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ANALYSIS OF JAPANESE RICE POLICIES

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Japan is the largest single country market for grains in the world, and the largest single country market for U. S. grain exports. During 1970, Japan purchased almost 25 percent of total U. S. grain exports. The U. S. share of Japanese grain imports has increased from just over 30 percent in 1960 to 60 percent in 1970.

Although most countries engage in some form of agricultural protectionism, the food grain (wheat and rice) policies of Japan are of primary importance to the United States. The Japanese Government conducts an extensive price-support and price-stabilization program in the production and marketing of food grains. Because rice is the dominant food grain in Japan, this study will concentrate upon rice policy during the period 1963-1969. A better understanding of Japanese rice policies will hopefully aid the United States in adjusting to future changes in grain exports to Japan.

Japanese Rice Policies

The Japanese food grain programs during the 1960's have had three main targets: (1) increasing farm income, (2) maintaining low foodstuff prices, and (3) preventing "excessive" government expenditures. To attain these targets the government has employed the following instruments: (1) rice price supports to producers, (2) government purchase of domestic rice at the support price and re-sale to processors at a lower price, and (3) government purchase of imported rice at world prices and re-sale to processors at higher prices.

Figure 1 illustrates the relationship between the targets and instruments of Japanese rice policy. Under free trade conditions, Japan's domestic price would be p^m. With price supports the domestic price is increased to p^s. This results in the following deviations from free trade conditions. First, price supports aid in achieving the objective of increasing farm income. Under free trade conditions producers gross income would be designated by area Op^mEQ_1, but with price support of $(p^s - p^m)$ per tone this area is increased to OP^sAQ_2.

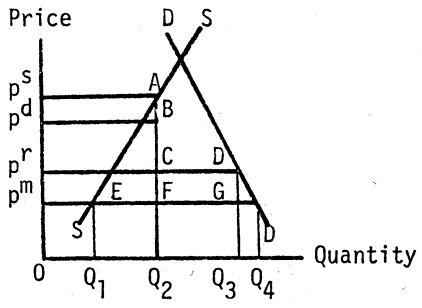

Figure 1. Japanese Rice Policies

Second, price supports result in a budgetary cost of p^dp^sAB. The government purchases Q_2 at support price p^s and re-sells to processors at price p^d, sustaining a loss of $p^s - p^d$ per unit.

Part of the budgetary cost of price support is offset by "skimming" operations. The instrument of "skimming" results in a government revenue of CDFG. Imported rice is purchased at world price p^m and re-sold to processors at price p^r. This revenue (minus handling cost) helps offset the budgetary cost of price supports. "Skimming" also aids in achieving the target of holding down consumer food prices because p^r and p^d are less than p^s. However, p^r and p^d are greater than p^m.

Thirdly, price supports stimulate domestic production and reduce imports. Under free trade Japan's domestic production would be Q_1 with imports of $Q_4 - Q_1$. But with the rice program domestic production is increased to Q_2 and imports are decreased to $Q_3 - Q_2$.

Equivalent Tariffs

Japan relies exclusively upon nontariff barriers to control imports of food grains. For this reason a study of Japanese rice policies necessitates use of the equivalent tariff concept. An equivalent tariff is a tariff having the same effect on volume of imports as existing trade restrictions.[1/] This study emphasizes the equivalent ad valorem tariff because it compares domestic and import price differential to import price. Import price should include all costs associated with getting a commodity to the importing country. Equivalent tariff rates calculated with free-on-board import prices will be biased upward.

Equivalent Protective Tariff

Japanese rice producers are protected from international competition by a very effective nontariff device -- state trading. The government, acting through the Japanese Food Agency, determines the amount of rice to be imported. Private importers then purchase rice on the world market and sell it to the government for re-sale to processors.

The equivalent protective tariff measures the percent by which the price received by Japanese producers exceeds the price at which rice was available from foreign suppliers. The equivalent ad valorem protective tariff (T^p) is defined as (Figure 1):

$$T^p = \frac{(p^s - p^m)}{p^m} \times 100$$

where p^s is support price of rice per metric ton and p^m is average import price of rice per metric ton -- including cost, insurance, freight, and importers fees. Support prices have increased more rapidly than import prices, causing T^p to increase from 78.18 percent in 1963 to 121.62 percent in 1969 (Table 1).[2/]

Equivalent Producer Subsidy

The policy of supporting rice prices above government re-sale prices results in a farm income transfer similar to that obtained from a subsidy. The equivalent producer subsidy rate (S) comparing government support and re-sale price of rice is defined as (Figure 1):

$$S = \frac{(p^s - p^d)}{p^d} \times 100$$

where p^d is government re-sale price of domestic rice per metric ton. The equivalent producer subsidy increased from -1.61 percent in 1963 to 11.05 percent in 1968, then declined to 7.50 percent (Table 1). The decline during 1969 was a result of policy decisions to hold support prices at the 1968 level in response to a growing rice surplus.

Equivalent Excise Tax Rate

The difference between Food Agency re-sale price and import price is equivalent to a tax which processors pay when purchasing domestic and imported rice. This study assumes the tax is passed on to consumers.

Equivalent ad valorem consumer tax rate paid on domestic rice (T^c) is (Figure 1):

$$T^c = \frac{(p^d - p^m)}{p^m} \times 100$$

The policy of selling domestic rice above the average import price resulted in an equivalent consumer tax rate of 106.14 percent in 1969 compared to 81.09 percent in 1963.

Equivalent consumer tax rate paid on imported rice is defined as (Figure 1):

$$T^e = \frac{(p^r - p^m)}{p^m} \times 100$$

where p^r is average Food Agency re-sale price of imported rice. Japanese consumers are paying a substantially greater equivalent tax on domestic rice than on imported rice. During 1969 T^e was 42.01 percent (Table 2).

Equivalent Revenue Tariff

The process of selling imported rice for a profit has the same effect upon government revenue as levying a tariff on imports. Equivalent revenue tariff rates for imported rice were calculated to indicate government "skimming" profit as a percentage of import price.

The equivalent revenue tariff on imported rice (R) is (Figure 1):

$$R = \frac{(p^r - p^m - h^c)}{p^m} \times 100$$

where h^c is estimated government handling cost per metric ton of imported rice. The equivalent revenue tariff was 36.27 percent in 1969, compared to 47.46 percent in 1963 (Table 3).

Summary and Implications

The policy of supporting domestic rice prices above world levels has increased farm income, but at an increasing cost to consumers and the government. During the JFY 1969 Japanese rice producers enjoyed an equivalent subsidy of 7.50 percent with the aid of a 121.62 percent equivalent protective tariff.

Consumers are contributing to the rice support program through payment of equivalent excise tax rates amounting to 106.14 percent on domestic rice and 42.01 percent on imported rice. Consumers are also paying for the rice program through government treasury payments to producers. In addition, an equivalent tariff on rice imports has failed to offset increasing government costs of the rice program.

An excess supply of rice resulting from high support prices is currently a serious agricultural problem for Japan. The interdependency of world trade patterns suggests that Japanese attempts to solve the rice surplus problem will have an impact upon many developed and developing countries. For example, several means of reducing rice stocks are being attempted. These include limiting the quantity of rice that the government will purchase at the support price, increasing exports, and providing financial incentives to divert rice land to alternative production. The potential also exists for using rice as a livestock feed. In the past this has been prevented, but it might be accepted in the next few years if coupled with lower consumer prices for rice.

FOOTNOTES

1/ Other studies using the equivalent tariff concept include [1, 3].

2/ Year refers to Japanese fiscal year, beginning April 1 of year stated.

REFERENCES

1. Dardis, Rachel, and Elmer W. Learn, Measures of the Degree and Cost of Economic Protection of Agriculture in Selected Countries, USDA-ERS, Tech. Bul. 1384, 1967.

2. Japan Bureau of Statistics, Japan Statistical Yearbook, 1963-1969, Tokyo, Govt. Print. Off.

3. Johnson, D. Gale, "Agriculture and Foreign Economic Policy," Journal of Farm Economics, Vol. 46, No. 5, 1964, pp. 915-929.

Table 1. Equivalent Producer Subsidy Rate and Degree of Tariff Protection, Selected Years, JFY 1963-1969

JFY	p^s	p^d	p^m	$(p^s - p^d)$	$(p^s - p^m)$	T^p	S
	dollars per metric ton					percent	
1969	374.53	348.39	169.00	26.14	205.53	121.62	7.50
1968	374.46	337.20	168.00	37.26	206.46	122.89	11.05
1967	357.21	335.35	165.00	21.86	192.21	116.49	6.52
1965	296.53	287.75	154.66	8.78	141.87	91.73	3.05
1963	238.90	242.81	134.08	-3.91	104.82	78.18	-1.61

Table 2. Equivalent Excise Tax Payment Rate, Selected Years, JFY 1963-1969

JFY	Domestic Rice			Imported Rice			
	p^d	$(p^d - p^m)$	T^c	p^m	p^r	$(p^r - p^m)$	T^e
	dollars/metric ton		pct.	dollars/metric ton			pct.
1969	348.39	179.39	106.14	169.00	240.00	71.00	42.01
1967	335.35	170.35	103.24	165.00	240.00	75.00	45.45
1965	287.75	133.09	86.05	154.66	234.55	79.89	51.66
1963	242.81	108.73	81.09	134.08	207.42	73.34	54.70

Table 3. Equivalent Revenue Tariff, Imported Rice, Selected Years, JFY,1963-1969

JFY	p^m	h^c	p^r	Net profit	R
	dollars per metric ton				pct.
1969	169.00	9.70	240.00	61.30	36.27
1967	165.00	9.70	240.00	65.30	39.58
1965	154.66	9.70	234.55	70.19	45.38
1963	134.08	9.70	207.42	63.64	47.46