

EE463 GLOBALIZATION AND INTERNATIONAL
DEVELOPMENT Semester XX (XXXX - XXXXXX)

Agriculture transition in Thailand (1960-2000)

GROUP 1

Members

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FACULTY OF ECONOMICS
THAMMASAT UNIVERSITY

Overview

Agriculture in the 1960 to 1980 of Thailand had an astonishing average growth of more than 4% a year, a rate exceeding the population growth rate. Agriculture growth mostly happened due to agricultural land expansion and high rural population growth rate. During 1980-1996, Thailand's economy grew rapidly despite the slowing growth of agriculture. The main reason for economic growth during this time period is driven by the manufacturing field which increased by an average of 10% causing a widening of income gap of agriculture and almost all of the other sectors affecting more people to leave the agriculture sector because of lack of money incentive. During 1997-1998, agriculture became more interesting again because of the Tom Yum kung crisis dragging Thailand into 2 years of deep recession affecting other sectors significantly. As agriculture can be viewed as a safety net for many people the agriculture sector is affected much less relatively to others. In the years 1999-2000, after the economic crisis ended the agriculture sector further grew even more at a rate almost as fast as the service sector. The perk emerged from the world commodity boom in recent years. The pattern of growth changed compared to prior years because the base of growth changed to intensification, specialization, and connection to market value.

For the geography of Thailand agriculture, many areas of Thailand have heavy rainfall over the year and access to the coast. Moreover, soil quality varies significantly in different areas. In the central region, there is much irrigated land and commercial agriculture was first developed. Although this region has high agricultural productivity, the share of agriculture is the lowest in Thailand's economy. In the northern region, most of the area is mountainous. This region has low population density and a large proportion of farmers that specialize in high value crops with a small land plot. In the northeast region, almost half of Thai farmers live in this region so this region is the largest agricultural area. However, agricultural, and ecological conditions are worse than other regions and it is remote from the coast and the main city. Thus, this region has the lowest agricultural productivity and highest level of rural poverty. In the southern region, because of rainfall over the year, agricultural and ecological conditions are very low intensity and very appropriate for cultivation. Moreover, this region exports Thailand's first valuable agricultural commodity, the production of rubber.

Important factors that help Thailand progress in agriculture come in many forms, transition happens all the time in Thailand's agriculture sector starting from the 1970 when Thailand transitioned from labor and land-based growth to capital and input based growth. During 1960-1970 Thai started putting underused land and rural labor to use resulting in more agricultural productivity. In 1980, we can observe from table 1 that almost the entire contribution to growth in agriculture came from capital about 59.9% and technological progress about 43.5% from 1990 onward to 2000, investment focus changed from large-scale infrastructure to micro level due to high investment cost with low rate of return. International aid also has a significant contribution to support the agriculture sector, especially in the northeast region. Later, the government has taken environmental issues more seriously creating strict regulation thus deforestation decreased. Fertilizer now plays a crucial role in driving yield up; nitrogenous fertilizer has increased by more than 10 times (table 2).

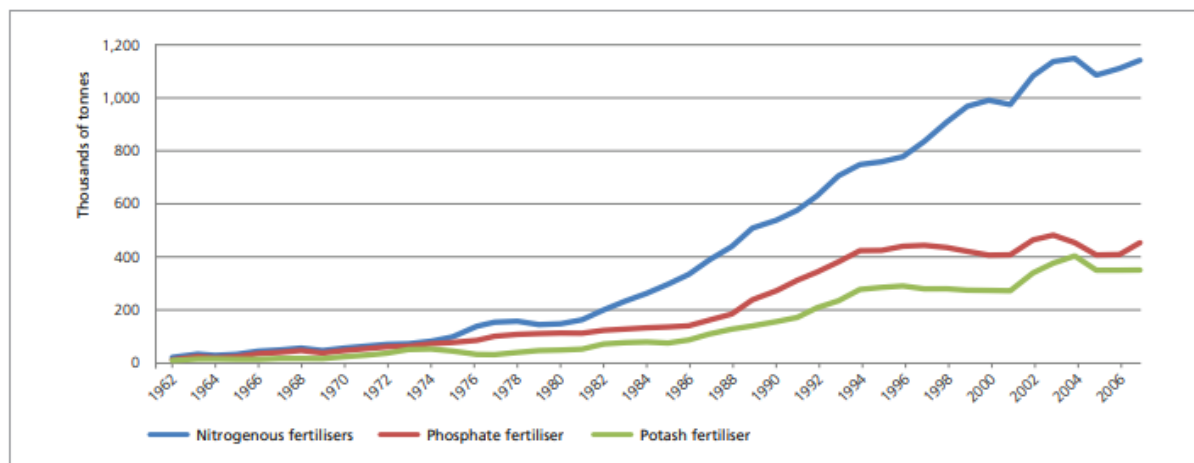
Table1: Factors contribution to agricultural GDP growth, 1981-2003

Table 6: Factors contribution to agricultural GDP growth, 1981-2003

	Labour	Land	Capital	Technological progress
Absolute contribution to agricultural growth (annual growth points)	-0.28	0.16	2.06	1.50
Relative contribution (%)	-8.1	4.6	59.9	43.5

Table2: Growing use of fertilizers, 1962-2007

Figure 16: Growing use of fertilisers, 1962-2007



Source: FAOSTAT.

New markets emerging overtime such as organic plants market helps the professional farmer, a type of farmer that is technically innovative and takes into consideration the market demand, to gain more market share and quickly increase their revenues. Contract farming is cliché for these types of farmers, supermarkets and the professional farmer have a special relationship since the supermarkets help the professional farmers gain more with the same amount of work.

Rice trades among Thai, Chinese, European is common throughout the histories of the 3 countries. Since the 1990s, Thailand's economy consists of about 50% of agriculture and agribusiness sectors. To improve Thailand's export, Thailand must promote the development of a national agribusiness sector because it is one of the important mechanisms in improving and developing most of the exports. For example, open a new export market for foreign animal feed companies that can stimulate the growth of higher value produce in local markets and support farmers to become more specialized. Moreover, the agribusinesses have a great influence on agricultural policy making.

The growth of selection crops in Thailand consists of rice, rubber, sugarcane, and cassava. Starting with the most important crop in Thailand that is rice, taking up more than half of arable area due to the ideal agricultural and ecological condition, Thailand was able to both tax rice and become the world's leading exporter for a long period. Up until the early 1980s, rice output grew mostly as a result of area expansion, but it was also aided by public irrigation projects that were the main factor of growth in rice at that time. The next

crop is rubber due to the monsoon environment of southern Thailand that is an ideal environment for rubber tree agriculture, allowing farmers to obtain high yields of 1.76 tons of rubber per hectare. By using improved varieties and reducing taxation it helped Thailand raise their rubber productivity and since 1991, Thailand has surpassed Malaysia as the world's biggest producer and exporter of rubber. The third crop is sugarcane, Thailand has been exporting sugar since the 1950s, but the country's sugar sector is protected by a 'home pricing plan,' which sets prices higher than the global market price that make growers and millers have fought over prices, but they've been able to lobby the government for intervention, for the sugar cane growth in around 1962-2007 it still largely focused on the increase of harvestable lands. The last crop is cassava, the production of cassava has steadily increased during the 1970s and early 1980s because of the expansion of the cultivated area, the area that use to plant cassava mainly located in the northeast due to the land availability because in northeast it full of forest so it easy to expand the cultivated area. However, the area under cassava fell in the 1990s, as stagnant root prices and rising labor costs lowered profitability making the production fall in that period.

Key Issues and Challenges

Thailand's agricultural growth has been a success. The country has made significant progress from a rural agricultural to an urban and industrial economy over the last half-century, with high growth rates and significant reductions in poverty and hunger. While agriculture has declined in importance, Thailand has evolved into a top agricultural exporter capable of producing a wide range of tropical products at high prices. But in the succession of agricultural growth there may be some Issues and challenges that are hard to solve, so we will discuss the problem in the next paragraph.

- Reduction in Poverty

Thailand's agriculture sector employs around 30 percent of the total labor force. However, it also generates the lowest value added per worker with the slowest growth. Thai agriculture has been an important factor for the living of the poor in Thailand. Instead, since 2013, the country's agriculture industry has deteriorated because of increased investment in the rival manufacturing and service industries. Aside from these tendencies, Thailand's current lack of modern agricultural infrastructure has exposed many farmers to drought and other natural disasters. With roughly 35 million people still relying on agriculture for a living, technological advancement in the field is critical for many communities to stay out of poverty.

- Policy challenges

Thailand's actual gross domestic product growth has stalled due to the manufacturing sector's falling competitiveness. During the previous two decades, chronic political instability has led to the implementation of short-sighted policies that were designed for gathering more votes rather than an increase in the corporate sector's long-term productivity.

- Sustainability

Thai agriculture has a remarkable economic sustainability, and this is the heart of this progress story: Thai farms, many of them small to medium scale, have evolved into market-oriented firms. Thai agriculture is a leading exporter of several globally traded commodities, and its competitiveness is strong in several areas. Even Though, Environmental sustainability is a major problem to concern. Since the mid-1990s, agricultural

land expansion has slowed, and natural areas have been better preserved. The current problem is to maintain the quality of agricultural land and water supplies. From higher land available per capita, Thailand appears to be in a better position to meet the challenge of producing more with less input. To sustain economic agriculture, they will also have to maintain the environment too by repairing it or changing the System ETC. Traditional system to be the settled agriculture, this will reduce in opening the new area and reducing the slash and burn progression.

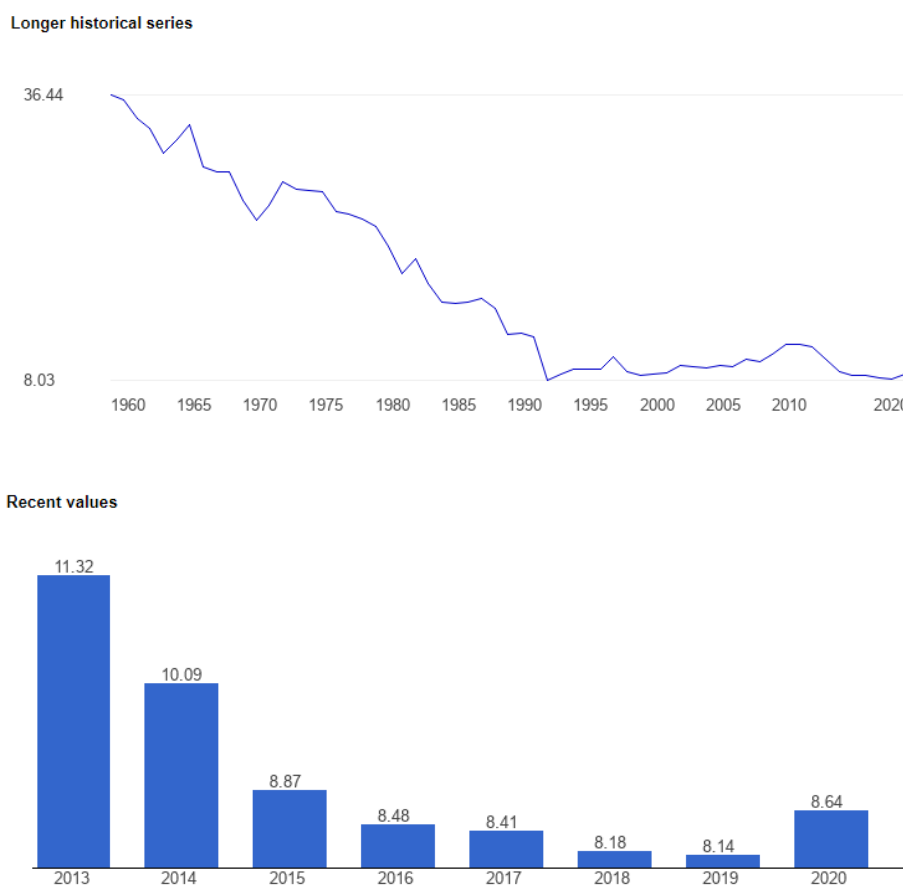
- Diversification of people in rural area

It is necessary to continue to establish conditions that allow people in rural areas to diversify their livelihoods or exit agriculture entirely, while also allowing specialized farmers to invest and develop.

- Low productivity

As you can see from the Table3, share of the agriculture sector in Thailand, compared with overall GDP 1960-2020 during this period the share of this sector was around 17.32 percent with a minimum of 8.03 percent in 1993 and a maximum of 36.44 percent in 1960 and the latest value from 2020 is 8.64 percent. In 2020, based on 146 nations. The global average is around 10.81 percent. We can see that in this sector in Thailand the productivity is low and needs to be increased and improved.

Table3: Historical series of Thailand agricultural sector over 1960-2020



Government/State Strategies, Policies and Legislation

- Evolution of agriculture taxation – a shift in public policies (1980)

In the early 1980, Agricultural exports were highly taxed to raise funds to keep the domestic price of rice low, helping to keep labor expenses down. Rice exports were subject to a fixed export tax, ad valorem duty, volume limitations, and a requirement that exporters sell a portion of their rice at prices below market. Exporters were further harmed by the baht's overvaluation. Taxation was eased after industrialization, the baht was devalued, and steps to support farmers were taken in response to increased demand from a better-educated rural population. Following that, shock protection was provided, including rice intervention pricing.

- Infrastructure development: roads, irrigation, and telecoms (1977)

Infrastructure has gradually developed since 1977. The overall length of roads increased by 1.4 % every year from 38,244 kilometers in 1977 to 52,960 kilometers in 2000. Rural roads developed even faster, from 6,258 kilometers in 1977 to 67,138 kilometers in 2000. The density of rural roads has increased from 12km to 124km per 1000km². Road network expansion has played an important role in the development of the northeast. Irrigation investments began to decline in the mid-1980, and development shifted to smaller-scale systems and irrigation in less favorable areas. Irrigation and road development were main determinants to increased agricultural productivity. Every year since 1977, the number of rural telecom lines has increased by more than 20%. Rural telecom expansion contributed significantly to agricultural productivity growth with very little governmental expenditure.

- Agriculture research

This research has the largest positive impact on agricultural productivity compared with other public expenditures which can increase agricultural productivity by 12.6 baht for every additional baht invested in agriculture research. From the fact that we have modern rice varieties, use of improved rubber trees and improved varieties of maize, soybean and cassava due to the result of agricultural research, however, research spending has stagnated and fell relative to agricultural GDP.

- Rural education (1960)

Since the 1960, Thailand has pushed for universal primary education. Before the end of the 1970, the average rural quality of education was about 80%. In the northwest, education investments and levels were significantly higher, and rural education is among the highest in developing countries. This shows that educational investments have had a significant impact on agricultural labor productivity growth, which was, perhaps unsurprisingly, greater than non-agricultural employment and poverty reduction.

- Provision of agricultural credit through institutional innovations (1980)

For many small farmers, a lack of access to credit is a major impediment to agricultural investment and productivity growth. Because formal banks have limited knowledge on the character and ability of farmers, rural lending markets fail. Nonetheless, policy has helped to create a sustainable institution, one that has contributed to the development of increasingly capital- and technology-intensive agriculture since the 1980 by guaranteeing that most small farmers can receive loans and other financial services.

- Encouraging the use of machinery

In 1979, the National Committee for Agricultural Mechanization was formed to develop a policy framework, which was adopted by the cabinet in 1985. which indicates that the procedure is proceeding smoothly,

encouraging the use of machinery that boosts production by providing low-cost, high-quality machines that are fit for Thai farmers' needs. This is despite some frequent concerns that machines would be able to replace agricultural people, causing excessive rural-to-urban migration and reducing agriculture's ability to absorb labor during an economic downturn. Collaboration between the public and private sectors in research and development, standardization of machinery to allow certification, farmer and manufacturing worker training, and the facilitation of long-term loans for farmers and machinery businesses were one of the strategies.

Lesson learned

Our group observes that the agricultural sector is the important sector for every country in the world in developing economic growth. In Thailand, the growth in agriculture is largely due to the agricultural land expansion and high rural population growth rate. Thailand also has a selection of crops which consist of disease resistance and higher yields like the green revolution period. All these important crops in Thailand such as rice, cassava, rubber, and sugarcane have a high growth rate due to the suitable environment and geography of some areas in Thailand thus the growth rate and the amount of crop that produce is mostly dependent on the environment and geography of that area. As economic growth during 1980-1996, share of agriculture decreased while manufacturing increased, so there is a shift from agriculture to other sectors due to lack of money incentive. Moreover, in 1970, Thailand transitioned from labor and land-based growth to capital and input based growth and used the nitrogenous fertilizer to increase agricultural productivity. In order to reduce the issues in this sector, it needs help from all parties to proceed to solve the problems such as the investment by the government and the foreign investment to increase spending on the electricity and telecommunication. These are the main factors that affect transportation as well as productivity, sustainability, and poverty. If the transportation is good, it will have a positive impact on productivity, sustainability, and poverty. Another important factor is the policies that can relieve the key issues by creating incentives for production and enhancing productivity. Furthermore, agricultural labor productivity increases and helps to reduce rural poverty. However, the income gap between the rural and urban areas has expanded. In addition, the government has become another important role that has driven the Thai agriculture sector by promoting agriculture export via actively participating in multilateral, regional, and bilateral trade talks. Lastly, government institutions have many policies such as developing the agricultural machinery industry by using machinery to boost agriculture production by providing low-cost, and high-quality machines that are fit for Thai farmers even though Thailand has a bad environment in some areas.

Conclusion

To the present day, we can explicitly say that agriculture has played a significant role and gone through many transitions. For instance, the transition from an agricultural economy that is based on export to an economy that has infrastructure created from manufacturing and services providing income for the majority of the population. During the early phase of industrialization is the time when agriculture grew at a rapid rate due to the fact that Thailand started using more underused factors of production such as forest land and the labor of the growing population. As a result, the return on agriculture increases to a level that the government can tax and create a better economic infrastructure. The key issues that have been discussed before can be

solved by, starting from sustainability and productivity are the intervention policies to prevent opening the new land without permission to open new lands requires prior permission. which will be supported by possession law and allows farmers to clear the land correctly this will cure the environmental sustainability efficiency. Moreover, government policy has also been an important factor that has driven Thailand's agriculture by starting with supporting machinery that helps farmers to solve many problems, such as reducing agriculture's ability to absorb labor during an economic downturn and helping to improve agriculture production. Provision of agricultural credit, one of the government policies, this allows farmers to invest more in the cultivation of agricultural crops as having more capital can help to improve the quality of agricultural crops. Furthermore, rural education aids in increasing agricultural productivity and improving the quality of agricultural products by allowing farmers to apply their knowledge to enhance and manage their fields in order to obtain more quantity and quality from their agricultural products.