

Chapter 4

Prospects of Thai Export Performance and Instability

In this chapter we will discuss about the results of this study. As we could see in chapter 3 that the overall performance of Thai rice and rubber exports to the world market were quite the same but the change in export instability index were different. Therefore, we will discuss about rice export first and followed by rubber export. Moreover, we will try to suggest the policy implication to solve some problem of rice and rubber export of Thailand.

Before recommend some policy implications of the results of rice and rubber exports of Thailand, we will discuss about the agricultural policy and the policy options for government to choose to intervene in agricultural market first.

If a definition of agricultural policy was required, it might be 'That set of measures taken by central governments which were aimed at influencing, directly or indirectly, agricultural factor and product markets'.³⁷

³⁷ Josling, T. (1974) "Agricultural Policies in Developed Countries: A Review", *Journal of Agriculture Economics*. (35:3,259-64).

Food and agricultural prices were major determinants of producer incentives and real incomes in developing countries. Governments in those countries often adopt pricing policies to reduce food prices for urban consumers even though farmers were forced to bear the costs. Ironically, in developed countries where farmers were a much smaller proportion of the population, government price interventions tend to support agricultural prices, often at the expense of tax payers and consumers.³⁸

The form of government interventions into agricultural commodity markets also shifted as development proceeds. During early stages of development, most governments had to intervene in agricultural markets to raise revenues because the economic base was primarily agricultural. It was politically and bureaucratically difficult to tax on land or income directly, food prices were manipulated through a variety of mechanisms that implicitly tax agriculture. As development proceeds, with its accompanying structural transformation of the economy, the need to tax agriculture diminishes.³⁹

Political leaders advised policies to meet society's objectives and the demand of interest groups, to generate revenue, and in some cases, to line their own pockets. Government could influence

³⁸ Gorge W. Norton and Jeffrey Alwang. "*Introduction to Economics of Agricultural Development*". (McGraw-Hill, Inc. 1993), pp242-243.

³⁹ Ibid, p244.

agricultural prices by setting price ceilings or floors and enforcing them with subsidies, taxes, manipulation of exchange rates, storage programs, quantity restrictions, and other policy instruments. These interventions influenced producer and consumer prices and incomes, production and consumption foreign exchange earnings, price stability, government revenues, the efficiency of resource allocation, employment, capital investment, technical change, health and nutrition, and marketing margins.

Marketing referred to the process of changing products in time, space, and form through storage, transportation, and processing. Goods were exchanged and prices were determined in the markets. The importance of these functions increased as markets became more commercialised. Developing countries often had marketing systems characterised by deficient infrastructure, inadequate information, weak bargaining position for producers for certain commodities, and government-induced distortions. The government could help to solve certain marketing deficiencies, particularly the lack of roads and information. The public sector could provide a system of grades and standards as well as other regulations. These contributions could help reduce transactions costs that rose as markets became less personal. Government should avoid the larger parastatal marketing agencies that tend to introduce marketing distortions.⁴⁰

⁴⁰ Ibid, p259.

Although government should avoid to intervene in the market, the intervention and distortion still necessary. They used a range of ways of manipulating the supply and demand of farm products. There were three main policies options for government to choose if they wished to intervene in agricultural markets. They were to⁴¹:

1. manipulate (i.e., raise) product prices with or without controlling supply from home or foreign suppliers
2. change the level of costs faced by farmers by the use of subsidies and taxes linked to inputs
3. make payments to farmers not linked to production (though possibly linked to non-production) so that their profit-income objective is approached in a way that does not directly flow from agricultural production.

These three options were considered in turn, though inevitably actual policies contained aspects of more than one of the approaches. Most attention would focus on the first two, since in practice they had dominated the pattern of intervention for policy purposes.

In a free market the interaction of demand with supply ensured that the quantity that entered the market from suppliers was all taken from the market by purchasers, and prices would be adjusted by the interaction

⁴¹ Berkely Hill and Derek Ray. "Economics For Agriculture: Food, Farming, and the Rural Economy" (Macmillan Education,1987), p336.

of buyers and sellers to ensure that this balance was achieved. Adjustments to the balance between demand and supply were made solely by changes in price. Government that attempted to manipulate farm prices and distorted the price from its equilibrium level was also faced with the consequence that the quantity demanded would not equate with the quantity supplied at the new price level. The government might have a mechanism which removed surpluses and supplies deficits at the new price if it wished to allow market forces to continue to operate.⁴²

The simple solution was the buffer stock principle, where intervention was designed to stabilise prices of those agricultural products that were subjected to wide price variation brought about by weather influenced on supply. The buffer consisted of the state buying farm products when prices were low, taking them into storage, and releasing them onto the market when prices rose to unusually high levels. In reality no state agency would try to maintain a single, unfluctuating price. More likely it would set a minimum and a maximum price it is willing to see in the market, buying if the actual price tended to slide below the permitted range and selling if it appears to be likely to exceed the desired maximum. The buffer might operate not simply to stabilise prices, but rather to stabilise revenues, that was price times quantity sold buy producers. There might also be income implications of stabilisation programmes.⁴³

⁴² Ibid, pp336-337.

⁴³ Ibid.

The key to buffer stock was the variation in supply that meant a government (or its agent) was sometimes a buyer and sometimes a seller. In the case of support buying, the opportunity to be a seller seldom if ever existed. The government was providing farmers with a higher price than a free market would permit. To do this, it must operate on the internal and on the external markets.

The problem was worsened because the high price would encourage local farmers to invest and expand, shifting local supply rightwards, and enlarging the surplus. Others problems were created by this system besides the budgetary cost. First, world market prices were made lower and more variable as surplus domestic production, which would vary from year to year according to the weather and other short-run supply factors, was put on the world market at subsidised prices, a cause of complaint by traditional farm exporting economies. Second, farmers lost the discipline of market forces and were unable to relate their costs to costs elsewhere or to the strength of consumer demand. Third, consumer paid higher prices than they need and there were the trade distorting effects exists.⁴⁴

The government could attempt to establish higher home prices by minimum import prices. This was an easy system to negotiate so

⁴⁴ Ibid, p340.

long as supply was restricted to a few well-established countries because they could see a gain in prices they received to offset their loss of sales in country. The higher price for home farmers increased local supply and cut local demand for the product, thus, reduced the quantity of imports.

The minimum import price system had two major disadvantages. First, consumers paying higher prices for imports were needlessly helping to support foreign farmers as the importing country was consciously asking foreign countries to be more expensive. The second disadvantage was that the system creates monopolies and retards competition.

The obvious solution was to reject the minimum import price concept and bought from the cheapest source whilst maintaining a constant raised import price by imposing a tax to bring up the import price to the desired domestic price. The major problem with market intervention which raised the prices of farm products was that, not unreasonably, farmers interpreted the higher prices as a signal to expand production. This might not be the intention of policy makers, who might really be aiming at supporting incomes through product prices. Consequently the cost of price support might be much greater than was at first envisaged. The advantage of such a system was that it was automatic.⁴⁵

⁴⁵ Ibid, p342.

The other measures to manipulate farm price were domestic quotas, physical constrictions on foreign supply, deficiency payments, and production bounties and taxes.

The basic idea of a deficiency payment system was to allow free market forces to determine the level of market prices, which with an internationally traded commodity would be the world price. Farmers sold their output for this market price and the government agreed to make up to farmers the difference between this market price and some pre-determined guaranteed price by means of a direct payment, termed the deficiency payment. The use of an average market price in order to calculate the deficiency payment meant that there is still an incentive for individual farmers to seek the best prices for their output, that was marketing efficiency was still promoted. The disadvantage of deficiency payment system were the administrative problem of paying farmers individually according to their production levels, the high cost to the public budget of the payments and the inevitable political attention that they attracted and the vulnerability of expenditure to influences outside the control of the government, such as a movement in world prices because of good yields in foreign countries.⁴⁶

The effect of production bounties was to shift the supply curve for these enterprises downwards-farmers were willing to supply the same

⁴⁶ Ibid, p347.

quantities to the market at a market price lowered by the extent of the bounty than before. A tax on production would exert the opposite effect; not all the impact of the tax would fall on the farmer as the contraction in supply that would result in part pass the burden to the consumer. One instance where such a tax was used was on farmers who exceed quota levels of output; by penalising over-quota production consumers had to pay more for their purchases.

Now, we moved from considering the intervention of the state in the markets for agricultural products to the ways in which it attempted to manipulate the markets for the inputs which farmers used.

The state intervention in the market of the input market by both direct methods and influencing the demand and supply of them. The demand by farmers for inputs, both those used up in production within one cycle such as insecticides and those that were longer-lasting such as buildings, was derived from the demand for farm products. The supply of farm products could be influenced by the cost of inputs. By taxing inputs and thereby raising their prices, government could reduce production; by subsidising inputs, it could expand farm supply.

Finally, the last policy option for government to choose to intervene in agricultural markets was direct payments to farmers. One way in which it was felt possible to influence the market for products was to make

payments to farmers which could be enjoyed as income; this might relieve them from the necessity to derive a livelihood from agricultural activity. The implication was that they would then not produce as much, thereby relieving in part the problem of over-production. It would be easy to deduce that a direct income payment without any condition attached would affect neither the level of output nor the use of inputs; farmer would still behave as profit maximisers in the way that arranged their farms, although perhaps a modest reduction in activity might be exhibited by those who preferred to take more of their reward in the form of leisure. On the Other hand, direct payments could affect the markets for farm products and the inputs if they were linked to specific actions by farmers.⁴⁷

From the methods of price intervention and market intervention discussed above, we could apply those measures to solve the problems of negative competitiveness of Thai rice and rubber exports as following.

Rice Export

As mentioned in the previous chapter that price stability was caused by instability in foreign demand. Thus, when price fluctuation was larger contributor and demand fluctuation was the source of the export in

⁴⁷ Ibid, pp354-356.

stability, the degree of instability would be high. While, if demand fluctuation is the source of the export instability and quantity fluctuation was larger contributor, the degree of instability would be low.

In period 1, rice export instability index was higher than in period 2 because of in period 1 the source of export instability was demand fluctuation and the determinant contributor was price instability. The demand fluctuation could effect the instability in export through price fluctuation variable than quantity fluctuation variable. In period 2, the demand fluctuation was still the source of rice export instability, but the determinant contributor of rice export instability changed from price instability to be quantity instability. Therefore, the rice export instability index of period1 was lower than period 2.

The determinant variable of the competitiveness residual of rice export in 1986-1990 was price stability index. The overall positive results of price stability index in period 1 told us that the price of rice export from Thailand fluctuated more often than the other exporters, USA and Vietnam. In period 2, the price stability index was still the determinant variable of the competitiveness residual of Thai rice export. The ability to supply rice to the world market of Thailand had relatively high influence on the competitiveness residual than the price stability index. The overall result of price stability index in period 2 was negative. This meant that the price of Thai rice that export to the world market has changed more often than the

competitors during 1986-1990. The overall result of supply availability index was negative in period 2 while this index has the positive sign in overall results in period 1. Thus, during 1991-1995 Thailand had less ability to supply rice to the world market than the other major competitor which are USA and Vietnam.

The determinant variables that caused the negative competitive effects of Thai rice export were price stability index for period 1 and supply availability index and price stability index for period 2. The weak point that caused the negative competitiveness of Thai rice export to the world market during 1986-1990 was the price instability of Thai rice comparing to the major competitors. In period 2, the causes of negative competitiveness of Thai rice in the world market were the price stability index and supply availability index. Eventhough, the overall results of price stability index had expected sign (negative sign) of the correlation coefficient between competitiveness residual and price stability index, the price stability could explain the competitiveness residual of Thai rice export less than supply availability. Because of supply availability index in period 2 had negative overall results, therefore, Thailand had lower ability to supply rice lower than the competitors. The overall performance of rice export competitive growth was negative. The weak point that caused the negative competitiveness of Thai rice export in the world market comparing to the major competitors was negative supply availability index.

As mentioned earlier that rice export instability of Thailand to the world market in period 1 was higher than period 2. While Thai rice export had more stability index of export in period 2, export competitiveness was negative in period 1 and more negative growth in period 2. Therefore, Thailand was still the large exporter in the world rice market but had relatively permanent uncompetitiveness comparing to the other major exporters, USA and Vietnam.

Policy Implication for the Results of Rice Exports

The obtained results suggested that export of rice export of Thailand in the world market had the problem of competitiveness growth. Rice export faced the problem of negative supply availability index, that was, Thailand had less ability to supply than the competitors. While the supply availability of rice from Thailand was rice 13,632,990 metric tons. The supply availability of rice from Vietnam was 21,218,110 metric tons and from USA was 5,088,743 metric tons in 1995^{*}. The supply availability was the supply-side variable. Therefore, to increase ability to supply, we had to increase productivity, quality and production technology of rice.

The strong influences of domestic and export markets had stimulated the expansion of cultivated areas as well as output growth,

^{*}Data from FAOSTAT Statistics Database.

however, the inelasticity of land supply had switched the concern toward productivity improvements. Significant developments in rural infrastructure, extension work, and public research had resulted in the sustaining the rice supply growth through the adoption of rice cropping intensity and modern technology. A consequence of these agricultural developments in Thailand and also in other parts of the world had affected the international rice market. Since both domestic and international rice markets were closely linked, the effect of price movements in the international market inevitably transmitted to the domestic market. Essentially, these would remarkably result in a reduction of farmers' income if the world price declined due to increased supplies.

Rice production in Thailand was now in an international phrase. A massive encroachment of forest was in the past has reduced the ratio of forest land to agricultural area which now created problems of environmental degradation. This could be observed by irregular rainfall pattern and a prolonged drought in many rainfed rice regions. Even the irrigated areas, water resource scarcity, particularly in the dry season, were increasingly intensified. These extensive impacts of environmental degradation, coupled with a low rice price reduced the comparative advantage of the rice farming compared to other crops. Furthermore, high growth rate in non-agricultural sectors in recent years had created the competitive use of the country resource. A remarkably increased in demand for labour in non-agricultural sector, had both temporally and permanently

drawn farm workers out of agriculture. A continuous rise in wage rate and a shortage of hired labour supply, specifically during the peak season, raised the production cost. It was doubted in the near future that Thailand could maintain her domestic surplus of rice and her competitiveness export market.⁴⁸

From the paragraph above, we could see that Thailand really had the problem of supply availability and production productivity. The solution or policy that government should applied were increasing production productivity by using newly technology of rice production and reduced the problem of the scarcity of water.

Moreover, as the wage rates were increasing Thai rice exports should be more concentrate on the market of high quality rice which demand was depended on quality of products not price. Because Thailand production of rice was less than Vietnam's production, thus Thailand should use more marketing strategies to access the market than before if Thailand needed to have comparative advantage in the market of low quality rice exports. Those strategies were such as government or its agent should to reduce the transaction costs of exports, tried to access new market instead of waiting for exporters to access news market by themselves, and improved the information system that provided in the market.

⁴⁸ Somporn Isvilanonda and Nipon Poapongsakorn, TDRI 1995

The transaction costs contained transportation costs (both domestic and international transports), public sectors working system. The important of good transport was as this case, Vietnam had had part of low quality rice market of Thailand but the importers return to import from Thailand again because Thailand had better delivery system and shipping system. To access the new market for Thai rice, government should tried to open new market for exporters. Moreover, government should tried to bring about the trust in exporters by guarantee to the importers. One of the import things was the information in the market. Government should improve the collection of trade data and provided to the exporters. Eventhough, the exporters could seek for the necessary information by themselves, but the information of the market both broad and deep information was still important for policy-maker.

Rubber Export

In period 1, rubber export instability index was lower than period 2 because of in period 1 the source of export instability is supply fluctuation and the determinant contributor is price instability. In period 2, although price fluctuation stability was still the contributor of rubber export instability, the source of rubber export instability changed from supply fluctuation to be demand fluctuation. Therefore, the rubber export instability index of period 1 was lower than period 2.

The determinant variable of the competitiveness residual of rubber export in 1986-1990 was the supply availability index. The overall results of supply availability index was negative in period 1 while was positive in period 2. Thus, during 1991-1995 Thailand had more ability to supply rubber to the world market than the other major competitor, Indonesia and Malaysia.

The determinant variable that caused the negative competitive effects of Thai rubber export was supply availability index for both period 1 and period 2. Therefore, the weak point that caused the negative competitiveness of Thai rubber export to the world market during 1986-1990 and 1991-1995 was the supply availability comparing to the major competitors. However, because of the supply availability index in period 2 had positive sign as expected in overall results, Thailand had lower ability to supply rubber higher than the competitors while the overall performance of rubber export competitive growth was negative. Therefore, the competitiveness of Thai rubber export in period 2 would be higher. However, because of the rubber market is consumer's market, the growth or activities of this market depended on demand fluctuation. Eventhough Thailand had higher ability to supply than the other exporters, the demand side variable had more influence on rubber market than the supply. Therefore, positive supply availability index had less important role on competitive residual of Thai rubber than demand fluctuation.

Although Thailand had higher ability to supply than the competitors in period 2, the growth of competitiveness of Thai rubber export still had a negative sign. The reason was that the rubber market was consumer market thus the demand side variable would have more influence on the rubber market than supply variable. Supply availability was supply variable so that the influence of this factor was not enough to lead Thai rubber export to have more competitiveness, moreover; Indonesia and Malaysia concentrated on block rubber export when Thailand concentrated on rubber smoked sheets. The regression results showed no significant correlation between the competitiveness residual and the three independent variables because of the data using in this study were not specify enough. However, the results in period 1 were more significant than in period 2 in both cases.

As mentioned earlier that rubber export instability of Thailand to the world market in period 1 was lower than period 2. Thai rubber export had more instability index of export in period 2 than period 1 while export competitiveness was negative in period 1 and more negative growth in period 2. Therefore, Thailand was still the large exporter in the world rubber market but had relatively uncertainty in the rubber export uncompetitiveness when compared to the other major exporters whom in this study are Indonesia and Malaysia.

The problem of negative competitiveness of Thai rubber export to the world market came from price instability and fluctuations of demand-side variable. Government or policy-maker who try to improve Thai competitiveness in the world market to maintain the position of largest exporter of the world with effective competitiveness should try to reduce impact of demand and price fluctuation on Thai rubber export.

Policy Implication for the Results of Rubber Exports

The obtained results mentioned earlier suggested that export of rubber export of Thailand in the world market had the problem of competitiveness growth. Rubber export faced the problem of the fluctuations of demand, that was because the market for natural rubber is highly competitive. Since the demand for natural rubber as well as its supply are highly insensitive to price changes in the short run, natural rubber prices fluctuated widely in response to changes in economic activity or variations in the flow of natural rubber supplies. As the market share of synthetic rubber increased, their price began to set the overall price trend, and natural rubber producers became price takers⁴⁹. Therefore, price instability and demand fluctuation really be the problem of Thai rubber exports.

⁴⁹ Nida Sang-ngam "Demand for Natural Rubber in USA, Japan and China: with Special Reference to Thai Natural Rubber" (Master's Thesis, Thammasat University, 1995), abstract.

To reduce the impact and risks of demand fluctuation on Thai rubber export the scheme of buffer stock principle should be used. Thailand was the largest exporter and producer of natural rubber of the world but the market of rubber in Thailand was not the main market for international trading. Thus, rubber price of export still depended on Malaysia rubber market and Japan rubber market. The solution of this problem should be solved by establish the forward market for rubber. There were a lot of supply of rubber in Thailand, therefore, in Thai forward market would have both speculators and exporters acting in the market. The other benefit was that Thailand would have capacity to control or has more bargaining power in trading rubber.

Moreover, Thai rubber export should develop the production technology for more competitive and productive of Thai rubber in the world market. As Nida Sang-ngam concluded in her study that, The production and export target of Thailand in the year 2000 would not be sufficient when the quantity of all Thai natural rubber demands of three countries (Japan, USA, and China) and demand from the rest of the world were included together. As a result, Thailand should promote natural rubber production and increase more exports to capture all additional demand from the world. Several ways should be applied for the growth of the production

for instance area-planting expansion, promotion of more high-yielding trees and the improvement of the production process.⁵⁰

Finally, as the case of rice exports, government should try to access new market, provide effective information, and reduce costs of transaction of trading activity in rubber export.

⁵⁰ Ibid.