

PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES
Working Paper 83-04

IMPACT OF GOVERNMENT POLICIES ON PHILIPPINE SUGAR

by

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February 1983

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Sugar has been as a major earner of foreign exchange for the Philippine economy since the early part of the twentieth century. During the 1960's, for example, sugar exports made up 18 percent of total export earnings (Table 1). Sugar's share of export earnings has been declining, however, due both to increasing domestic sugar consumption and growth in other exports. In the 1950's, sugar was roughly 22 percent of total exports, but by the late 1970's, sugar's share of total exports had declined to only 10 percent (Table 1).

The predominance of sugar in Philippine trade was largely the result of colonial and post-colonial ties with the United States. Until 1974, almost all Philippine sugar was sold duty free into the protected United States market where prices were kept stable at

*This working paper has been written as part of the Impact of Economic Policies on Agricultural Development project. The authors wish to thank Cristina David, John Power, and Laurian Unnevehr for helpful comments on earlier drafts. All comments and suggestions are welcome.

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TABLE 1

Quantity and Value of Philippine Exports of Centrifugal and Refined Sugar
(000 metric tons and million U.S. dollars)

YEAR	TOTAL SUGAR EXPORTS		IMPORTERS								Share of Sugar in Total Exports (percent)
			U.S.		JAPAN		CENTRALLY PLANNED ECONOMIES		OTHERS		
			Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	
1955-1959 ¹	864	101	839	98	8	1	-	-	17	2	25
1960-1964 ¹	1,032	140	1,032	140	-	-	-	-	-	-	19
1965-1969 ¹	984	144	984	144	-	-	-	-	-	-	18
1970-1974 ¹	1,383	325	1,317	286	51	33	-	-	15	7	21
1975	972	581	329	147	476	324	11	3	156	107	25
1976	1,466	429	961	285	91	28	333	97	81	19	17
1977	2,442	512	1,234	278	237	50	892	166	79	18	16
1978	1,124	197	626	110	62	10	199	35	237	42	6
1979	1,150	212	405	75	347	63	138	24	260	50	5
1980	1,735	624	415	151	363	137	382	113	575	223	11

Source: National Economic and Development Authority, Foreign Trade Statistics of the Philippines, National Census and Statistics Office, various years.

levels usually well above the world market. Philippine policies were in large measure designed to secure maximum benefits from these arrangements.

Preferential access to the U.S. market ended in 1974, precipitating a major change in Philippine policies. The government took over control of both domestic and international marketing, justifying this as a way of protecting producers and consumers from world price fluctuations and improving the Philippine negotiating position in world markets. Both before and after 1974, sugar production, processing and trade has always been closely regulated by the government. These regulations have included export taxes, an import ban, price, production, and marketing controls, low interest rates on production and equipment loans, and special minimum wages. A major goal of this paper is to examine the impact of these policies on sugar production and trade.

In addition to trade, sugar is a highly visible consumer good and its domestic price, along with those of rice and cooking oil, is a barometer of the success of government efforts to control inflation. A second goal of this paper is to examine the effect of government policies on domestic prices and therefore the distribution of income from sugar production and processing.

It has been argued that the cost of producing sugar in the Philippines is high relative to other major exporters (FEER). What is not mentioned is the extent to which the high costs reflect

social opportunity costs of the inputs or the impact of government policies such as minimum wages, credit subsidies and price controls. If the costs are not due primarily to government policies, and are greater than long run sugar prices, a strong case can be made for encouraging marginal producers to shift out of sugar. A third goal of the paper is to examine comparative advantage in production.

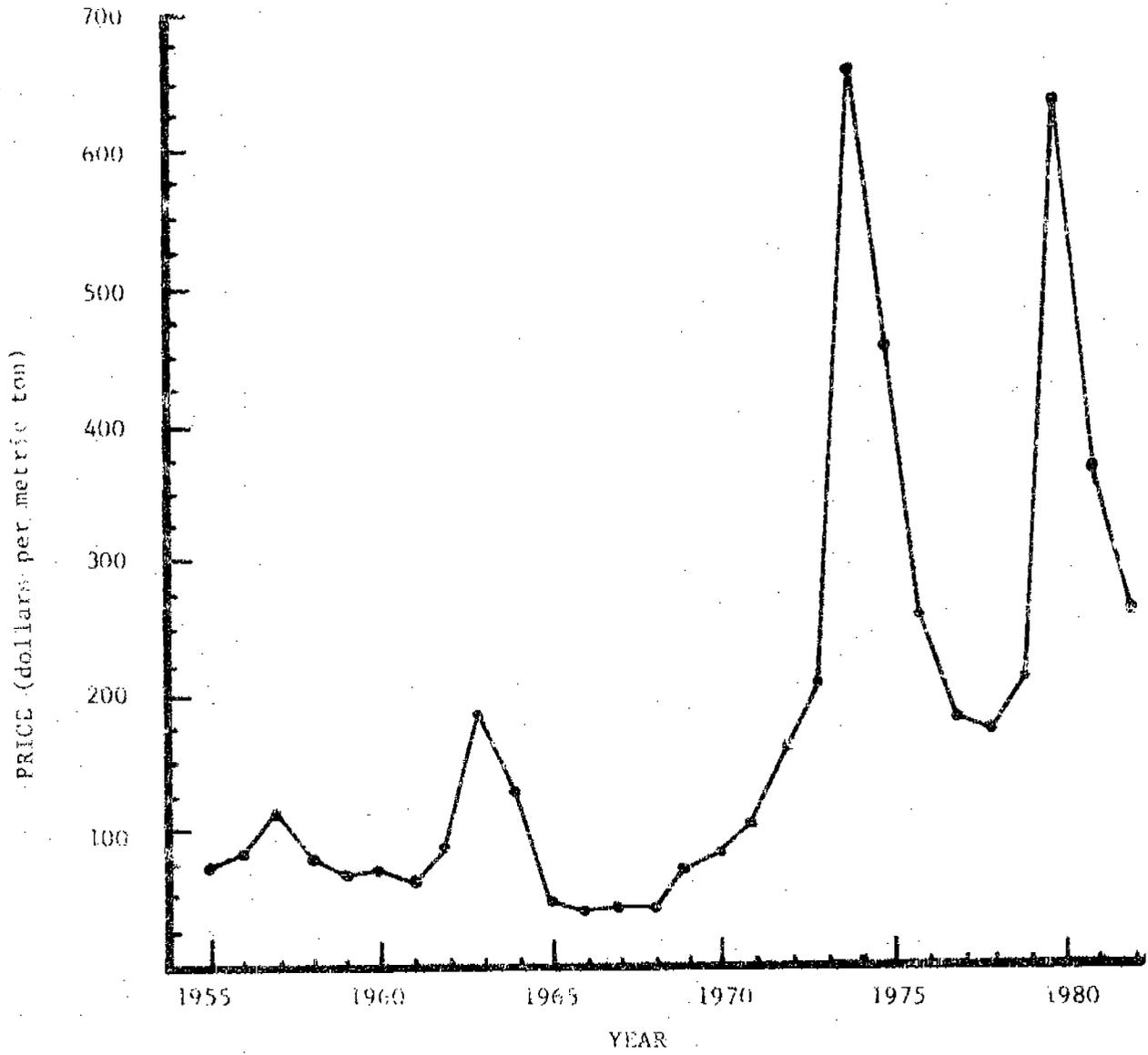
WORLD TRADE IN SUGAR

Because international trade is so important to Philippine sugar, it is useful to discuss briefly the characteristics of the international sugar market. International free market prices of sugar are notorious for fluctuating wildly and the decade of the 1970's provides a good example (Figure 1). From a low of \$81 per metric ton in 1970, the world price climbed steadily to a peak of \$552 in 1974, and then dropped back to only \$171 in 1978. A rapid increase followed and by 1980, prices were over \$600 per metric ton. An equally rapid decline followed and in 1981, prices fell to an average of \$390. In 1982, free market sugar prices remained near a decade low of about \$180 per metric ton.

Two factors account for this fluctuation. Relative to other commodities, a large share of internationally traded sugar is not sold at free market prices. Only about 70 percent of sugar traded internationally is sold on the free market and this includes sugar sold at prices below production costs.¹ In addition, domestic sugar production and consumption in many countries are protected from world price fluctuations by government price control, forcing domestic production variation onto the world market. For example, the EC sets a domestic floor price well above the free market price in most years, purchases excess production, and sells it at a loss in the world market. It also has large preferential imports from previous colonies of member countries and as a result, is the second or third largest

FIGURE 1

International Free Market Sugar Price



Source: Appendix table.

importer and the second or third largest net exporter of sugar.

Although the Philippine share of world area devoted to sugar is only two percent, it has been consistently one of the top four or five exporters, supplying about five percent of all exported sugar. Until the end of its preferential trade with the U.S. in 1974, essentially all Philippine sugar was exported to the U.S. Since 1974, export markets have been diversified and in 1980, exports to the U.S. were only 25 percent of the total. Japan took a little over 20 percent, and the centrally planned economies bought somewhat less than 20 percent.

PHILIPPINE SUGAR PRICE POLICIES

In the post World War II period, there have been three distinct policy environments--from the end of the war to 1962 when an over-valued peso reduced the desirability of exporting, 1962 to 1974 when two devaluations and an increase in U.S. quotas gave export quota holders large profits, and 1974 to the present when the government took direct control of domestic and international marketing. In each of these periods, sugar was affected not only by policies directly affecting sugar, but also by policies directed towards agriculture generally, such as credit and fertilizer subsidies, and by macroeconomic policies such as the overall structure of protection. This section deals primarily with price, marketing and foreign exchange policies. A discussion of the impact of policies affecting inputs is deferred to a later section.

PRE WAR POLICIES

The post war policy environment has been strongly influenced by pre war developments, and a brief look backward helps to understand current policies.² Between 1914 and 1934, Philippine sugar entered U.S. markets duty free and in unrestricted quantities. As a result, Philippine production, almost all of which was for export, grew rapidly. Exports reached a peak of 1.3 million tons in 1934, a level that was not exceeded until 1971 (Euke, 1963). In 1935, the U.S. changed the structure of protection given to domestic sugar

from high tariff barriers to quantitative limits on imports. Philippine sugar was provided a quota of only 850,000 tons, two-thirds of its previous free trade exports to the U.S.

The primary goals of Philippine pre-World War II regulation were to distribute the export quota for the U.S. market among domestic producers and to maintain the price of domestic sugar. The principal legislation, the Sugar Limitation Law of 1934, set up the basic mechanisms which regulated sugar production, processing, and trade for most of the next 48 years. Each mill and grower was given a share of the U.S. export quota (called the A quota). A second quantity, the B quota, was set aside for sale to the domestic market. A small reserve (the C quota) was also set up to meet unforeseen needs. Both the A and B quotas were maximum amounts that a producer could sell into the respective markets. The sum of all A quotas was equal to the U.S. quota. The sum of all B quotas was equal to domestic supply, and was set to keep domestic consumer prices at a predetermined level. Each mill owner and producer was free to trade sugar domestically and in the export market up to the limit of his respective A and B quotas. Act 4166

The need for the A quota is clear. Under the provisions of the agreement with the U.S., the quantity of exports that could be shipped to the U.S. market was limited and the A quotas allocated the U.S. quota among domestic producers.

The original goal of the B quotas was to maintain domestic prices. In 1935 when the quota arrangement with the U.S. was implemented, Philippine exports to the U.S. were about 400,000 tons

greater than the quota. Since domestic consumption was only 100,000 tons (Huke, 1963), the impact of diverting the excess to the domestic market would have been to cause a drastic fall in domestic prices. To prevent this, producers were paid a one time fee to destroy part of their standing cane (Sugar News, May 1980), and production and domestic sales restrictions imposed.

POST WAR POLICIES TO 1962

Sugar plantations and processing facilities suffered substantial damage during World War II, and immediate post war production was well below pre war peaks. Furthermore, the exchange rate was frozen at two pesos per dollar, a rate that overvalued the peso (Baldwin, 1975).³ Until the 1962 devaluation, U.S. and domestic prices were roughly the same, and were 40 percent higher than the world price (Table 3). The overvaluation reduced incentive to export sugar to the U.S. Philippine exports to the U.S. were below export quotas in several years during the period (Table 2), and there were small exports to Japan.

During this period, explicit domestic price ceilings were introduced. However, since export (U.S.) and domestic prices were at the same level and the export quota was not always met, there was little need to enforce strictly either production controls or price regulations.

TABLE 2

United States Quota on Philippine Sugar and Actual
Philippine Exports
(000 metric tons, commercial weight¹)

Year	U.S. Quota	<u>Actual Philippine exports⁶ to the United States</u>
1955 ²	863.6	890.6
1956 ²	863.6	870.6
1957 ²	863.6	630.7
1958 ²	863.6	892.5
1959 ³	863.6	909.1
1960 ³	1,019.0	940.6
1961 ³	1,296.1	1,039.0
1962 ³	1,116.5	979.4
1963 ³	1,099.5	1,081.1
1964 ³	1,032.3	1,119.5
1965 ³	1,159.8	1,122.8
1966 ⁴	1,123.4	941.7
1967 ⁴	1,051.5	942.7
1968 ⁴	1,051.5	904.4
1969 ⁴	1,051.5	1,010.5
1970 ⁴	1,214.9	1,236.2
1971 ⁵	1,413.1	1,421.4
1972 ⁵	1,267.4	1,239.0
1973 ⁵	1,295.4	1,410.7

- Notes:
1. Sugar statistics that include both raw or refined sugar are reported either in commercial weight or raw value. Commercial weight is simply the sum of the tonnages of both types of sugar. In figures reported in raw value terms, refined sugar is converted to its raw equivalent. The conversion rate depends upon the degree of purity of the refined sugar but is roughly equal to 1.05.
 2. Niceto S. Poblador (1964), "The Philippine Sugar Industry: A Case Study of Government Control," The Philippine Review of Business and Economics, Volume 1, Number 2, October. The raw value equivalent is 980,000 short tons.
 3. Philippine Sugar Handbook, July 1974.
 4. Sugar News, February 1972. These figures were reported in raw value and have been converted to commercial weight equivalent at a rate of 1.0294.
 5. Sugar Today, 1974.
 6. From Table 1.

Cont. of Table 2.

Statistics on the United States quota on sugar are complicated in a number of ways. The quota provided for imports of both raw and refined sugar. In addition, the quota was usually expressed long tons, but is sometimes referred to in short tons or in metric tons. Finally, in addition to the basic export tonnage, which was increased occasionally, the Philippines was provided a share in the growth of United States consumption above a certain level as well as a share in quota shortfalls of other countries. This table presents figures which are reasonably close to what the actual quota was, but should not be viewed as exact.

POLICIES BETWEEN 1962 AND 1974

The direct impact of the devaluation of the peso between 1960 and 1962 was to raise substantially the peso price of sugar exported to the U.S. relative to the Philippine consumer price. Between 1960 and 1962, export unit values doubled while the Manila wholesale price increased less than 50 percent. A second devaluation and imposition of a 10 percent export tax in 1970 further widened the gap between consumer and export prices and during the period 1962 to 1973, the export price was 30 percent higher than the consumer price on average.

Philippine access to the U.S. market increased when the Cuban quota was eliminated in 1960 and its share allocated among other quota holders. Between 1959 and 1962, the quota was increased roughly 25 percent (250,000 tons commercial weight) and by 1974 another 200,000 tons had been added. In addition, domestic consumption was rising steadily. Average annual domestic consumption (production less exports) was 355,000 tons in 1955-60, but had increased to 652,000 tons in the 1969-1973 period.

The combination of increased peso prices for exports and growth in the export quota made exporting more attractive than it had been before 1962. At the same time, growth in population and income increased domestic demand. Substantially higher domestic prices were politically undesirable and inputs at the lower free

market price were impossible if this U.S. quota were to be maintained. A combination of increases in B quotas with moderate domestic price increases was chosen as the way to meet domestic demand. Producers were required to allocate 30 percent of their weekly production to the domestic market (B quota-sugar) until their B quotas was filled. If they did not meet their domestic quota in a given year, sales in the next year went entirely to the domestic market until the previous year's quota was filled. In essence, export sales became a residual market. The domestic market was satisfied before exports were allowed. An important effect was that between 1962 and 1973, exports to the U.S. were below 95 percent of the quota in 4 out of 12 years (Table 2).

IMPACT OF GOVERNMENT POLICIES BETWEEN 1955 AND 1974

A comparison of world and U.S. domestic prices indicates that for almost all of the period between 1955 and 1974, U.S. prices were well above the world price (Table 3 and Figure 2). Duty free access to the protected U.S. market allowed Philippine producers to earn substantially more on exports than if they could sell only to the world market.

At the official exchange rate, domestic prices were roughly equal to export (U.S.) prices until 1961, but from 1962 on Philippine consumer prices were below export unit values but above world prices.⁴ With devaluation and the increased U.S. export quota, a wedge was

TABLE 3

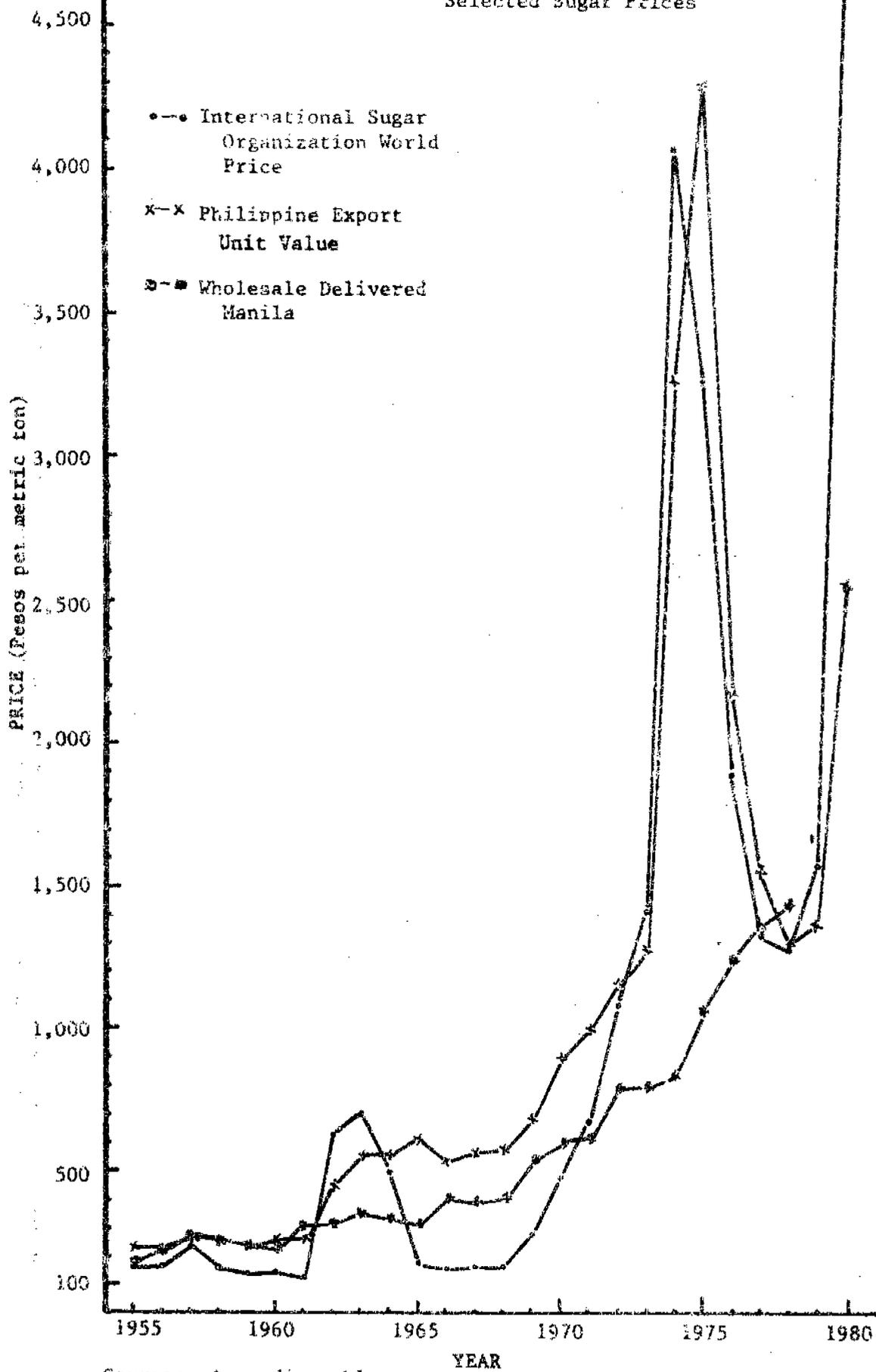
Nominal Tariff Rates, Implicit Tariffs, and
Related Sugar Price Ratios, 1955 to 1980
(percent)

	<u>1955-1961</u>	<u>1962-1973</u>	<u>1974-1980</u>
Nominal tariff rate ¹	65	77	-23
Implicit tariff ²	63	39	-31
U.S. to world	71	106	29
Philippine export to world	63	102	-3
Philippine export to U.S.	-5	4	-2
Wholesale Manila to export	-2	-32	-28
Millgate to export	2	-17	-20

Source: Calculations based on the appendix table.

1. The nominal protection rate is based on the ratio of the millgate price to the world price. The prices are not at the same point in the marketing chain and these figures overstate the protection provided to producers.
2. The implicit tariff is based on the ratio of the wholesale Manila price to the world price.

FIGURE 2
Selected Sugar Prices



Source: Appendix table.

introduced between export and consumer prices. In order to protect consumers from a sharp rise in sugar prices, producers were required to sell a portion of their production into the domestic market in order to export. As a result, consumer prices increased much less than export prices.

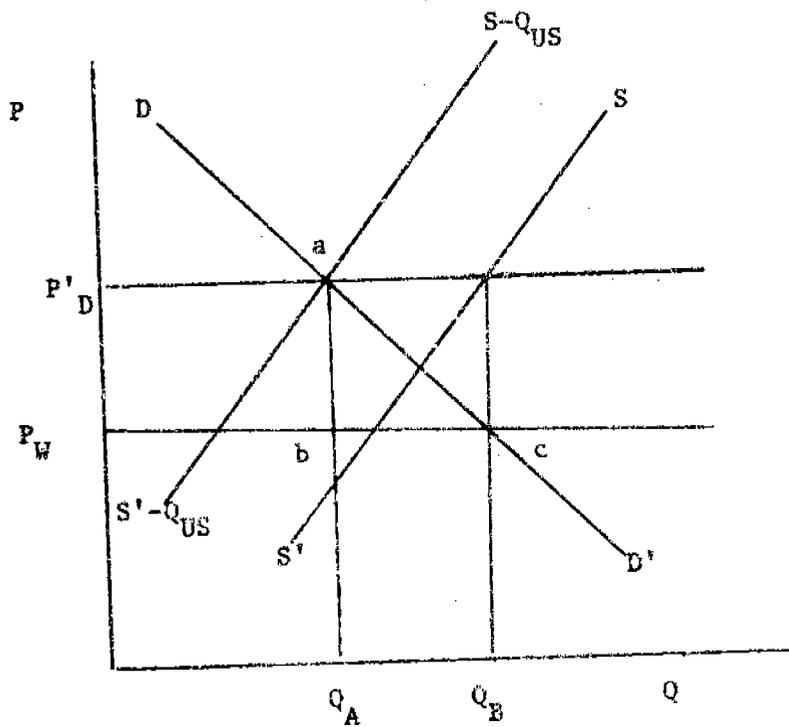
Producer incomes depended upon the level of the export and domestic prices, the shares which they were allowed to sell into each market, and the extent to which domestic production was sufficient to meet both quotas.

In Figure 3, DD' is the domestic demand curve, SS' is the domestic supply curve (the marginal cost curve), $S-Q_{US}$ is the domestic supply curve less the U.S. quota, Q_{US} . P_{US} and P_W are U.S. CIF and world free market prices respectively. If the only domestic policies were the import ban and the export quota, the domestic price would be P'_D and domestic consumption would be Q_A . Producers would earn $P_{US} Q_{US} + P'_D Q_A - AC_B Q_B$ (AC_B = average cost of production at quantity B), consumers would pay $(P'_D - P_W) Q_A$ more for the sugar they consumed than if that sugar were imported at the free market price.⁵

In addition to the export quota and import ban, however, the government had a domestic price ceiling which it met by forcing producers to sell in the domestic market before they were allowed to export. In Figure 4, SS' is again the domestic supply curve and $S - Q_D$ is the domestic supply curve less the domestic quota. Given

FIGURE 3

Demand for and Supply of Philippine Sugar, 1962-1973



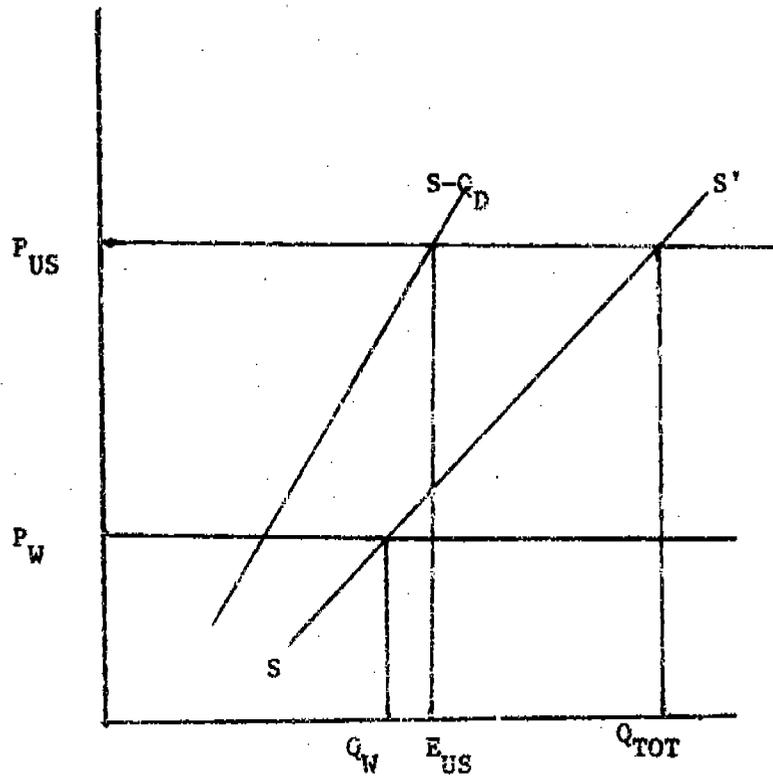
the ban on imports, the domestic quota, and the price of exports (P_{US}), producers want to produce Q_{TOT} and export E_{US} .⁶

If the U.S. quota is equal to E_{US} , the system is in equilibrium and one of the quotas is redundant. If the U.S. quota is greater than E_{US} , it will not be met because producers must sell first to the domestic market. If the U.S. quota is less than E_{US} , the export quotas become binding and quota rents are generated.⁷

During this period, three factors acted to move the system out of equilibrium--growing domestic demand, increases in the U.S. quota, and outward shifts in the supply curve due both to technological changes and input cost reducing policies such as credit and fertilizer subsidies. Domestic demand growth shifts $S-Q_D$ to the left, while supply factors shift SS' and therefore $S-Q_D$ to the right. It is not possible to observe periods when E_{US} was greater than the U.S. quota and quota rents were generated, but in four years between 1962 and 1974, exports were less than 95 percent of the U.S. quota, an indication that E_{US} was less than the U.S. quota.

Four general income distribution or production effects of these policies can be seen. First, U.S. consumers paid more to Philippine producers than if they had imported from the free market; there was a revenue transfer from U.S. consumers to Philippine producers. Between 1955 and 1973, this amount averaged \$53 million per year (1972 dollars). Second, Philippine consumers paid more to Philippine producers than if the free market

FIGURE 4



price had prevailed in the Philippines. This loss of consumer surplus was roughly \$10 million per year (1972 dollars). Third, domestic production expanded beyond what would have been privately profitable if the world price had prevailed. Finally, producers with better than average lands earned excess profits and in some years all producers earned quota rents.

PHILIPPINE SUGAR POLICIES 1974 TO 1982

The end of preferential access to the U.S. market in 1973 led to a major change in Philippine sugar policies. Before 1974, the government had allocated domestic and export quotas, but allowed the private trade to handle the marketing. In response to the termination of the Laurel-Langley Act, the Philippine Exchange Company, Incorporated (Philex), an agency of the Philippine National Bank (the major financial institution for the sugar industry at that time), was designated the sole buyer of sugar from the sugar mills and the sole exporter of sugar.⁸

In contrast to the previous system in which each mill was responsible for marketing its export and domestic quotas, Philex bought all sugar at a single "composite" price--calculated by taking weighted shares of the officially determined "export" (A), "domestic" (B), and "reserve" (C) prices (Table 4).⁹ Philex sold sugar for the domestic market to licensed traders and exported the remainder itself.

The end of the U.S. quota system coincided with record high world prices for sugar and the problems of adjusting to the new situation were temporarily postponed. Because world prices were so high, an additional export tax was implemented¹⁰ and a temporary ban on exports was declared in late 1974 to protect domestic consumers.

TABLE 4

Composite Price and Export Unit Value of Sugar, 1974 to 1982

<u>Date Effective</u>	<u>Composite Price</u>		<u>Average Export</u>
	<u>(₱/picul)</u>	<u>(₱/kg.)</u>	<u>Unit Value</u> <u>(₱/kg., calendar</u> <u>year)</u>
25 October 1974	140.94	2.23	3.25
5 May 1975	115.60	1.83	4.30
26 March 1976	108.75	1.72	2.17
2 December 1976	79.50	1.26	1.55*
13 December 1976	81.50	1.28	1.55*
1 May 1977	90.00	1.42	1.55
1 January 1978	90.00	1.42	1.30
2 April 1979	99.20 (129.5)	1.57 (1.95)	1.30
1 September 1980	112.00 (145.0)	1.78 (2.29)	2.58
1 September 1981	113.00 (144.8)	1.75 (2.29)	
1 February 1982	168.80	2.66	

Source: NASUTRA

Note: Figures in parentheses include additional payment to millers and planters as a share of NASUTRA profits.

*1977 price.

GCN

World sugar prices began falling in 1975 and by 1977 were only 27 percent of 1974 levels. In response, the composite price was lowered from 2.23P/kg. (its original level) to 1.28P/kg. in December of 1976 and then increased to 1.40P/kg. in May 1977 where it remained until world prices began rising in 1979.

Despite the reduction of the composite price, export unit values in most of 1977, 1978, and 1979, were lower still. In order to maintain producer prices above world prices, Philex made large loans from domestic and foreign banks in 1977, 1978, and 1979.¹¹

Despite high world prices in 1973 and 1974 (or perhaps because of them), domestic stocks of sugar were built up and by 1975/76 had reached a 1970's peak of 1.68 million tons.¹² The next two years saw record exports (most of the increase went to Russia and China) and stocks were drawn down somewhat. Unfortunately, these exports came in years when world prices were at their lowest and export revenues did not increase nearly as much as export quantity. As a result of the substantial losses incurred, government control of sugar was transferred in 1978 to a newly constituted policy making body, the Philippine Sugar Commission (Philsucom)¹³ and day to day operations were given to the new National Sugar Trading Company (NASUTRA).

Philsucom and NASUTRA were saddled with domestic stocks that were still large by historical standards and the need to repay the large loans made previously. A fortuitous rise in world prices in

1979 and 1980 allowed NASUTRA to draw down its stocks profitably (exports in 1980 were the second largest ever recorded), and in 1980 NASUTRA entered into long term contracts of three and four years to sell half of total exports at roughly 51.8 U.S. cents per kg. (P3.7 per kg.). Although that price was only half of the highest price reached in the spot market in 1980, it proved to be a remarkably good bargain because world prices fell to about 22 cents per kg. in 1981 and remained at or below that level through 1982.

As world prices began increasing in 1979, composite prices were raised, first in the middle of the 1978/79 crop year and then again in the beginning of the 1979/80 crop year. In general, Philsucom's price policy was to change the export price component of the composite price with changes in the world price. Because of the need to repay the loans, however, world price increases were not fully passed through to producers. Fifty percent of NASUTRA's profits were kept to pay off the loans (changed to 20 percent in December 1981) and fifty percent paid to planters/millers.¹⁴ By March 1981, the president of NASUTRA reported that P1.5 billion of the loans (approximately 60 percent) had been repaid (Sugar News, March 1981).¹⁵

IMPACT OF CURRENT SUGAR PRICE AND MARKETING POLICIES

The most dramatic impact of government policies in this period is in the decline in nominal protection to producers and the transition from implicit taxation to implicit subsidization of sugar consumers (Table 3). On average, producers received only ~~74~~⁷⁷ percent of the world price during this period while consumers paid only 69 percent of the world price. These averages, however, conceal large fluctuations in nominal protection rates and implicit tariffs during the period due to large changes in world prices. Producer and consumer prices were above world prices in three years out of seven. In 1982 and 1983 producer prices are again above world prices (Figure 5).

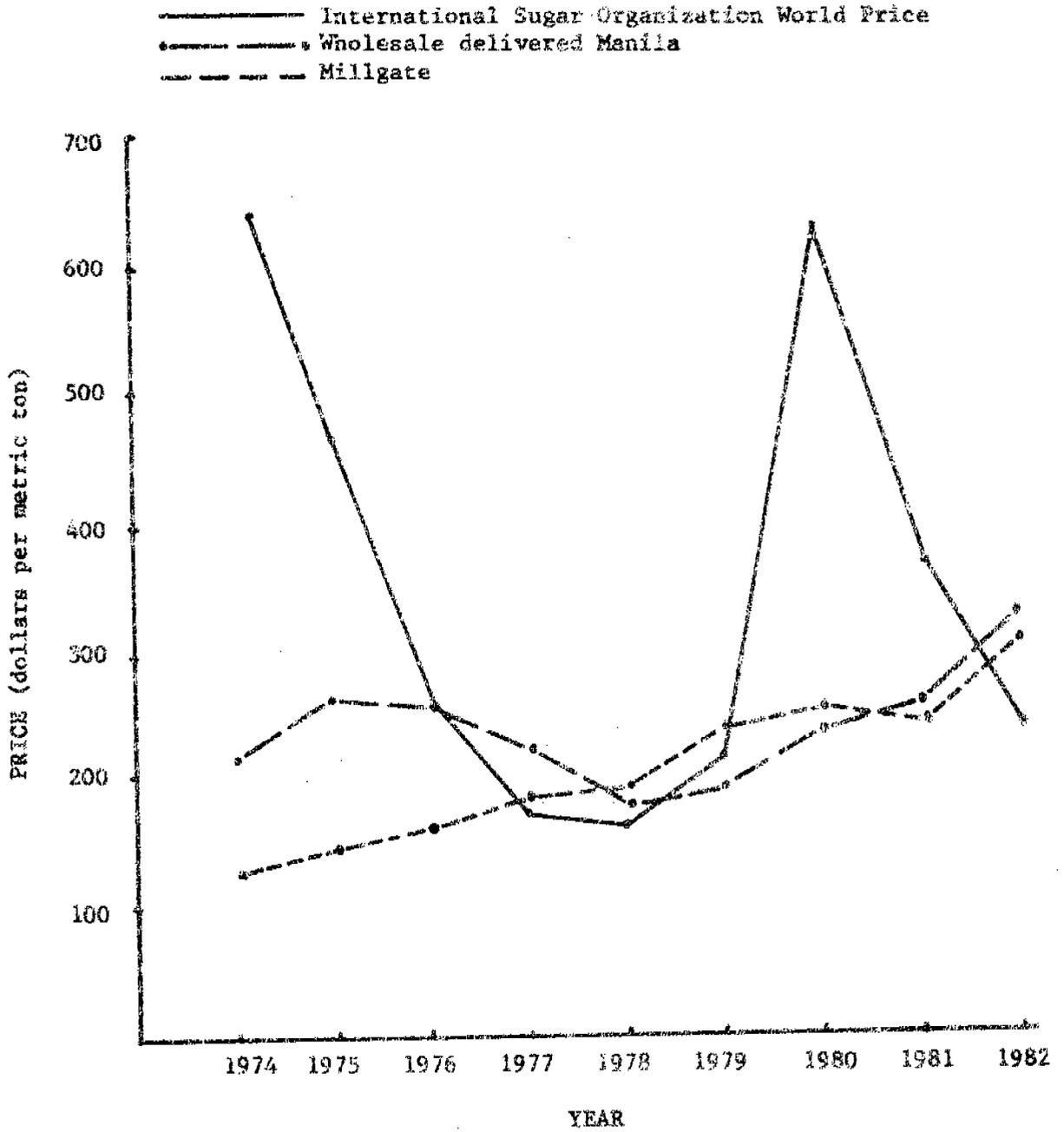
Of the various arguments for the government takeover of domestic and international marketing, three are the most common--government control reduces the variability in prices facing consumers and producers, makes it possible to negotiate favorable long term contracts, and raises the average price producers earn. It is useful to examine each of these arguments in turn.

Reduction of Price Variation

Price variability affects consumers and producers of sugar in opposite ways. Both face relative price effects (a sugar price decline makes other commodities relatively more expensive and

FIGURE 3

Producer, Consumer, and World Sugar Prices, 1974 to 1982



Source: Appendix table.

makes sugar less profitable than other crops) and income effects (an increase in the sugar price reduces the real income of sugar consumers and increases the real income of producers). Consumers make their buying decisions based on the current price and are therefore able to adjust their purchases to an unexpected change in the price. Producers, on the other hand, make their planting decisions on the basis of expected price, not the actual price at harvest time.

It is not sufficient that there be social benefits from stabilization; the benefits must be greater than the social costs of running the stabilization policy. Probably the largest cost is the opportunity cost of the foreign exchange loans made by the government to cover the period when export prices are below producer prices. Roughly US\$376 million were borrowed between 1977 and 1979 to subsidize producers during this period, about one and a half times the value of annual sugar exports in those years.

Much has been written in the economics literature in the last eight years about the impact of consumer price stabilization on consumer welfare, but few definitive conclusions have been reached. Probably the most that can be said is that if there are gains, they arise more from the impact on real income variability than on price variability. Thus stabilization of wildly fluctuating rice prices would increase consumer welfare in the Philippines more than stabilization of wildly fluctuating sugar prices because rice purchases are a larger share of expenditures than sugar.

Three potential gains on the producer side exist, all of which arise because of divergences between private and social profitability. One possibility is that capital markets are distorted so that the profitability of lending to sugar growers is greater than the opportunity cost of capital, but because of the distortion, lenders won't supply capital to sugar growers. In this case, producers are forced to rely on their own financial resources in times when prices are low and produce below the optimal level. Another possibility is that producers are more risk averse than socially optimal and again produce too little. A final possibility, related to the second, is that because of price variability, producers adopt new technology at a rate slower than the optimum.

Although it is possible to construct theoretical situations based on these divergences between social and private returns, it has been difficult to identify them empirically for any crop or country. It seems especially unlikely that these divergences would be relatively more important in sugar than in other agricultural crops in the Philippines. Sugar producers are among the largest and most commercial of agricultural entrepreneurs. They receive the bulk of all credit provided to the agricultural sector, use a quarter of all fertilizer in the country and own a large number of the agricultural machines in the Philippines. There is little evidence that producers of sugar are excessively risk averse or that decreases in sugar price fluctuations would increase average

sugar production. Thus it is not clear that many benefits arise when the government uses its scarce foreign exchange borrowing capacity to stabilize either consumer or producer sugar prices.

Improved Bargaining Position in the Export Market

The decision of NASUTRA to make long term contracts in 1980 has proven to be an excellent one. Shortly after the contracts were made, world market prices fell precipitously. As a result, Filipino producers enjoyed prices in 1982 and will enjoy prices in 1983 roughly double the free market price.

The record over the whole period of government control of marketing is not so favorable. During the period 1974 to 1980, the average unit value of Philippine exports was somewhat less than the average world price. Furthermore, during the Philex period, export quantities and prices were inversely correlated. Record stocks were accumulated when world prices were at their highest (1974)¹⁶ and record quantities were exported when world prices were at their lowest (1977). Thus over the whole period of government control, export prices have been somewhat above world prices on average but of three critical export contract decisions, two were made incorrectly; stocks were built up rather than drawn down when world prices were high, and stocks were sold when prices were low.

There are two reasons why government control of exporting might be desirable--to optimally restrict export supply, and to

take advantage of economies of scale in gathering market information.

If the world demand for Philippine sugar is downward sloping, that is, Philippine exports have some impact on world prices, then it is theoretically possible to reduce Philippine exports, induce a rise in world prices and increase export revenues. It is unlikely, however, that Philippine exports have any long run impact on world markets. Free market trade is about 15 million tons and Philippine exports are only one million tons or a little over five percent. Thus restricting exports does not seem a likely way to increase export revenues.

It is also difficult to imagine why NASUTRA should be in a better position to predict long run price levels than is the private sector. If the private sector were free to export, it should be able to develop the necessary expertise to predict future prices. Even if for some reason NASUTRA were able to do a better job of forecasting, it would make most sense for that information to be provided to the private sector to make its own contract decisions.

Ultimately, someone must decide when and how to sell sugar abroad. No one is infallible and mistakes in judgment will undoubtedly take place. If decision making is decentralized, the costs of a wrong decision accrue only to the person who made the decision. If that decision making is concentrated in one organization, the cost of a mistake, such as the decision by Phillex to

build up stocks at a time of record world prices, is incurred on all sugar traded or that could have been traded.

Increased Prices to Producers

Unless the government wants to finance the subsidy to domestic producers previously provided by the preferential access to the U.S. market, the only way the government can raise producer prices relative to the world market is to either sell abroad or sell to consumers at increased prices. Given the arguments above, it seems unlikely that NASUTRA would be able to use market power to increase long run export prices. Furthermore, if it could, the mechanism would be reduced exports. Reduction in supply requires a drop in domestic production quotas or paying producers lower prices.

It would be politically undesirable to raise consumer prices solely to increase producer incomes and the evidence suggests that NASUTRA has not resorted to this. In the 1962 to 1973 period, consumer prices were 140 percent of the world price on average. Between 1974 and 1980, consumer prices were only 69 percent of world prices. The impact of government control has been to lower, not raise, consumer prices. In order to finance this low consumer price, the producer price has been kept below the world price.

Summary

NASUTRA's good decision in making long term contracts was at least partially offset by Philex bad decisions in timing of export and stock accumulation. The Philippines does not control a sufficient amount of world trade to affect world prices. Neither Philippine consumers nor producers appear to gain much from price stabilization, but consumers gain and producers lose because the prices they face have been kept well below world prices. It is not clear whether the gains to consumers are offset by the losses to producers. It thus appears that either from a theoretical or an empirical standpoint, the long run overall gains from government control of sugar marketing are not large, but that there have been large income transfers from sugar producers to sugar consumers.

(At the time this paper was reproduced, the final section on comparative advantage was not yet complete. A supplementary handout will be available at the Workshop.)

FOOTNOTES

¹The world free market includes all sugar not traded under special government to government arrangements such as those between Cuba and the European socialist countries. EC exports of subsidized sugar are to the free market, but its imports of sugar from ACP countries are not from the free market.

²See Castro, 1965, for an extended discussion of the early history of Philippine-U.S. sugar relations.

³Sugar exporters were required to convert a part of their foreign exchange earnings to pesos at the old rate through 1965.

⁴The magnitude of the difference between consumer and world prices depends upon the price at which sugar could have been imported into the Philippines. If the International Sugar Organization world price is used domestic prices were 39 percent above world prices. If an average of Japanese, Hong Kong and South Korea imported unit values are used as the world price, domestic prices were only 18 percent higher.

⁵Consumer also lose the standard dead weight loss triangle abc.

⁶This assumes that average revenues at Q_{TOT} are greater than average costs and that production decisions are made with the U.S. price as the marginal revenue. If producers base their production decisions on a weighted average of P_{US} and P_D , production will be somewhat less.

⁷In other words, P_{US} is greater than the marginal cost when production equals the sum of the U.S. and domestic quotas. These quota rents must be seen as occurring within the context of the whole constellation of Philippine and U.S. sugar policies. The maximum rents could be earned by paying producers world prices and if production was not sufficient to meet domestic demand and the U.S. quota, buying foreign sugar to make up the difference. The U.S., however, would not allow U.S. imports of non-Philippine sugar to meet the Philippine quota, nor would it allow Philippine imports of foreign sugar to meet Philippine domestic demand and sales of Philippine sugar to meet the U.S. quota. The rents referred to in the text arise because, given the ban on imports and the domestic sales requirement, producers want to sell more sugar to the U.S. market than allowed by the U.S. quota.

⁸The molasses trade remained in the hands of the private sector.

⁹Since 1974, the reserve has lost any practical significance since control of all sugar is in government hands. Its price contribution in the composite price is identical to the export price. Reserve sugar is sometimes used to meet ISA stockholding commitments.

¹⁰The basic export tax was 6 percent. The new tax, called a premium duty, was 20 percent of the difference between the CIF price and a base price, originally set equal to 80 percent of the FOB value of exports for February 1974. The taxes applied to centrifugal and refined sugar and molasses.

Neither the export tax nor the premium duty appear to have been fully collected. The premium duty was paid only in three years, 1974 to 1976. Between 1970 and 1977 total revenues from export taxes averaged only 1.8 percent of the value of exports.

¹¹ P2.78 billion were reportedly borrowed; P332 million from the International Monetary Fund commodity price stabilization fund, P1.025 billion from the foreign banks, P1.3 billion in the form of credit lines from the Philippine National Bank and the Republic Planters Bank, and an P18 million credit line from the Traders Royal Bank (Sugar News, March 1981).

¹² These stocks were equal to 8 percent of total world exports of sugar.

¹³ The authorization for Philsucom was contained in Presidential Decree No. in 1974, but Philsucom was not organized until 1978.

¹⁴ The planters/millers share of the export profit was distributed in the following way.

First, the NASUTRA export costs was calculated by adding a margin of P0.316 per kg. (P20/picul) to the export price component of the composite price. The difference between the world price and this export cost, called the export differential, was shared between NASUTRA and the millers/planters.

For example, for the 1979/1980 crop season, the following figures were used to calculate the basic composite price:

	<u>Price</u> <u>₱/picul</u>	<u>Percent share</u> <u>in the composite</u>	<u>Contribution to</u> <u>the composite</u>
Export sugar	90	50	45.0
Domestic sugar	110	46	50.6
Reserve sugar	90	4	3.6
Composite price			99.2

If the average export price were ₱200 per picul (approximately 45 percent per kg.) the export differential would be

export price	200.0
less basic composite price	99.2
less NASUTRA margin	20.0
export differential	89.8

With the initial sharing arrangement, fifty percent of ₱44.9 would be added to the export price component of the composite price and the new composite price would be ₱121.65. The differential between the two composite prices is split between millers and planters in proportion to their production sharing arrangement.

¹⁵The president of NASUTRA, Ambassador Roberto Benedicto, is also Chairman of Philsucom and chairman of the Board of Directors of the Republic Planters Bank which took over the bulk of financial services for the sugar industry in 1978.

¹⁶A part of this accumulation was undoubtedly due to the ban on exports. The ban was designed to protect consumers, but it is difficult to see why record stocks were necessary for that reason alone.

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APPENDIX TABLE

Selected Raw Sugar Prices.
(Pesos per metric ton)

Year	1 International Sugar Organi- zation World Price	2 New York CIF	3 Philippine Export Unit Value	4 Wholesale Delivered Manila	5 Millgate
1955	143	240	226	176	207
1956	154	247	222	204	218
1957	227	253	236	261	243
1958	154	255	244	249	243
1959	131	253	238	227	232
1960	138	256	249	221	250
1961	119	253	259	301	325
1962	623	436	441	307	384
1963	696	633	555	350	401
1964	492	539	550	334	422
1965	174	526	612	314	396
1966	151	548	527	408	479
1967	161	572	562	395	489
1968	159	593	569	404	496
1969	275	612	589	547	572
1970	478	950	897	602	709
1971	669	1,114	998	607	823
1972	1,074	1,258	1,152	791	987
1973	1,401	1,442	1,265	787	1,052
1974	4,453	4,258	3,250	826	1,458
1975	3,244	3,567	4,298	1,060	1,955
1976	1,886	2,171	2,168	1,240	1,763
1977	1,323	1,791	1,547	1,374	1,331
1978	1,275	2,268	1,295	1,439	1,423
1979	1,576	2,333	1,362	1,739	1,568
1980	4,668	4,902	2,575	1,850	1,953
1981	2,793	-	-	1,850	1,790
1982	2,055	-	-	1,850	2,660

Cont. Appendix Table.

Notes:

1. The International Sugar Organization spot price.
From FAO.
2. Bulk raw sugar, landed New York with applicable duties paid.
3. The value of centrifugal sugar exports divided by the quantity.
4. Wholesale price for sugar (ordinario 97⁰) basis buyers ex-central, delivered Manila. For 1955 to 1978, from Philippine Council for Agriculture and Resources Research (1980), "Data Series on Sugarcane Statistics in the Philippines." From 1979 to 1981, from Domestic Marketing Office, NASUTRA.
5. For 1955 to 1973, a weighted average of the export prices for sugar, Victorias ex-warehouse, and the wholesale price presented in column four. The weights are the share of production being exported and one minus that share. From 1974 to 1980, the composite price. Prices and production are for the crop year ending in the year indicated, exports are for the calendar year.



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