

# THE TAXATION OF THE AGRICULTURAL SECTOR IN THAILAND

## The Effects of the Rice Premium

WINFRIED MANIG

### 1. Introduction

Since the Second World War, Thailand has been following development concepts which give priority to the industrialization of the country. In the agricultural sector, special attention was given to export crop promotion in order to raise financial means for the industrialization. Following this policy, economic growth and development was mainly directed by means of the market mechanism in Thailand while still taking the above-mentioned priority into consideration. In addition, trade has grown considerably since 1955—56, enforced by a liberal trade policy. The pursuit of a liberal economic and development policy can be attributed above all to the influence of the many missions from the International Bank of Reconstruction and Development and the International Monetary Fund which visited Thailand in the 50s<sup>1</sup>. In the past, the various administrations in Thailand allowed the private business enterprises complete economic freedom. It was not until the beginning of the 70s that, as a result of pressure from the students, restrictions were placed on the activities of a few foreign companies<sup>2</sup>. The liberal economic and development policy led to the metamorphosis of the area in and around Bangkok-Thonburi as the main centre of industrialization due, on the one hand, to the generally inadequate transportation and administrative infrastructures in Thailand, and, on the other hand, to the advantageous site on which the capital is located. This led to the necessity of improving and enlarging the personnel and material infrastructures in the area around Bangkok. The government was forced by this policy to invest considerable public funds in the infrastructure in and around Bangkok. The necessary funds were, as a result, not available for financing development in rural areas, or the proposed measures were not carried out in these regions.

Bangkok developed into the leading political and economic centre of the country. It had a population of more than four million inhabitants: that amounts to about 10 percent of the total population in the whole country (the next largest city in Thailand is Chiang Mai which has only about 100,000 inhabitants). Approximately 60 percent of the total urban population in Thailand lives in the area around Bangkok<sup>3</sup>. The neglected economic structure in the rest of the country conforms, for the most part, to the needs of the metropolis, Bangkok. The industrialization of the environs around Bangkok and the enlargement of the personnel and material infrastructures demanded considerable financial means. Part of the capital used for

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1 Silcock, T. H. "Outline of Economic Development". In: Silcock, T. H., (ed.) *Thailand. Social and Economic Studies in Development*, Canberra 1967, pp. 8 ff.

2 IBRD, *Current Economic Position and Prospects of Thailand*, Vol. I; The Main Report. Report No. 542-TH, October 1974, p. 2.

3 IBRD, *Main Report*, op. cit., p. 49.

the industrialization process came from foreign investments<sup>4</sup>. Another, likewise considerable, part of the capital used for the extension of the industry and financing the current extended government activities was accumulated from domestic sources, or has been invested by the indigenous population.

In the agrarian sector, the agricultural export sector was particularly promoted as an important field for gaining foreign exchange. These foreign exchange proceeds were used for importing capital goods needed for the enlargement of the industrial sector and for the importation of consumer goods for certain strata of the population which live, for the most part, in Bangkok.

The neglecting of the agricultural sector led, in connection with the population growth, to unfavourable developments in the rural areas. Therefore, in recent times, considerable financial means have been made available for rural development programmes within the framework of development planning<sup>5</sup>. It must, however, be mentioned that also in the past capital has been invested in the agricultural sector as well. But this was used for the most part, however, for promoting the agricultural export sector. Another part of the funds did not reach the rural areas, but rather "oozed away" on the way from Bangkok to their destinations. The capital which was, in the past, mainly invested in the secondary sector led to the expansion of the industrial production for the domestic market and exports. If the share of the value added in this sector of the gross domestic product in 1960 amounted to only about 18 percent, it rose by 1974 to 23 percent — accompanied, indeed, by a considerable absolute increase in the total product (see Table 1).

**Table 1:** Gross Domestic Product\* in Thailand 1960, 1965, 1970, 1972, 1974 — Percentage Distribution of GDP by Industrial Origin —

Sector	1960	1965	1970	1972	1974
Agriculture	39.8	34.9	28.5	30.3	31.9
Mining, Quarrying	1.0	2.1	2.0	1.9	1.8
Industrial Sector	17.5	20.6	23.2	23.3	22.6
Transport, Trade, Banking etc.	27.4	28.6	31.5	29.5	} 43.8
Public Administration	4.6	4.3	4.5	4.6	
Other Services	9.7	9.5	10.2	10.5	
Total	100	100	100	100	100
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Total in 1,000 mill. of Baht**	54.0	84.3	135.9	162.1	270.0

\* At current market prices.

\*\* Exchange rates: US \$ per 100 Baht: 1973; 5.00, 1974/75; 5.10.

Sources: IBRD, Current Economic Position and Prospects of Thailand, Vol. II; Statistical Appendix. Report No. 542 — TH, Oct. 1974. Statistisches Bundesamt Wiesbaden, Allgemeine Statistik des Auslandes: Länderkurzberichte; Thailand 1976. Stuttgart und Mainz 1976.

<sup>4</sup> IBRD, Main Report, op. cit., pp. 43 ff.

<sup>5</sup> Statistisches Bundesamt Wiesbaden, Allgemeine Statistik des Auslandes: Länderkurzberichte; Thailand 1976, Stuttgart und Mainz 1976, p. 31.

The industrialization, particularly as a result of the Investment Boom from 1965—1969, led, along with falling export prices for the products, at the beginning of the 70s to an overcapacity<sup>6</sup>. Investments have increased again since 1973<sup>7</sup> as the result of growing industrial exports due to rising world market prices (industrial exports rose from US \$ 40 million in 1970 to \$ 270 million in 1973<sup>8</sup>).

## 2. The Role of Agriculture in Development

In Thailand, the pursuit of a concept of modernization in economic development which gives priority to industrialization at the level of private enterprise made it seem logical to promote this process of industrialization by alleviating, as much as possible, the incidence of tax for this sector. The financial means for investments and current expenditures of the government had, therefore, to be supplied by the largest economic sector, agriculture. The agricultural sector had to function as a purveyor of capital, labour, and cheap foodstuffs for the urban population. To fulfill and carry out this task, various resource transfer mechanisms had to be developed. Of these, three will be discussed below.

### 2.1 Promotion of Agricultural Exports

The explicit promotion of agricultural production for export was realized in the hitherto three five-year-plans. Agricultural products are the most important source the country has for obtaining foreign exchange proceeds (see Table 2). The foreign exchange earnings are mainly used for the import of capital goods for industrialization and of consumer goods demanded by the urban population.

**Table 2:** Thailand's Export Composition of Main Commodity Groups in 1965, 1970, 1973 (in percentage of total export value)

Products	1965	1970	1973
Rice	33.5	17.0	11.0
Rubber	15.4	15.1	14.2
Maize	7.8	13.3	9.3
Other Agricultural Products	25.4	26.5	29.3
Mineral Products	10.6	14.0	8.6
Manufacturing Products	2.9	5.3	17.3
Other Exports	4.4	8.8	10.3
Total	100	100	100
Total in 1,000 mill. of Baht*	12.9	14.8	32.2

\* Exchange rate: US \$ per 100 Baht: 1973; 5.00.

**Source:** IBRD, Current Economic Position and Prospects of Thailand, Vol. II; Statistical Appendix. Report No. 542 — TH, Oct. 1974.

<sup>6</sup> IBRD, Main Report, op. cit., pp. 5 ff.

<sup>7</sup> IBRD, Main Report, op. cit., p. 61.

<sup>8</sup> IBRD, Main Report, op. cit., p. VII and p. 40.

Agricultural commodities have maintained the position of being Thailand's most important source of foreign exchange proceeds although, as a result of the industrialization, the exportation of industrial products rose remarkably from 3 percent in 1965 to over 17 percent in 1973. As a consequence, the relative volume of the agricultural export earnings dropped from 82 percent in 1965 to 64 percent in 1973. The share the rice exports brought in of the foreign exchange proceeds sank from 34 percent in 1965 to only 11 percent in 1973. The decreasing world market prices are also responsible for these developments. From 1973 onwards, the importance of rice exports rose once again as a result of considerable increases in world market prices.

At present, the attempt is being made to force the production of other agricultural products than rice which also have good prospects on the export market, such as maize, cassava, kenaf, and soybeans.

## 2.2 Land Accumulation

According to the available statistics<sup>9</sup>, approximately 80 percent of the total labour force in 1970 was employed directly in agriculture. Due to the low productivity of agriculture, this sector produced in the same year only 28.5 percent of the gross domestic product at market prices, or 32 percent of the gross domestic product at factor costs. The value added rose slightly in the following years in this sector, due to increased prices. In 1960, on the other hand, the share of the agricultural production still amounted to about 40 percent of the gross domestic product at market prices. The relative shares of the secondary and tertiary sectors expanded to the same extent as the share of agriculture decreased, mainly at the level of private enterprise, as government activities changed only moderately (see Table 1).

Agriculture in Thailand is almost exclusively carried out on small holdings. The size of the average farm during the middle of the 60s was 3.47 ha, or 21.7 rai, with noteworthy variations between the provinces<sup>10</sup>. According to the 1963 census, about half of all the agricultural holdings had less than 15 rai (2.4 ha) farming area, and they cultivated only about 15 percent of the total farmland of the country (compare with Table 3).

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<sup>9</sup> Census Report, cit. by IBRD, Current Economic Position and Prospects of Thailand, Vol. II; Statistical Appendix. Report No. 542-TH, October 1974, Table 1.3.

<sup>10</sup> Fuhs, F. W. and Goericke, F. V., Einige regionale Unterschiede in der Landwirtschaft Thailands, Heidelberg 1975, p. 28.

**Table 3:** Percentage Distribution of Agricultural Holdings by Size in Thailand, 1963\*

Size of Holdings		Distribution of Holdings	
in Rai**	in ha	Number	Area
up to 4	up to 0.64	10.3	0.8
4 — 6	0.64 — 0.96	8.3	1.7
6 — 10	0.96 — 1.60	14.2	4.7
10 — 15	1.60 — 2.40	15.1	8.2
15 — 20	2.40 — 3.20	11.0	8.5
20 — 25	3.20 — 4.00	9.3	9.3
25 — 30	4.00 — 4.80	7.2	8.8
30 — 40	4.80 — 6.40	9.7	15.0
40 — 50	6.40 — 8.00	5.6	11.3
50 — 100	8.00 — 16.00	8.2	23.8
above 100	above 16.00	1.1	7.9
Total Holdings		100***	100****

\* Results of an Agricultural Census.

\*\*1 rai = 0.16 ha.

\*\*\* Totalling 3.214 mill. holdings.

\*\*\*\* Totalling 11.149 mill. ha.

**Source:** Statistisches Bundesamt Wiesbaden, Allgemeine Statistik des Auslandes: Länderkurzberichte; Thailand 1976, Stuttgart und Mainz 1976.

Due to the sparse settlement density of the country, it was possible in the past for every farmer to cultivate a piece of land for which they could, after a period of time, obtain a title deed. There are at present in Thailand still three legally valid forms of property titles<sup>11</sup>.

- **Reserve Licence:** This licence is issued for a three year period. It grants the right to utilize a certain area. The licence can be revoked.
- **Exploitation Testimonial:** This licence is issued to the holder of a reserve licence if he cultivates at least 75 percent of the area. The exploitation testimonial is issued without a time limit and is inheritable. This property title is, however, not accepted by banks as security for credit.
- **Title Deed:** The title deed represents the undisputed ownership of land and is only issued for land that has been surveyed and is registered in a cadastral register. Of 28 million acres, in 1970 only 6 million bore title deeds<sup>12</sup>.

With the commencement of the modernization of Thai agriculture and as a result of the enormous pressure on the land, the absence of incontestable property titles for most of the land had a negative effect. It has been relatively easy to transfer land to powerful rural groups because of the nonexistence of cadastral registers and registration of property titles for most of the land. This shifting of land ownership in favour of wealthy rural and urban merchants and large landowners, among others, has been taking place since around the middle of the 50s<sup>13</sup>.

11 Fuhs, F. W. and Goericke, F. V., op. cit., pp. 31 ff.

12 Fuhs, F. W. and Goericke, F. V., op. cit., p. 32.

13 This trend towards land accumulation was probably strengthened by the annulment of an old law

The rapid population growth and, as a result, the increasing pressure on the irrigable land in the flood areas of the Menam that are suitable for rice cultivation brought about this shifting of the types of proprietorship in Thailand. As a result, more land which is dependent upon rainfall is being brought under cultivation in the north and northeast of the country. However, the process of land accumulation has begun in these areas as well.

This trend is augmented by the fact that the traditional élite in Thailand tend to invest their money in landed property. The most frequent mechanism leading to land transfer found its beginning in debts owed to the merchants.

Already in 1963, according to the latest agricultural census, in all of Thailand 22 percent of the land was leased out. At that time, already 30 percent of the land in the central province was, admittedly, leased out. 10 percent of all Thai farmers were lessees according to these statistics, and 20 percent had, in addition, rented part of the land they cultivated (see Table 4). In some districts of the central province (the classical Thai rice cultivation area), leasing was already substantially wider spread at this point (up to 50 percent of all farms in some of the provinces)<sup>14</sup>.

**Table 4:** Percentage Distribution of Agricultural Holdings by Type of Tenancy and Region in Thailand, 1963\*

Holdings by Type of Tenancy	Region				Total Thailand
	Central	North	North-East	South	
Owner-Operator	54.9	57.9	80.0	60.7	66.0
Tenant	15.9	13.7	5.3	8.3	10.2
Partly Landowner-Tenant**	14.6	14.1	9.7	23.7	14.0
Partly Tenant-Landowner***	12.1	9.1	2.3	3.6	6.4
Other Holdings	2.5	5.2	2.7	3.7	3.4
Total****	100	100	100	100	100

\* Results of an Agricultural Census.  
 \*\* > 50 % owned land.  
 \*\*\* < 50 % owned land.  
 \*\*\*\* 22 % of the land has been rented in Thailand. The figure for the Central-Region is 30 %.

**Source:** Statistisches Bundesamt Wiesbaden, Allgemeine Statistik des Auslandes: Länderkurzberichte; Thailand 1976, Stuttgart und Mainz 1976.

which forbid the ownership of more than 50 rai of cultivable land. This law was annulled towards the end of the 50s apparently on the advice of the International Bank for Reconstruction and Development which saw a possibility of expanding the export volume of rice by mechanized large-scale farming. (This information is taken from "Bangkok World", Rice, A Supplement of the "Bangkok World", Bangkok, May 31, 1976, p. 9. It should be mentioned that the above source cannot be considered as serious.)  
 14 Fuhs, F. W. and Goericke, F. V., op. cit., pp. 68 ff.

At present, land accumulation — which has, admittedly, until now not been proven statistically — has taken place to such an extent that it makes the necessity of land reform especially pressing. Appropriate laws should be, or have been<sup>15</sup>, passed by the government, but a general enforcement has, until now, not taken place. At first, attempts have to be limited to a few districts<sup>16</sup>.

The new owners do not cultivate the land themselves, but rather leave it in the hands of the previous owners. For this reason, the great increase in rented land is statistically difficult to prove. As interest, a tenant has to pay a share of the yield in kind (up to 50 percent of the total output) to the owner — who usually lives in the same area. As this sharecropping is not legal, property transfer is, as a result, not immediately apparent.

The share of the rent that has to be paid in kind leaves the rural areas and is made available for consumption in the cities, or for export. The earnings for those products are either used for further land accumulation, or invested in urban areas, as well as consumed in the cities (imported luxury consumer goods). Although the intersectoral terms of trade between industry and the agricultural sector have improved in favour of agriculture — especially between the years 1971 and 1974<sup>17</sup> — the additional income flowed to those landlords only who marketed a share of their production. These were, to a large extent, the lessors of land.

### 2.3. Taxation of the Agricultural Sector

A specific possibility for resource transfer from agriculture to other sectors is taxation of the agricultural sector and the utilization of these funds in other sectors and regions. Not only is the direct removal of funds by means of levying taxes thereby important, but rather the indirect effects in the form of intersectoral changes in the terms of trade at the expense of the agricultural sector, as a result of certain tax measures, are especially important. In this paper, special attention will be paid to the most important tax instrument applied in Thailand which brings about the above-mentioned effect, the levying of an export tax on rice — the Rice Premium.

The levying of export taxes is only possible as, despite the shifting of this tax to the producers, the supply of rice exceeds consumption in Thailand. The effects of that type of tax on the various sectors are different and vary within the sectors from group to group as well.

## 3. The Tax System in Thailand — an Overview

The major portion of the tax revenues of the central government and the local state organizations in Thailand comes, as is the case in most other developing countries, from indirect taxes, while revenues derived from direct taxes remain relatively unimportant (see Table 5).

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15 Thailand, Government of, Ministry of Agriculture and Co-operatives, *Agricultural Land Reform Act B. E. 2518 (1975)*, Bangkok 1976.

16 The situation changed following the takeover of the government by the military after the coup d'état in October 1976. It is not yet possible to foresee the standpoint the military regime will take in the question of a land reform. In all probability, however, it could be assumed from past experience with previous military regimes that the beginnings of a land reform will not be further pursued.

17 IBRD, *Main Report*, op. cit., pp. 12 ff.

Between the years 1970 and 1974, the importance of some central government taxes changed definitely. While the revenues from income taxes remained relatively constant, the volume of the revenues derived from import duties dropped from over 30 percent of the total revenues in the years 1970 to 1973 to 23 percent in 1974. Correspondingly, revenues from export duties gained in importance, particularly revenues derived from the rice premium. The increase in those revenues in 1974 was, in particular, a result of the rising world market prices.

The revenues from income tax yield a portion of the yearly tax revenues that amounts to 13 percent. But not only the tax assessment basis — the income — is low in Thailand, but a large part of the population, particularly in rural areas, does not pay any income tax at all. All rice farmers are exempted from income tax. Through the levying of an export tax on rice, these farmers are indirectly included in tax payment.

Income tax is, therefore, paid for the most part by the urban population, since they, in addition, cannot evade tax payment. It is assumed that the abundant local merchants pay hardly any income tax<sup>18</sup>.

The indirect taxes on consumption include import duties, turnover and sales taxes (business tax), excise tax, and entertainment tax. In the future, indirect taxes, particularly export taxes, will presumably retain their importance. This must be seen against the background of the — presumptively — quite large extent of tax evasion<sup>19</sup>. Indirect taxes have the great advantage of being easily administered, despite their — within limits — regressive effects.

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18 Colditz, B. T., Pamphlet No. 10, Agricultural Land Reform Office, Bangkok 1976 (mimeo), pp. 10 ff.

19 Colditz, B. T., *op. cit.*, p. 7.

**Table 5:** Composition of Central Government Tax Revenues in Thailand 1970—1974  
— Percentage Distribution —

Item	1970	1971	1972	1973	1974
Taxes on Income	12.8	13.7	13.4	13.4	13.5
Taxes on Consumption	69.2	71.8	71.6	71.7	62.7
Import Duties	31.8	30.0	30.5	28.3	23.1
Business Taxes	21.1	22.7	22.6	22.9	20.6
Excise Taxes	15.8	18.5	17.9	20.0	18.6
Entertainment Tax	0.5	0.6	0.6	0.5	0.4
Taxes on Production	8.5	4.9	4.4	6.3	16.1
Rice Premium	3.9	1.5	0.8	4.3	13.8
other Export Taxes	2.3	1.0	1.3		
Royalties	2.3	2.4	2.3	2.0	2.3
Other Taxes	9.5	9.6	10.6	8.6	7.7
Central Government Tax Revenue in mill. of Baht*	16,968	17,274	19,059	24,440	36,252
Local Government Tax Revenue and other Revenues in mill. of Baht*	1,159	1,338	1,320	1,083	1,958

Fiscal Years, including September 30.

\* Exchange rates: US \$ per 100 Baht: 1971/72; 4.83, 1973; 5.00, 1974/75; 5.10.

**Sources:** IBRD, Current Economic Position and Prospects of Thailand, Vol. II; Statistical Appendix. Report No. 542 — TH, October 1974, Tables 5.4 and 5.7. Colditz, B.T., Pamphlet No. 10, Agricultural Land Reform Office, Bangkok 1976 (mimeo), p. 20.

Local taxes and other, not identified, revenues of local state organizations are, indeed, in volume, in comparison to the centrally levied taxes, not very substantial, but can be quite significant locally, particularly in rural areas. These local taxes are either levied by the local tax authorities themselves (house and land tax, land development tax, slaughtering tax, signboard tax, and license fees and fines), or are included in the assessments made by the central tax authorities on behalf of municipalities (rice duty, but not the rice premium, and a road vehicle tax), or the central authorities are bound by law to yield up to the local administrations a fixed share of certain tax revenues (e. g., turnover and sales taxes, entertainment tax, beverages taxes).

The land development tax is levied on landed property on which no buildings stand. Land which is used for owner residence as well as pasture and cultivated land are subject to exemptions. For cultivated land which belongs to the cultivator

himself, only half of the normal tax rate is collected. This amounts to, however, at most 5 Baht per rai<sup>20</sup>, without taking the value of the land into consideration. In reality, it is the current cultivator of the land who pays the taxes in almost all cases. Tenants also pay the tax, however, with reduced rates for owner-occupiers. But according to the law, the landlords must pay the tax to the tax authorities at the normal rate (Table 6).

**Table 6:** Thailand; Land Development Tax Rates (Local Tax Rates According to Section 7 of Local Tax Act 1965)

The Average Price of Land	Tax Rate / Rai in Baht
Not more than 200 B/rai	0.50
More than 200 B/rai — 400 B/rai	1.00
More than 400 B/rai — 600 B/rai	2.00
More than 600 B/rai — 800 B/rai	3.00
More than 800 B/rai — 1,000 B/rai	4.00
More than 1,000 B/rai — 1,200 B/rai	5.50
More than 1,200 B/rai — 1,400 B/rai	7.00
More than 1,400 B/rai — 1,600 B/rai	8.00
More than 1,600 B/rai — 1,800 B/rai	9.00
More than 1,800 B/rai — 2,000 B/rai	10.00
More than 100,000 B/rai — 200,000 B/rai	250.00
More than 200,000 B/rai — 300,000 B/rai	300.00
More than 300,000 B/rai — 400,000 B/rai	350.00
More than 400,000 B/rai — 500,000 B/rai	400.00
More than 500,000 B/rai the tax rate is: For the first average price of 500,000 B/rai, the first rate is 400 B. For more than the average price of 500,000.—, the rate is 100 B for every 100,000.— B. If it is less than 50,000 B, tax is exempted and for the amount over 50,000 B is regarded as 100,000 B.	

Remarks: (1) The tax paid for arable land, especially that used for annual crops, is half the normal rate if the owner operates it himself. The highest rate is not more than 5 B/rai.

(2) For unutilized land a double rate is paid.

<sup>20</sup> US\$ 1.6/ha.

- (3) Taxable local land
  - a) For the excess portion of one rai (less than 1 rai), the proportional rate is used.
  - b) If the excess portion is less 4 sq. metres, tax is exempted.
- (4) After tax valuation, any amount less than 0.10 B is exempted.

Exchange rate: US \$ per 100 Baht: 1973; 5.00.

**Source:** Colditz, B. T., Pamphlet No. 10, Agricultural Land Reform Office, Bangkok 1976 (mimeo), pp. 28 f.

#### 4. The Importance and Implications of the Taxation of Rice Exports

The “rice premium” is an export tax on rice<sup>21</sup>. The tax is levied on the amount of rice exported. The tax rate is based on the world market price for rice; however, it is not automatically altered in accordance with the fluctuations in the world market prices, but, in each particular case, by a specific government decree. This is one of the reasons why the tax rate remains relatively stable over a rather long period of time and, when finally changed, then with pronounced differences (see Table 9).

The levying of an export tax is only possible if either the patterns of demand allow the tax burden to be shifted to the consumers, or if it becomes possible to shift it to the producers, and these do not reduce their production accordingly. In Thailand, despite the reduction of the producer price through the levying of the rice premium (shifting to the producers), production still exceeds the demand of the domestic market. This overproduction allows an export tax to be levied.

Such a tax imposed on a product which, in Thailand, constitutes the staple food and figures, moreover, among the most important products of the country, has complex implications for the overall economic activities in the country. There are a series of individual surveys, sometimes with contradictory results, on the effects of this tax. However, an overall analysis of an equilibrium model which could quantify the multiple implications has not been made yet.

##### 4.1. Historical Development of the Taxation of Rice Exports

From 1855 until the Second World War, Thailand’s rice export had been operated on a liberal basis as it was left in the hands of private exporters. The government (the king), had only the possibility of prohibiting exportation by passing a decree in particular times of scarcity. Trade agreements existed between Thailand and several European countries and the USA<sup>22</sup>.

After the Second World War, Thailand had to pay reparations by supplying 1.5 million tons of rice<sup>23</sup>. The government tried to purchase rice locally at a low

21 Besides the centrally levied rice premium, there exists another export tax on rice in Thailand, the locally levied rice export duty, which is not substantial (see chap. 4.4.1).

22 Osterwald, H., *Die Relexportsteuer in Thailand*, Diplomarbeit, Heidelberg 1975, p. 4.

23 Ingram, J. C., *Economic Change in Thailand 1850—1970*, Stanford 1971, p. 3 (cit. by Osterwald, H., op. cit., pp. 4 f. For further details see also Silcock, T. H., *The Economic Development of Thai Agriculture*, Canberra 1970, p. 49 and pp. 207—222).

price to meet its obligations. The low price, paid by the government, led to hoarding and smuggling of rice. Not until 1947 was Thailand once again allowed to sell rice on the world market, but at a lower price than that of the world market. This brought about a rise in local prices which led to a substantial increase in the exported quantity. But the government still had the monopoly in the rice export business at that time. The surpluses had to be sold to the "Rice Office", a governmental marketing organization, at a price fixed by government. This purchasing office sold the rice to foreign buyers who, then, had to secure transportation. The selling price to the foreign buyers was up to 20 percent above the buying price which the "Rice Office" itself paid to the producers or to the intermediaries<sup>24</sup>.

An additional profit was achieved through the transactions in foreign currency since the foreign buyers were bound to exchange foreign currency for export business at a low rate (35 Baht = £ 1) at the Bank of Thailand, although this only affected the export of rice, tin, rubber, and teak wood. The obligatory amount of the share of foreign exchange which had to be officially converted and was fixed according to the corresponding export volume varied from product to product (Multiple Exchange Rate). It was estimated that the total tax incidence on the rice export, including the unfavourable exchange conditions (overvaluation of the currency), amounted to about 50 percent of the prices without the tax incidence<sup>25</sup>. The Bank of Thailand sold the foreign currency earnings at a high exchange rate, like that of the free foreign exchange market (£ 1 = 53 Baht), to the importers of commodities (undervaluation of the currency). The profits thus achieved flowed into the monetary reserves of the country so that Thailand was in a position, at that time, to amass reserves of foreign currencies.

The mechanism of the multiple exchange rate system led to export taxation (overvaluation of currency) as well as to import taxation (undervaluation). Since the exchange rates differed, each export and import product concerned was taxed differently.

In 1955, the system of multiple exchange rate and the government's rice export monopoly were abolished, but the government reserved for itself the possibility of further intervention. In particular, a new export tax on rice, the "rice premium" was introduced. The tax differs according to the rice varieties and is to be adjusted in accordance with the price fluctuations on the world market. In practice, however, tax rates vary with differences according to variety and quality. High quality levels, in particular, remained partly unaffected<sup>26</sup> by great changes in the tax rates so that the price fluctuations were fully transferred to the domestic prices. On the other hand, the tax rates for poorer rice qualities were quite often altered, sometimes every month. Moreover, tax rates have been, and will be, also differentiated according to export harbours and destination countries<sup>27</sup>.

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24 Osterwald, H., op. cit., p. 7.

25 Corden, W. M., "The Exchange Rate System and the Taxation of Trade". In: Silcock, T. H. (ed.), Thailand, Social and Economic Studies in Development, Canberra 1967, p. 157.

26 Usher, D., The Economics of the Rice Premium (Preliminary), Bangkok (mimeo), p. 2.

27 Chuchard, Ch. and Tongpan, S., The Determination and Analysis of Policies to Support and Stabilize Agricultural Prices and Incomes of the Thai Farmers (with Special Reference to Rice Premium), (Land Development Department, Ministry of National Development; Department of Agricultural Economics, Kasetsart University and South East Asia Treaty Organization), Bangkok 1965, p. 5.

## 4.2 Objectives of the Levying of the “Rice Premium”

The objectives for levying the rice premium were never made officially known by the government of Thailand. However, the intentions connected with the levying of an export tax on rice can be deduced from inofficial and other statements.

### 1. Price stabilization for rice in Thailand<sup>28</sup>:

The fluctuations in the world market prices should not directly effect the local market prices by the adjustment of the rice premium rates. However, the changes in the tax rates did not follow the fluctuations in the world market prices so that both price series had equal variations<sup>29</sup>. Particularly the tax rates for high quality levels remained constant over quite a long period of time, whereas frequent adjustments were made for other qualities.

### 2. Limitations on the export of staple foods:

Another objective was to prevent scarcity and, as a result thereof, price increases for rice in Thailand. Here it was assumed that, in general, demand and prices on the world market increase and that the local demand is relatively inelastic<sup>30</sup>. On the other hand, the demand on the world market for rice from Thailand was assumed to be elastic<sup>31</sup>.

### 3. Source of tax revenues:

The levying of a tax for financing the government budget was surely one of the main reasons for the introduction of the rice premium. In particular, the levying required low administrative costs and hardly any possibilities of evasion since the export business was conducted by a few licensed exporters.

A conflict can easily arise between the objectives of collecting tax revenues and the stabilization of the local prices, namely when the prices on the world market drop rapidly. In that case, the rice premium ought to sink as well in accordance with the objective of stabilizing local rice prices. The objective of stabilizing tax revenues would need the opposite reaction. The actual reactions can be interpreted as consequences of the attainment of the two objectives.

## 4.3 The Importance of the Rice Trade and the Volume of Export Taxes

In the last fifteen years, of the estimated annual total rice production in Thailand, one-fifth on the average was exported, whereby the annual export share of the total production fluctuated between 9 percent (1973) and 28 percent (1972) (see Table 7). If it is considered that the largest part of the total rice production is consumed on the subsistence farms, or locally, the importance of exports can be estimated approximately from the total marketed rice quantity<sup>32</sup>.

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28 Chuchard, Ch. and Tongpan, S., op. cit., p. 5.

29 Ingram, J. C., op. cit., p. 257 (cit. by Osterwald, H., op. cit., p. 24).

30 Chuchard, Ch. and Tongpan, S., op. cit., p. 6.

31 Ingram, J. C., op. cit., p. 248.

32 According to a survey of 1957/58, on the average, 50 percent of the harvested rice quantity was marketed (see Udhis, N., *Farmer's Indebtedness and Rice Trading in Central Thailand* (in Thai language), Bangkok 1958, p. 130, cit. by Sanittanont, S., *Thailand's Rice Export Tax: Its Effects on the Rice Economy*, Ph. D. Thesis University of Wisconsin 1967, p. 56).

**Table 7:** Thailand's Rice Production and Export in Comparison to World Export\*, 1961—1974

Year	Quantity of Production in Thailand	Quantity	Export of Thailand Total Value**	Value/Ton (US \$)	Thailand's Export Quantity of Production
1960	7,834	1,221	121,350	99	2.1
1961	10,150	1,574	168,782	107	2.1
1962	11,250	1,271	155,763	123	1.1
1963	12,171	1,418	165,009	116	1.1
1964	11,600	1,896	210,989	111	2.1
1965	11,164	1,895	208,384	110	2.1
1966	13,500	1,508	192,360	128	1.1
1967	11,198	1,482	223,709	151	2.1
1968	12,410	1,078	181,483	168	1.1
1969	13,410	1,023	141,571	138	1.1
1970	13,270	1,064	120,990	114	1.1
1971	13,744	1,576	139,843	89	1.1
1972	11,800	2,119	213,846	101	2.1
1973	14,898	849	176,271	208	1.1
1974	13,175	1,124	482,750	430	1.1

\* Total quantity converted in milled rice (100 units of paddy = 65 units of milled rice). Quantity in 1,000 metric tons, value in million US dollars.

**Sources:** FAO, Trade Yearbook 1965, Vol. 19, Rome 1966, pp. 100 ff. (1960). Ibid., 1972, Vol. 22 (1961—1972). Ibid., 1974, Vol. 28, Rome 1974, pp. 134 ff. (1969—1974). UN, Yearbook of International Law and Statistics, Vol. I: Trade by Country, New York 1975, p. 885. Statistisches Bundesamt Wiesbaden, Länderkurzberichte; Thailand 1970, Stuttgart and Mainz 1970, p. 15 (1961). Ibid., Thailand 1973—1974, Table 11.

The total volume of rice exported by Thailand amounted quantitatively — during the same period — to about 18 percent of the total world export, with fluctuations of 9 percent (1973) to 24 percent (1961 and 1964) (cf. Table 7). In those fifteen years, Thailand's share as regards the value of total exports amounted to an average of only 16 percent.

According to one publication<sup>33</sup>, Thailand's export volume in the years 1961—1964 amounted to 24 percent of the world exports (excepting the People's Republic of China), but, however, to only about 2 percent of the total supply of all countries with a deficit in rice production<sup>34</sup>. During the same period, Thailand's production amounted to only 3.7 percent of the world production<sup>35</sup>.

The influence of Thailand's rice exports on the world market is, therefore, relatively insignificant. It can be assumed<sup>36</sup> that the world market demand for rice from Thailand is very elastic, more elastic than the overall demand on the world market. Thai exporters have, thus, no, or only a few, possibilities of shifting higher prices to the buying countries.

On the other hand, it has to be assumed that the local demand for rice as a staple food in Thailand (70—90 percent of the daily caloric consumption is provided by rice) is very inelastic (about — 0.1 was estimated as the coefficient of price elasticity and 0 to — 0.1 as the coefficient of income elasticity<sup>37</sup>). Hence, the added ballast of the fluctuations in the world market price and other local burdens (e.g., taxes) can be shifted to the Thai producers and consumers. The producers, in particular, bear the major part of the burden on account of the constant surplus situation and the inelastic supply.

**Table 8:** Rice Premium 1967—1974 in Thailand

Year	Revenue (Million Baht)	Value of Rice Export (Million Baht)	Premium as % of Rice Export
1967	524	4653	11,3
1968	403	3775	10,7
1969	301	2945	10,2
1970	268	2516	10,7
1971	459	2909	15,8
1972	937	4437	21,1
1973	305	3594	8,5
1974	1024	9792	10,5

Exchange rates; US \$ per 100 Baht: 1971/1972; 4.83, 1973; 5.00, 1974/1975; 5.10.

**Source:** Colditz, B. T., Pamphlet No. 10, Agricultural Land Reform Office, Bangkok 1976 (mimeo), p. 27.

<sup>33</sup> Sanittanont, S., op. cit., p. 34.

<sup>34</sup> Sanittanont, S., op. cit., p. 36.

<sup>35</sup> Sanittanont, S., op. cit., p. 31.

<sup>36</sup> Most of the surveys to this conclusion, even if not expressis verbis (cf. Sanittanont, S., op. cit., p. 51).

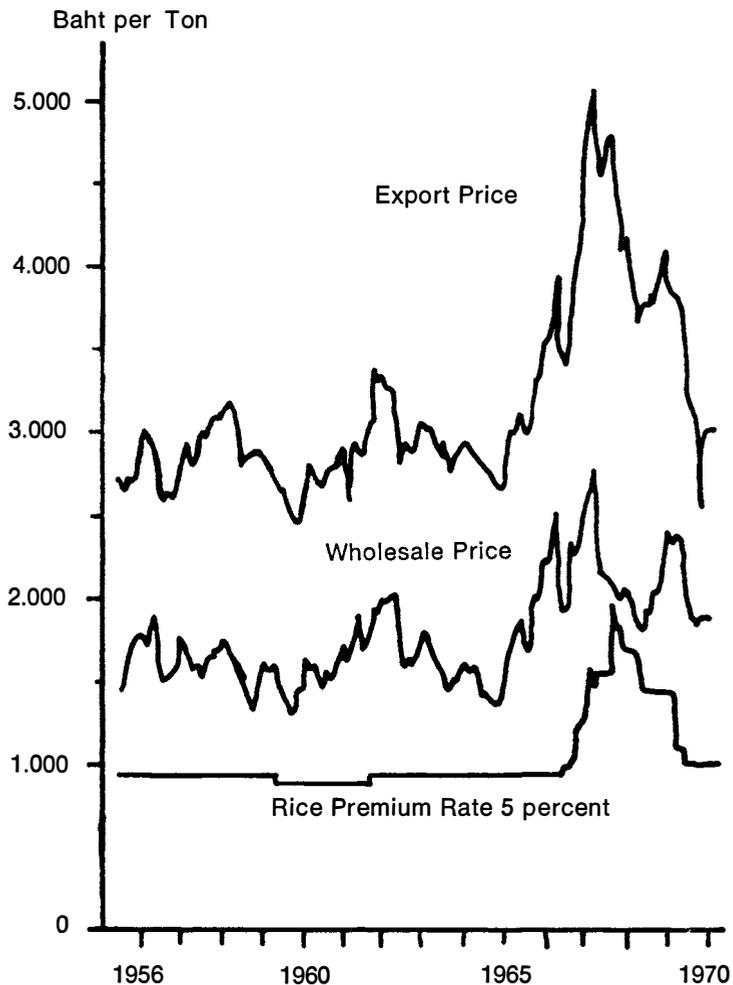
<sup>37</sup> Sanittanont, S., op. cit., p. 69 ff.

The value of rice exports depends on the exported quantity and on the world market prices for rice. The quantity itself is influenced by the world market price and the volume of local production. Since all the three variables are subject to wide fluctuations over the years, the total revenues from the rice premium will also differ considerably. In addition, the revenue will be modified by the tax rate which follows the fluctuations of the remaining variables to a limited extent only. Measured on the total tax revenue of the central government in Thailand, the revenues from the rice export tax fluctuate between 0.8 percent (1972) and more than 10 percent (1974) (cf. Table 5). Table 8 shows the revenues from the rice premium from 1967 to 1974. The revenues were very low in 1973, due mainly to the low quantity exported (cf. Table 7). Beginning with 1974, the tax revenues have increased considerably (cf. Table 8) on account of the rise in the world market price for rice (the fifth column in Table 7 gives the average value per ton of exported rice) and a slight increase in the exported quantity.

The share of the tax revenues from the rice premium in the export earnings fluctuated between 8.5 percent in 1973 and 21.1 percent in 1972. The figures again show the delayed adjustment of the tax rates. According to the intention behind the levying of the rice premium, the share in the years of low export earnings ought to be less than in the years of high earnings if the price fluctuations on the local market were to be stabilized. However, since other objectives than that of maximizing the tax revenues were pursued, the result is a differentiated picture of the various influencing factors.

Figure 1 shows the fluctuations in export prices and wholesale prices from 1956 to 1970, as well as the tax rate for a specific quality level. This shows that the tax remained constant over quite a long period, and the price fluctuations on the world market could be fully reflected by the local prices.

**Figure 1:** Comparison of Export- and Wholesale Prices\* and Rice Premium\*\* in Thailand 1956—1970



\* Monthly Average Prices.

\*\* White Rice 5 % broken.

**Sources:** Ingram, J. C., *Economic Change in Thailand 1850—1970*, Stanford 1971, p. 251 (cit. by Osterwald, H., *Die Reiserexportsteuer in Thailand*, Diplomarbeit, Heidelberg 1975, p. 39).

The adjustment of the export tax rates to the changed world market prices was carried out with delay and not evenly for all quality levels (cf. Table 9). The changes in the tax rates were made abruptly in September 1973, especially as regards the top quality levels for which, precisely, it could be ascertained that they had remained constant over quite a long period of time. The general increases of the tax rates are to be attributed to the rise of world market prices during that period (see also in Table 7 the average value per ton of exported rice for Thailand).

**Table 9: Rice Export Premium Rates in Thailand, 1972—1974**  
— in Baht per Metric Ton —

Item	Aug. 9, 1973	Sept. 18, 1973	Mar. 22, 1974	June 26, 1974
	to Sept. 17, 1973	to Dec. 5, 1973	to June 25, 1974	to date
White rice 100 %/o	750	5,000	5,100	4,500
White rice 10 %/o	500	1,300	4,600	4,000
White broken rice				
Al Super Special	900	900	3,400	2,800
Glutinous rice				
long grain 10 %/o	1,100	1,100	4,100	3,500
Cargo rice 100 %/o	675	1,200	4,100	3,500
Parboiled rice				
100 %/o and 5 %/o	1,000	1,000	3,600	3,000

Exchange rates US \$ per 100 Baht: 1971/1972; 4.82, 1973; 5.00, 1974/1975; 5.10.

**Source:** Bank of Thailand (cit. by IBRD, *Current Economic Position and Prospects of Thailand*, Vol. II, Statistical Appendix. Report No. 542 — TH, October 1974, Table 7.35).

#### 4.4 The Effects of the Rice Premium

##### 4.4.1 The Effects on the Intersectoral Resource Transfer

On the justified assumption that the world market for rice from Thailand has a high price elasticity and that the domestic demand for rice as a staple food is inelastic (see chap. 4.3), the direct and indirect burden of the levying of the rice premium is largely shifted to the rice producers, especially on account of the prevailing surplus situation. In Thailand the surplus rice production above and beyond the local requirements results mostly from the impossibility of substituting other products for rice production in large parts of the country. This applies particularly to the flooded region of the Menam where, apart from rice, hardly any other agricultural products can be cultivated. The price elasticity of supply is therefore low. In a survey made by BEHRMANN<sup>38</sup>, the average coefficients of price elasticity of the rice supply are stated as being 0.2 in short-term periods and 0.31 for long-term periods<sup>39</sup>.

<sup>38</sup> Behrmann, J. R., *Supply Response in Underdeveloped Agriculture: A Case Study of Four Major Annual Crops in Thailand, 1937—1963*, Amsterdam 1968 (cit. by Marzouk, G. A., *Economic Development and Policies. Case Study of Thailand*, with a Foreword by J. Tinbergen, Rotterdam 1972, p. 138).

<sup>39</sup> The analysis was aggregated at the province level (Changwat) whereby a non-linear dynamic regression model was used. Apart from rice, the analysis included three other main products.

Since the world market price is a factor which cannot be influenced<sup>40</sup> by the rice exporters from Thailand, all burdens, such as marketing costs in the broadest sense as well as indirect taxes, such as the rice premium, reduce the producer's prices for exported rice. However, since a considerable part of the total rice sold in Thailand is exported (see chap. 4.3), the producer's price for the marketed rice is also generally reduced.

Rice supplies most of the calories contained in the diet consumed in Thailand. Because of an inelastic domestic demand for rice (see chap. 4.3), rice is substituted by other foodstuffs only to a certain extent even if there are great price differentials between rice and these other foodstuffs. That means that the total price structure for food in Thailand is reduced by the levying of the rice premium with the consequence that the cost of living for the urban population is lowered. Hence, the rice premium led to a broadening of the gap between the income of the urban and the rural populations<sup>41</sup>.

In USHER's survey<sup>42</sup>, it was estimated — for 1965 — that an elimination of the rice premium would allow the prices for rice to rise, at the wholesale level by about 75 percent, ranging between 40 percent and 90 percent according to the quality of the rice; the prices for paddy<sup>43</sup> by 85 percent; and retail prices for rice by about 60 percent on the average. The prices for other important foodstuffs would then rise by about 55 percent in Bangkok<sup>44</sup>. On the basis of these figures it was estimated that the cost of living for the urban population would increase by about 23 percent if the rice premium were abolished<sup>45</sup>.

The agricultural sector subsidizes, therefore, the industrial and other sectors<sup>46</sup> through the mechanism of a change in the terms of trade in favour of all those sectors. The burden of reducing the urban cost of living is, thereby, borne by that part of the agricultural population which produces for the market either directly, by marketing its products itself, or indirectly, by the share croppers whose share of rent paid in kind is sold by the landlords (see chap. 2.2). The subsistence farmers are not affected by export taxation. The greater the share of rice sold of the total production, the greater is the direct (measured on tax revenues) and the indirect (measured as a share of the payment of subsidies to other sectors) tax burden of those farmers.

The low cost of living in the cities makes it possible for the domestic industry to keep wages low. Thus, the industrial sector is in a better position in the competition with imported products within Thailand, as well as on the world market. The low cost of living also allows the industry to achieve greater profits. As far as these profits are reinvested, they contribute not only towards increasing the industrial

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40 In a survey made by Usher (Usher, D., *The Economics . . .*, op. cit., pp. 20 ff.), it is estimated roughly that an elimination of the rice premium would reduce the world market price by only 3 percent (!).

41 IBRD, Main Report, op. cit., pp. 22 ff.

42 Usher, D., *The Economics . . .*, op. cit., pp. 5 ff.

43 Paddy is unhusked rice.

44 Usher, D., *The Economics . . .*, op. cit., p. 5.

45 Usher, D., *The Economics . . .*, op. cit., p. 9.

46 Marzouk, G. A., op. cit., p. 139. On account of the increase in world market prices for rice since 1972, the local price level also rose in general. For example, until 1974, the prices for rice rose by 150 percent, for agricultural products by 70 percent, and, thus, more rapidly than the prices of other products. The result was that between 1972 and 1974, the terms of trade became favourable for the agricultural sector (see IBRD, Main Report, op. cit., p. 14). But the income increase for agriculture connected therewith flowed only to the farmers who actually sold part of their products. On the other hand, this temporary improvement of the terms of trade in favour of agriculture does not constitute a counterproof for the above argumentation since the level of agricultural producer's prices is generally kept low by the rice premium.

capacity and higher earnings, but also towards emphasizing income inequalities. Therefore, the agricultural sector has — to a considerable extent — through the altered terms of trade brought about by the rice premium, financed industrialization<sup>47</sup>. Since the industrialization mainly takes place in the region of the metropolis Bangkok-Thonburi, the regional differences were still widened by these “back-wash-effects”. In addition, these tax measures also encourage the consumption of mainly imported luxury goods in that region.

On the other hand, it is argued<sup>48</sup> that it is precisely the rice premium which, by reducing the cost of living, reduces the purchasing power which thus exercises a negative influence on the volume of investments. This, however, does not apply to the production for the export market.

Figure 2 illustrates the distribution of the direct and indirect burden caused by the levying of the rice premium between rice producers and consumers.

This is represented on the assumption that there is perfect competition on the domestic rice market, as was ascertained by different authors<sup>49</sup>. However, this assumption is not likely to apply to the local rice markets.

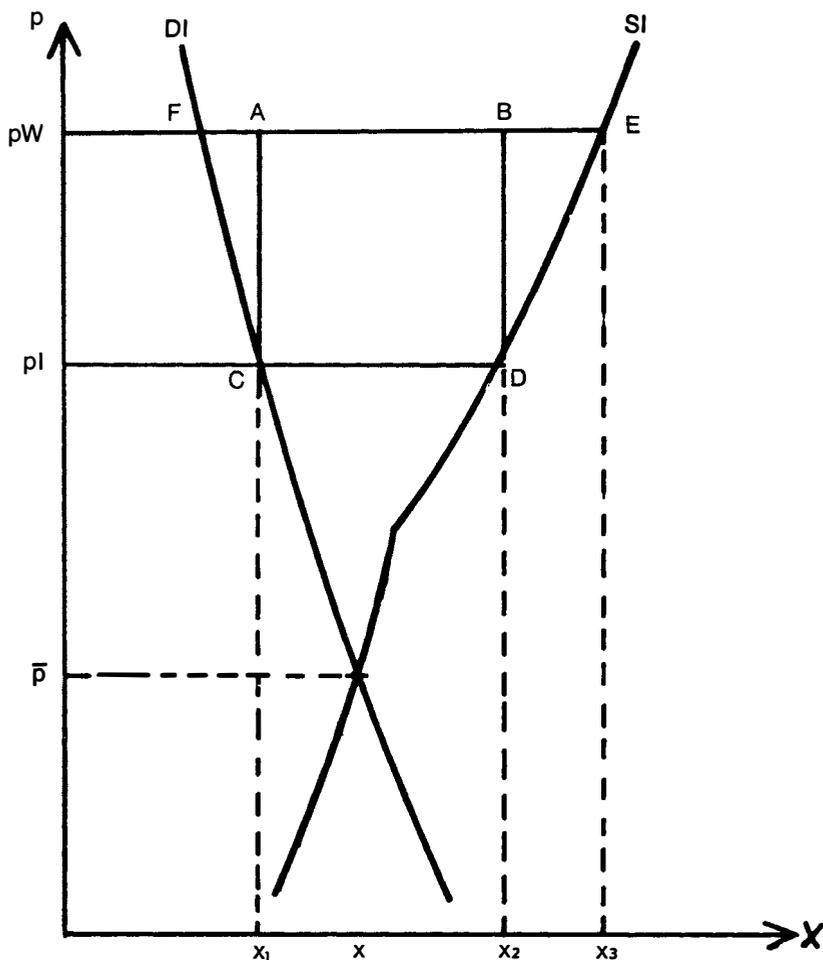
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47 Usher, D., *The Economics . . .*, op. cit., p. 18 ff.

48 Ingram, J. C., op. cit., p. 256.

49 Usher, D., “The Thai Rice Trade”. In: Silcock, T. H. (ed.), *Thailand. Social and Economic Studies in Development*, Canberra 1967, pp. 206 f. Ingram, J. C., op. cit., p. 249.

Figure 2: Distribution of the Burden of Rice Premium in Thailand



Source: Based on a diagram by Osterwald, H., Die Reisexportsteuer in Thailand, Diplomarbeit, Heidelberg 1975, p. 65.

In Figure 2, the following symbols mean:

- DI = inelastic demand curve of local consumers.
- SI = inelastic supply curve. The subsistence supply is shown up to the break in the supply curve; above the break, the market supply is shown. The market supply is relatively more elastic than the subsistence supply.
- $p_I$  = local consumers price (since perfect competition is assumed, the trade margin can be neglected in this figure).
- $p_W$  = export price (world market price).
- $p$  = equilibrium price.
- $p_W - p_I$  = rice premium rate.
- $x_1, x_2, x_3$  = corresponding quantities of rice.

If the direct and indirect burden of levying the rice premium is represented by the area  $pI pW ED$  in Figure 2 (usually the producers' surplus), this burden is distributed among the various following groups:

The consumers' surplus is the area  $pI pW FC$ . The tax revenue for the government is represented by the area of the rectangle  $ABCD$ ; and welfare losses for Thailand's economy are shown by the area of the triangles  $ACF$  and  $BED$ . The welfare losses flow to the foreign buyers of rice.

As a result of the reduction of producers' prices for rice, on account of the rice premium, Thailand's farmers have to bear both a direct tax load (area of the rectangle  $ABCD$  in Fig. 2) and an extra burden caused by the altered terms of trade (both the consumers' surplus as well as the welfare losses). But the consumers' surplus (area  $pI pWFC$  in Fig. 2) does not flow to the consumers of rice, but rather mostly to those producers in sectors other than agriculture because of the low cost of living and the low wage rates caused by this.

In a survey on the quantitative distribution of the burdens, the following quantification was made by USHER<sup>50</sup> for 1963. On the assumption that the local rice price would increase by 85 percent if the rice premium were abolished, it has been computed that the transfer effects by the altered terms of trade still surpass the direct tax load by 50 percent. That means that, in Fig. 2, the so-called consumers' surplus (area  $pI pWFC$ ) together with the welfare losses (areas  $ACF$  and  $BRD$ ) are 50 percent higher than the tax revenues (area  $ABCD$ ).

The abolition of the rice premium, as SANITTANONT<sup>51</sup> estimated, would allow 70 percent of the whole producers' surplus (total surface in Fig. 2) to flow to the farmers and 30 percent to the intermediaries. The urban wage rates would then increase accordingly. Consequently, the urban middle-class strata now draw the greatest benefit from the rice premium and, therefore, are not interested in its elimination<sup>52</sup>.

At this point it should be mentioned, however, that agriculture pays hardly any other taxes than the rice premium<sup>53</sup> and the "land development tax", so that part of the charges seems to be fully justified on parity principles. In spite of this, the total burden of the agricultural sector on account of the levying of the rice premium is much higher than that of other sectors. The effect of taxation is, thus, regressive since it is precisely the lower income groups — here the agricultural sector — which are heavier burdened by taxes than others.

But great differences which modify the above statement exist within agriculture. Only rice farmers who sell surpluses directly or indirectly are affected by the rice premium. The producers of other goods within agriculture benefit from these taxes by low wage rates. These farmers produce with the help of hired labour other goods, whose prices are influenced by the price of rice, to a certain extent only, however, since substitution within the demand is too insignificant. The terms of trade, altered at the cost of the agricultural sector, did not only lead to an indirect transfer of capital into other sectors and into the urban regions, but also

50 Usher, D., *The Economics . . .*, op. cit., pp. 10 ff.

51 Sanittanont, S., op. cit., p. 112.

52 Usher, D., *The Economics . . .*, op. cit., pp. 15 ff.

53 In addition to the rice premium, a so-called export duty on rice amounting to 4.2 percent of the f.o.b. price and a "milling tax" of about 3.85 percent of the sale price is levied (Usher, D., *The Economics . . .*, op. cit., p. 1) together with a municipal tax of 0.2 percent of the export price (Marzouk, G. A., op. cit., p. 136).

to migration from the rural areas into the urban regions because of the reduction of intensity in the agricultural production and, hence, lower labour force requirements. Thus, as a result of this migration, the consequent social costs of the infrastructures also increase, particularly in the region of Bangkok-Thonburi.

#### 4.4.2 The Effects on Agricultural Development in Thailand

The levying of the rice premium had numerous effects on the development of agriculture in Thailand. However, it is difficult to quantify these effects. This is why the presentation had to be largely based on plausible observations.

##### 4.4.2.1 The Influence on the Composition of Production

Through the levying of the rice premium, the cultivation of agricultural crops is directly influenced only in those areas where alternative crops, other than rice, can be cultivated. In the regions of traditional rice cultivation in the flooded delta of the Menam, there are only few or no alternatives. The effects of the rice premium in those regions are of a different nature (see, for example, chap.4.4.2.2). In the same way, the production patterns of subsistence farmers are not affected by the export tax.

The influence of taxation on the composition of production in the agricultural sector can, therefore, only be assumed in regions which offer alternative cultivation possibilities and as affecting only those farmers who produce partly, or mainly, for the market. However, that influence cannot be proved globally; it can only be assumed. Although the price of rice has been reduced by means of this export tax, the absolute area on which rice is cultivated increased in Thailand during the period of tax imposition.

In relation to the extension of the total cropping area, however, the area under rice cultivation decreased. This tendency can be interpreted as meaning that, on account of the enormous population increase in Thailand, an extension of the cultivated area became necessary even in regions which are not suitable for rice cultivation, or to a limited extent only. The urge of farmers in Thailand to be self-sufficient, at least in the supply of rice as their staple food, led to an absolute extension of the area under rice cultivation, however, to a lesser extent than the extension of the total cultivated area.

But, it can be assumed that the rice premium encouraged the diversification of agriculture<sup>54</sup>, although only in specific regions and on specific types of agricultural holdings. Diversification caused by the export tax has only influenced those crops whose returns per area can compete with that of rice (e.g., maize and mung beans).

It should be mentioned, however, that, in many regions which have been taken under cultivation recently, there is only minor competition for the cultivable areas between rice and other products since the conditions required for cultivating the crops differ considerably<sup>55</sup>. As a result of the urge to be self-sufficient in their

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54 Marzouk, G. A., *op. cit.*, p. 139. Usher, D., *The Economics . . .*, *op. cit.*, pp. 16 ff.

55 Osterwald, H., *op. cit.*, pp. 46 ff.

supply of rice, all land which is somehow suitable for rice (slopes, river banks) in the north-eastern regions of Thailand, a region of rainfed cultivation, is used for its cultivation. This is done although it would be — in many cases — more profitable to cultivate other crops and exchange them on the market for rice. The conditions for producing rice are so poor that the cultivation of alternative crops would be rational under the economic aspect. The urge for self-sufficiency prevents this. Therefore, only the land which is not at all suitable for rice is cultivated with other products. The decision to cultivate those crops is heavily influenced by the products. In such cases, especially maize, cassava, kenaf, mung beans, and sugar cane are cultivated. Since these are also important export commodities, the decision to cultivate them is partly dependent upon the development of world market prices, the marketing possibilities, and knowledge concerning their cultivation.

In addition, it can be assumed that the low price for rice — through the levying of the rice premium — decisively hindered intensification of rice production for the market (see following chapter) and the technological progress in agriculture.

#### 4.4.2.2 The Influence on the Use of the Production Factors

The reduction of the rice price brought about by the levying of the rice export tax led, in general, to the fact that *cum grano salis* the production potential of agriculture in Thailand is not exhausted if compared to the situation when the price level on the world market is taken as a basis. This low production results from the suboptimal combination of the factors of production, especially from the limited use of modern inputs<sup>56</sup>. Thus, the rice premium leads to the perpetuation of ineffective methods of cultivation<sup>57</sup>.

The influence of the tax on the combination of factors in the agricultural production process has different scopes and consequences, depending on the framework of the political, institutional, economic, and social limitations for each individual farmer.

##### 1. Employment of Capital

The rice yields in Thailand are at the lower end of the yield scale for the world, like in many other South Asian countries. For example, the average rice yield in Thailand in 1974 amounted to about 1.7 t/ha as compared to 2.6 t/ha in Indonesia and 5.8 t/ha in Japan<sup>58</sup>. One of the reasons for the low yield is to be attributed to the insignificant capital input in the form of fertilizers and high yielding varieties in rice cultivation<sup>59</sup>. The reasons for the limited use of these forms of capital are

56 IBRD, Main Report, *op. cit.*, pp. 84 ff.

57 Usher, D., *The Economics . . .*, *op. cit.*, p. 18.

58 FAO, *Production Yearbook 1974*, Vol. 28-1, Rome 1975, pp. 46 f.

59 Taylor, V. D., "The Thai Rice Premium". In: Heymann, H. et al, *Security and Assistance in Thailand*, Santa Monica, Cal., 1965, p. 12. Of the total harvested area of paddy in Thailand in 1974, which amounted to 7.734 mill. ha, it has been estimated for 1973/74, that about 400,000 ha (= 5.2 percent) were planted with high yielding rice varieties. See FAO, *Production Yearbook 1974*, *op. cit.*, p. 47 and Dalrymple, D. G., *Development and Spread of High-Yielding Varieties of Wheat and Rice in the Less Developed Nations*, (Economic Research Service, U. S. Department of Agriculture in Cooperation with U. S. Agency for International Development, Foreign Agricultural Economic Report No. 95), Washington 1976 (fifth edition), p. 112.

to be found, on the one hand, in the absence of adequate development institutions such as credit and extension services and in the existence of share-cropping systems in Thai agriculture. On the other hand, on account of the low price for rice, the ratio between the price of fertilizers and that of rice is unfavourable. This allows the economic utilization of these modern capital inputs to increase the yield only to a limited extent. In 1960, for example, the ratio of fertilizer to rice prices in Thailand was 6.5:1<sup>60</sup>. The surplus yield for rice, when using fertilizers, was, according to the surveys, only slightly higher than the proportion mentioned above<sup>61</sup>. Since rice cultivation and the use of modern inputs entails a considerable risk for the farmers, the surplus yield should be much higher so that the risk threshold is exceeded. In that connection, it was roughly estimated<sup>62</sup> that, in Thailand, the initial application of mineral fertilizers takes place when the marginal profits are twice as high as the marginal costs. Or, in other words, farmers act as if the price of fertilizers were twice as high as it actually is, or as if the rice price were only half the actual one. In concrete terms, that means that the price-cost ratio must be about 12:1 before fertilizers are applied on a large scale. This can result from an increase in the price of rice, or from a subvention of the fertilizer<sup>63</sup>.

## 2. Employment of Labour Force

Rice cultivation in Thailand is, in general, labour intensive. The small subsistence holdings accomplish the work with family members. Farmers who have medium or large sized holdings are forced in Thailand, however, to employ hired labourers who migrate seasonally from the northern and north-eastern regions to the rice growing areas. The reduction of the rice has surely the effect that labour input has been reduced on the farms with hired labour<sup>64</sup>. If only seasonal hired labourers are employed, it must be assumed that their wages do not react proportionally to changes in rice prices. An increase in the rice price would, therefore, only induce a relatively insignificant rise in the wage rate. The elimination of the rice premium would entail a greater labour input on holdings employing hired labour with a view to expanding production, since, in that case, the labour input shows a high marginal productivity<sup>65</sup>.

It is also to be assumed that, if there were a rise in the price of rice, small farms would expand their production for the market by employing more family members and would thus become more intensively integrated in the market.

If the rice premium is maintained, hired labourers will be employed to a more limited extent in agriculture than if no tax is levied. Thus, the problems of under-employment and unemployment in rural areas become more acute. An elimination of the tax would lead to a more intensive employment of hired labour, although the wage rate per labourer would increase relatively less than the rice price.

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60 Osterwald, H., op. cit., p. 59.

61 Taylor, V. D., op. cit., pp. 17 ff.

62 Taylor, V. D., op. cit., pp. 18 ff.

63 For the further details about problems of subventioning fertilizer use in developing countries see Mai, D., *Düngemittel-Subventionierung im Entwicklungsprozeß*, (Socio-economic Studies on Rural Development, ed. by F. Kuhnen, No. 26), Saarbrücken 1977 (forthcoming).

64 Taylor, V. D., op. cit., p. 12.

65 Taylor, V. D., op. cit., p. 12. Marzouk, G. A., op. cit., p. 139.

The contrary opinion is also supported in scientific literature<sup>66</sup>. The low price of rice and the altered terms of trade in favour of non-agricultural sectors contributed — as already mentioned above — towards increasing the availability of job opportunities in those sectors and had, therefore, a partially positive effect.

### 3. Land Utilization

Theoretically, it can be ascertained that the low price of rice reduced both intensive land use and the cultivation of new areas. In Thailand, however, this effect ought to have been superimposed by other influences, such as population increase for example. It is remarkable that, although the area under rice cultivation has been extended, relatively, it has decreased. This indicates that limits are set to an extension of the area suitable for rice cultivation. However, it would definitely be possible to extend the actual cultivated area by double cropping<sup>67</sup>. But this depends largely on the training and extension facilities offered to farmers<sup>68</sup>.

In general, however, it can be stated that an elimination of the rice premium would entail an expansion of the area under rice cultivation, and this for farmers who are integrated fully or partially in the market. These changes would take place — to a certain extent — if the areas used for other products were reduced. This, however, would be limited because of the different natural conditions suitable for this crop cultivation.

The elimination of the rice premium would, besides bringing about a price increase for land, be particularly advantageous for the middle and large farmers who produce for the market<sup>69</sup> and/or have part of their land rented out. This is especially important in the areas of traditional rice cultivation of the central provinces of Thailand<sup>70</sup>.

On the other hand, however, the revenues from the tax imposition contributed towards extending the volume of irrigated land for rice cultivation through the installation of artificial irrigation systems and methods (dams, canals) and led, thus, to an increased use of land for rice cultivation. However, the possible development that would come about without the imposing of an export tax is not taken into consideration.

### 5. Rice Export Taxation and Development Theories

The introduction of an export tax for a product, which figures among the most important suppliers of foreign currency of a developing country and is also the most important domestic staple food, has multiple consequences in all sectors of the economy. The intended effects of the rice premium in Thailand (see chap. 4.2) can only be achieved since, in spite of the ensuing reduction of the whole domestic price level, the total supply of rice exceeds local consumption. This behaviour of the rice producers is mostly conditioned by the urge felt by all farmers to cultivate

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66 Usher, D., *The Economics . . .*, op. cit., p. 15.

67 Osterwald, H., op. cit., p. 54.

68 Fuhs, F. W. and Goericke, F. V., op. cit., p. 17.

69 Taylor, V. D., op. cit., pp. 7 ff.

70 Taylor, V. D., op. cit., p. 8.

enough rice for their own consumption in order to be self-sufficient and by the difficulty, or impossibility, regarding production techniques, to cultivate alternative products besides rice in many regions of Thailand.

The levying of the rice export tax in Thailand created a mechanism for the transfer of resources from agriculture to other sectors. The transfer is effected directly through the tax revenues of the rice premium, which are mainly invested in non-agricultural sectors and other, especially "urban", sectors (partially compulsory capital formation), and, indirectly, on account of the fact that because of the change in the terms of trade to the detriment of agriculture, the other sectors are subventioned in the broadest sense. The effects of the mechanism of changes in the terms of trade in the individual cases have been explained in detail in the above chapters.

The consequences of the rice export taxation, as they have been described in the concrete case of Thailand, allow various interpretations and evaluations according to the development theory approach on which they are based, since, as a result of the rice export tax, a sector, or group, is burdened. This results necessarily in another group being favoured.

In this recapitulatory chapter, some possibilities of interpretation will be briefly described and classified. The interpretations are based on modernization approaches in the sense of theories and strategies of economic growth and, in contrast to this, on approaches of the "dependencia" theory. In this recapitulatory chapter, only a few selected results can be discussed. But precisely these show the partial character of the available development theory approaches which, in each case, can only explain specific phenomena of underdevelopment and measures to overcome it. Moreover, similar phenomena can be interpreted very differently according to the approach used as a basis, and contradictory conclusions can be drawn.

According to the theories of economic modernization, the introduction of modern methods of production in agriculture and the industrialization of a developing country serve to overcome backwardness as compared to the structures and behaviours of industrial countries which are considered as patterns. The priorities in the promotion of development and growth between the different sectors need not be dealt with in detail here, since Thailand gives, on the one hand, a certain priority to industrialization and, on the other hand, develops agriculture by expanding the export sector. The promotion of the sector of agricultural export again has mainly the objective of capital formation for industrialization through the financing of the importation of capital goods. Through this policy, it is true, the importation of consumer goods is also financed. However, this by-product is not considered to be important and can rather be evaluated as the positive component of a liberal economic policy.

Since priority was accorded to industrialization, instruments had to be developed which would finance this process, besides supplying foreign currency from the export of agricultural products. A considerable share of the necessary funds had to be withdrawn directly or indirectly from the most important economic sector of the country, i.e., from agriculture.

Thereby, various possibilities and means of transferring these resources have resulted, such as, for example, the heavy taxation of agriculture or of specific groups, tax relief for industry, the supply of cheap labour force from agriculture, and lowering of the living costs. The taxation of the rice export promoted or, at

least, affected all the measures considered and should, therefore, be evaluated as positive in view of the achievement of the objective concerned.

The negative effects of a liberal industrialization policy, such as regionalism with the resulting backwash-effects, have to be met by an increased promotion of the rural hinterland. Thereby it must be mentioned that there are at the moment no signs of a sweeping success. The problems of the economic and power structure in the rural areas, and the necessity of social change are ignored to a large extent.

From the approach of the dependence theory, the levying of a rice export duty and the resulting direct and indirect heavy burden of a certain rural class can be interpreted as exploitation, especially since the beneficiaries are mainly the urban middle and upper classes in the capital, Bangkok. It is particularly important that the urban élites use the tax instruments to strengthen the dependence of the peripheral rural groups and areas by means of regionally localized industrialization which is, doubtlessly, partly financed by the levying of the rice export tax. With these measures the urban élites expand their economic basis in the metropole. The mechanisms leading to the increase in dependence are, for the main part, invisible, e.g., the alteration in the terms of trade to the burden of agriculture by means of the export tax.

Through the transfer of resources for industrialization in the metropolis Bangkok-Thonburi, the demand structures of the industrial countries are reproduced by the urban élites, since there is no doubt that the industries which will be established are those which can meet these requirements. The empirical evidence does not, however, support this evaluation (see above comments and chap. 1).

The development of agricultural export, of rice in particular, served not only to increase the tax revenues, but also to finance the importation of capital goods for industrialization. Both measures contributed to increasing the dependence on the industrial countries. The empirical findings hardly allow this conclusion.

The industrialization not only has to satisfy the needs of the domestic Thai market, but rather it must also deliver goods to foreign markets, which is part of the policy. Thus, Thailand's dependence on foreign countries is doubtlessly reduced simultaneously in two directions. One, by import substitution, and two, by diminishing its dependence on agricultural exports. The long-term reduction of the dependence of the Thai economy on other countries would have to be paid by a passing increase in dependency in that agricultural products, such as rice, would have to be increasingly exported in order to partially finance the industrialization. But there is no doubt that, with the promotion of export, the consumption of imported goods is directly financed.

The industrial enterprises are in a position to achieve higher profits on account of the reduced cost of living. Since a reduction, or abolition, of the export tax would allow an increase in the rice price and this does not become immediately effective in a raise of salaries and wages, there is a coalition between the so-called "workers" aristocracy and the proprietors of the enterprises to maintain the export tax. The inhabitants of the Bangkok metropole (or at least part of them) are therefore interested in maintaining the exploitative mechanisms of the peripheral regions. They are enabled to do this not only by government power, but particularly because of the heterogeneity of the economic structure in which the capitalistic mode of production dominates in the capital and keeps other traditional modes of

production in the peripheral regions in a state of dependence. But it should be mentioned that rural landless labourers or part-time farmers, who are employed seasonally, are also interested in the reduction of the living costs. An abolition of the rice premium would increase the wage rates, but not to the same extent as the increase in rice prices.

From the point of view of the dependence theories, the urban élites have developed multiple instruments, among others the export tax on rice, to withdraw from the rural peripheries the resources which allow a perpetuation of the prevailing dependence through the structural differences between metropolises and peripheral areas.

As the above comments show, there is evidence for both development theory approaches in Thailand. However, because of the limited value of the two theoretical approaches for explaining the facts, it is not possible, in the light of the empirical findings, to give undeniable priority to one of these two theories and their strategies.

## The Taxation of the Agricultural Sector in Thailand

By W. MANIG

The industrialization of the country was given priority in Thailand's development planning. In the pursuit of this goal, the agricultural export sector, among others, was promoted in order to obtain foreign exchange for importing capital goods for the industrial growth while, on the other hand, mechanisms were developed which made a transfer of resources from agriculture into other sectors possible.

One of the important measures for guaranteeing the financing of growth and development in Thailand is the rice premium, an export tax levied on rice. The successful levying of the rice premium is possible because, despite the decrease in the rice producer's price which resulted from this tax, the supply of rice exceeds consumption on the domestic market. The rice premium has various effects on the different economic sectors. A few of these effects were selected for discussion above.

As Thailand's rice supply can only influence the prices on the world market to a limited extent, the export tax has the effect that the producer's price is reduced for both rice destined for exportation and rice to be sold on the domestic Thai market. As a result of this drop in the price of rice, the price level of all producer's prices for agricultural products decreases and, hence, the cost of living is lowered. It was estimated that the cost of living in the 60s in Thailand would have risen by about  $\frac{1}{4}$ th if the rice premium had been abolished. This low cost of living allows the payment of low wage rates especially in the sectors promoted by the development planning, thus increasing profits. The levying of the rice premium consequently alters the terms of trade in favour of the promoted sector of the economy and is hence to be considered as a measure for enforcing the transfer of resources between agriculture and the other sectors. The income realized thereby in the urban centres of the country is, however, also used for importing consumer goods to satisfy the demand of certain groups. Thus agriculture subvenes these urban groups.

For the development of agriculture itself, the export tax on rice has multiple various effects on the composition of production, on the employment of the production factors, and on the agrarian structure. Thereby, the effects on the individual groups in the rural areas are multifarious.