The Influence of Rice Premium and Rice Prices on Production in Thailand

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I. THE RICE EXPORT PREMIUM SYSTEM

Prior to World War II, rice exports from Thailand were free of any significant tax and control by the government. The war had caused great disruptions to rice production of practically all countries as well as to international rice trade. Rice prices in the international market rose to an imprecedented level compared with the prewar prices. In order to prevent excessive rice exports and to insulate the influence of world prices on domestic rice prices, the government found it necessary to take over the rice export trade from private exporters[1] : Thus all rice exports were effected through the government rice export monopoly from 1946 through 1954.

The government rice export monopoly was finally dissolved in 1955, for the following main reasons : [2]

1. World rice production and trade had gradually returned to normal, tight government control was no longer necessary.

2. International rice market had ceased to be the seller's market, the rigid policy and practices of the government monopoly were unable to cope with the changed situation, rice exports from Thailand had declined steadily and the monopoly was unable to reverse the trend and was forced to return the rice exports to the more flexible and efficient private traders.

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[1] For details, see Sura Sanittanont , *Thailand's Rice Export Tax : Its Effects on the Rice Economy*, Bangkok, 1967, pp. 16—24.

[2] S. C. Yang , *A Multiple Exchange Rate System : An Appraisal of Thailand's Experience*, University of Wisconsin Press, 1957, pp, 116—121.

Although rice export trade was returned to private hands with the dissolution of the government monopoly, the government retained a considerable degree of control and regulation over it, by the institution of the "rice export premium system" which with minor modifications, has been in effect up to to-day.

The rice premium system ostensibly has the following objectives and functions :[3]

1. To improve the bargaining position of Thai rice exporters in the world market.

2. To maintain domestic rice prices at a traditionally low level.

3. To channel part of the earnings from rice exports into the government treasury.

These explicit objectives of the rice premium system suggest the following implicit assumptions :

1. Rice exports from Thailand as a whole have great influence on the world price level.

2. Domestic rice traders pass a significant degree of monopolistic and monopsonistic power in the domestic rice and paddy markets.

3. Domestic paddy production is not responsive to price changes.

II. WORKING OF THE RICE PREMIUM SYSTEM

The working machinery of the present rice export control system is simple and yet effective and it is almost impossible for exporters to evade taxation. Several changes have been made of the administrative procedure in recent years. In its current form, the rice premium system is a mixture of government export monopoly and machinery for the control of private rice exports.

1. Determination of annual exportable rice surplus. Each year the Ministry or Economic Affairs in co-operation with the Ministry of Agriculture will determine the level of exportable rice surplus, with the primary objective of reserving sufficient rice for domestic consumption. Since domestic consumption requirements do not change greatly from year to year, the level of paddy production is the most important determinant of the level of rice surplus.

[3] Vichien Inthachat , *Rice Premium and Its Administration*, Bangkok, 1966, p. 19.

2. Rice exports on government-to-government contracts. After setting the level of maximum exportable surplus, the government exports honoring contractual agreements with other countries will have priority over commercial rice exports. Only after–all–government commitments have been met are rice export permits issued to private rice exporters. From Table 1,–it is evident that government exports have been gaining in relative importance.

TABLE 1: RELATIVE SHARES OF GOVERNMENTAL AND COMMERCIAL RICE EXPORTS (MILLION TONS)

Year	Total Rice Exports	Commercial Exports	Government Exports	Gov't Exports as % of Total
1950	1.51	0.30*	1.21	80*
1	1.61	1.48*	1.31	70*
2	1.41	0.56	0.84	60
3	1.34	0.60	0.74	65
4	1.02	0.51*	0.51	50*
5	1.24	1.24	—	0
6	1.26	1.13	0.18	10*
7	1.57	1.33	0.24	15*
8	1.14	0.88	0.26	16
—9	1.09	0.94	0.15	14
1960	1.20	0.87	0.33	28
1	1.58	0.88	0.70	35
2	1.28	0.87	0.41	32
3	1.44	0.87	0.57	41
4	1.90	11.1	0.79	42
5	1.89	1.19	0.70	37
6	1.51	0.85	0.66	44

Sources : S. Y. Lee, "Post–war Rice Trade of Thailand", and "Selling Thai Rice", *Far Eastern Economic Review*, vol. XVI, No. 21 (May 1954), and vol. XLV, No. 1 (July 1964).
1964–66, Dept. of Foreign Trade, Ministry of Foreign Affairs.
*Estimates

Governmental rice exports are usually initiated at the request of rice deficit countries, usually Indonesia, the Philippines and India. Governmental rice exports are usually contracted on special terms, at somewhat lower than market prices, and humanitarian considerations also carry considerable weight.

After the Government has concluded contracts with governments of buying countries, the Ministry of Economic Affairs buys rice from domestic rice sellers at domestic prices, which are considerably below world prices. The difference which is profit to the government is entered in the government budget as part of the rice premium revenue.[4] It should be pointed out that the government is involved only in accounting transactions, the actual shipment of rice is done by commercial firms acting as the agent for the government.

3. Allocation of rice export permits. After government contracts have been taken care of, the remaining exportable surplus—will be available for commercial exports. The Ministry of Economic Affairs will issue permits to the exporters. There are no hard and fast rules for the awarding of permits.[5] Past export record, financial position, and credit worthiness of the exporter are also taken into considerations.[6] Thus, a large, financially strong rice exporter who has been exporting large quantities in the past is also likely to receive large quota in the future.

4. Collection of rice premium. After obtaining the rice export permits, rice exporters have to pay a substantial export duty known as the rice premium before they can ship rice abroad.

Prior to January 16, 1967, the rice premium was a specific duty, since then, it has been changed into an advalorem duty.

5. Rice premium 1955-1966. During this period, rice premium was a specific duty payable in baht. Premium rates were fixed by the government and were supposedly adjusted in accordance with domestic and world market conditions such that the rice premium would serve as a regulator of export volume and as an insulator

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[4]Information obtained from officials of the Department of Foreign Trade, Ministry of Economic Affairs in an interview.

[5]*Ibid.*

[6]S.Y. Lee, "Selling Thai Rice", *Far Eastern Economic Review*, July 1964, pp. 20—21.

of external influence on domestic rice prices. Theoretically, premium rates were to be raised (lowered) when foreign demand is strong (weak) relative to the domestic supply of exportable surplus, so as to prevent excessive exports and to keep domestic rice prices in check. In practice, however, premium rate adjustments were made at the discretion of responsible government officials rather than up to market conditions. It is evident from Table 2 that changes in the premium rates were indeed made rather infrequently and irregularly.

TABLE 2: PREMIUM RATES FOR MAJOR CATEGORIES OF RICE EXPORTS

(baht/ton)

Effective	White Rice (up to 20% broken)	White Rice (25%—45% broken)	Broken Rice (average)
Dec. 1955	935	935	380
Feb. 1956—	935	935	380
Nov. 1956	840	570	420
July 1957	935	600	470
Feb. 1958	935	730	470
June 1959	935	650	450
Jan. 1960	865	600	500
Mar. 1961	865	600	520
Apr. 1962	950	700	575

Source : Dept. of Foreign Trade, Ministry of Economic Affairs, Effective through **Jan. 15, 1967.**

Thus, during this period, the rice premium played a limited and passive role in the rice export control system. It did not serve as the regulator of the export quantities, nor was it able to insulate external price fluctuations from affecting domestic rice prices.

6. Rice premium since January 1967. The rice premium has been changed into an advalorem duty since the middle of January, 1967. Now there are only two basic rates :[7]

1. For white rice of various grades containing up to 20% broken grains the premium is 30% of f.o.b. Bangkok prices.
2. For all other grades, including rice products the premium is 25% of f.o.b. Bangkok prices.

For the first two months, the f.o.b. Bangkok prices were fixed by the Ministry of Economic Affairs in a more or less arbitrary manner. Since April, however, such prices on which premium is assessed is fixed by a special committee according to external market prices, and have been very close to reality:[8] Table 3 shows rice premium in baht per ton as the result of the advalorem duty.

[7] Announcement of the Ministry of Economic Affairs, dated January 18, 1963.

[8] Interview with officials in the Division of Exports, Dept. of Foreign Trade.

TABLE 3: RICE PREMIUM OF MAJOR CATEGORIES OF RICE JAN.–NOV. 1967 (BAHT/TON)

Grade	Up to Jan. 16, 1967	Jan. Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct. Nov.
White Rice 100%	950	1010	1090	1240	1300	1320	1470	1640	1520	1640
,, 5%	950	980	1050	1190	1230	1260	1400	1570	1450	1570
,, 10%	950	950	1010	1130	1180	1210	1350	1520	1400	1520
,, 15%	950	940	1000	1080	1130	1150	1290	1460	1350	1460
,, 20%	950	930	980	1070	1110	1140	1270	1440	1330	1440
,, 25%	700	770	810	880	910	930	1050	1190	1090	1190
,, 35%	700	730	800	800	—	—	—	—	—	—
น.ข.ก. เอกันเลิศ	600	680	700	790	810	810	840	930	890	930
,, ,, พิเศษ	600	680	700	780	800	800	830	910	880	920
,, ,, ธรรมดา	600	680	680	760	780	780	810	890	860	910

Source : Dept. of Foreign Trade, Ministry of Economic Affairs.

In terms of reducing price fluctuations in the domestic market, the change of premium into an advalorem duty should be considered as an improvement over the specific duty.[9]

III. THE EFFECTS OF RICE PREMIUM ON RICE AND PADDY PRICES

1. Rice premium and rice export prices. It is the contention of the government that the rice premium is largely paid by foreign buyers in the form of higher prices. Without the rice premium, it is believed, export prices for Thai rice would fall from the present level. Government officials are quick to point out that as soon as premium rates were lowered, prices for Thai rice export in such important markets as Singapore and Hong Kong would fall immediately.[10] This contention is apparently based on the belief that since Thailand supplies as much as 25% to 30% of total world rice exports, she must necessarily have considerable influence over the world price level. In other words, it is believed that Thai rice exporters' costs determine export prices, or that Thai exporters are price – makers rather than price makers. Therefore when rice premium which is a very important cost item is reduced or eliminated, the costs of rice exports will be lowered and exporters will lower their prices, either as a result of foreign competition or competition among Thai rice exporters.

While it is true that Thailand's share in international rice trade is large, but her output constitutes only a small fraction of the world's total rice production.

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[9] Snoh Unakul, "A Proposed Stabilization Policy for Rice Prices", NEDB, Bangkok 1967 (mimeo).

[10] Interview with responsible officials in the Division of Exports, Dept. of Foreign Trade.

TABLE 4: STRUCTURE OF WORLD RICE PRODUCTION, 1961–63 AVERAGE

Country	Production ('000 tons)*	Percentage of Total
China (Mainland)	57,859	35.5
India	33,577	20.6
Japan	11,184	6.9
Pakistan	10,571	6.5
Indonesia	8,145	5.0
Thailand	5,996	3.7
Burma	4,734	2.9
Brazil	3,791	2.3
U.S.	1,872	1.1
Others	25,096	15.5
World Total	162,825	100.0

Source : FAO, *Production Yearbook*, 1964. Table 21.

*Converted from paddy figures at the conversion rate of 0.65.

The fact that Thailand's rice production figures to be a mere 3.7% of world production is highly significant.[11] This point can by appreciated by examining factors that determine export prices in the international rice market.

Although a substantial part of the international rice trade is conducted through government channels and commercial rice exports are also under government intervention, there is no evidence of collusion either among the buying countries or the selling countries.[12] Prices in the world market are, therefore, determined mainly by

[11] Sura Sanittanont, *op. cit.*, chapter III.

[12] *Ibid.*

demand and supply forces.[13] The demand for rice export is determined by the level of output and domestic consumption requirements of rice deficit countries, and the supply of rice exports is determined by the level of output and domestic consumption requirements in rice surplus countries. Consumption requirements in all countries are quite steady from year to year, at least in the short run, while production in most countries tend to fluctuate widely from year to year, depending on weather conditions. Of weather conditions in both rice deficit and rice surplus countries are favorable, demand for rice exports will be low and supply abundant, prices will tend to be low. The opposite will be true when weather conditions are favorable. Since Thailand's rice production constitutes such a small share of total world production, her influence over export prices should be correspondingly small.[14] To many people, it seems hard to believe that the second (in some years the first) largest rice exporting country in the world should have so little influence on export prices. But in a basically competitive world market, the only factors that can influence export prices are the demand for and the supply of rice exports. Thailand can, if she chooses to, influence prices if she would deliberately restrict the quantity of exports. Any other government action, such as the imposition of an export tax, will not materially affect world prices. The rice premium is not intended, as an export restricting measure, and has no such effects.[15] The government policy is to sell all the exportable surplus. Therefore, the levying of rice premium does not increase export prices; in other words, little or no part of the rice premium is shifted forward to the buyers.[16]

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[13]As noted earlier, political and other non-commercial considerations often enter into the consideration of government rice exports.

[14]Snoh Unakul, *op. cit.* Sura Sanittanont, *op. cit.*, chapter III.

[15]It will, however, has an indirect effect on total rice output, as will be discussed later.

[16]For a different and more elaborate argument, see Sura Sanittanont, *op. cit.*, chapter III.

2. Rice premium and domestic rice and paddy prices. If the rice premium cannot be exported, the burden of the tax then rests on the domestic economy. But on which group does the tax incidence finally fall? Does it fall on the rice exporters, on the rice and paddy traders, or on the paddy farmers?

The answer hinges upon the degree of competitiveness of these various markets. If the export trade, rice trade as well as paddy trade are highly competitive, the incidence of the tax will rest on the farmers. This is so because a high degree of competition means that traders and exporters are earning only normal profits even if these were no rice premium. This being the case, rice traders and exporters are naturally unable to absorb the burden of rice premium and have to shift it backward onto the ultimate suppliers or the farmers. A number of studies on domestic rice trade show that these various markets are indeed highly competitive and that rice traders and exporters are earning only normal profits.[17] Their conclusions were based on the following evidence and reasons.[18]

1. There are several types of paddy buyers: local and regional middlemen, local and regional rice mills and government cooperatives.

2. There are large numbers of each type buyers, which means there is horizontal as well as vertical competition in paddy trading.

3. The number of rice sellers is large.

4. There are no legal, technical or financial barriers to entry into paddy or rice trade.

5. Although it is relatively more difficult for new firms to enter into rice export trade, the existing number of is large enough to make collusion improbable.

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[17]Udhis Narkaswasdi, *Formers Indebtedness and Rice Marketing in Central Thailand* (in Thai), Bangkok 1958. Daniel Usher, "Notes on the Thai Rice Trade", (mimeo), Bangkok, 1965. Phairach Krisanamis, *Paddy Price Movements and their Effects on the Economic Situation of Famers in the Central Plain of Thailand*, Bangkok, 1967. For a detail discussion of this problem see Sura Sanittanont, *op. cit.*, chapter IV.

[18]Sura Sanittanont, *op. cit.*, chapter V.

Domestic paddy and rice trading in Thailand is relatively free of to sell his paddy or rice to whichever channel he prefers. Free trading in a competitive market should, theoretically, produce perfect harmony between export and domestic. Prices in the domestic market should be such that a supplier will receive the same per unit revenue regardless to which channel he sells his product.

TABLE 5 : COMPARISON OF EXPORT AND DOMESTIC PRICES OF RICE AND PADDY. (GRADE I RICE AND PADDY, BATH/TON)

Year	Export Prices (f.o.b)	Rice Premium	(1) — (2)	Wholesale Rice Prices	Paddy Prices
1956		935		1857	1004
1957		935		1767	969
1958		935		1963	1097
1959	3045	935	2110	1800	941
1960	2958	865	2093	1641	898
1961	3011	865	2146	1731	985
1962	3364	950	2414	1992	1172
1963	3161	950	2211	1799	1031
1964	3077	950	2127	1680	874
1965	3114	950	2164	1649	912
1966	3092	950	2742	2189	1282

As a Percentage of Export Prices

Year	Export Prices (f.o.b.)	Rice Premium	(1) — (2)	Wholesale Rice Prices	Paddy Prices
1956	100.0				
1957	100.0				
1958	100.0				
1959	100.0	30.7	69.3	59.1	30.9
1960	100.0	29.2	70.8	55.6	30.4
1961	100.0	28.7	71.3	57.5	32.7
1962	100.0	28.2	71.8	59.2	34.8
1963	100.0	30.1	69.9	56.9	32.6
1964	100.0	30.9	69.1	54.6	28.4
1965	100.0	30.6	69.5	52.9	29.3
1966	100.0	25.7	74.3	59.3	34.7

Source : Dept. of Foreign Trade, Ministry of Economic Affairs.

It is significant to note in table 5 that not only are the various prices related to each other as expected, but fluctuations in one time series are also in close correspondence with the other. This indicates that rice markets are indeed competitive and there is no evidence of price fixation. Any changes in rice export prices are reflected in domestic rice and paddy prices.

VI. RICE PREMIUM AND PADDY PRODUCTION

Since the burden of the rice premium falls mainly on the farmers, it is most likely that it will have some adverse effects on paddy production. Whether this production effect is considerable or negligible depends on the price elasticity of supply or the degree of responsiveness of paddy production to price changes.

It is widely believed that agricultural production in underdeveloped countries is completely price inelastic, determined by certain irrational traditional behavior, and that the supply of marketable farm product may in fact have a negative price elasticity. The common explanations for such economically "perverse" behavior are:[19]

1. Farmers in underdeveloped areas have a high preference for additional leisure time over additional income, therefore they would not work more, or may even work less, when prices for their products rise.

2. Farmers in underdeveloped areas have already "worked up to the hilt" and the failure to increase production is not due to lack of price incentives but to lack of knowledge, inavailability of land and fertilizers, lack of credit etc.

In recent years, however, a number of quantitative empirical studies have found significant and positive price elasticity in farm supply in underdeveloped countries, in contradiction to the above arguments.[20]

[19] *Ibid.*, pp. 18—80.

[20] *Ibid.*, chapter V.

TABLE 6 : ESTIMATES OF SHORT–RUN AND LONG–RUN PRICE ELASTICITIES OF SUPPLY OF CERTAIN FARM COMMODITIES

Region and Commodity	Price Elasticity Estimates	
	Short–run	Long–run
Punjab[a]		
Corn (1914–43)	.23	.56
Sugar cane (1915–53)	.34	.60
Rice (1914–45)	.31	.59
Wheat (1914–45)		
Irrigated area	.08	.14
Unirrigated area	–	.22*
India[b]		
Jute (1911–38)	.46	.73
W. Pakistan[c]		
Cotton (1933–58)	.41	n.a.
U.S.[d]		
Cotton (1909–32)	.34	.67
Wheat (1909–32)	.48	.93
Corn (1909–32)	.10	.18

*Significant only at the 10% level.

Notes : a) Raj Krishna, "Farm Supply Response in India–Pakistan : A Case Study of the Punjab Region," *Economic Journal*, Sept. 1963, pp. 477–487.

b) L.S. Venkataraman, "A Statistical Study of Indian Jute Production and Marketing with Special Reference to Foreign Demand," unpublished Ph. D. thesis, University of Chicago, 1958.

c) W.P. Falcon, *op. cit.* (note 11), pp. 580–91.

d) Marc Nerlove, *The Dynamics of Supply*, Johns Hopkins University, 1958.

This means that rice premium has considerable disincentive effect on paddy production. If paddy production in Thailand is to be increased, one way of stimulating production is to remove this disincentive effect by eliminating the rice premium.

V. THAILAND'S RICE CRISIS

The importance of rice to Thailand is well-known and needs no elaboration. In fact, up until recent years, the Thai economy consisted, of little more than rice. Rice exports have always been for most of the country's imports. "It would be difficult to conceive of Thailand's foreign trade position in the absence of the rice surplus component. And yet, this situation, disastrous as it seems, is the one toward which the country is irresistably drifting".[21]

This so-called "Malthusian squeeze" situation occurs because, in the hight of existing trends, the rate of production growth lags behind the rate of population growth. Rice production will probably increase at a rate of about 96,000 tons per annum.[22] The rate of population growth is assumed to be 3.3% per annum. Given these trends, Thailand may become a rice-deficit countries no later than 1980. This situation is summarized in Table 7.

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[21]Edward Van Roy, "The Malthusian Squeeze," *Asian Survey*, July 1967, reproduced in *Bangkok Bank Monthly Review*, August 1967, p. 286.

[22]These limits are according to Van Roy, *ibid.*, p. 283.

TABLE 7 : RICE SURPLUS-FOUR ESTIMATES

(1,000 tons)

Calendar year (1)	NSO (2)	Van Roy (3)	NEDB (4)	ECAFE (5)
1950	1,578	1,744	1,837	1,990
1951	1,561	1,733	1,828	1,986
1952	1,848	2,025	2,123	2,286
1953	1,209	1,392	1,493	1,661
1954	2,285	2,474	2,529	2,752
1955	318	513	621	800
1956	1,375	1,576	1,688	1,873
1957	1,943	2,152	2,267	2,458
1958	−183	32	151	349
1959	806	1,029	1,152	1,356
1960	398	628	755	967
1961	986	1,225	1,356	1,575
1962	1,163	1,409	1,545	1,771
1963	1,163	1,417	1,558	1,792
1964	1,585	1,848	1,993	2,235
1965	1,056	1,316	1,479	1,729
1966	841	1,122	1,277	1,566
1967	612	902	1,063	1,330
1968	516	817	1,079	1,259
1969	416	726	898	1,183
1970	310	631	808	1,102
1971	198	529	712	1,016
1972	78	420	609	923
1973	−48	305	501	825
1974		183	385	720
1975		54	262	608
1976		−84	132	490
1977			−5	364
1978				231
1979				91
1980				−114

Source : Van Roy, *op. cit.*, Table IV

(2) Asumming per capita consumption = 167.5

(3) „ „ „ = 159.0

(4) „ „ „ = 154.3

(5) „ „ „ = 146.5

In order to escape from the "Malthusian squeeze", Thailand must either bring down the population growth rate, or raise the growth rate of paddy production, preferably both. But up to the present, the government does not even seem to recognize the need for population control, let alone doing something about the problem. And even after a population control campaign is initiated, it still takes many years to take effect. With the rice crisis so alarmingly near, it is necessary to raise production in order to combat the crisis. Furthermore, raising paddy production is a desirable goal in itself, with or without a food crisis.

Technically, paddy production can be most effectively raised by improvements in physical enviornments with better irrigation fairlities; and by raising yields per acre with the use of fertilizers and better production techniques.[23] These factors are well-recognized and sufficiently emphasized in any discussions of food production. What is not adequately recognize, however, is the importance of the incentive factor. It is increasingly realized that farmers in underdeveloped countries are just as economically rational as industrial workers. Because they are rational, they need sufficient incentives to exert greater efforts and to improve their productivity. The elimination of the rice premium would, as was pointed out earlier, be a major incentive factors to the farmers.

CONCLUSION

On the ground of increasing paddy production, the rice premium should certainly be eliminated. But a major economic policy such as this one certainly has many considerations : government revenue, general price level etc. The final decision should be based on the consideration of all factors, including the production effect of the rice premium.[24]

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[23]For detailed discussions, see Sura Sanittanont, *op. cit.*, Chapter V.

[24]For discussions of the revenue effect, the price effect and the income distribution effect, see Sura Sanittanont, *op. cit.*, chapters VI and VII.