tanggal : 3 Juni 2015

Tempat : Fakultas Pertanian Universitas Jember

Dosen Penguji 1,

Dr. Ir. Evita Soliha Hani, MP
NIP. 196309031990022001

Dosen Penguji 3,

Dr. Triana Dewi Hapsari, SP., MP.
NIP. 197104151997022001

Dosen Penguji 2,

Ati Kusmiati, SP., MP
NIP. 197809172002122001

Dosen Penguji 4,

Mustapit, SP., M.Si.
NIP. 197708162005011001

Mengetahui,
Dekan,

Dr. Ir. Jani Januar, MT.
NIP. 195901021988031002

SUMMARY

Impacts of Rice Pledging Policy on Rice Marketing in Thailand, Puji Agustin, 111510601072, Agribusiness Study Program, Department of Agriculture Social Economics, Faculty of Agriculture, Jember University

Rice is the primary staple food for more than half the world population. Rice is also the most important staple crop in Thailand because around 65 percent of total agricultural household are in this sector. The rice pledging policy that aims to increase farmer income have impacts to rice marketing.

Therefore, this study focused on an analyzing and identifying the impact of rice pledging policy on rice industry and its constraint and recommendation. The aim of study is to identify a number of recommendations on increasing income and living standard of stakeholders that would support sustainable developments.

The respondent of the study are the rice local trader and government officer in Chedi Hak Sub-district Mueng District Ratchaburi Province Western Thailand. The sample selected using purposive sampling technique. Descriptive method was used in this study to describe the facts and phenomenons in term rice pledging policy.

The findings on social aspects revealed that the constraints of rice pledging policy is many middlemans (local trader) lost their job and weak farmers' organization (have no power). Regarding the economy aspect, the constraints are the fluctuation paddy rice and decreasing rice quality.

The study generated recommendations for rice marketing policy measures that focused on: 1) an evaluation of the program and its effects is necessary, and the government should revise the policy, especially the level of pledged price, 2) to promote the standard and rice grading continuously to improve rice quality, 3) to provide the training as education center to increase knowledge and skill of farmer and another stakeholder in term rice marketing technology.

Student signature

Thesis Advisor's signature

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RINGKASAN

Impacts of Rice Pledging Policy on Rice Marketing in Thailand, Puji Agustin, 111510601072, Program Studi Agribisnis Jurusan Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Jember.

Beras merupakan makanan pokok yang penting untuk lebih dari setengah populasi dunia. Beras juga merupakan komoditas pangan yang penting di Thailand karena sekitar 65 persen dari total tumah tangga pertanian berada di sector ini. Kebijakan penjaminan beras yang bertujuan untuk meningkatkan pendapatan petani memiliki dampak terhadap pemasaran beras.

Penelitian ini berfokus pada analisis dan identifikasi dampak dari kebijakan penjaminan beras terhadap industri beras dan kendala serta rekomendasi yang tepat terhadap kebijakan. Tujuan dari penelitian adalah untuk mengidentifikasi jumlah rekomendasi dalam meningkatkan pendapatan dan standar hidup dari stakeholder yang akan mendukung keberlanjutan pembangunan.

Responden dari penelitian ini adalah pedagang beras lokal dan pegawai pemerintah di Kecamatan Chedi Hak Kabupaten Mueng Provinsi Ratchaburi Thailand Barat. Metode pengambilan contoh yang digunakan adalah metode pengambilan contoh secara sengaja (*purposive sampling technique*). Metode analisis yang digunakan adalah metode deskriptif.

Hasil dari penelitian terkait dengan aspek sosial adalah kendala dalam pelaksanaan kebijakan adalah banyak pedagang lokal yang kehilangan pekerjaan dan kelompok tani tidak memiliki kekuatan. Kendala dari pelaksanaan program dilihat aspek ekonomi adalah harga padi yang berfluktuasi dan penurunan kualitas beras.

Rekomendasi dari hasil penelitian ini untuk kebijakan pemasaran beras adalah 1) Evaluasi program dan pengaruhnya perlu dilakukan dan pemerintah seharusnya merevisi ulang kebijakan penjaminan beras, terutama pada tingkat harga padi yang dijamin, 2) Mendorong standar dan grade beras secara kontinyu untuk meningkatkan kualitas beras, 3) Memberikan pelatihan sebagai pusat pendidikan untuk meningkatkan pengetahuan dan keahlian petani dan stakeholder lainnya meliputi teknologi pemasaran beras.

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The author realizes that this research is far from perfect. Therefore, it needs some suggestions and recommendation. Hopefully this research can be useful for readers.

Jember, June 2015

Author

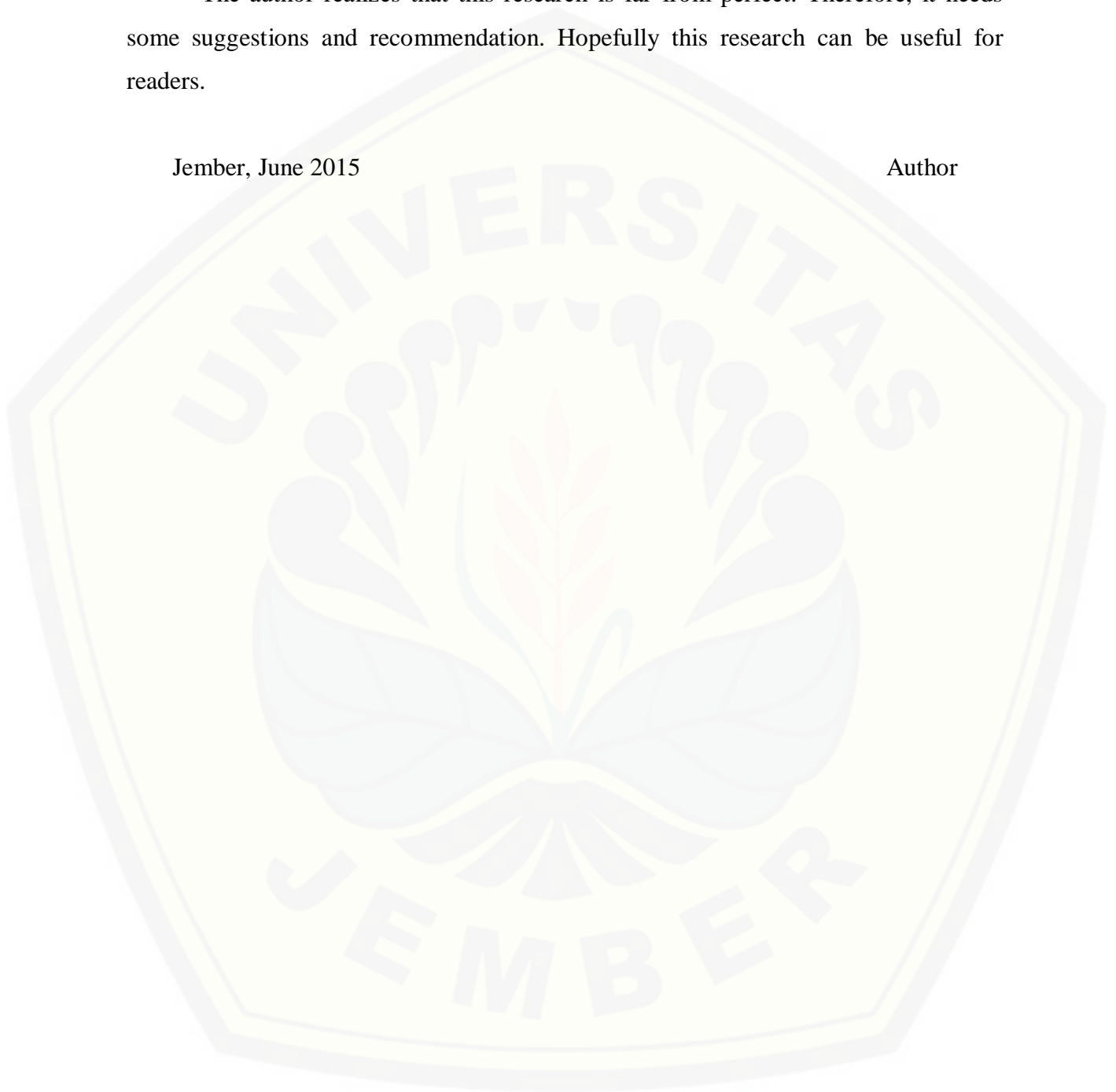


TABLE OF CONTENTS

	Page
COVER (INDONESIA)	i
COVER (THAILAND)	ii
VALIDATION	iii
DEDICATION	iv
MOTTO	v
DECLARATION OF UNDERGRADUATED CANDIDATE	vi
ADVISOR	vii
PENGESAHAN	viii
SUMMARY	ix
RINGKASAN	x
ACKNOWLEDGEMENT	xi
TABLE OF CONTENTS	xiii
LIST OF TABLES	xvi
LIST OF FIGURES	xvii
LIST OF APPENDICES	xviii
CHAPTER 1 INTRODUCTION	1
1.1 Statement of Problem	1
1.2 Research Question.....	10
1.3 Objectives of Study and Expected Result	11
1.3.1 Objective of Study	11
1.3.2 Expected Result	11
CHAPTER 2 LITERRATURE REVIEW	12
2.1 Rice Marketing System	12
2.1.1 Concept of Supply Chain Management in Rice Marketing System	12
2.1.2 Performance of the Rice Marketing System	14
2.1.3 Rice Marketing System in Thailand	15

2.2 Rice Policy.....	17
2.2.1 Rice Policy in Thailand	17
2.2.2 Rice Pledging Policy	20
2.2.3 Impacts of Rice Pledging Policy	23
2.2.4 Constraints and Recommendations of Rice Pledging Policy.....	26
2.3 Conceptual Framework	29
2.4 Research Hypothesis	29
2.5 Structure ofHypothesis	30
CHAPTER 3 RESEARCH METHODOLOGY	31
3.1 Selection of Research Site	31
3.2 Population and Sampling Technique	31
3.3 Data Collection	32
3.4 Analytical Method.....	32
3.5 Operation Definition	32
CHAPTER 4 RESULTS AND DISCUSSION.....	35
4.1 Personal Background of Local Trader	35
4.1.1 Personal Information of Rice Local Trader	35
4.1.2 Amount and Source of Household Income	35
4.1.3 Accessibility of credit	36
4.1.4 Social and Political Group Belonging	36
4.2 Rice Marketing System	37
4.2.1 Rice Marketing Function	37
4.2.2 Rice Marketing Channels	30
4.3 Rice Pledging Policy	40
4.3.1 Rice Policy in Thailand	40
4.3.2 Rice Pledging Program	40
4.3.3 The Impact of Rice Pledging Policy	41
4.4 Strengths, Weaknessess, Opportunities, and Threats of Rice Pledging Policy	42

4.4.1 Strengths	42
4.4.2 Weaknesses	42
4.4.3 Opportunities	43
4.4.4 Threats	43
4.5 Constraint of Rice Pledging Policy	43
CHAPTER 5 CONCLUSIONS AND RECOMMENCATIONS	46
5.1 Conclusion	46
5.2 Recommendations	48
LITTERATURE CITED.....	50
APPENDICES	55

LIST OF TABLES

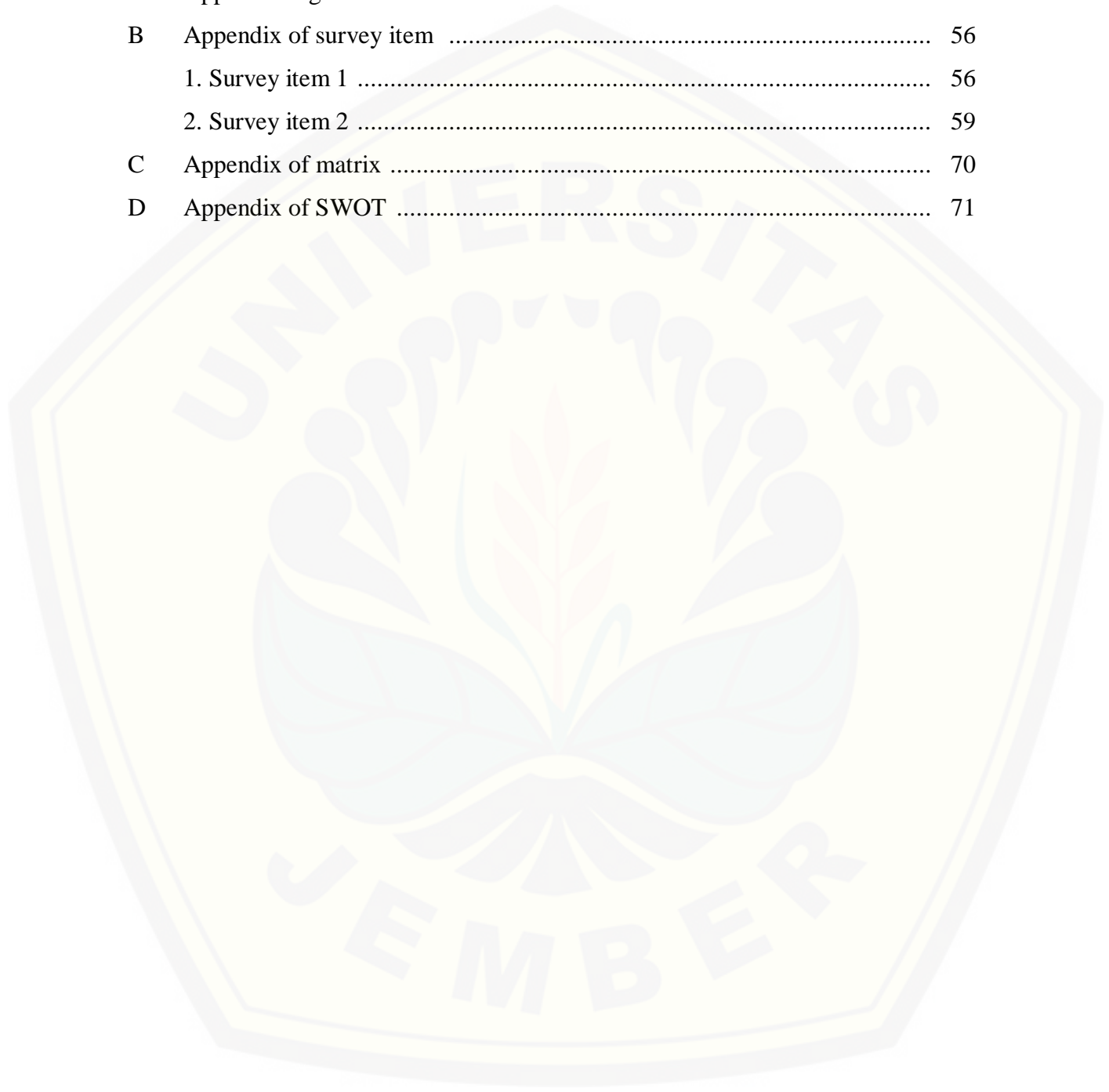
No	Title	Page
Table 1	World rice production	1
Table 2	World rice consumption	2
Table 3	World rice trade (exports and imports)	4
Table 4	Harvested area, production and yield of major rice and second rice in Thailand (2008-2012)	5
Table 5	Rice consumption in Thailand (2000-2012)	6
Table 6	Rice export by Thailand in 2006-2008	7
Table 7	The financial cost of the rice local trader	39

LIST OF FIGURES

No	Title	Page
Figure 1	Value and quantity of rice export	7
Figure 2	Amount and value of rice sol under the rice pledging program and profit and loss of rice pledging program	8
Figure 3	Rice marketing system in Thailand	16
Figure 4	Paddy and milled rice flow	17
Figure 5	Conceptual framework	29
Figure 6	Structure of testing hypothesis	30
Figure 7	The rice marketing channels of respondent	39

LIST OF APPENDICES

No	Title	Page
A	Appendix Figures	54
B	Appendix of survey item	56
	1. Survey item 1	56
	2. Survey item 2	59
C	Appendix of matrix	70
D	Appendix of SWOT	71



CHAPTER 1.
INTRODUCTION

1.1 Statement of the Problems

Rice is the primary staple for more than half the world's population, especially Asia and Africa as the largest consuming regions. Developing countries have long depended on rice versatility and high caloric value. According to Falvey (2000) and Sriwatanapongse (2003), over half the world population consume rice as their source of nutrition. Moreover, 90 percent of the world rice is produced and consumed within Asia, mainly in the country of production, and becoming the world's largest exporter.

In addition, Kenmore (2003), explained that rice is a key source of food energy and rice-based production and processing are major employers and sources of income for the poor. Rice production activities provide employment for several hundred million people who work either directly in rice production or in related support services.

Table 1 World rice production

Countries	Production			
	thousand metric tonnes			
	2009/10	2010/11	2011/12	2012/13
Bangladesh	31,000	31,700	33,700	33,820
Brazil	7,929	9,300	7,888	7,990
Burma	11,642	10,528	10,816	10,666
Cambodia	4,056	4,233	4,268	4,600
China	136,570	137,000	140,700	143,000
Egypt	4,564	3,100	4,250	4,675
India	89,090	95,980	105,310	104,400
Indonesia	36,370	35,500	36,500	36,550
Japan	7,711	7,720	7,646	7,756
Korea South	4,916	4,295	4,224	4,006
Pakistan	6,800	5,000	6,200	5,800
Philippines	9,772	10,539	10,710	11,428
Sri Lanka	2,650	2,490	3,138	2,675
Thailand	20,260	20,262	20,460	20,200
Vietnam	24,993	26,371	27,152	27,700
Others	35,473	37,619	36,988	37,898
United States	7,133	7,593	5,866	6,336
World Total	440,929	449,230	465,816	469,500

Source: World Market and Trade, USDA, 2014

World rice production increased from the 2009/2010 to 2012/2013. The increase in the period 2012/2013 is supported by the increase in Bangladesh, Brazil, Cambodia, China, Indonesia, Japan, Philippines, Vietnam, and the United States. Meanwhile, the rice production in Burma, India, South Korea, Pakistan, Sri Lanka and Thailand has been declining, as shown in Table 1.

World rice consumption totally showed a trend in increase each year. World rice consumption for period of 2009/2010, 2010/2011, 2011/2012, and 2012/2013 is 438,486 thousand tonnes, 445,437 thousand tonnes, 460,042 thousand tonnes, and 466,793 thousand tonnes, respectively. A large increase from the period 2010/2011 to the period 2011/2012 is the amount of 14,605 thousand tonnes. This is due to increased consumption of rice in almost countries in the world except Brazil, Indonesia and Nigeria, while the amount of the consumption of rice in Burma remains the same as the prior year period, as shown in Table 2.

Table 2. World rice consumption

Countries	Consumption			
	thousand metric tonnes			
	2009/10	2010/11	2011/12	2012/13
Bangladesh	31,600	32,400	34,300	34,474
Brazil	8,477	8,200	7,928	7,850
Burma	10,890	10,100	10,200	10,200
Cambodia	3,270	3,370	3,450	3,615
China	134,320	135,000	139,600	144,000
Egypt	3,940	3,300	3,620	3,900
European Union	3,200	3,250	3,300	3,350
India	85,508	90,206	93,334	93,500
Indonesia	38,000	39,000	39,550	39,200
Japan	8,200	8,200	8,050	8,250
Korea South	4,701	5,175	4,905	4,522
Nigeria	4,350	4,800	5,600	5,400
Philippines	13,125	12,900	12,860	12,850
Thailand	10,200	10,300	10,400	10,600
Vietnam	19,150	19,400	19,650	20,100
Others	52,651	53,581	56,284	58,563
United States	4,014	4,330	3,493	3,753
World Total	438,486	445,437	460,042	466,793

Source: World Market and Trade, USDA, 2014

According to statistics of the FAO Rice Market Monitor in Table 3, the forecast of world rice trade in 2013 amounted to 37.5 million tonnes. This forecasting a decline of 2.5 percent from the previous year of 38.5 million tonnes. This decline is due to declining import demand in Africa and Asia, 1 million tonnes and 200,000 tonnes, respectively. The increase in the number of shipments to the U.S. and Europe at 200,000 tonnes and 100,000 tonnes, respectively. Seen in parts of Asia, some countries reduce their rice imports, such as Indonesia, Iran and the Philippines. Indonesia increased the purchase of rice from 1.8 million tonnes in 2012 to 1.3 million tonnes in 2013. Meanwhile, the magnitude of decline in import demand in Iran and the Philippines amounted to 200,000 tonnes and 100,000 tonnes, respectively.



Table 3 World rice trade (exports and imports)

Country	Exports				Imports			
	2008-2010	2011	2012	2013 (forecast)	2008-2010	2011	2012	2013 (forecast)
	Million tonnes							
WORLD	30.3	36.3	38.5	37.5	30.3	36.3	38.5	37.5
ASIA	23.7	28.5	30.2	29.5	14.2	18.0	18.1	17.9
Bangladesh	-	-	-	-	0.8	1.5G	0.1G	0.1
Cambodia	1.0	1.1	1.1	1.3	-	-	-	-
China	1.7	1.1	0.6	1.0	1.3	1.8G	5.4G	5.8
India	2.6	4.8G	10.3G	8.8	-	-	-	-
Indonesia	-	-	-	-	0.5	2.9	1.8	1.3
Iran	-	-	-	-	1.2	1.1G	1.5G	1.3
Iraq	-	-	-	-	1.0	1.3	1.4	1.4
Japan	-	-	-	-	0.6	0.7G	0.6G	0.7
Malaysia	-	-	-	-	1.1	1.0G	1.1	1.1
Myanmar	0.7	0.8G	0.6G	0.7	-	-	-	-
Pakistan	3.1	3.1G	2.8G	2.9	-	-	-	-
Philippines	-	-	-	-	2.2	1.2	1.1	1.0
Saudi arabia	-	-	-	-	1.0	1.3	1.3	1.4
Thailand	9.3	10.7G	7.7G	7.0	-	-	-	-
UAE	-	-	-	-	0.5	0.7	0.6	0.7
Vietnam	5.9	7.1G	7.7G	7.7	-	-	-	-
AFRICA	0.6	0.2	0.5	0.5	9.7	11.8	13.6	12.6
Cote d'Ivoire	-	-	-	-	0.9	1.1	1.3	1.3
Egypt	0.5	0.1	0.4	0.5	-	-	-	-
Nigeria	-	-	-	-	2.0	2.4	3.0	2.5
Senegal	-	-	-	-	0.8	0.8G	1.2	0.9
South africa	-	-	-	-	0.8	0.9	1.3	1.2
AMERICA	5.7	6.8	6.7	6.5	4.2	4.3	4.7	4.9
Argentina	0.4	0.7G	0.6G	0.6	-	-	-	-
Brazil	0.5	1.3G	1.1G	0.8	0.6	0.6G	0.7G	0.8
Cuba	-	-	-	-	0.5	0.5	0.4	0.4
Guyana	0.2	0.3G	0.3G	0.3	-	-	-	-
Mexico	-	-	-	-	0.6	0.7G	0.6G	0.6
Uruguay	0.8	0.9G	1.0	0.9	-	-	-	-
USA	3.4	3.2G	3.3G	3.4	0.6	0.6G	0.6G	0.7G
EUROPE	0.3	0.4	0.5	0.5	1.7	1.6	1.7	1.8
EU	0.2	0.3	0.3	0.3	1.2	1.2	1.3	1.4
Russian federation	0.1	0.1G	0.3G	0.2	0.2	0.2G	0.2G	0.2
OCEANIA	0.0	0.3	0.5	0.5	0.5	0.5	0.5	0.4
Australia	0.0	0.3G	0.5G	0.5	-	-	-	-

Note: G = figure official

Source: FAO Rice Market Monitor (July 2013).

The increasing imported rice in the importing countries to encourage increasing exported rice in the exporting countries, except in America. Asia is the largest of exporting countries. The largest exporters in the Asia are India, Thailand,

and Vietnam. Increasing in the number of rice exports is dominated by India and Vietnam around 5.6 million tones and 0.6 million tones, respectively. Thailand decreased exported rice around 3 million tones from 2011 to 2012. In addition, countries in South America as Argentina, Brazil, and Uruguay, also the lowers shipment of 300,000 tonnes totally.

Rice is the most important staple crop for Thailand because farmers around from 3.72 million households (16 million people) or 65 percent of total agricultural household (5.76 million households) are in this sector. Most of them are small-scale with farmland around 2.4-3.2 hectares (15-20 rai) per household (Dechachete, 2011).

Table 4 Harvested area, production and yield of major rice and second rice in Thailand (2008-2012)

Descriptions	2008	2009	2010	2011	2012
Rice harvested area (1,000 rais)	66,772	69,626	75,747	74,652	75,266
Major rice	54,385	54,740	56,690	56,752	60,607
Second rice	12,789	12,389	14,887	16,057	17,900
Rice production (1,000 tonnes)	32,020	32,396	36,004	38,091	36,854
Major rice	23,505	24,428	25,743	25,867	26,950
Second rice	8,894	8,515	8,968	10,261	12,224
Yield per rai of rice (kg)	480	465	475	510	490
Major rice	432	428	431	456	445
Second rice	695	687	602	639	683

Source: Agricultural Statistic of Thailand, Office of Agricultural Economics, 2014

Thai farmers cultivate rice twice a year, major rice in rainy season and second rice in summer season. Total rice harvested area in 2012 is around 75,266 thousand rai. Major rice accounts for 60,607 thousand rais or about 80 percent of total cultivation area. Second rice, which is around 17,900 thousand rais or around 20 percent of total cultivation area.

Rice production from 2012 was approximately 36,854 thousand tonnes, however, in 2012 the production decreased by 1,237 thousand tonnes. Rice production for the major rice around 26,950 thousand tonnes, while the second rice rice production around 12,224 thousand tonnes in 2012. Rice yields in 2012 approximately 490 kg per rai. Generally, rice yields in the second rice is higher than on the major rice.

Table 5 Rice consumption in Thailand (2000-2012)

Year	Total consumption (milled rice) thousand tonnes
2000	9,250
2001	9,400
2002	9,460
2003	9,470
2004	9,480
2005	9,544
2006	9,780
2007	9,600
2008	9,500
2009	10,200
2010	10,300
2011	10,400
2012	10,500
average	9,760.31

Source: IRRI, 2014

Based on the table, the consumption of rice in Thailand from 2000 to 2012 has increased by 1,250 thousand tons, and the average consumption per year by 9,760.31 thousand tons. Rice consumption had declined in 2007 and 2008, after that, continues to increase, so the consumption of rice by 10,500 thousand tons in 2012. In addition, according to Poapongsakorn (2013), forecast consumption of rice Thailand in the next 10 years will increase slowly.

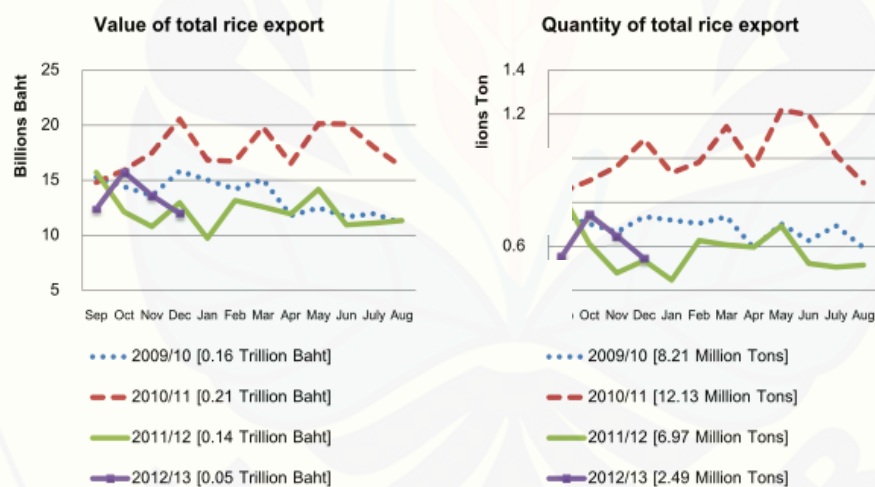
Thailand has been the largest exporter of rice in the world over the last 30 years. Between 2006-2008, Thailand rice exports were around 40-45 percent of the rice production, it is tends to increase from 7.494 to 10.216 million tonnes or 36.32 percent increase from the 2006. In general, four types of rice export Thailand, namely jasmine rice, white rice, rice porboiled, and Glutinous rice. From these four types of rice, white rice and rice porboiled continued to increase during 2006-2008, while the jasmine rice has experienced a decline in 2008 amounted to 552,000 tonnes, and Glutinous rice decreased in 2007, but after it was increased to 298,000 tonnes (see at table 6).

Table 6 Rice export by Thailand in 2006-2008

Type	2006	2007	2008	% Growth rate
	million tonnes			
Jasmine rice	2.599	3.068	2.516	-1.61
White rice	3.000	4.472	4.680	24.90
Porboiled rice	1.604	1.878	2.722	30.27
Glutinous rice	0.291	0.175	0.298	1.20
Total	7.494	9.593	10.216	16.76

Source: Dechachete, Office of Agricultural Economics, 2011.

However, the number of Thai exports has declined at the period 2009/2010, 2011/2012 and 2012/2013 amounted to 8.21 million tonnes, 6.97 million tonnes and 2.49 million tonnes, respectively. Only in the period 2010/2011, the amount of export has experienced a significant increase, after that, the amount of exports continued to decline in quantity. Not only decreased in number, rice exports also decreased in the export value of 0.16 billion baht in the period 2009/2010 amounted to 0.05 billion baht in 2012/2013 (see figure 1).

**Figure 1** Value and quantity of rice export

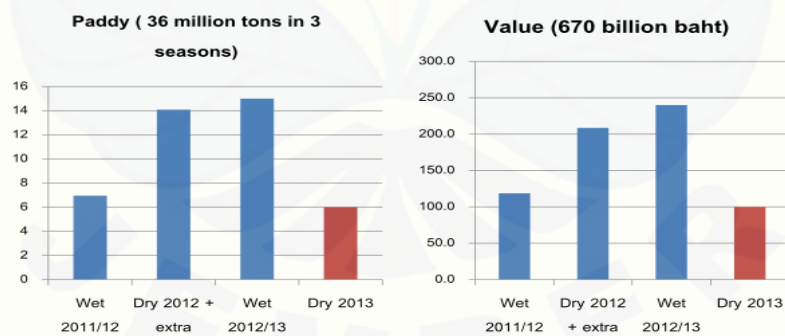
Source: Poapongsakorn, Thailand Development Research Institute Foundation (TDRI), 2013

Many of countries in general and developing countries in particular have implemented policies that effect the agricultural sector either directly or indirectly. According Forssell (2009a), explained that the development of rice policies, especially price policies, in Thailand several things are discovered. Starting with policies that

heavily taxed producers, benefited consumers and the urban population, the policy changed slowly. In the early period of intervention, the government taxed the agricultural sector heavily, especially the rice sector. It was a way to gather revenues to industrialize the country without too much opposition. The farmers who constituted the majority of the population and implied a large taxation base, had low political influence due to their lack of education and organization.

One of the rice policies in Thailand is rice pledging policy. This policy aims to support the price of rice and farmers' income by providing loans to farmers with the provision that the farmers sell rice to the government. The government give the farmers two ways to bank lending. First, the farmers can directly borrow from the bank and keep the rice as a pledge in their storage facilities, if the farmer has a storage facilities. Second, if the farmers do not have storage facilities, farmers can also borrow to bring rice with the central warehouse, where it is government facilities.

The rice pledging program assist the farmers face a sales price deterioration during the harvest season. Under normal conditions, the prices during harvest season are lower than the average annual price due to the surplus supply during that period. Therefore, farmers were requested to pledge their paddy to government to obtain the pledge price, which is higher than the market price. The farmers can also redeem their paddy when the market price is higher than the pledge price.



Profit and loss of rice pledging program.

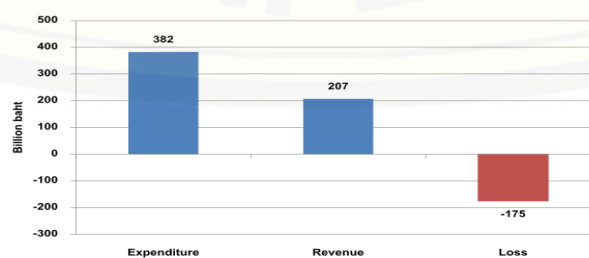


Figure 2 Amount and value of paddy sold under the rice pledging program and profit and loss of rice pledging program

Source: Poapongsakorn, Thailand Development Research Institute Foundation (TDRI), 2013

The number and value of paddy which is sold under the rice pledging program is 42 million tonnes of rice worth 670 billion baht in the 2011/2012 wet season until the 2013 dry season. The number and the value is not comparable to the export performance of the government, which only sells rice stock valued at 60 billion baht in 2012. Actually, the program is straining the budget, where expenses are used for this program amounted to 382 billion baht, with the government only received 207 billion baht of budget spent. The program thus causing financial losses amounting to 175 billion baht (see figure 3). This program not only burden the government budget but also distorts the market. Normally, rice prices are determined by market mechanisms, the combination of local demand with the supply of rice and completely handled by the market. However, since government intervention in market mechanisms, many farmers sell rice to the government for a higher price than the market price. So this causes a reduction in the supply of rice which is handled by the market and will further reduce the number of local traders and other middlemen. Moreover, rice pledging policy led to decrease in the amount of exports, swelling of the huge financial costs, changes in price in each market, increasing stock of volume, and strict export competitiveness.

In addition, this policy is not well targeted. Because many of the the farmers and stakeholders who receive the benefits of this program are rich farmers, large rice mills, farmers' organizations, large exporters and even members of the government. Poor farmers and the farmers who are not in the irrigation area are very little benefit from this program. In fact, the goal of this program is that they, and the poor farmers constitute the majority of farmers in Thailand. Limitations of poor farmers include education, knowledge, and rice production is one of the causes of this inequality. Thus, the government should be a facilitator for them.

Based on the problems and previous studies, solutions can be recommended for the issue of the impact of this policy is that the government should reduce the intervention price of rice gradually. This is because the magnitude of the impact is

provided by the policy. In addition, policy makers should be more careful in issuing and implementing any policy regime populism. Because not only aspects of poverty, but also aspects of inequality and unfairness is also one of the important issues in Thai society. As well as the long term, to produce other types of commodities can be considered to solve this chronic issue.

Consequently, the rice pledging policy as the market intervention program has a market distortion and a major impact to rice industry for all stakeholder. Therefore, this study would like to focus on the impact of the rice pledging policy on rice industry and its constraint and recommendation of stakeholders.

1.2 Research Question

Based on the problem statement, the research questions for the study were developed as follow as:

1. What the rice marketing system in Thailand?
2. What is the rice pledging policy in Thailand?
3. What about the impact of the rice pledging policy on rice marketing in Thailand?
4. What are the strengths, weaknessess, opportunities, and threats of the rice pledging policy?
5. What is the constraint and recommendation of the stakeholder in rice industry in Thailand?

1.3 Objectives of Study and Expected Result

1.3.1 Objectives of Study

1. To study the rice marketing system in Thailand.
2. To explain the rice pledging policy in Thailand.
3. To determine the impact of the rice pledging policy toward stakeholders on rice marketing in Thailand.
4. To determine the strengths, weaknesses, opportunities, and threats of the rice pledging policy.
5. To find out the constraint and recommendation of the stakeholders.

1.3.2 Expected Result

The research focuses on an analyzing and identifying the impacts of the rice pledging policy and finds the constraint and recommendation of rice pledging policy. The aim of the research is to identify a number of recommendations in term policy and recommendation on increasing income and living standard for each stakeholder on rice marketing that would support sustainable developments.

CHAPTER 2. LITERRATURE REVIEW

2.1 Rice Marketing System

2.1.1 Concept of Supply Chain Management in Rice Marketing System

Poapongsakorn (2012a), explains that supply chain management is the management of a network of interconnected businesses involved in the supply of major product and service packages required by the customer. This includes all movement and storage of raw materials, finished goods inventory, as well as information flow and cash flow from point of origin to point of consumption. It aims to create net value, reduce costs and waste, as well as introducing innovation.

The marketing concept must be adopted throughout not only the entire organization, but the entire marketing system. A system is a complex of interrelated component parts or sub-systems which have a defined common goal. Thus, an agricultural and food marketing system comprises all of the functions, and agencies who perform those activities, that are necessary in order to profitably exploit opportunities in the marketplace. Each of the component, or sub-systems, are independent of one another but a change in any one of them impacts on the others as well as upon the system as whole. The farmer's interest is focused on getting the best return from their produce, which usually equates to maximum price for unlimited quantities. Manufacturers want least cost, best quality produce from the farmer so that they can sell it at competitive, but profitable prices. Traders and retailers want high quality and reliable supplies from manufacturer or farmer, at the most competitive prices. Consumers are interested in obtaining high quality products at low prices (Crawford, 2006a).

Sharma (2013) explained Rice supply chain management generally follows the multi-stage supply chain system, including farmers as suppliers basic of rice, intermediary or agent, rice processing industry, distribution agents, and retailers, as interlinked the upstream and downstream sectors. During the long process of the supply chain, many activities that take place at each stage that affect the function of the next stage, so that the necessary cooperation by adjusting the way. Supply chain requires intermediaries to distribute rice from one stage to another stage. The main

stages of the rice supply chain are farmers who supply paddy to the rice processing industry, which are sold directly or through intermediaries, depending on the type of farmers and their productivity. Farmers who have low productivity of rice is usually sells through intermediaries, while farmers who have high productivity directly sell to the rice processing industry. The second stage is the rice processing industry which is processing paddy into rice, rice processing involves cleaning, grinding or milling, polishing, packaging, storage and distribution. After the operation process of the rice, the rice is distributed to retailers and wholesalers.

According to Poapongsakorn (2012b), factors affecting the supply chain management in Thailand is the flow of value-added, information flow, capital flow and risk sharing, product flow (logistics), government policy, industry structure and evolution, as well as external (global environment and competition). These factors can be described as follows :

1. Flow of value -added
 - a. Significant value loss along the supply chain due to inefficiency
 - b. Difficult to introduce value -added products and services
 - c. Values are not well distributed throughout the supply chain
2. Flow of information
 - a. Insufficient communication and information sharing
 - b. Ineffective communication channels
3. Capital flows and the distribution of sharing
 - a. Ineffective use of supply contracts and risk sharing
 - b. Not available sources of capitals causing imperfect environment
4. Product flow (logistics)
 - a. Inadequate central logistics infrastructure
 - b. Low quality and high cost mode
 - c. Insufficient technology investment
5. Government policy
 - a. Ineffective management of trade barriers and quotas
 - b. Subsidies and government support is ineffective, inadequate, and unfair
 - c. Inefficient or ineffective government required process
6. Industry structure and evolution

- a. Industry structure leading to fierce competition or collusion
 - b. Evolution of industry structure causing paradigm change
7. External (global environment and competition)
- a. Landscape of global competition causes ineffective supply chain
 - b. Requirements from other countries causing supply chain ineffectiveness

2.1.2 Performance of the Rice Marketing System

An efficient marketing system is one capable of moving goods from producer to consumer at the lowest cost consistent with the provision of the services that customers demand. Once the costs involved in marketing have been identified then means can be devised to make the system more efficient. Increases in efficiency can be achieved in a variety of ways: by increasing the volume of business using improved handling methods, investing in modern technology, locating the business in the most appropriate place, implementing better layouts and working practices in production, improving managerial planning and control and/or making changes in marketing arrangements. Performance of a marketing system could be evaluated in terms of how well the agricultural and food marketing system performs what society and the market participants expect of it. A marketing system can be effective without being efficient. Increased efficiency is in the best interests of farmers, traders, processors, wholesalers, retailers, consumers and society as a whole. The efficiency of marketing system is measured in terms of the level and or costs to the system of the inputs, to achieve a given level and or quality of output. Hence resources are the costs and utilities are the benefits that comprise the marketing efficiency ratio. Efficient marketing optimises the ratio between inputs and outputs (Crawford, 2006b).

A knowledge of marketing margin (which is a measure of performance) and pricing efficiency enable us determine the mark up earnings obtained for marketing intermediaries as well as determining the extent of marketing efficiency. Efficient marketing system promote economic development by encouraging specialization and leading to output enhancement. It encouraged farmers to boost their productivity thereby contributing to the improvement of rural income in developing countries. Beyond this, it reduces post harvest loses, ensure adequate returns to farmers investment and stimulate expansion in food productivity, thereby enhancing the level

of food security. The reserve constitutes an impediment to food security, as investment in production becomes more costly, risky and wasted, while free flow of marketing information between markets are hindered (Bassey, 2013).

According to the Anindita (2003), explained that marketing is a key activity that specifically implemented to complete the process of marketing. marketing functions can be classified as: (1) exchange function consisting of the purchasing function and the sales function, (2) physical function consisting of the functions of storage, transportation, processing, (3) the function of the facility consists of standardization, financing, risk, market, (4) demand function.

IFPRI (1996) explained that the relationship between marketing agencies can be explained by the analysis of marketing channels. The overall goal of this channel is to transport and store grain produced by the farmers, to convert it into rice, and distribute to consumers both for domestic consumption and export. Each channel involves various agents to perform various marketing functions. Each agent may involved in more than one major marketing functions, such as storage, transportation, processing, distribution, export, and others.

2.1.3 Rice Marketing System in Thailand

Wiboonpongse and Chaovanapoonphol (2001a) explained that there are various intermediaries involved in the rice marketing system, which have been expanded through the uncoordinated initiatives of private individuals. Since rice producing areas are concentrated and situated at some distance from the main urban consumption centers, the rice marketing system takes along route to reach consumers. At the local level, intermediaries include local buyers or assemblers, local commission agents, cooperatives, farmers groups, local assembling market centers, millers, wholesalers and retailers. At the regional level, large local assembling market centres and large millers are major intermediaries. The final level, i.e country level includes commission agents, wholesalers and exporters. Marketing system of rice can be subdivided into 2 levels, namely paddy markets and rice markets. As for the former, local assemblers play the major role i.e. 43 percent to 60 percent of paddy pass through these merchants before it changes hand to millers. Commission agents handle about 18 percent to 20 percent of paddy. They mainly supply to millers and partly to

large local assemblers. It is notable that farmers' organizations such as the farmer's groups and cooperatives handle only a small proportion of paddy. As for the rice marketing system, about 40 percent to 50 percent of milled is for domestic consumption and the remainder is exported. The commission agents play a significant role in matching exporters' orders and millers' supply at this stage. Some large millers have either direct contact with exporters or foreign importers.

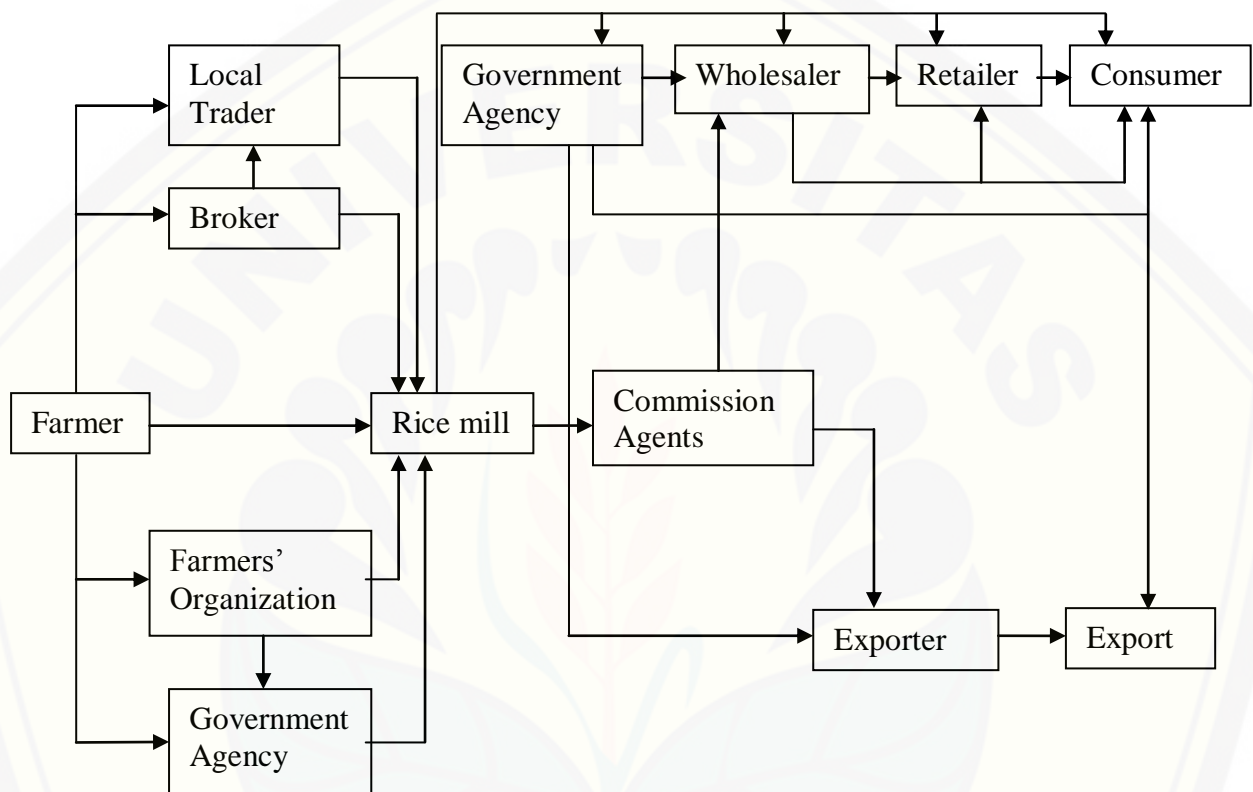


Figure 3 Rice Marketing System in Thailand

Source: Wiboonponge and Chaovanapoonphol (2001)

According to Jie and Thongrattana (2009), described that rice supply chain in Thailand that the paddy rice from farmers as suppliers of rice millers is transported to local millers after harvesting. The largest quantity of rained paddy rice (wet season) is purchased almost immediately from farmers to millers or paddy merchants after harvesting in January-April can lead to large surplus of rice, while off-season rice crop in irrigated areas launches to rice mills during June-September of each year. Then, drying is the important process after harvesting because it affects directly to grain quality and result in losses. There are 6 stakeholders in Thai rice supply chain, namely farmers as suppliers of rice millers, paddy merchants, Thai government as

the Government's rice mortgage scheme, rice millers, retailers for domestic customers and exporters for international customers, and distributors who manage storage system before distributed to retailers or exporters.

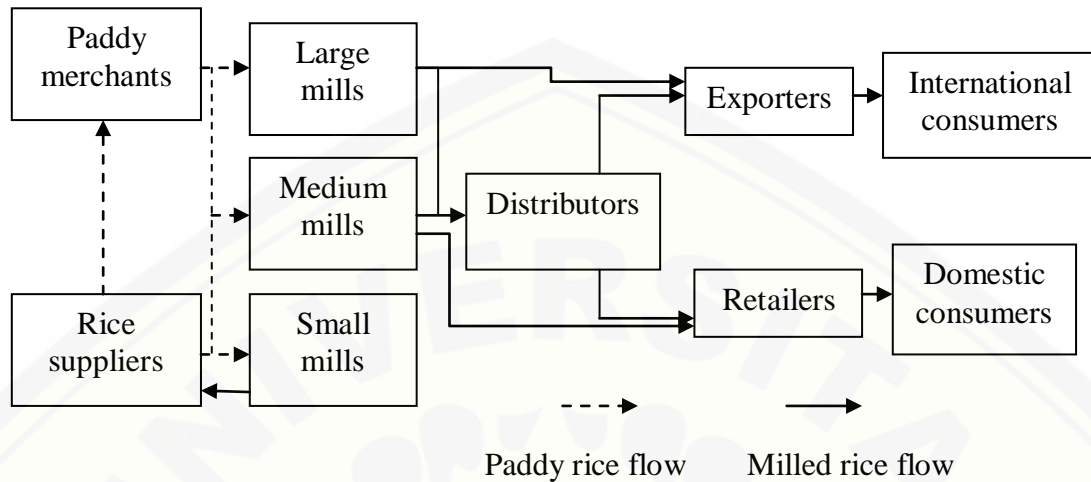


Figure 4 Paddy and milled rice flow

Source: Jie and Thongrattana (2009).

The paddy can be purchased directly between farmers and rice millers, or indirectly between farmers and Thai Government passing rice miller note as the Government's rice mortgage scheme. Some paddy rice from farmers who crop rice for their consumption is milled by small or local rice mills (1-12 tonnes/day). Meanwhile, some paddy rice from a large-medium of rice farm is milled by medium (30-60 tonnes/day) and large mills (100 tonnes/day), and then is refined and packed for domestic consumer by retailers and for international consumer by exporters. In another way, milled rice is transferred to rice distributor who manage storage system before distributed to retailers and exporters (see figure 5).

2.2 Rice Policy

2.2.1 Rice Policy in Thailand

The international rice market has been characterised in the past two years by ample supplies, following record world production in 1999, faltering import demand and a marked drop in world prices. These features were in sharp contrast with those witnessed in the 1998 season, when brisk import demand had lifted the volume of trade to a record high and had sustained prices. This transition prompted

substantial changes in national rice policies in the period under review, as their focus shifted from securing affordable and stable rice supplies for consumers to guarantee reasonable income to producers. As a result, many governments intervened in support of producers through large procurement purchases, direct income transfers, import restrictions or export incentives (FAO, 2001a).

Most food-exporting countries tax their exports heavily in the early development stage and reduce taxation later as they advance into higher development stages. Thai government used to impose a heavy tax on rice exports in its early development stage and later reduced it as this country achieved successful industrialization. The tax reduction that occurred in the 1970s to the early 1980s was associated with efficiency improvements from the over-taxation to the optimum taxation in terms of the social welfare criteria to the nation. However, as the political equilibrium moved toward favoring farmers more after the mid-1980s, the export taxation was further reduced to zero. This recent move should have been politically rational in terms of politicians' private welfare maximization, though not economically rational in terms of social economic welfare maximization (Choeun, 2006).

Agriculture and agricultural policy play an important role in the economy, especially for developing countries. A requirement for industrial development is a well functioning agricultural sector that can provide food at low and stable prices and labour to the industrial sector. Agriculture can also earn foreign exchange and help in financing the industrial development and help create markets and stimulate demand for the products of the manufacturing sector (Rock, 2002 in Forssell 2009b).

Since rice is the most important crop in Thailand and involves the majority of farmers on the one hand and all consumers on the other, rice sector received top attention from the government. Various policy measures have been implemented since World War II. Policy impacts were analyzed especially the export premium by a number of economists (Wiboonpongse and Chaovanapoonphol, 2001b).

The Thai government policy imposed a very high export rate in 1960s and 1970s (an average of 30 percent in 1960 and 24 percent in the 1970s). And a sizable decrease by 10 percent in 1980 and 4 percent in the 1990s. The stability index reflects that the domestic price stabilization policy from the early 1970s until the early 1980s.

However, in the early 1980s, the government eliminates stabilization policies and introduced rice pledging program. Since 1981, the Bank for Agriculture and Agricultural Co-operatives (BAAC) has operated a rice pledging program (paddy mortgage scheme), an optional program that allows farmers who choose to mortgage their rice when market price is low and redeem it when the price returns to normal. This shows the government's policy of supporting farmers through commodity market intervention to price stabilization. In November 1982, Thailand signed the GATT agreement and in 1986, eliminate the rice reservation deposit in that year and several types of rice taxes (Kajisa and Akiyama, 2005).

The most important influence on rice policies in Thailand has become an export orientation of agricultural sector. In the early periode of interveticion, the government imposed heavy taxes agriculture, especially rice sector. Farmers who constituted the majority of the population and implied a large taxation base, have a low impact because of their lack of education and organization. However, as an industrial country with an increase in urban income, is causing farmers to become more aware of the impact of the policy because of the increasing income's gap between urban and rural areas. It forced the government to change their policies towards more producer oriented, namely by introducing price support. Introduction of price support aims to increase the income of farmers and also supports rice mill who benefited largely. Elimination of export premium rice and other policies also increase Thailand's international status, and since Thailand became a member of GATT which may affect policy decisions. In the 21st century, the introduction of the rice mortgage program can also be explained politically by increasing the income of farmers who constitute the majority of the population. This policy resulted a pledged price of rice higher than the market price and a large purchase of paddy by the government (Forssell, 2009c).

Wanglee describes the comparison between the income guarantee scheme and rice mortgage scheme. Income guarantee scheme is a government program which farmers are required to register and sign a contract of the lowest price assurance with the BAAC. During the period of the price guarantee, if the market price is lower than the guaranteed price, farmers that participated in the scheme will receive the price difference. By contrast, if the market price is higher than the guaranteed price, farmers

allows to sell their products to the market. This scheme aims to allow the market mechanism to determine the rice price and encourage exports. In other words, the income guarantee scheme is similar to insurance, which will be compensated if the problem happened. However, if there is no problem, purchasing insurance premiums will be considered as the cost of hedging. In contrast from rice mortgage scheme, in this scheme, the government allows farmers to sell rice to the government at a price determined by the government. Furthermore, the government sells rice through the government to government, private companies or releases to the domestic market. Profit or loss that received by the government depends on the world rice price. Rice mortgage scheme aims to increase the Thai rice prices and control the world market prices.

2.2.2 Rice Pledging Policy

The major change in government agricultural policy occurred in 1986 when a pro-consumer policy was replaced by a pro-producer policy (Siamwalla and Poapongsakorn, 1995 in Dawe, 2010; Poapongsakorn and Isvilanond, 2008 in Poapongsakorn, 2010a).

The export taxes and restrictions that penalized farmers were eliminated, resulting in a more or less neutral nominal rate of protection for exportable crops, although some import-competing crops such as oil palm retain some protection (Warr and Kahpaiboon, 2007 in Poapongsakorn, 2010b).

Since then the government has increased agricultural subsidies through the agricultural pledging program, with the paddy pledging program as the most important instrument in term of budget. The government has also attempted to implement an export cooperation policy with several major rice-exporting countries (Poapongsakorn, 2010c).

Concept of Rice Pledging Policy

The Thai government has launched the rice pledging scheme since 1982. The initial objective of rice pledging scheme was to provide a loan at low interest rate for farmers who needed cash in the early harvesting season, so that the farmers can keep their paddies from selling at low price and delay sales until price rise later. The

government assigns the BAAC to lend farmers money that has value equal to the pledged paddy. Value is calculated at prices determined by the government. The farmers received loans for pledged paddy at the net interest cost of 3 percent per year, and farmers were given 5 years to redeem their pledged paddy. Otherwise, the pledged paddy goes into government stockpiles (Chulaphan, 2012a).

Price support to paddy producers in Thailand continues to be based on a paddy mortgage scheme operated by the Bank of Agriculture and Agricultural Co-operatives. Under the scheme, participating farmers receive loans at preferential credit rates for up to 90 percent of the value of the paddy mortgage at the official support price (FAO, 2001b).

According to Poapongsakorn (2010d), explained that In the early years of the program, before 2001-2002, the farmers can borrow less than 100 percent of the paddy target price. Up until the loan is due, farmers can choose to redeem or forfeit their collateral paddy, depending on the level of market prices relative to the pledged price of paddy. Since 2001-2002, the objective of the program has been changed to support the price and increase farmers' income. There are two ways to borrow:

1. farmers can borrow directly from BAAC and keep the pledged paddy as the 'pledge' (or collateral) in storage facilities on their own farms (barn-house pledging); or
2. farmers who do not have storage facilities can also borrow by bringing their paddy to 'central warehouses'. This is the so-called 'warehouse deposit slip' paddy pledging scheme that is handled by the Public Warehouse Organization (PWO) and the Farmer Central Market Organization (FCMO).

The government provides the interest subsidy for the farmers and also subsidizes the operation of the paddy pledging program and rice sale as follows:

1. The interest charged by BAAC is 6.0-7.0 percent (minimum lending rate (MLR)+1 for the barn-house pledging and MLR-1 for the warehouse deposit slip pledging). If farmers forfeit their crop, the government pays BAAC the interest cost; if not the farmers pay only 3 percent and the rest is absorbed by the government. The government also reimburses BAAC operation cost at the rate 3.0 percent of the loan for the barn-house pledging and 0.5 percent for the warehouse deposit slip pledging.

2. The government, through the Farmer Assistance Fund (FAF), also subsidizes other operational expenses of the program. These subsidies include 100 bath per ton for the operation and overhead expenses of PWO and FCMO; the storage cost (216 bath/ton/6 months) for rice and 20 bath per ton paddy per month that stay in stock longer than three months; the milling and rice mixing cost (400 bath per ton); and the financial loss of rice sales. However, some operational costs of the agencies concerned, especially personnel costs, are embedded in the normal budget of each agency.

The last 29 years saw several major changes to the nature and objectives of the program. First, in 1993-1994, the second type of pledging, i.e the warehouse deposit slips scheme, was introduced in addition to the barn-house pledging program. The change not only benefit farmers who did not have barn houses, but also the rice mills that had paddy warehouses. The program was extended to cover dry-season paddy in 2001, benefiting both the well-to-do farmers and the rice millers in the irrigated areas. The third change – and the most important one – was the increase in the pledging price. Though the loan rate was increased gradually from 80 percent of the target price to 90 percent in 1990–1991 and 95 percent in 1998–1999, the major shift occurred during 2001–2002 and 2005–2006 when the Thaksin government increased the loan to 100 percent of the target price. In addition, the pledging price has been raised to 120–130 percent of the market price. The program, therefore, has been changed to a ‘de facto price support’ program, although its name and the pledging procedure have remained the same. Thus, in practice, most farmers sell their paddy to the government.

The volume of pledged paddy increased from a few thousand tons in the early years to 8.65 million tons in the wet season of 2004–2005. Dry-season pledging peaked in 2008 when the pledging price was set at the record of 14,000 baht per ton. In the early years when pledging prices were below market prices, the share of pledged paddy in total production was relatively small, ranging from 2.9 percent to 8.2 percent, with the only exception being 1992–1993. The share surged after 2001–2002 and peaked at 38 percent for the 2004–2005 wet-season paddy and 44.8 per cent for the 2007–2008 dry-season paddy. Consequently, the government’s rice stock has jumped markedly (as is discussed later), and the government has recently become the country’s largest rice trader.

2.2.3 Impacts of Rice Pledging Policy

According to Poapongsakorn (2010e), explained that there are six possible ways to assess the paddy pledging program:

1. The financial cost of the program

Data limitations make it extremely difficult to measure the financial costs of the program. Although the Farmer Assistance Fund is responsible for a consolidated financial report to the government, the report has never been made public. Each responsible agency has its own report system and financial reports, most of which are not publicly disclosed. Thus, a rigorous estimate of the financial costs of the paddy pledging program consist of: (1) the difference between the paddy pledging price and the rice selling price (when the government releases the rice); (2) the interest subsidy for farmers' loans and lending operations by BAAC; (3) the subsidy of the rice sale operation that includes storage and milling costs and overhead cost of the PWO; and (4) other minor operational expenses incurred by the responsible government agencies.

2. The extend to which it helps poor farmers

One reason for this policy is to help poor farmers. But poor farmers only received 4.5 percent of the benefit, while 20 percent of rich farmers benefited as much as 35 percent. There are two reasons why the most benefit of the program is accepted by the rich farmers. First, poor farmers have little surplus rice for sale because most of the production is used for own consumption. Secondly, benefit of the program during the dry season is only captured by the rich farmers in irrigated areas are located in the Central Plains and Upper North. Only 5 percent of the irrigated area are in the poor northeastern region.

3. The impact on rice prices, especially seasonal price movements

In theory, the program should improve agricultural prices during the period of harvest and the lower the market price after the season when the government released rice stocks to the market. The program should also raise the overall price because the target price was set above the market price. Normally, the price of rice increased to 1998, after which it began to decline until reaching a trough in 2001, rice prices started soaring after that. Several factors may explain the increase in the trend since 2001, but the most important possibility is the increase in the pledged price of rice that began at that time. Uncertainty over government policy against the stock sale of rice can cause

fluctuations in the price of the last few years. Seasonal price patterns change sharply over time. There are 2 main reasons for the seasonal price changes. First, the spread of high-yielding rice varieties and cropping intensity increase in rice yields are spread more evenly throughout the year, except February to April. Second, the effect of the rice pledging program that April is the last month of the program . And this time, most of the rice supply in the hands of the government.

4. The impact on the structure of the rice market

The higher pledging price has resulted in an increasing government role in the rice sector. It not only increases the budget for the program, but also results in an increasing amount of rice that the government has to store, mill and sell. The amount of pledged paddy was as high as 38 percent of wet-season paddy production in 2004–2005 and 44 percent of dry season production in 2008. The government, therefore, is now the country's largest buyer and seller of rice, leading to at least three consequences.

First, rice is now less competitive market. Increased pledged paddy can reduce the supply of rice were handled by the market, thus reducing the local traders and central paddy markets operated by private. Second, the government does not have the necessary facilities to handle several million tons. So it depends on the service of the rice mills and exporter, payment of the cost of storage and milling services. Because the government only need 500-600 more than a few thousand medium and large-scale mills. The rice millers who want to participate in the program should lobby government officials loudly. By paying high rates of program services, the program distorts the market and create uneven playing field in the milling business.

5. The political economy of rice policy and rent-seeking behaviour

This program generates a large economic rents, especially in recent years. Before the 2001-2002, the rent is limited due to the amount of rice that pledged little. Large increases in the pledged price of rice 2001-2002, not only produces greater subsidies for farmers, but also higher rents for those involved in the program, especially the mills, exporters and politicians. The real motive of the program is to increase the rent obtained to please various interest groups and politicians to help re-elected.

Rent increases through multiple channels. Farmers receive interest subsidy and the price difference between the market price and the target price. The factory receives milling costs and does not require borrowing money to buy rice. Exporters receive storage fees and the difference between the export price and successful bid price is bid government rice. Since 2001, all of the rent increase substantially after the pledged price of rice is set above the market price. Rents are captured by the rich farmers, farmers' associations and cooperatives, large rice mills and exporters. Rich farmers and large mills obtain loans by using the identification of farmers. In addition, there are several rice mills and warehouse owners who acquire storage service legally sell paddy and rice from government stocks, as well as recharge the warehouse when the government wants to sell rice.

Rent that goes to the exporter who won the auction of government rice is the difference between the export price and the offer price. Some exporters lobbying the government to amend the terms of the sale after the offering. Exporter of rice bargain old stock at a low price, thus, enabling exporters to bribe officials who control stock access to better quality than other stocks

6. The effects on the competitiveness of rice exports.

Rice pledging program affecting the competitiveness of Thai rice exports in three ways. First, since 2001, the high price of rice is pledged to make Thai rice more expensive than Vietnamese rice. Second, stock and release policies also affect competitiveness. Seasonal price index peaked in April, two months after harvest, because most of the rice in the stock of government and the government does not want to sell rice, fearing that it would depress the market price. The high domestic price in the first quarter to coincide with the winter-spring crop in Vietnam, so Vietnam's exporters will benefited. Third, the program also affects the quality of Thai rice. The program gradually reduce the incentive to provide high-quality rice.

There was a dramatic increase in the pledged price of paddy by 120 percent to 130 percent in 2001. As a result, the budget expenditure for the program loses from US\$ 0.24 billion in 2001 to US\$ 1.31 billion in 2005, and the amount of pledged rice also sharply increased from 6 million tonnes in 2001 to the peak of 10 million tonnes in 2008 (Isvilanonda and Kao-ent, 2009 in Chulaphan, *et al.* 2012b).

The rice pledging scheme may distort market mechanism because this policy not only increase the farm price in the harvesting season but decrease the market price later in the season when the government releases the rice in the market. In addition, this policy also caused structural changes to the market. The increase in the share of pledged rice hold by government reduced the number of local rice buyers, related farmers' organizations, and central rice markets. Meanwhile, the rice millers have increased their roles as a representative of government in order to buy pledged rice from farmers (Forssell, 2009; Lindblom, 2001; Ponnarong, 2008; the Center of Applied Economics Research in Thailand, 2004 in Chulaphan, 2012c)

According to Forssell (2009d), the mortgage program has had a negative impact on the Thai rice market in the sense that the functioning of the market mechanism has been distorted. If the market forces are allowed to be distorted for a longer period, it can also destroy capital creation, technology innovation and motivation for all participations in the market. The pledged prices have resulted in distortions in production and caused problems for the trade. The policy have been a high domestic price and large government expenditure. Rice importing countries postponed their import in order to wait cheaper prices of from other producer countries, which has harmed the Thai exporters.

2.2.4 Constraints and Recommendations of Rice Pledging Policy

Constraints

Forssell in the study about rice price policy in Thailand (2009e), explained about the short term results of the rice pledging policy have been a slowdown in exports, high domestic prices and large government expenditure. The domestic market has been harmed and integration has been reversed because the mortgage program distorted the market forces. In the long run the program will have more far reaching negative consequences if it distorts the incentives for farmers to enhance productivity and decrease costs. If the market forces are allowed to be distorted for a longer period, it can also destroy capital creation, technological innovation and motivation for all participants in the market. This affects the growth and the efficiency. The Thai rice sector might lose more of its competitiveness which has already been damaged due to the high prices of Thai rice compared to, for example, Vietnamese rice.

Jermittiparsert in their study about The Populism Policy and Building/Diminishing Economic Inequality and Unfairness: Emperical Suggestion on Pork-Barrel in Thailand's Rice Trading Business (2012), argued that the rice pledging policy gives a large share of the profits to exporters by 61 percent, while rice farmers received its lowest share of the profits by 17 percent.

Jermittiparsert (2013), conclude the result of the research indicates that the current circumstance, where the factor of production cost has no effect on the determination of paddy domestic price, and the factor of government policies that aim to interfere with such price have proven ineffective compared to the demand and supply of rice in the world market, is an evidence of the deteriorating power status of the state in this globalisation era, which is virtually nonexistence in practice. Though, it does not seem to have been realised by Thai government, which appears to believe throwing a vast amount of national budget at the problems is effective.

According to Chulaphan (2012d), explained that the rice price-pledging scheme is a price support program that aims to provide a loan at low interest rate to farmers. The government lends the farmer money equivalent to the value of the pledged rice. This policy has been criticized that it may distort the market mechanism. During the rice-price pledging policy, rice markets were integrated, however, the transmission was imperfect among prices at the farm gate, wholesale, retail and export level. The stakeholders in each market level do not receive the same effects when prices of rice change. The results from this study provide vital evidence that the rice-price pledging policy have a direct impact over export prices. Thus, implement this policy might lower the competitive advantage of Thai rice exports.

Recommendations

Forssell in the study about rice price policy in Thailand (2009f), recommended that the government should revise its policy, especially the level of the pledging price. Because an evaluation of the program and its impact is necessary.

Jermittiparsert (2013) provide recommendation to the government that should adjusting the pattern of economic management under the context of globalisation, which the government should not and, in fact, could not effectively continue to

intervene in rice price. any possibilities to improve technology, production and processing, as well as subsidising (if required), should be considered promptly and timely. As for the long run, to produce other type of commodity may have to be considered as a means to solve this chronic problem.

Study about The Populism Policy and Building/Diminishing Economic Inequality and Unfairness Empirical Suggestion on Pork-Barrel in Thailand's Rice Trading Business by Jermsttiparsert (2012), reminded to two group of peoples. First, a group of people having interest in establishing a government policy must be more thorough in issuing or applying any populism policy rezime because besides the poverty aspect, an aspect of inequality and unfairness is one important problem in the Thai Society. Second, civil people who need to realize the necessity of proofs and the truth whether different policies established and applied by the government are implemented with good faith or with a hidden agenda, as well as whether and how much they are beneficial to the public as whole.

According to Chulaphan (2012e), give recommendations about effect of the rice pledging program on price transmission that the policy maker when to launch, should take special consideration of the effects price transmissions have over the benefit and welfare of different market levels.

2.3 Conceptual Framework

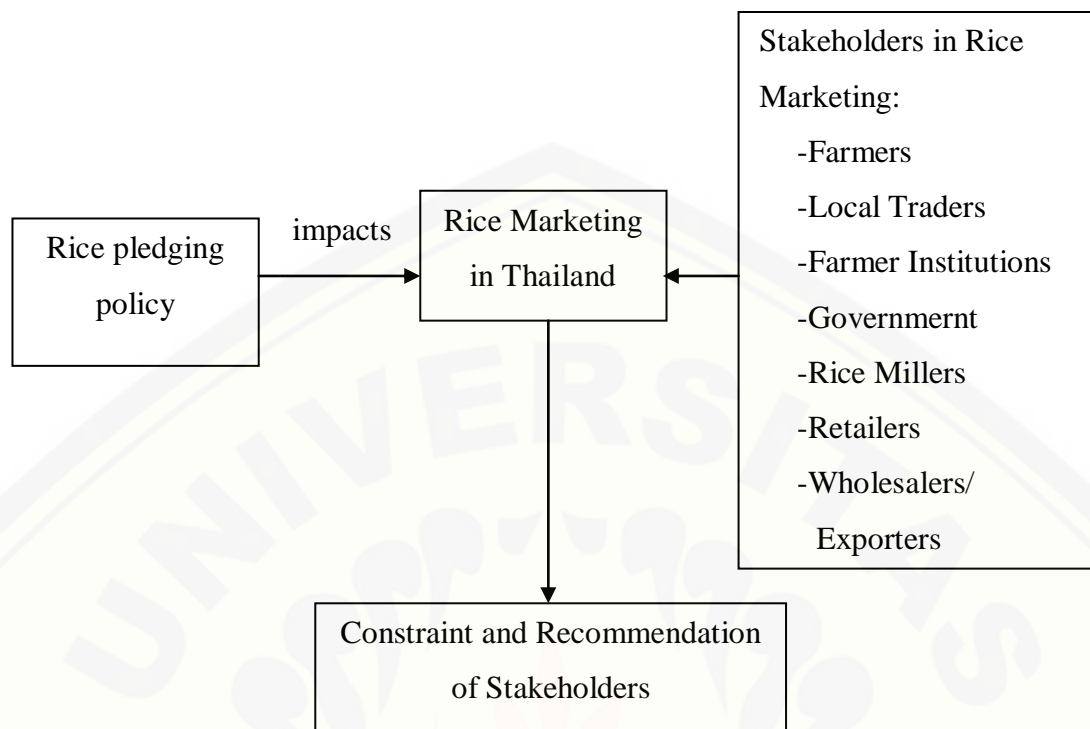


Figure 5 Conceptual Framework

2.4 Research Hypothesis

The testing hypothesis of this study involves the impact of rice pledging program on rice markets, many independent variables has statistically significant relationship with dependent variables. Then, in this investigation the research hypothesis is as follows:

1. There are the effect of the political factors toward rice markets, including export volume, rice stock, and rice price.

2.5 Structure of Hypothesis

Based on the research hypothesis, the structures of testing hypothesis as follows.

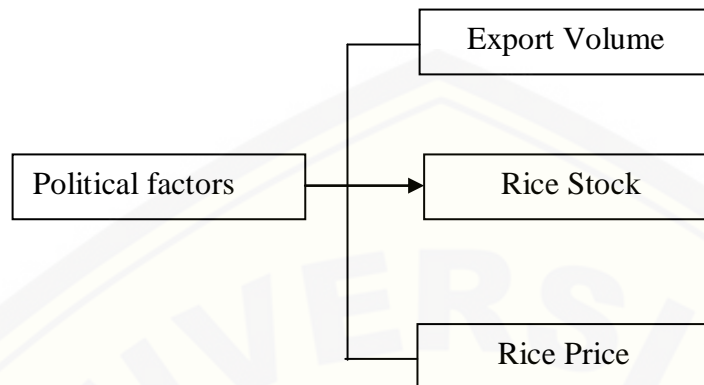


Figure 6 Structure of testing hypothesis

CHAPTER 3. RESEARCH METHODOLOGY

This chapter presents the methods of sampling technique, data collection and data analysis employed in this study including primary and secondary data. This chapter organized to detail out the selection of the research site, population and sampling technique, data collection and data analytical methods.

3.1 Selection of Research Site

Chedi Hak Sub-District, Mueang District, Ratchaburi province, Western Thailand was selected as a research site. This location is 80 kilometres west of Bangkok and borders. Neighbouring provinces are Kanchanaburi, Nakhon Pathom, Samut Sakhon, Samut Songkram and Phetchaburi province. The reasons why this area was chosen as a research site is because one of major rice cultivation province. There are many of stakeholders which are farmers, local traders, farmers' organization, government agencies, rice millers, wholesalers, retailers, and exporters on rice industry in this area that received the impact of the rice pledging policy.

3.2 Population and Sampling Technique

The population of study were all of stakeholders on rice industry which are farmers, local traders, rice mills, farmers' organization, government, retailers, wholesalers, exporters, and BAAC in Ratchaburi Province. Both of the stakeholders that under the rice pledging policy and not under the rice pledging policy. Sampling techniques used in this study was purposive sampling technique to find out the respondent of stakeholders. According to Neuman (2003), purposive sampling technique is a sampling technique that is acceptable for a particular situation. There are some respondents that selected, namely, the rice local trader and agricultural extensionists as government officer.

3.3 Data Collection

Secondary Data Collection

Secondary data focus on the marketing system of rice in Thailand under the rice pledging policy. Data collection obtained from the relevant agencies as Office of Agricultural Economics (OAE), Thai Rice Exporters Association (TREA), Bank of Agriculture and Agricultural Cooperative (BAAC), and the other relevant agencies. The information were gathered through the review of documents and online. The kind of information that collect are rice statistic, rice policy, research and development (R&D), an rice marketing.

Primary Data Collection

Primary data obtained was collect from respondent by using designed interviewing schedule and in depth interview. The tools that used in depth interview is SWOT and matrix that concern about impact of the rice pledging policy and constraints and recommendation. There are 3 part of survey item as interviewing schedule for rice local trader, namely, personal background of respondent, the rice marketing system, and constraints and recommendation. For government officer, the question concern about the rice pledging policy.

3.4 Analytical Method

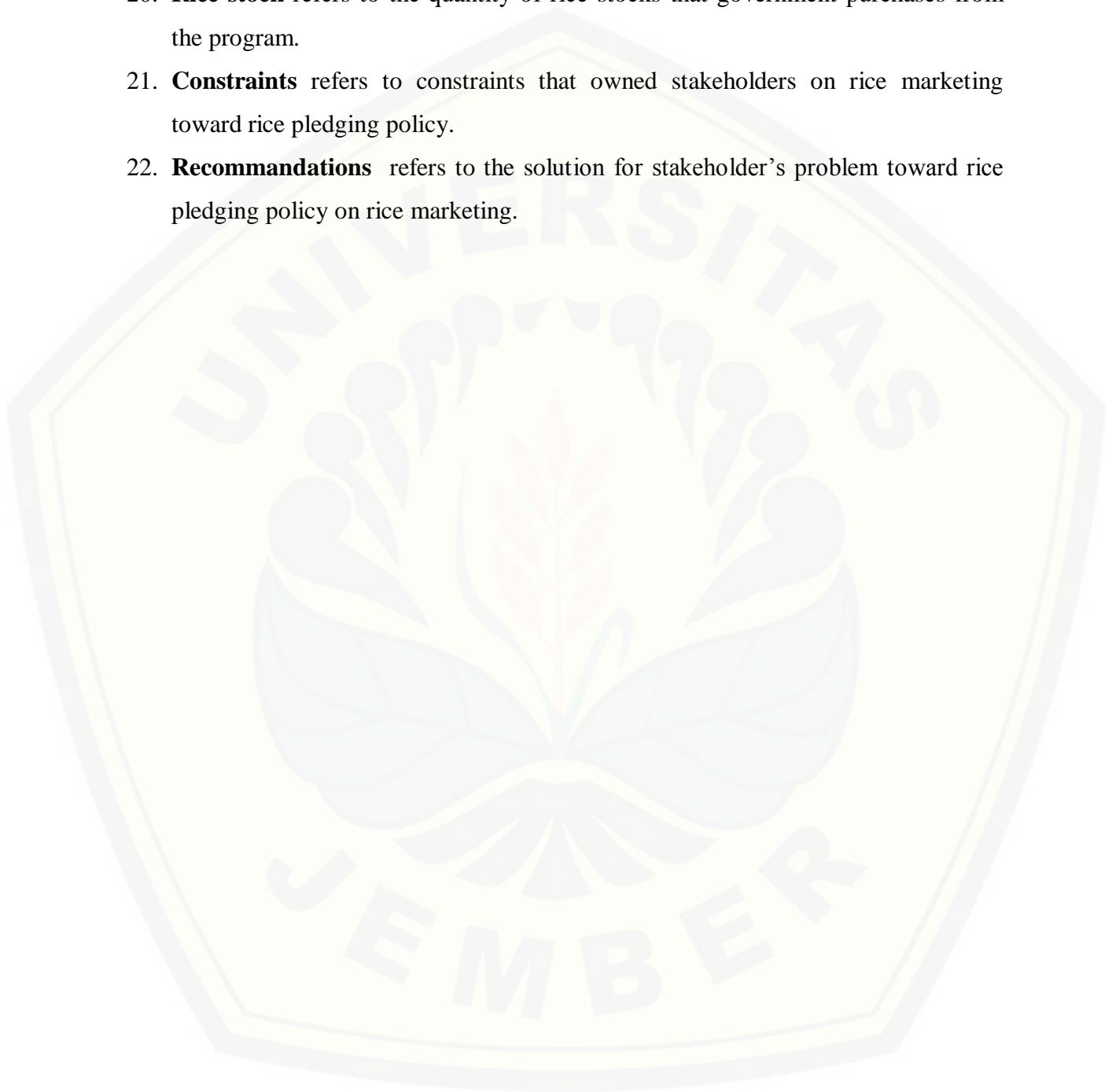
This study used descriptive method as analytical method to describe the impact of rice pledging policy on rice marketing. In addition, it concern about relations between phenomena of impact of rice pledging policy. Data collected from respondent was described.

3.5 Operation Definition

1. **Rice marketing system** refers to the rice marketing included paddy marketing system and rice milled marketing system under the rice pledging program and not under the program in Thailand.
2. **Marketing channels** refers to rice marketing channels used by each of the stakeholders who responded.

3. **Marketing function** refers to the purchase, sale, transport, storage, standardization, processing, finance, risk, and demand at each of the stakeholders who responded.
4. **Stakeholders** refers to person who has been in rice industry.
5. **Rice farmers** refers to the person cultivate rice who joined in rice pledging program and do not join in the program.
6. **Local traders** refers to the person who buys paddy from farmers who does not join the rice pledging program to be sold back to the rice millers.
7. **Farmers' organization** refers to the group of farmer under rice program and not under program who have the same goal to collect paddy from the farmers for resales to rice millers.
8. **Government agencies** refers to the government employees who work for rice pledging program.
9. **Bank Agriculture and Agricultural Cooperatives** refers to the bank that lends money to farmers through the rice pledging program.
10. **Rice mills** refers to the rice millers that appointed by the government to store and mill rice under rice pledging program and not under the program.
11. **Wholesalers** refers to the person large traders who buy rice in bulk from rice millers and government agencies are included in the rice pledging program.
12. **Retailers** refers to the small trader who buy rice in small quantities from the wholesalers and rice millers.
13. **Public Warehouse Organization** refers to organization under rice pledging policy that handles the storage warehouse of rice from farmers (in the program) that does not have storage facilities.
14. **Farmer Central Market Organization** refers to organization that same with PWO who also handles the storage warehouse of rice farmers.
15. **Irrigated area** refers to number of areas which gained irrigation during rice planting season.
16. **Rice pledging policy** refers to an existing condition of the rice pledging policy which provides soft loans to rice farmers in Thailand.
17. **Pledged paddy** refers to paddy that pledged by farmers who participate in the program.

18. **Pledged prices** refers to rice prices obtained by farmers from the program.
19. **Impact** refers to price transmission, rice domestic demand, total of paddy production, stocks of rice, and export quantity caused by the program.
20. **Rice stock** refers to the quantity of rice stocks that government purchases from the program.
21. **Constraints** refers to constraints that owned stakeholders on rice marketing toward rice pledging policy.
22. **Recommandations** refers to the solution for stakeholder's problem toward rice pledging policy on rice marketing.



CHAPTER 4. RESULTS AND DISCUSSION

4.1 Personal Background of Local Trader

This part, the general information of one rice local trader in Ratchaburi province will be described. The data consisted of personal information of respondent, amount and source of household income, accessibility to credit, and social and political group belonging.

4.1.1 Personal information of rice local trader

The study revealed that the rice local trader as respondent were male. The name of respondent is Mr Walit who also as farmer and works in the Rice Learn Center. This respondent and the Rice Learn Center is not under the rice pledging program. The Rice Learn Center is a community that have farmer members who cultivate GAP rice and supply their paddy to this community. This community buys and mills the paddy from their members and sells the milled rice to market, especially in the hospital, because it is healthy rice and have Q-mark certificate. According to Wiboonpongse and Chaovanapoonphol (2001), it indicated that the local buyers assemble paddy from farmers to local country markets'. They normally own trucks and arrange for transportation between farms and mills. Regular assemblers usually contract medium and large millers because of opportunity to buy large quantities of rice of given types, varieties or grade at one time. However, some farmers are also local buyer or millers.

Regarding marital status of respondent, the rice local trader is single, but the number of household member are 5 persons. In term of the rice local trader education, the last education is senior high school. The local trader as farmers have 23 rais of rice farms that rents 1000 Baht a year per rai.

4.1.2 Amount and source of household income

Income of the study sample focused on only cash income from rice products. The rice local trader have no farm income, because it directly mills and sells to the

hospital, so the local trader only have salary from his business. The rice local trader had salary about more than 100,000 Baht a year.

Thai rice farmer households who are much weaker both in economic power and in standard of living. The rice farmer has an average land per household of around 4 acres in the Northeast and 12 acres in the Central part of Thailand. Income per family with 4 people per year is 523 US\$ for the Northeast of Thailand and 718 US\$ for growers who cultivate a second crop (Vanichanont, et al, 2004). Compared with income of rice growers, the local trader has income higher than rice grower.

4.1.3 Accessibility to credit

The rice local trader had access to credit. In term amount of credit, the respondent did not mention the nominal of credit. Source of credit is the Bank of Agriculture and Agricultural Cooperative (BAAC) with interest rate 7 percent a year. Regarding the purpose of credit, respondent informed that he used money as farm capital for farm production.

The BAAC was established to provide farm credit as well as to serve price support programs e.g warehouses and pledging program (Wiboonpongse and Chaovanapongphol, 2001). However, the BAAC provides loan also to agricultural cooperative, farmers' associations or community enterprises can also borrow from BAAC for purposes of re-lending to members, procurement of farm inputs and equipments, and collection of farm products from members.

4.1.4 Social and political group belonging

Regarding social and political group belonging, the findings revealed that rice local trader was involved in the BAAC as a member to access loan for farm production cost. The respondent also involved as leader in the Agricultural Cooperative and the village fund. The Agricultural Cooperative is closed with the Rice Learn Center that the member to be able sell their rice in that cooperation.

In term of political group belonging, the rice local trader was involved in political party at sub-district level as leader. Involving into this community will benefit the local to improve the quality of life by raising some local issue into community, state and national level.

4.2 Rice Marketing

This part will further discuss on rice marketing in term rice marketing function and rice marketing channels in the study area. It will present about exchange function, physical function, and facilitating function.

4.2.1 Rice Marketing Function

Exchange function

Regarding exchange function in rice marketing by the rice local trader, there are purchasing function and selling function. The study revealed that the respondent purchases the paddy from farmers' organization. The amount of paddy that purchased usually is more than 1,300 ton a year with 8,500 Baht/ton of rice price, so that the respondent should have minimal expenditure for purchasing paddy about 11,050,000 Baht a year. There are no problems in purchasing paddy.

In term of selling function, this study found that the respondent sells milled rice to hospital as Q-mark rice product. It means that the milled rice was met market standard for food safety. For this product, the prices in normal market is 17 Baht/kg, but the purchasing price from hospital as 21 Baht/kg is higher than normal market around 4 Baht/kg. The income of this rice selling is around 27,300,000 Baht a year. Therefore, there are no problems in selling milled rice.

Physical function

In term of physical function in rice marketing by a respondent, there are three functions, namely, storage function, transportation function, and processing function. This survey indicated that the rice local trader stores the paddy for 4 months before mills it. The amount of paddy that stored is around 1,500 ton a year and the capacity of storage house is 1,000 ton of paddy that uses open storage system. The paddy stored in bags, each bag is 30-40 kg of paddy. For Q-mark rice product, the respondent do not use the chemical in rice storage, but it use basil leaf for protect the paddy from insect. There are no storage cost, because it include in farm production cost or purchasing paddy.

Regarding transportation function in rice marketing by the rice local trader, this finding revealed that the respondent to distribute milled rice to hospital uses own car. The distance of hospital is about 6 to 26 km. Every week, two ton of milled rice distributed. The rice local trader sends milled rice if the hospital already order. For payment, the hospital will give the bill if the rice local trader already sent the milled rice. The cost of transportation is 200 Baht a week

This study revealed that the respondent mills paddy if there order from customer. There is a small scale rice mills with capacity 10 ton a day, exactly, milling process depended on order from hospital. Usually, every mills paddy as much as 4 ton a day. The cost of milling process involved labor cost and electricity. The labor cost is 300 Baht/ton and the electricity cost is 150 Baht/ton. The respondent also add for depreciation around 150 Baht/ton. According to OAE (1993,1999) in Wiboonpongse and Chaovanapoonphol (2001), indicated that existing technology employed by most mills is inefficient especially when energy costs rise. Modern technology is only used by large millers to reduce broken grain, to increase milled rice quality and to produce better packaging.

Facility function

Regarding the facility function in rice marketing by the rice local trader in Chedi Hak, Ratchaburi province, this survey indicated that the farmer who contracted by respondent has GAP product for farm practice. The milled rice that produced by respondent is Q-mark rice product that have Q-mark certificate for standardization. The standard packaging that used by respondent is a plastic bag which new clean one, no contamination. Grading and standardization have been well established.

This study revealed that the rice local trader ever had credit as sources of fund in the BAAC and farmer community at last time ago. The financial cost involved purchasing cost, storage cost, transportation cost, and processing cost. The total of financial cost is 11,837,200 Baht a year (as shown in Table 7)

Table 7 The financial cost of the ric local trader

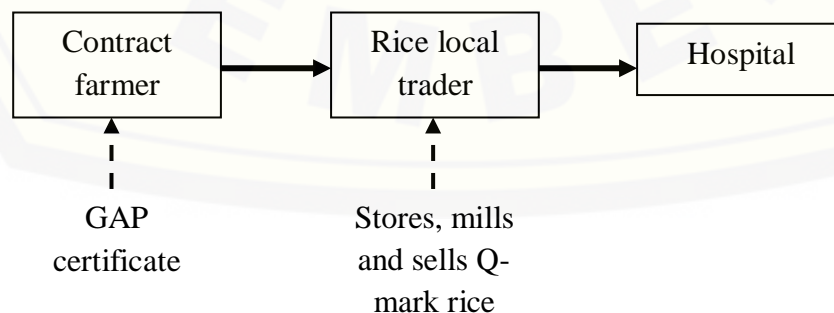
Components	Amount of paddy (ton)	Cost (Baht)
Purchasing cost	1,300	11,050,000
Storage cost	-	-
Transportation cost		7,200
Processing cost		
-labor cost		390,000
-electricity		195,000
-depreciation		195,000
Total	1,300	11,837,200

According to OAE's findings (1995) in Wiboonpongse and Chaovanapoonphol (2001), indicate that millers enjoyed the highest profit rate (21 percent of the cost and 17 percent of the price received). The major marketing cost items in descending order are transportation, labor and overhead charges, packaging, interest and milling.

This findings indicated that the rice local trader never had loss in storage process. The respondent always stores in paddy form, so it make more resistance to insects. This study also indicated that the respondent have no problem to get market information in term price and quality of rice. The rice local trader gets the market information from online and actual market (retailer and market).

4.2.2 Rice Marketing Channels

This survey revealed that the rice local trader purchases the paddy from farmers that have GAP certificate. The respondent mills the paddy by small scale mills with capacity 10 ton a day. The milled rice that produced is sells to hospital (as shown in Figure 7)

**Figure 3** The rice marketing channels of respondent

This findings indicated that the price determined by market mechanism. However, the hospital has higher rice prices than normal prices. This the respondent's reason sells to hospital, another reason reason is because the location near from production price so can reduce the transportation cost. In various studies, farmers, local assemblers and millers that they were price takers. The millers' buying price was their expected selling price deducted by their handling cost and a certain profit

4.3 Rice Pledging Policy

This part will discuss about the kind of policy in term rice commodity in Thailand, the concept of rice pledging policy and the impacts of this policy. The study revealed that respondent for information of rice pledging policy is a government officer at Department of Agricultural Extension (DOAE) in Ratchaburi province. The name of respondent is Mr. Pathomchai Gajasuta as agricultural extensionist in DOAE.

4.3.1 Rice policy in Thailand

This study revealed that policies in term rice commodity in Thailand are rice pledging program that will discuss in next part, financial support to farmers who suffer disaster. For financial support, officer go to field for evaluating how much farmer get loss. In term rice policy in Thailand, the government also has program about credit card for farmers. This program provides loan to farmer who follows the program. In addition, the government also provide training as education program to farmers that aims to reduce production cost or increase efficiency input use.

4.3.2 Rice pledging program

This findings indicated that the rice pledging program is policy to support the selling price with sets the rice price at farm gate level is higher than market price. The farmer who under the program sell rice to rice mills that also under the program. This program aims to increase the farmer income. There are 98 percent farmers in Ratchaburi province included the program and only the large scale rice mills that included the program about 13-15 unit of rice mills.

The study revealed the process to apply into program, especially for farmer. The farmer who want to join the program, have to go directly to office at district level

for applying the document and register. After that, officer will prove the document and set up the meeting with farmers to inspection. Furthermore, the officer inspects to the field for checking the number of land holding, the rice variety, cultivation time and harvest time of paddy. If farmers meet all requirements and inspection process already finished, agricultural office provide a certificate to farmer that means farmer already become member of program.

4.3.3 The impact of rice pledging policy

The study revealed that rice pledging program have destroyed rice marketing system. The government has implemented this program to intervere in market mechanism. This program causes the government be the largest rice trader, because many farmers sells their paddy to government. According to Poapongsakorn (2010), increasing pledged paddy can reduce the rice supply were handled by the market, thus reduces the local traders and central paddy markets operated by private.

This survey indicated that government has a large expenditure of rice pleding program. The budget of program not only involves difference between pledged paddy price of program and market price, but also milling cost and storage cost also handled by government. According to Isvilanonda and Kao-ent (2009) in Chulaphan, et. al (2012), increasing pledged paddy price 30 percent higher than market price results the expenditure of program lost from US\$ 0.24 billion in 2001 to US\$ 1.31 billion in 2005.

This findings indicated that importing countries has stopped to purchase rice from Thailand. It buys from Vietnam. This program affects the competitiveness of Thai rice. According to Poapongsakorn (2010), the higher pledged paddy price makes Thai rice more expensive than Vietnam rice. In addition, government did not want to sell rice that it also affects to the Thai rice quality. The rice pledging program also decreases rice quality. It causes the paddy is too long stored in warehouse. The program gradually reduce the incentive to provide high rice quality.

4.4 Strengths, Weaknesses, Opportunities, and Threats of Rice Pledging Policy

This part will discuss about strengths, weaknesses, opportunities and threats of rice pledging policy. The study revealed this analysis according to opinion of rice local trader and government office.

4.4.1 Strengths

The survey indicated that the strengths of rice pledging policy are including 1) this program benefits for farmers, because farmers can keep their paddies at low selling price, 2) farmers receives higher paddy price than market prices, 3) increase rice farmer income, because it is a objective of program, 4) rice mills gets milling cost from the program, 5) rice mills does not require borrowing money to buy paddy from farmers, 6) the government becoming the largest rice trader.

Majority of respondent revealed that farmers receives higher paddy prices than market prices, increase rice farmer incomes, rice mills does not require borrowing money to buy paddy from farmers, and the government becoming the largest rice trader are strengths of rice pledging program.

4.4.2 Weaknesses

The findings revealed that the weaknesses of rice pledging police are including 1) in the dry season, the program only benefits farmer in irrigated area, 2) the most benefits of program is accepted by rice farmers and poor farmers only receives low benefit of the program, 3) many of Thai farmers is unpaid, 4) each market level (farm gate, wholesale, retail, and export) do not receive same effect when rice price changed, 5) farmers received the lowest share of the profit, 6) many local trader lost their job, 7) financial cost of program become very high (increased government expenditure), 8) amount of paddy that stored by goverment is increased, 9) amount of paddy that milled and sold by government is decreased, 10) stock sale of rice can causes fluctuation rice price, 11) the government does not necessary facilities to handle several million tonnes of paddy, 12) causal of changes market structure, and 13) reduce the incentive to provide high rice quality.

Both of respondent indicated that the most benefit of program is accepted by rice farmers and poor farmers only received low benefit, farmer received the lowest

share of the profits, financial cost of program is increased, amount of paddy that stored by government is increased, amount of paddy that milled and sold by government is declined, stock sale of rice can cause fluctuation rice price, causal of changed market structure, and reduce the incentive to provide high rice quality are weaknesses of rice pledging program.

4.4.3 Opportunities

This study indicated that the opportunity of the rice pledging program is many countries consumes rice. Rice as staple food for majority of people can be an opportunity to continue this program. However, compared with the weaknesses and threats of the program, this program can not be effort.

4.4.4 Threats

The survey indicated that the threats of the program are including 1) import countries change to another countries for importing rice, 2) Thai rice price more expensive than Vietnam rice price, 3) the program to intervere price, have proven ineffective compared to the demand and supply of rice in the world market, and 4) Thailand lost market share in rice world market.

Majority of respondent indicated that importing countries changed to another countries for importing rice, Thai rice price more expensive than Vietnam rice price, and Thailand lost market share in rice world market are threats of the program.

4.5 Constraint of Rice Pledging Policy

This part will present about constraints of rice pledging program in rice marketing. It revealed that there are six items as constraints according respondent including 1) the large government expenditure, 2) declining rice export quantity, 3) high export price of rice, 4) destroy motivation for stakeholders in rice marketing, 5) the stakeholder in each market level do not receive the same effect when price changed, and 6) reduce the number of local trader, related farmer organization, and rice market center.

In addition, this study also indicated the constraints by using matrix analiysis. There are 4 main constraints in term economy aspect and social aspect. Regarding

economy aspect, there are 2 main constraints, such as fluctuation in rice price and decreasing rice quality. The fluctuation rice price caused by increasing rice stock domestically and government limits rice selling to export. It made amount of paddy is higher than milled rice, and Thailand lost market share in international market. the second constraint in term economy aspect is decreasing rice quality that caused by mixed rice quality. It is because any stakeholders did it. Decreasing rice quality affects the price and export volume. It makes rice price and export volume is decreased. In addition, low grade of rice have caused the importing countries postponed their import or changed import to another countries.

In term of social aspect, there are 2 constraints, such as many middleman lost their jobs and weak farmers' organization (have no power). Middleman or local traders who lost their job because farmers directly sells paddy to rice mills, so that, local traders have lack of rice supply. Because of lost job, they changes their job. In term of social aspect, this phenomenone is called social mobility. The second constraint in term social aspect is weak farmers' organization. The rice pledging program causes the farmers directly sells their paddy to the rice mills that under program. It made the position of farmers' organization is weak, because farmers prefer to choose sells their paddy to rice mills than farmers' organization. So that, it impacts to performace of farmers' organization and gradually, will reduce the number of farmers' organization.

According the constraints, in this survey revealed that the respondent give the recommendation towards rice pledging program on rice marketing in term implementation and policy. Regarding implementation oriented, the recommendation towards the impact of rice pledging program on rice marketing are the stakeholders in rice marketing should increase the market information an knowledge through attend the extension meeting or training program, as well as farmers' organization should improve education center in 2015 for food safety. In addition, to address the fluctuation rice price, the farmers should keep their paddy to reduce rice supply in the market. Improving rice quality (standard) and grading continuously is needed to increase the rice quality.

Regarding policy oriented, the recommendation toward rice marketing are the government should terminate the rice pledging program to lead the price determined

by market mechanism. Moreover, the deletion this program is able to address decreasing the number and performance of stakeholder. On the other hand, zoning and promoting the quality standard of rice is needed to address decreasing rice quality.



CHAPTER 5.

CONCLUSIONS AND RECOMMENCATIONS

5.1 Conclusion

1. The name of respondent is Mr. Walit who single, but the number of household members are 5 persons. The last education is high school. The respondent is rice local trader who has 23 rais of land that rents 1,000 Baht a year per rai. The respondent hace no farm income. It has only salary about more than 100,000 Baht a year. The salary come from their rice business. The respondent can access to credit facilities. The source of credit is the BAAC that have interest rate about 7 percent a year. The purpose of borrow loans to thte bank is for farm production cost.The respondent involved in any group belonging in term social group and politic group. The respondent as member in the BAAC, but he is a leader for agricultural cooperative and politic group at sub-district level. He also is a committee in village fund.
2. The respondent purchases the paddy around more than 1,300 ton a year with price 8,500 Baht/ton from farmers that have GAP certificate for their production process. The rice local trader selss the milled rice to hospitals with price 21 Baht/kg. This price is higher than the normal price, because this rice is Q-mark product. The respondent stores the paddy in open storage house with capacity 1,500 ton and it uses no chemical. The paddy stored for 4 months and then milled is there is order from hospital. For buying the paddy from farmers and selling the milled rice to hospital, the respondent uses own car. The rice local trader has small scale rice mills with capacity 10 ton a day. Exactly, the milling process depends on order from hospital. Usually, everyday mills 4 ton of paddy. The respondent has Q-mark certificate as standard product. Therefore, it need the paddy that have GAP standard. The respondent ever has credit in the BAAC and another source of funds. The respondent also did not have risk in their business. It also have no problem to get market information. The rice local trader purchases the paddy from farmers that have GAP certificate, then stores and mills, furthermore sells the milled rice directly to hospitals. The price determined by market.

However, the hospital provide the higher price than market price. The reason why the respondent sells to hospital are the high price and the location is near.

3. The respondent for collecting information about rice pledging policy is a agricultural extensionist in DOAE, Ratchaburi province as government officer. The policy in Thailand in term rice commodity are the rice pledging policy, financial support for farmers who suffered disaster, loan for farmer with credit card, and education program (training). The rice pledging policy is a policy to support the selling price with provide paddy price at farmgate level is higher than market prices. The farmers who under program sells paddy to the rice mills that under program. The aims of this policy is increasing farmer income. The farmer be able to apply this program with register and bring document that needed to agricultural office at distric level. Then, the officer will prove the documents and set up the meeting with farmer for field inspection. Furthermore, if field inspection finished and success, the farmers will provided the certifiante by agricultural office.
4. Majority of respondent revealed that farmers receives higher paddy prices than market prices, increase rice farmer incomes, rice mills does not require borrowing money to buy paddy from farmers, and the government becoming the largest rice trader are strengths of rice pledging program. Both of respondent indicated that the most benefit of program is accepted by rice farmers and poor farmers only received low benefit, farmer received the lowest share of the profits, financial cost of program is increased, amount of paddy that stored by government is increased, amount of paddy that milled and sold by government is declined, stock sale of rice can cause fluctuation rice price, causal of changed market structure, and reduce the incentive to provide high rice quality are weaknesses of rice pledging program. Majority of respondent indicated that importing countries changed to another countries for importing rice, Thai rice price more expensive than Vietnam rice price, and Thailand lost market share in rice world market are threats of the program.
5. This study revealed that there some constraints in rie pledging policy in term economy aspect and social aspect. Regarding the economy aspect, the constraint are the fluctuation paddy rice and decreasing rice quality. In term of social aspect,

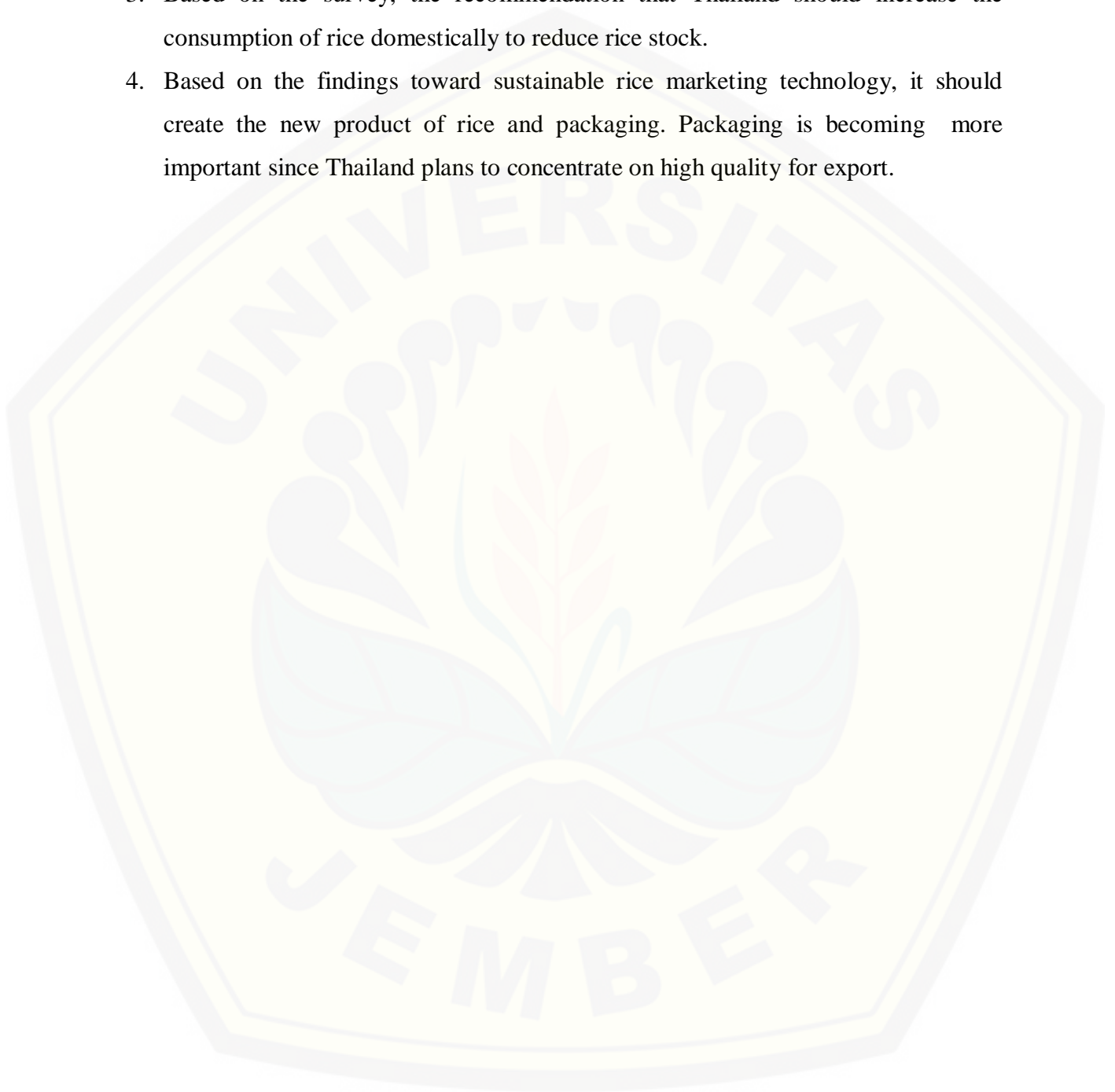
the constraint of rice pledging policy is many middleman (local trader) lost their job and weak farmers' organization (have no power). Regarding implementation oriented, the recommendation towards the impact of rice pledging program on rice marketing are the stakeholders in rice marketing should increase the market information and knowledge through attend the extension meeting or training program, as well as farmers' organization should improve education center in 2015 for food safety. In addition, to address the fluctuation rice price, the farmers should keep their paddy to reduce rice supply in the market. Improving rice quality (standard) and grading continuously is needed to increase the rice quality. In term of policy oriented, the government should terminate the rice pledging program to lead the price determined by market mechanism. Moreover, the deletion this program be able to address decreasing the number and performance of stakeholder. On the other hand, zoning and promoting the quality standard of rice is needed to address decreasing rice quality

5.2 Recommendations

Based on the findings, some recommendations can be made to the relevant agencies and included in the appropriate strategy on policy and implementation measures with regard to rice marketing in Thailand, especially in Chedi Hak Sub-district, Mueang District, Ratchaburi Province.

1. Based on the findings towards sustainable rice marketing development in study area, the study recommends for marketing policy.
 - a. An evaluation of the program and its effects is necessary, and the government should revise the policy, especially the level of pledged price.
 - b. The government should promotes the standard and rice grading continuously to improve rice quality.
 - c. The government should provide the training as education center to increase knowledge and skill of farmer and another stakeholder in term rice marketing technology.
2. Based on the study towards increasing income and living standard for stakeholder, the recommendation that the stakeholder should do are as follows.

- a. The stakeholder should attend the training to increase knowledge and skill in term rice marketing technology.
 - b. The stakeholder should create the new product of rice to increase value added.
3. Based on the survey, the recommendation that Thailand should increase the consumption of rice domestically to reduce rice stock.
 4. Based on the findings toward sustainable rice marketing technology, it should create the new product of rice and packaging. Packaging is becoming more important since Thailand plans to concentrate on high quality for export.



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APPENDICES



APPENDIX A. Appendix Figures



Interviewed the government officer



Took a picture together with respondents



Interviewed the local trader



The Rice Learn Center or the place for interviewing

APPENDIX B. Survey Item 1

No.....

**For Local Trader, Farmers' Organization, Wholesaler, Retailer, Exporter
Impacts of Rice Pledging Policy on Rice Marketing in Thailand**

Name of organization/company
 Name of respondent
 Position in organization/company
 Address..... Village Moo
 Sub-district District Province
 Telephone
 E-mail
 Date of interviewing / /

PART I: Personal background of respondent

a. Personal information background

1. Name of respondent:
2. Gender : () Male () Female
3. Age :years
4. Marital status : () Single () Married
() Widower () Divorcee
5. Education :
 () Below primary school
 () Primary school
 () Secondary school
 () High School
 () Undergraduated
 () higher
 () others.....
6. The number of household members: persons
7. Occupation :
 a. Major:

 b. Minor:

8. Land holding:
 () owner :..... rais
 () rent :..... rais Baht/month Baht/year
 () free :..... rais
 () others :..... rais
9. The number of labor: persons

b. Amount and source of household income

1. Farm income

Source of income	Yield (Units/year)	Price/unit (Baht)	Total income (Baht/year)
1. Rice farming			
2. Field crop farming			
3. Fruit crop			
4. Vegetable planting			
5. Livestock			
6. Fisheries			
7. Other			
Total farm income			

2. Non farm income

Source of income	Income (Baht/month)	Months/year	Total (Baht/year)
1. Salary			
2. Wage worker			
3. Trader			
4. Other			
Total non farm income			

3. Total income (farm income+non farm income).....Baht/year

c. Accessibility to credit

1. Do you access to any credit facilities in crop year 2013? ()YES ()NO

2. If YES please provide the information below:

No.	Source of credit	Amount of credit	Interest rate (%/year)	Loan purpose */
1	The Bank for Agriculture and Agricultural Cooperative			
2	Agricultural Cooperative			
3	Commercial bank			
4	Village fund			
5	Middleman			
6	Family			
7	Neighbor			
8	Other			
Total				

Note */:

- a. Farm production
 - b. Non farm enterprise
 - c. Households living
 - d. Others.....
3. If NO why do you did not access to any credit facilities?
- () The Bank for Agriculture Agricultural Cooperative loan not available
 - () Agricultural Cooperative loan not available
 - () Commercial bank loan not available
 - () Loan from informal sources not available
 - () Do not have required collateral
 - () Repayment terms are unfavorable
 - () Interest rate is too high
 - () Have enough capital
 - () Fear to have debt
 - () Others

d. Social and political group belonging

- 1. Do you involve in any social firm/movement in your area? ()YES()NO
- 2. If YES please give the information below:

Group name	Member status			Reason attend Group */
	President	Committee	Member	
1. The Bank for Agriculture and Agricultural Cooperative				
2. Agriculture Cooperative				
3. Village fund				
4. House wife group				
5. Sericulture group				
6. Farmer group				
7. Others				

Note */:

- a. Buy lower price of input
- b. Sale product at a high price
- c. Gaining knowledge in agricultural production
- d. Access soft loan
- e. Got a good welfare form group
- f. Other

3. Do you involves in any political party in your area? ()YES ()NO
 4. If YES please give the information below:

Group name	Member status			Reason attend Group
	President	Committee	Member	
1.				
2.				
3.				

PART II: Rice marketing
a. Rice marketing Function

1. Exchange function
 a. Purchasing function
 1. Price of rice

No.	Amount of rice (ton)	Grading (%)	Purchasing price (Baht)	Where do you buy? */
1				1 2 3 4 5
2				1 2 3 4 5
3				1 2 3 4 5
4				1 2 3 4 5

Note */:

- (1)Government agencies
- (2)Rice mills
- (3)Middlemen/broker
- (4)Farmers' organization
- (5)Others

2. Do you have any problem to buy your rice? YES () NO ()

3. If YES, please explain what kind of the problems?

Answer:

.....

.....

.....

.....

b. Sales function

1. Rice yield and income

No.	Land size (Ha)	Yield (unit)	Grading (%)	Net weight (ton)	Selling price (Baht)	Income (Baht)	where do you sell? */
1							1 2 3 4 5
2							1 2 3 4 5
3							1 2 3 4 5
4							1 2 3 4 5

Note */:

- (1) Government agencies
- (2) Rice mills
- (3) Middlemen/broker
- (4) Farmers' organization
- (5) Others

2. Do you have any problem to sell your rice? YES () NO ()

3. If YES, please explain what kind of the problems?

Answer:

.....

2. Physical function

a. Storage function

1. How long the storage of rice?

Answer:
.....
.....

2. How many rice is stored? Monthly, yearly?

Answer:
.....
.....

3. How does the storage of rice?

Answer:
.....
.....

4. What are facilities used in the storage of rice?

Answer:
.....
.....

5. How much storage costs incurred?

Answer:
.....

b. Transportation function

1. What kind of transport service used?

Answer:
.....
.....

2. How the size and quality of packaged?

Answer:
.....
.....

3. How distance and time required to distribute rice to the buyer?

Answer:
.....
.....

4. How many rice is distributed every month?

Answer:
.....
.....

5. How much it costs to transport services?

Answer:
.....

c. Processing function

1. What type of processing is used?

Answer:
.....
.....

2. How the grading and packing process?

Answer:
.....
.....

3. What facilities are used in the processing of rice?

Answer:
.....
.....

4. How the costs incurred for the processing of rice?

Answer:
.....
.....

3. Function of facility

a. Standardization

1. How your rice quality standards?

Answer:

2. This is based on the requirements of the market?

Answer:
.....
.....
.....

3. How the provision of market requirements?

Answer:
.....
.....
.....

4. How your standard rice packaging?

Answer:
.....
.....
.....

b. Financing

1. Where the source of the funds raised?

Answer:
.....
.....
.....

2. Do you have credit? If yes, how do you manage it?

Answer:
.....

3. Funding / financing

No.	Components	Cost (Baht)
1	Purchasing cost	
2	Storage cost	
3	Transportation cost	
4	Processing cost	
5	Others:	

c. Risk

1. Have you ever experienced a loss? YES () NO ()

2. If YES, what causes?

Answer:

3. How many losses suffered?

Answer:

4. What do you do to resolve the loss?

Answer:

5. What you anticipate to face such problems again?

Answer:
.....
.....
.....

d. Market information

1. How do you get market information (on price and quality)?

Answer:
.....
.....
.....

2. Do you ever have any problems in obtaining the market information? YES () NO ()

3. If YES, how constraints in obtaining that information?

Answer:
.....
.....
.....

b. Rice marketing channels

Marketing channels	Quantity (ton)	Cost (Baht/ton)	Transportation cost	Price setup by */	Reason for sale **/
1. Farmer					
2. Middleman					
3. Local trader					
4. Government agencies					
5. Rice mills					
6. Farmers' organization					
7. Wholesaler					
8. Retailer					
9. Exporter					

Note */:

1. Farmer

2. Seller

3. Government

4. Group member

5. According to market price

6. Others:

**/:

1. High price

2. Familiarity

3. Near production place

4. Others:

PART III: Constraint and recommendation

1. Constraint

In your opinion what is the major constraint of stakeholders on rice marketing?

Constraint	No Problem	Problem	
		Have No Solution	Have Solution
1. Large government expenditure			
2. High domestic price			
3. Fluctuation in rice prices			
4. Decrease export quantity			
5. High price of rice export			
6. Decrease in export competitiveness			
7. Destroyed motivation for stakeholders in rice marketing			
8. Rice farmer received a lowest share of the profit			
9. Rice demand and supply in the world market has more effect on the determination of paddy domestic price.			
10. The stakeholders in each market level do not receive the same effect when rice price have changes			
11. Reduced the number of local buyers, related farmers' organization, and central rice market.			
12. Others:			

2. Recommendation

Do you have any recommendation toward impact of rice pledging policy on rice marketing?

No	Recommendation	Agree	Not agree
	Implementation		
1.	Increasing market information		
	Increasing knowledge through attend the extension meeting or training program		
	Produce another type of commodity		
	Others		
	Policy		
2.	Government should revise rice pledging policy		
	Improve technology, production, processing, and subsidising		
	others		

APPENDIX B. Survey Item 2

**Survey Item III
For Government Agency
Impacts Of Rice Pledging Policy on Rice Marketing in Thailand**

Name of organization/company
Name of respondent
Position in organization/company
Address Village Moo
Sub-district District Province
Telephone
E-mail
Date of interviewing / /

Rice Pledging Policy

1. What kind of policy in term rice commodity in Thailand?

Answer:
.....

2. What is the rice pledging policy?

Answer:.....
.....

3. What are the purpose and objective of rice pledging policy?

Answer:.....
.....

4. what the concept of rice pledging policy?

Answer:
.....

5. How the application of rice pledging policy?

Answer:.....
.....

6. What are the impact of rice pledging policy?

Answer:.....
.....

APPENDIX C. Matrix

Matrix Analysis

No	Problem	Causal	Impact	solution	
				implementation	policy
1.	Fluctuation in price of rice				
2.	Decreasing rice quality				
3.	Many middleman (local trader) lost their jobs				
	others				

APPENDIX D. SWOT



SWOT Analysis
IMPACT OF RICE PLEDGING POLICY ON RICE
MARKETING IN THAILAND
 Department of Extension And Communication Agriculture,
 Faculty of Agriculture
 Kasetsart University

Name of organization/company

Name of respondent

Position in organization/company

Address Village Moo

Sub-district District Province

Telephone

E-mail

Date of interviewing / /

Components	Agree	Undecision	Disagree	Describe
Strengths				
1. Benefit for farmers, because farmers can keep their paddies from selling at low price				
2. Farmers receives loan for pledged paddy at low interest				
3. Not only farmers who have own storage, but also farmers who do not have storage can also borrow money from BAAC				
4. Farmers receives higher prices of paddy than market prices				
5. Increase earning of the rice farmers				
6. Rice mills gets milling cost from the program				
7. Rice mills does not require borrowing money to buy paddy from farmers				
8. The government has become the country's largest rice trader				
9. Exporters receive storage fees and difference price between the export price and successful bid price (bid government price)				
10. Exporters receives a a large share of the profit				
11. Others				

Weaknesses				
<ol style="list-style-type: none"> 1. In the dry season, the program only benefits farmers in the irrigated areas 2. The most benefits of program is accepted by rich farmers and poor farmers only receives little bit benefit of the program 3. Many of Thai farmers unpaid 4. Each market level (farmgate, wholesale, retail, and export) do not receive the same effect when price of rice changed 5. Farmers received the lowest share of the profit 6. Many middle merchants (local trader) lost their jobs 7. The financial cost of program become very high (increase the budget for program) 8. Amount of rice that government stores is increased 9. Amount of rice that government mills and sells is decreased 10. Stock sale of rice can cause fluctuation in the price of the last few years 11. The government does not have the necessary facilities to handle several million tons of paddy 12. Caused change of market structure 13. Reduce the incentive to provide high quality of rice 14. The government failed to sell Thai rice 15. Gradually, reduce the incentive to provide high-quality of rice 16. Others 				
Opportunity				
<ol style="list-style-type: none"> 1. Many of countries consumes rice 2. Others 				
Threats				

<ol style="list-style-type: none">1. Import countries postponed their import in order to wait cheaper prices of from other produces countries2. Thai rice more expensive than Vietnamese rice3. The program to interfere price, have proven ineffective compared to the demand and supply of rice in the world market4. Thai rice lose market share5. Others				
--	--	--	--	--

