Entry of Young Generation into Farming in Thailand

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Abstract

In the face of population growth, the world’s per capita food consumption is also growing, requiring 60 percent more food by 2050. Thailand could be referred to as the “kitchen” of the world, since it is one of the world’s leading food exporters. The major export commodities are cassava, sugar, fish products, and rice. However, the labor force in the agriculture sector has decreased gradually. In addition to unveiling the reason for this decline, this paper examines the development of young farmers by institutional agents, and illustrates the current situation and challenges of the agriculture sector in Thailand. The empirical evidence suggests two attempts made by the different levels of collaboration. Firstly, efforts were taken amongst the public and private sectors, and universities to encourage the young generation’s reentry or reengagement in the agriculture sector. Secondly, national plan has put forward a strategy to stimulate/foster a new intake in the said sector. In addition, the study suggests ways to transform the national plan both at local and national levels by considering short- and long-term strategies. Further suggestion is made to foster institutional level’s of collaboration in enabling the implementation of the national strategy. Thus, this paper argues the condition for a paradigm shift in agriculture growth that lies in strategic cooperation among all parties at the local, regional, and national levels in the context of Thailand.

Keywords: young farmers, agricultural development, cooperation, strategic management, agricultural entrepreneur

1. Introduction

Agriculture has long been an important industry for the development of Thailand and has been viewed as the “backbone” of the country. Over the past five decades, the agricultural sector used to be the key engine of economic growth in Thailand. In 1960, the share of agriculture in GDP was higher than the industrial sector with 32.1 and 22.1 percent, respectively (Suwannarat, 2014). In 1961, the value of agriculture sector was about USD 781 million while the national GDP was USD 2,562 million (Ministry of Agriculture, 2011a). However, it decreased dramatically to 8.3 percent in 2013 whereas Thailand’s labor force working in this sector is relatively high with 39.1 percent. Until now, Thailand has encountered difficulties that the number of labor force in agriculture sector has declined gradually. There are several reasons why farmers leave their lands. Beyond the realization of the agricultural importance towards the country economy, few joint initiatives were developed by joining forces in tackling such a difficult issue by supporting young generation’s return to the farm land. Hence, this paper critically reviews the current developments in changing agriculture situation in Thailand. In addition, it presents empirical evidence in sharing the developmental lessons learnt from collaborative initiatives from the public and private sectors, and the universities in reshaping and training new professional young farmers.
2. Background

2.1 Agriculture Overview

The agriculture sector in the 21st century has been facing inevitable challenges such as occurrence of climate change, extension of bioenergy market, and the growing of world’s population. According to the United Nations (2013), the world population has a projected increase to almost one billion people within the next twelve years, from 7.2 billion in mid-2013 to 8.1 billion in 2025, and could further increase to 10.9 billion by 2100 (Figure 1). These results are based on the medium-variant projection, which assumes a medium fertility.

![Population projection graph](image)

*Fig. 1. Population of the world (1950-2100) according to different projections and variants (Source: United Nations, 2013)*

At the same time as population increases, world’s per capita food consumption is also growing, requiring 60 percent more food by 2050 (Alexandratos and Bruinsma, 2012). Thailand could be referred to as the “kitchen” of the world. According to the Board of Investment of Thailand (2013), the country is among the top world exporter of cassava, sugar, fish products, and rice (Table 1).

<table>
<thead>
<tr>
<th>Commodities</th>
<th>World ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cassava</td>
<td>No. 1</td>
</tr>
<tr>
<td>Sugar</td>
<td>No. 2</td>
</tr>
<tr>
<td>Fish products</td>
<td>No. 3</td>
</tr>
<tr>
<td>Rice and Grains</td>
<td>No.6</td>
</tr>
</tbody>
</table>

*Source: The Board of Investment of Thailand (2013)*
2.2 Thailand Focus

As reported by the Office of the National Economic and Social Development Board (2011), at the national level, there are some strategies in relation to the increase of youth and skilled labor to engage in agriculture in Thailand. However, when the national plan was implemented, there were no key performance indicators (KPIs) that directly support the agriculture strengthening strategies (Table 2).

Table 2. Policy related projects in Thailand that encourage the young generation into farming

<table>
<thead>
<tr>
<th>Policy</th>
<th>Related strategies</th>
<th>Related Development guideline</th>
<th>Related Key Indicators</th>
<th>Arguments</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Policy 2012-2016 (Office of the National Economic and Social Development Board, 2011)</td>
<td>Strengthening of the agricultural sector and security of food and energy</td>
<td>Creating job and income security for farmers by:</td>
<td>(1) Overall national development:</td>
<td>No key indicator directly support the agricultural strengthening strategies</td>
</tr>
<tr>
<td></td>
<td>1. Integrating income insurance system together with crop insurance</td>
<td>2. Developing fairness for farmers and stakeholders in the contract farming system</td>
<td>- The Thai Green and Happiness Index</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Increasing better quality of life for farmers</td>
<td>4. Inducing youth, new generations and skilled labor to engage in agriculture</td>
<td>- The Institute for Economics and Peace (IEP)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Empowering small farmers affected by free trade agreements for maintaining their living conditions</td>
<td></td>
<td>- The ratio between 10% highest income and 10% lowest income</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- The ratio of workers in the informal sector accessed social protection</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- The Corruption perception index</td>
<td></td>
</tr>
<tr>
<td>Agricultural development Policy 2012-2016 (Ministry of Agriculture and Cooperatives, 2011a)</td>
<td>Promoting better quality of life for farmer</td>
<td>1. To increase security for farmer</td>
<td>1. Increasing the Thai Green and Happiness Index to 80%</td>
<td>No key indicator directly support the promoting of young generation to agriculture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. To establish knowledge for farmer</td>
<td>2. Expecting the GDP growth more than 3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. To empower farmer for ASEAN</td>
<td>3. Managing the land used for agriculture</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. To ensure food security for household</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. To promote young generation to agriculture</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Over the past five decades, the agricultural sector was the primary mechanism of economic growth in Thailand. In 1960, the agricultural value-share to GDP was higher
than the industrial sector with 32.1 and 22.1 percent, respectively. The agricultural share in GDP has declined from 32.19 percent in 1960 to 10.33 percent in 2009. In contrast with the industrial value-share in GDP, it has increased dramatically from 22.15 percent in 1960 to 43.40 percent in 2009. Therefore the agricultural share in GDP was smaller than industrial sector with 10.33 percent and 43.40 percent, respectively (Figure 2).

![Sectoral Value-share (% of GDP)](source: Suwannarat, 2014)

According to the National Statistical Office (2014), the amount of Thai farmer has deceased gradually since last three decades; decreasing from 65.65 percent in 1980s to 44.28 percent in 2000 (Figure 3). Most of people leaving the farm move to the service sector and some to the industrial sector. Consequently, increasing the labor force in industrial sector from 12.07 percent while increasing the labor force in service sector from 22.48 to 35.81 percent (Figure 3).
In 2013, the agriculture sector contributed only 8.3 percent to the GDP (Table 3). Contrary to the macroeconomics, income from agriculture sector distributed to most of Thai population, since 39.1 percent of Thailand’s labor force are engaged in this sector (Bank of Thailand, 2014).

Table 3. Structure of the economy in 2013

<table>
<thead>
<tr>
<th>Sector</th>
<th>GDP by Sector (%)</th>
<th>Labor force by sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>38.1</td>
<td>13.8</td>
</tr>
<tr>
<td>Wholesale and Retail Trade</td>
<td>13.4</td>
<td>15.3</td>
</tr>
<tr>
<td>Transport, Storage and communication</td>
<td>10.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Agriculture</td>
<td>8.3</td>
<td>39.1</td>
</tr>
<tr>
<td>Construction and Mining</td>
<td>4.3</td>
<td>6.6</td>
</tr>
<tr>
<td>Other services*</td>
<td>25.7</td>
<td>22.5</td>
</tr>
</tbody>
</table>

* Financial, Education, Hotels and Restaurants, etc.
* Source: Bank of Thailand, 2014

Also, according to the National Statistical Office (2014), the number of Thai farmers has decreased gradually since the last two decades. In the 1990s, 19 million people (63.4 percent of total labor) work in agricultural sector; but in 2011 only 16.1 million people are left working in farms (41.1 percent). About three million people left the farm, most of them moved to the service sector and some to production sector (Figure 4). Significantly, almost three million people have left farming within last 20 years. Unfortunately, young generations left the old farmers behind. Specifically, the number of 15-24 years old farmers has decreased dramatically from 35.3 percent to 12.1 percent since 1987 to 2011. In addition, the number of the older farmers has decreased from 34.7 percent to 28.7 percent. Contrasting with the proportion of old farmers, the number has increased gradually from 4.4 percent to 12.4 percent. At present, the average age of Thai farmers has increased steadily at 51 years old (Thailand Research Fund, 2010).
3. Why did farmers leave their land?

The number of farmers leaving their land is increasing gradually due to the following reasons: attitude (negative attitude towards farming), poverty (debt, have no land of their own), economics (low income, unreliable agricultural product price), hard labor in farming, and the conversion of agricultural lands to industrialize areas.

3.1 Attitude

Fundamentally, the study indicates that most of young people who grew up in a farmer family do not want to be a farmer. In their perspective, a rice farmer is a career that requires hard labor in the field all day long but earns little money. It means farmers can never become rich. Their life value is driven by their ambitions to getting rich. Consequently, they considered farming as a not worthy profession.

Furthermore, the second type of farmers thought that being a rice farmer indicates lower social status in society. As a result, they discourage their children from farming. Therefore, when their children face career choices, non-agricultural options are highly encouraged by the parents.

According to the Knowledge Network Institute of Thailand (2014), only 8.8 percent of students in the university registrar majored in the agriculture program. In addition, farm work is perceived as hard labor work with unequal payment in Thailand.

3.2 Poverty

According to the Office of Agricultural Economics (2011), 29 percent of farmer household gained the average income below the poverty line (USD 592 per year).
the national Bureau of Statistics announced that two out of three households of farmer had debt about USD 4,388 (Nuansoi and Penkleng, 2012). The low income and the debt caused the farmer and their descendants to lose their interest in working on their farmland and move to another labor sector, hence, 19.6 percent of Thai farmers lost their farmlands.

3.3 Production Costs and Product Prices

Another indication comes from uncertainty of revenue due to crop insurance system. It was discovered that there were no real intention to support farmers. In addition, cost of operation is high, in contrast with the low/unstable prices of products. These issues are caused by seasonality and bad weather, which result to large and unpredictable losses (Figures 5a and 5b).

![Fig. 5a. Total production cost of industrial crops](source: Tunsri, 2011)

![Fig. 5b. Net income of industrial crops](source: Tunsri, 2011)
4. Roles of the Public and the Private Sectors, and Universities in Fostering the Young Generation into Farming

Arguably, there are several sources of evidence that show the public and private sectors, and universities in fostering a joint force to encourage the young generation to go back into farming in Thailand. Public and private sectors diagnosed the shortage of farmers which would cause problems on food safety, energy, and export situation. Thus, public and private sector especially financial institutes have established several projects to encourage the society to be aware of and to cooperate for creating urgently the new generation of farmers. The new generation of farmers should have the following characteristics:

1. Mastery on learning on both new advanced technology from academic and local knowledge and integrate local knowledge and modern knowledge;
2. Know-how to increase revenue, and cost and quality management. In addition they should know how to access their target group for their products and services.

There are several sectors that drive the development of new generation of farmers. These sectors were classified into four groups (Figure 6) as follows:

I. Government agency
   1. Ministry of Agriculture
      1.1) Fishery Department
      1.2) Department of Livestock Development
      1.3) Agricultural Support Department
   2. Ministry of Education

II. Private sector
   1. Research Funding Institute
   2. Bank for Agriculture and Agricultural Co-operatives
   3. Private sector such as Kubota
   4. Non-Profit Organizations

III. Academic Institute
   1. Universities
   2. Vocational Colleges

IV. Research Unit
There are several projects that the public and private sectors, and universities established such as the New Farmer Development Project, School of Rice, Farmer Smart farmer Smart officer and Rice Camp (Tables 4a-c). The authors present only a few significant projects. For instance, in terms of public sector, the Ministry of Agriculture and Cooperatives established the “Smart Farmer Smart Officer Project”. The objectives are to initiate new generation of farmers by using data for decision making, and to create smart officers to be consultants of smart farmers. In addition, the Rice Department established “School of Rice and Farmer”. Its mission and function are to prepare and develop training courses, and knowledge in all aspects of rice grain production channels of learning and prepare the rice field demonstration, training system in accordance with the development plan, and effectiveness and network learning in rice through private sector education both formal and non-formal. There are several courses such as the Intensive Professional Farmers course, the health drink made from rice, initial course of farming, intensive skin care from rice bran oil, rice production course souvenirs, and cooking and baking rice. In terms of private sector, Charoen Pokphand Group founded its own university and has provided Bachelor of Science in Innovative Agricultural Management. In terms of university, there is the joint project called “My Little Farm Project”. It is the collaboration among Kasetsart University, Cooperative Auditing Department, Ministry of Agriculture and Cooperatives, and Bank for Agriculture and Agricultural Cooperatives. The objective is to inspire pupils to be a new generation of farmers by using a reality farming contest.

5. Challenges for Successful Projects in a Sustainable Way

Agriculture sector has long served as the critical instrument of culture and economy in Thailand. As traditional agriculture has suffered from declining labor force, and consequently in the decrease in its contribution to the national GDP, the country face challenges to revitalize renewed young professional farmers.

Regarding strategy, there are a few ways in relation to promoting the youth, new
generations, and skilled labor to engage in agriculture. However, there is no key indicator that directly supports the agricultural strengthening strategies in Thailand. Realization of the importance of the agriculture sector affecting their organizations by the public and private sectors, and universities, several projects were established to promote youth into farming. In order to solve declining labor force in agriculture, these projects were created to inspire youth engaging to the agriculture sector.

In terms of the public sector, it can be seen that the government has an intention to develop projects in the long-term. An example is the project “New Farmer Development Project” established by the Agricultural Land Reform Office (ALRO) under the Ministry of Agriculture and Cooperatives. ALRO gives opportunities to new farmers to access land and financial resources.

In terms of the private sector, as mentioned earlier, Charoen Pokphand (CP) Group offered courses such as Bachelor of Science in Innovative Agricultural Management. The students will complete their studies in 2016. Consequently, the number of agricultural entrepreneurs will increase.

Table 4a. Projects supported by the public and the private sectors, and universities in fostering the young generation into farming in Thailand

<table>
<thead>
<tr>
<th>Project</th>
<th>Responsibility</th>
<th>Objectives</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New Farmer Development Project (2008-2012) (Agricultural Land Reform Office, 2012)</td>
<td>ALRO and MOAC, VEC, TRF, BAAC</td>
<td>1. To establish new farmer equipped with theoretical and practicing knowledge. 2. To develop sustainable agriculture.</td>
<td>1. Access knowledge: TRF and VEC established courses and invite young generation to the classes 2. Opportunity to access the land resource: the Agricultural Land reform permit interested persons utilize the land. 3. Opportunity to access occupations: increase the capabilities of land use for farming and generate sustainable income though the adoption and diffusion process 4. Opportunity to access finance resources from BAAC</td>
</tr>
<tr>
<td>2. School of Rice and Farmer (Rice department, 2013)</td>
<td>Rice Department</td>
<td>1. To Prepare and develop training courses and rice. 2. To knowledge in all aspects of rice grain production chain. 3. To demonstrate the rice field.</td>
<td>Establish courses: 1. - Intensive Professional Farmers 2. - Healthy drink made from rice 3. - Initial course of farming 4. - Intensive skin care from rice bran oil 5. - Rice production course souvenirs 6. - Course cooking and baking with rice</td>
</tr>
<tr>
<td>3. Volunteer Spirit Network (Volunteer Spirit)</td>
<td>OHM</td>
<td>1. To broaden farming perspective for the university student</td>
<td>Training course: - Farming experience - Field work in royal project</td>
</tr>
<tr>
<td>Project/Curriculum</td>
<td>Responsibility</td>
<td>Objectives</td>
<td>Activities</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Kubota Smart Farmer Camp <em>(SiamKubota, 2014)</em></td>
<td>Siam Kubota Corp.</td>
<td>To broaden farming perspective for the university student</td>
<td>Farming experience sharing Field work</td>
</tr>
<tr>
<td>Field work for Children: Rice Farm <em>(Charoen Pokphand Food, 2014)</em></td>
<td>CP</td>
<td>To broaden farming perspective for pupil</td>
<td>Farm experience sharing Field work</td>
</tr>
<tr>
<td>B.Sc. (Innovative Agricultural Management) <em>(Panyapiwat institute of Management, 2014)</em></td>
<td>CP</td>
<td>To produce graduates specialize in agricultural management</td>
<td>New curriculum (open in 2013)</td>
</tr>
</tbody>
</table>

*MOAC = Ministry of Agriculture and Cooperatives*

*ALRO = Agricultural Land Reform Office, Ministry of Agriculture and Cooperatives*

*BAAC = Bank for Agriculture and Agricultural Co-operatives*

*DOAE = Department of Agricultural Extension, Ministry of Agriculture and Cooperatives*

*OHEC = Office of the Higher Education Commission*

*OHM = Office of His Majesty the King Principal Private Secretary*

*QLF = Quality Learning Founding*

*TRF = Thailand Research Fund*

*VEC = Office of Vocational Education Commission*
<table>
<thead>
<tr>
<th>Weekend Farmer (Pitiwat, 2006)</th>
<th>Public social network</th>
<th>To motivate people to be a farmer</th>
<th>Share experience about farm technique via social media</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Generation Farmer network (New Generation Farmer Network, 2012)</td>
<td>Public social network</td>
<td>To motivate people to be a new generation farmer</td>
<td>Share experience about farm technique via social media</td>
</tr>
</tbody>
</table>

* CP = Charoen Pokphand Group

Table 4c. Projects supported by Thailand universities in fostering the young generation into farming

<table>
<thead>
<tr>
<th>Project/Curriculum</th>
<th>Responsibility</th>
<th>Objectives</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Little Farm Project (Kantana Group, 2012)</td>
<td>Kasetsart University Joint BAAC CAD Farm Chanel</td>
<td>To motivate pupil to be a new generation farmer</td>
<td>Reality farming contest</td>
</tr>
<tr>
<td>B.Sc. (Agricultural Resources and Production Management) (KUCSC, 2011)</td>
<td>Kasetsart University</td>
<td>To produce new generation of agricultural entrepreneurs</td>
<td>New curriculum (open in 2012)</td>
</tr>
<tr>
<td>B.A. (Agricultural Resources Administration) (School of Agriculture Resources, 2014)</td>
<td>Chulalongkorn University</td>
<td>To produce new generation of agricultural entrepreneurs</td>
<td>New curriculum (open in 2012)</td>
</tr>
<tr>
<td>B.A. (Cultural Landscape Management) (Ministry of Education, 2013)</td>
<td>Mahidol University</td>
<td>To produce new generation of agricultural entrepreneurs</td>
<td>New curriculum (will establish in 2015)</td>
</tr>
</tbody>
</table>

* CAD = Cooperative Auditing Department, Ministry of Agriculture and Cooperatives
* KUCSC = Kasetsart University, Chalermphrakiat Sakon Nakhon Province Campus

In terms of universities, several universities in Thailand such as the Kasetsart University, Chulalongkorn University, and Mahidol University have opened new courses for producing agricultural entrepreneurs, which will graduate in 2015 and onward. For example, Kasetsart University opened new curriculum in Bachelor of Science in Agricultural Resources and Production Management.

However, their goals have not been reached yet due to several difficulties such as unclear key indicators and loose integration among entities. Nevertheless we see a light at the end of the tunnel. Even most of these projects are at the preliminary stages but these can be counted as a good sign for the agriculture sector. For example, the New Farmer Development Project was the joint project among the public and private sectors, and universities. All these entities have cooperated and carried out short- and long-term development plans to match the needs of the industry. Hence, all entities should work closely together and recognize their potential, make a commitment, and take actions seriously to reach their goals. Therefore, it is the challenge for these entities to select the crucial mechanism and to cope with dynamic and limited resources.
6. Conclusion

Globalization has brought both opportunities and threats to the agriculture sector in Thailand. Increasing population dramatically has pushed Thai Government to take intervention to change the condition and social structure of the farming industry. Radically, joint forces are encouraged by the Thai government in making a change to develop more young generation farmers. The study demonstrated the important roles being played by the different institutions in the change process. Understanding the reasons why farmers have abandoned their farmland is vital; however, it also suggests a national level of collaborative strategy is needed to push this agenda further. This is not only to stimulate the collaboration at national, regional, and local levels but also to engage international players.

Summary (in Korean)

인구 증가와 함께 일인당 음식 소비량도 증가함에 따라 2050 년까지 식량생산을 60% 증대시켜야 한다. 태국은 카사바, 설탕, 해산물, 쌀 등을 주 품목으로 하는 세계 주요 식량 수출국으로서 ‘세계의 부엌’으로 인식되고 있다. 하지만 농업분야 노동력은 점차 감소하고 있다. 이러한 감소 추세 근원을 파악하는 것 이외에도 본 논문은 태국 내 청년 농업인력 개발을 위한 농업관련 기관의 노력에 대해 조사하고 태국 농업부문의 현황과 과제를 제시한다. 경험적 증거가 보여주는 바에 따르면 두 가지 형태의 접근이 있었다고 본다. 첫째, 민관학 모든 분야에서 청년층을 농업 분야로 유치하거나 귀농하도록 장려하는 노력을 있었다. 둘째, 국가 차원의 전략을 활용하여 농업 분야 신규인력 유치에 힘썼다. 또한 본 논문을 통해 장단기적인 전략 수립을 통해 국가 차원의 정책을 지역까지 전파하는 방법과 기관 간 협력을 통해 국가 차원의 전략 시행을 지원할 수 있는 방안을 논하고 있다. 농업 성장을 위한 패러다임 전환은 모든 관련 기관 및 관계자가 전략적으로 협력할 때 가능하다.

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