

Problems and Holistic Solutions for Agricultural Businesses in Chiang Mai

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Abstract

This research aims to study the problems and find solutions of major agro-industries in Chiang Mai, Thailand. The sample was divided into two parts: The supply side was the government agency, educational institutions and civil society. Demand side was Agro-Industry entrepreneurs. The methodology was focus on meeting the stakeholder debate, and group workshop, the first step of the research was selected the potential agro-industry group to study then in the operating phase, the survey was conducted to analyze and synthesize the problems of agro-industry and find solutions by group meetings in order to present a holistic problem-solving model. This process will provide opportunity for stakeholders and related agencies to collaborate and propose appropriate guidelines for action. The results show that, within demand side, the three most important issues are labor issues, marketing and production problems respectively. While the supply side, the top three issues are the integration problems, lacking of language skills / expertise, and lacking of database. Based on the analysis of both demand and supply side, there is a lack of concrete cooperation from relevant agencies, especially in policy cooperation. Therefore, a policy that responds to the problems of agro-industry is essential for all agencies to focus on and implement concrete measures to address sustainable issues.

Keywords: Agricultural Industry, Agricultural Business, Holistic Solutions.

1. Introduction

Agricultural industry is one the essential industry to enhance Thai economy by creating values to agricultural products. The industry has created jobs for the workforce and in return, those workforces can make a living by working in the industry. This is considered to be the source of income for farmer family and community in the remote area. The agricultural industry has the potential in exporting products and has brought income to Thailand approximately 1.4 trillion baht (20.5% of the total export in 2016). Among this amount, 12.9% is from primary agricultural product and 7.6% is secondary/ food-processed products). Based on evaluating the industry problem, it is found that agricultural-product exporting structure has not been changed from the past. However, the production is facing with some difficulties, that is, lack of raw material both in terms of quantity and quality, the readiness of SMEs', lack of labors and managerial and supporting problems accompanied with global warming issues. On the demand side, consumers' behavior has been changed which has affected raw material production and production structure of the industry. In the future, trend in trading near the borders and the increasing investment will affect to industry directly especially to those near the border of Thailand. There will be the expansion of agricultural industry-which would be the results of direct investment. As per to limitation of farming area in Thailand, the

production of certain agri-product such as rice, rubber, sugar cane, potato and livestock including the production of papers may be relocated to neighbor countries. This is caused by the competitive advantage in terms of resources and farming land. Such changes will led to the change in supporting industry and continuing industry. Thailand must be changed itself from 'low-cost production' to 'technology transfer' to neighbor countries (Integrated Industrial Development Plan based on Fiscal Year of 2017, The Office of Industrial Economy).

The study of problems and entrepreneurs' requirement from agricultural industry has become necessary in order to facilitate both private and public make efficient production planning or setting policy including setting roles for themselves in supporting and developing the industry to the same direction. Apart from this increasing investment to boost the potential of agricultural business exporter as the goal of sustainable development of Thailand hoping that it would be suitable to changing environment, beneficial as the new form of cooperation.

2. Literature Review

Taemlertboonchai (2016) has studied trend in the development of Thailand Industry, changes affecting industry in the world economy, favorable characteristics of industry in the future and efficient policy in making transformation to creative and knowledgable industry. The importance of agricultural industry, supporting SMEs, the reduction of logistic cost, power management and efficient environment management are unavoidable. Those requires the development of technology and man power as the drivers to the goals. However, such goals will be achieved unless strategy and related policy are not clearly set up. Policy setting and strategic practices are required in the past few years; namely, determining plans, project and result of research study on industry development. This is the high time to realize the importance of 114 industrial policies and put it to use immediately.

Maikansarn and Munkhum (2011) studies the adaptation of agricultural industry to the new world context. The changes has happended so fast resulting in the adaptation of agricultural sector. Many developing countries has studies and expected the trend so that they can better adjust to the new world environment. Apart from that, they aim to grow sustainable and increase their competitive advantage in the world market.

3. Purpose of the Research

- To search for vital information for analyzing purpose to solve the right problems for agricultural industry.
- To let stakeholders taking part in developmental plan policy.
- To utilize result of the study to analyze and find solutions for agricultural industry.

4. Expected Results

- To understand agricultural entrepreneurs' problems in Chiang Mai
- To understand methods in solving such problems from organizations involed in agricultural industry
- To utilize the results of the study and solve the related problems

5. Research Methodology

5.1 Scope of the Study

This study contains the scope in two perspectives which are

5.1.1 Demand Perspective would concentrate on agricultural industry problems in Chiang Mai

5.1.2 Supply perspective would concentrate on solving process and integrating process from other governmental departments- relating to develop and supporting, academic institutions, community in Chiang Mai

5.2 Population

5.2.1 On demand side, population are agricultural entrepreneurs in Chiang Mai and civil society which are Chiang Mai Chamber of Commerce and Federation of Industry

5.2.2 On supply side, Government organizations set up at the goal of developing and supporting agri industry such as Labor Office, Industry Office, Commercial Office etc and academic institutions both private and public.

Primary Data

This data was acquired from workshop by inviting all parties from demand and supply mentioned to reflex real problems, needs including ways in working together, by brainstorming utilizing Zopp card and by summarizing through focus group.

5.3 Data Collection

Data collection was done by workshop conference with meta approach, plenary and group discussion, unconstructed interview on opinions regarding overall problems, internal organization problem and ways to solve such problems.

5.4 Data Analysis

Supply analysis was conducted on analyzing what is going on in the present which hopefully would lead to the needs in the future and then the strategic plan and policy would be set up.

- Demand analysis was conducted on evaluating the future demand so that priorities should be properly set up for each party, including knowledge and skills required and technological requirements in the future.
- Gap analysis can be done by comparing supply and demand so that the shortage from both sides can be understood; namely, scarcity or the inability to supply what is demanded and 2. oversupply identification. This comprehension would reduce the gap between supply and demand side.

6. Result of the Study

6.1 Demand (9 entrepreneurs)

It is found that

6.1.1 Problems of Agricultural Industry in Chiang Mai

Dimension	Problems
Production	<ul style="list-style-type: none"> - lack of operational workforce and knowledgeable workforce -lack of machine and technology which lead to inefficient production -Unconstant output as it is the nature of agricultural production -small output per Rai (high cost of production) -lack of support in connecting between agricultural sectors and industry -decreasing food production which has led to lack of raw material in food processing industry -no development in production to add value -lack of expertise in adding value to the product -losing quality and quantity during the production process -natural disaster and plants and animal plaque
Workforce	<ul style="list-style-type: none"> -lack of workforce in certain season such as reaping season or producing seasons -lack of skillful labor during high demand production -lack of basic labor (grade 9-12) -lack of semi-skillful and unskillful labor as they prefer to continue their education -no new workforce as the existing labor are elderly in the community -no labor who is proficient in English, computer skills -labor lacks of experience which is difficult to apply theory to the real world -labor lacks of communication skills -labor tends to follow instruction which cause the lack of creativity -labor with bachelor degree tends to ask for higher wage -Increasing value in continuing labors' education.
Marketing	<ul style="list-style-type: none"> -on few markets for agricultural products -No clear price determination (no regulations in setting price) -little involvement of governmental organization -There is obstacles in entering international market as per to trade barriers - trades has been conducted to middlemand -price fluctuation -there are many competitors both from domestic and international -there is no marketing strategy and strategic plan -there is no public relations on branding -farmers lacks of marketing knowledge -high cost of transportation -there is no concrete conglomerate which lead to lack of bargaining power

Investing	-lack of funds/ lack of liquidity -high cost of factors of production -instability of politics -objection of factory building -lack of governmental support -higher cost of transportation
Knowledge and Technology	-lack of knowledge and understanding in technology -production doesn't utilize technology -farmers sticks to old producing method -lack of knowledge from research on technology, and machinery to apply to production in Thailand context
Policy	-farmers and entrepreneurs have been confused with inconsistent policy -Government organization does not support constantly in the industry -the instability in politics has caused the insecurity of entrepreneurs which lead to decreasing investments -Government policy is not in accordance with region requirement -Delay in policy enactment.

6.1.2 Prioritizing Problems

Problems	Score	The order
Labor	8	1
marketing	7	2
production	5	3
policy	3	4
Knowledge and technology	1	5

6.1.3 Causes and Solution

1.Labor	
Cause	Solution
1. lack of labor/ inconsistent working	Setting labor market
2.unskillful labor/ no expertise	Setting training to increase knowledge and skill
3. high wage, unskillful labor	Government should take part in to solve the problem

2.Marketing	
Cause	Solution
1. few market	Supporting of agricultural product processing
2. few export	Value adding Finding more connection arbor

3. Production	
Cause	Solution
1. High cost of raw material	Find the way to reduce cost
2. High cost gasoline	Supporting the use of bio-fertilizer Finding renewable energy
3. High wage	Government should assist in wage and support new technology

Based on problems and weakness of agricultural industry, it has shown problems in production, labor, marketing, funding, knowledge and technology including policy setting. Stakeholders has shown their opinion differently which can be concluded that the major problems are funding and technological knowledge with few perspective while problems on production and marketing seems to have several facets

6.2 Supply

6.2.1 Problems from the Industry Group, Academic Institution and Civil Society

Dimension	Problems
1. Language and Expertise	<ul style="list-style-type: none"> Lack of communication skill Lack of certain skills such as production, marketing, innovating to add value for the product Lack of English language skill Lack of third language skill
2. Policy	<ul style="list-style-type: none"> Central policy is not serious in solving the labor, marketing problems Top-down command has led to real participation of community Community was misled Management lacks of pedagogical management
3. Value	<ul style="list-style-type: none"> Attitude, and collaborating with supporting organization Value of rotating jobs an don't want to participate in the industry Students choose what is popularity not from what is worth for agricultural production Students lack of discipline New graduate aims to high compensation but accumulating of experience Value of continuing their education Society value, social problems affecting quality of student and labor Attitude of the trainees in required curriculum
4. Budget	<ul style="list-style-type: none"> Lack of operational lab Lack of budget Lack of support in developing human resource Number of project cannot be fully supported
5. Curriculum	<ul style="list-style-type: none"> Curriculum has not aimed to build expertise in agricultural production Few text books Curriculum is not in accordance with strategic plan
6. Entrepreneur	<ul style="list-style-type: none"> Few job availabilities Few job availabilities after the training Few certified labors Lack of entrepreneur's awareness to collaborate in developing labors' skill Inconsistency between job and wage Job required experience worker Lack of developing workers' plan
7. Integrative collaboration	<ul style="list-style-type: none"> Lack of Competency Base Curriculum between entrepreneur and academic institution Lack of coordination between entrepreneurs and government organization Lack of coordination between academic institution and entrepreneur Students are unaware of economic status before entering to workplace Lack of coordination between stakeholders Lack of support from government Lack of coordination to improve labors' skill Lack of coordination from other related organizations Lack of proper skills from relevant organizations
8. Database	<ul style="list-style-type: none"> Lack of Database of developing labor to match with requirements from entrepreneurs Lack of database of requirement

	<p>Lack of research based on agricultural industry-related problems</p> <p>Lack of information on labors</p> <p>Lack of information on developing business</p> <p>Lack of information on job position which led to inability to set up long-term plan</p> <p>Unstable of Demand for Labor Proportion</p>
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6.2.2 Prioritized Problems

Problems	Score	The order
Integrative Collaboration	13	1
Language and Expertise	8	2
Database	5	3
Value	3	4
Policy	1	5
Entrepreneur	1	5
Curriculum	1	5
Budget	0	6

6.2.3 Cause of Problems and Solution

1. Integrative collaboration	
Causes	Solution
<p>Government</p> <p>1. Change of Bureaucratized System has not been effective because of top-down policy, application of data, lack of evaluation and follow-up plan, executive's vision</p>	<p>1. Decision making should be changed from individual to committee of agricultural industry-related department</p> <p>2. Agri-cultural government department should utilize the same database which is updated and easy to apply</p> <p>3. Government should review and listen to comments from stakeholders seriously so that the recommendations can put to use efficiently</p>
<p>Private</p> <p>1. Lack of coordination among private, public and academic institutions</p> <p>2. Lack of research to support integrative collaboration</p> <p>3. Lack of information to assist in making decision</p>	<p>1. Develop work pattern of agricultural industry by letting private sector be part in setting up policy so policy can be enacted</p> <p>2. Private sector should participate in budgeting of research project</p>
<p>Academic Institution</p> <p>1. Academic service has not reflected real problems the industry</p> <p>2. Lack of coordination between academic private and public sector</p> <p>3. Key person cannot integrate knowledge and practices together</p>	<p>1. Academic institutions should set up policy that involving agri-industry. Academic can set up policy partly so policy can be put to use and match with industry problems</p> <p>2. Academic institution should be part in project budgeting</p> <p>3. Academic institution should take part and support personnel who be knowledgeable in agricultural industry</p>

2. Language and Expertise	
Cause	Problem
1. Lack of continuous improvement	1. Create awareness of importance of required skills before entering to industry
2. Lack of confidence in communication	2. Set up curriculum to support giver and taker
3. Lack of opportunity in working	3. Set up contest activity such as innovation of agricultural product contest

4.Lack of efficiency in real practice before students are graduated	4.Adjust academic system in accordance with demand
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3. Database	
Cause	Solution
1.Lack of information exchange between organizations; entrepreneurs, academic institutions, labor, private and public institutions	1.All parties should have M.O.U. in exchanging and updating information
2.Lack of major coordinating center and updated information	2.Setting up the coordinating center by selecting delegating staff from all parties
3. Lack of IT personnel's which lead to inability to search for agricultural industry demands	3. Setting training course for entrepreneurs on IT skills, such as searching

Based on the analysis of strength and weakness of agricultural industry, it is found that there are several facets of problems which are language skills and expertise, policy, value, budget, curriculum, entrepreneurs, integrative collaboration and database. Stakeholders has confirmed the mentioned problems. Major weakness are integrative collaborations, language and expertise, and lack of updated database.

References

- Agricultural Business. (2018). Sunrise-Sunset Industry, 2018. *Economic Section Based on Each Field*. Grassroots Economy Center.
- Boon Long, N. (1986). *Agro-Industry Principles*. Bangkok: Kasetsart University.
- Choonnapan, B. (1999). *Marketing of Agricultural Products*. Bangkok: Ramkhumhaeng University.
- Committee of Human Resource in Prtroleum Industry (Newfoundland & Labrador,Canada). (2001). *A study on "An Analysis of Gaps and Issues Related to Labor Supply and Demand in Offshore Exploration and Production in Newfoundland"*, Canada: Committee of Human Resource in Prtroleum Industry, Newfoundland & Labrador.
- Department of Industrial Promotion. (2006). *Holistic Concept. Economic news*. 13rd Friday of October 2006.
- Goss, J., and Burch, D. (2001). *From Agricultural Modernisation to Agri-Food Globalisation: The Waning of National Development in Thailand*. *Third World Quarterly*. 22(6): 969-986.
- King, R. P., Boehlje, M., Cook, M. L., and Sonka, S. T. (2010). *Agribusiness Economics and Management. American Journal of Agricultural Economics*.92(2): 554-570.
- Kotamraju, Pradeep. (2007). *How can you tell if a career and Technical Education Program of Study is Marketable: Case Study. Minnesota: Minnesota State Colleges &University*.
- Maikaensan, W. and Moonkham, M. (2014). *Changes in Agribusiness in the Context of Future World*. Panyapiwat journal. 5th year, May issue.
- Office of the Nationnal Economic and Social Development Board. (2016). *The Stretegy on Human Resource Development for Increasing Potential in Main Industry Development*. Bangkok.
- Office of the Nationnal Economic and Social Development Board. (2016). *Thai Economic Condition in the First Quarter and Tendency in 2017*. Bangkok: Office of the Nationnal Economic and Social Development Board.
- Peter Hazell and Stanley Wood. (2007). *Drivers of change in global agriculture*, Copyright© 2007 The Royal Society. Retrieved October 15, 2013, from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2610166/>.
- Savory, Allan and Jody, Butterfield. (1998). *Holistic Management: A New Framework for Decision Making*. (2nd ed.). Washington D.C.: Island Press.
- Terry W. Griffin, J. Lowen berg-De Boer, D.M. Lambert, J. Peone, T. Payne, and S.G. Daberkow. (2004). *Adoption, Profitability, and Making Better Use of Precision Faring Data*, Staff Paper #04-06June 2004, Dept. of Agricultural Economics, Purdue University. Retrieved October 18, 2013, from <http://ageconsearch.umn.edu/handle/28615>
- Thaksanawisut,S. (2010). *Introduction to Agribusiness*. Bangkok: Faculty of Economics, Thammasat University.
- Wattanasawaluck, S. 2013. *Problems and Determination of Guidelines for Forestry Industry Problem Solving in Phrae Province*. An independent study, Master of Management Engineering, Naresuan University.

Wichanchai, K. (2007). *A Survey on Problem Conditions and Problem Solving in Jewelry Industry of Chanthaburi Province*. An independent study, Master of Public Administration, College of Local Administration, Khonkaen University.

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