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RICE PRICES AND RICE PRICE POLICY

by
revised 1907
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Rice Prices and Rice Price PolicyI. Introduction

Rice and palay prices vary seasonally as do prices of other agricultural crops with a seasonal harvest pattern. Reflecting demand and supply influences in the domestic market, rice and palay prices exhibit longer run cyclical variations. In turn, world prices can influence domestic price and supply if the two markets are not insulated from each other. And finally, to the extent that communication is imperfect between markets, or other marketing constraints exist, prices will vary between markets.

The Government of the Philippines has always kept a close watch on these rice and palay price movements. Considering the importance of rice to the economy, if large swings were allowed to persist, their effects both on consumers and producers would result in economic and political repercussions. (The Government recognizes that policy objectives to minimize these repercussions can be fostered through regulation of the prices. Through the years, regulation has included an extensive variety of economic tactics such as tariffs, production input subsidies, floor and ceiling price guarantees, and other indirect procedures.)

The authors are indebted to Meliza Agabin, Aurora Galindo and Carmencita Rocio for invaluable research assistance while preparing this paper. Amelita Manibo and Rosalinda Culla spent long hours in typing and carefully proofreading successive drafts.

In this chapter an examination will be made of the historical price performance from which a rice price policy will be developed.^{1/} Such a policy must be sufficiently flexible to permit maintaining the relative rice price stability so essential a part of the infrastructure if economic progress and related economic and social objectives are to be realized. This will be approached in the following order: (1) Inter-temporal prices, (2) inter-spatial prices, (3) price and quality, and (4) a rice price policy.

II. Inter-temporal Prices

1. Secular price variations

a. Domestic long-run price movements. Secular price movements for the wholesale price of milled rice in the Manila market from 1914 to 1970 are shown in Chart VIII-1. Before 1941, prices dropped gradually over the entire period at the annual average rate of 1.9 percent, with major declines evident after World War I and during the depression of the 1930's.^{2/} Americans were interested in low costs in export industries so tariffs remained low with rice being imported in years of poor harvest.^{3/}

^{1/} Government organization to implement this policy is discussed in Chapter XI.

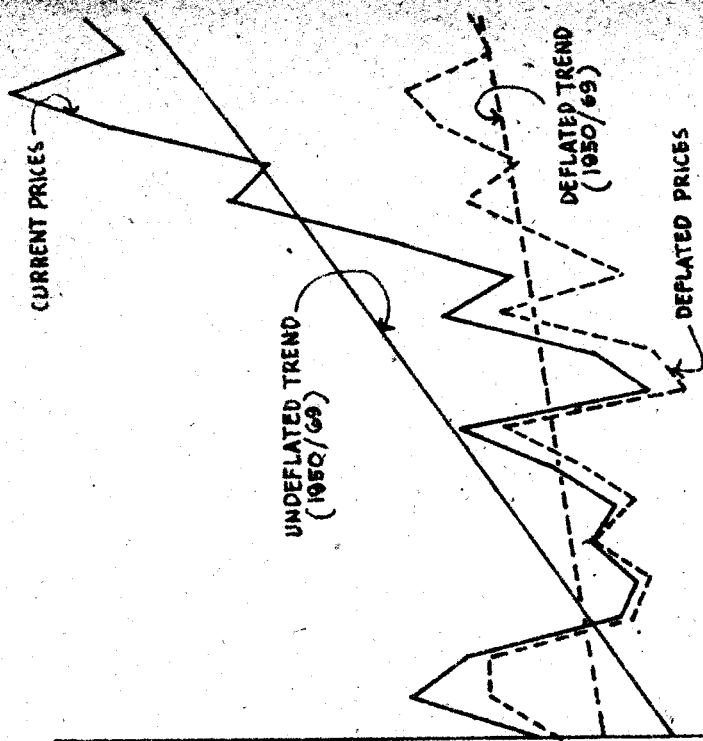
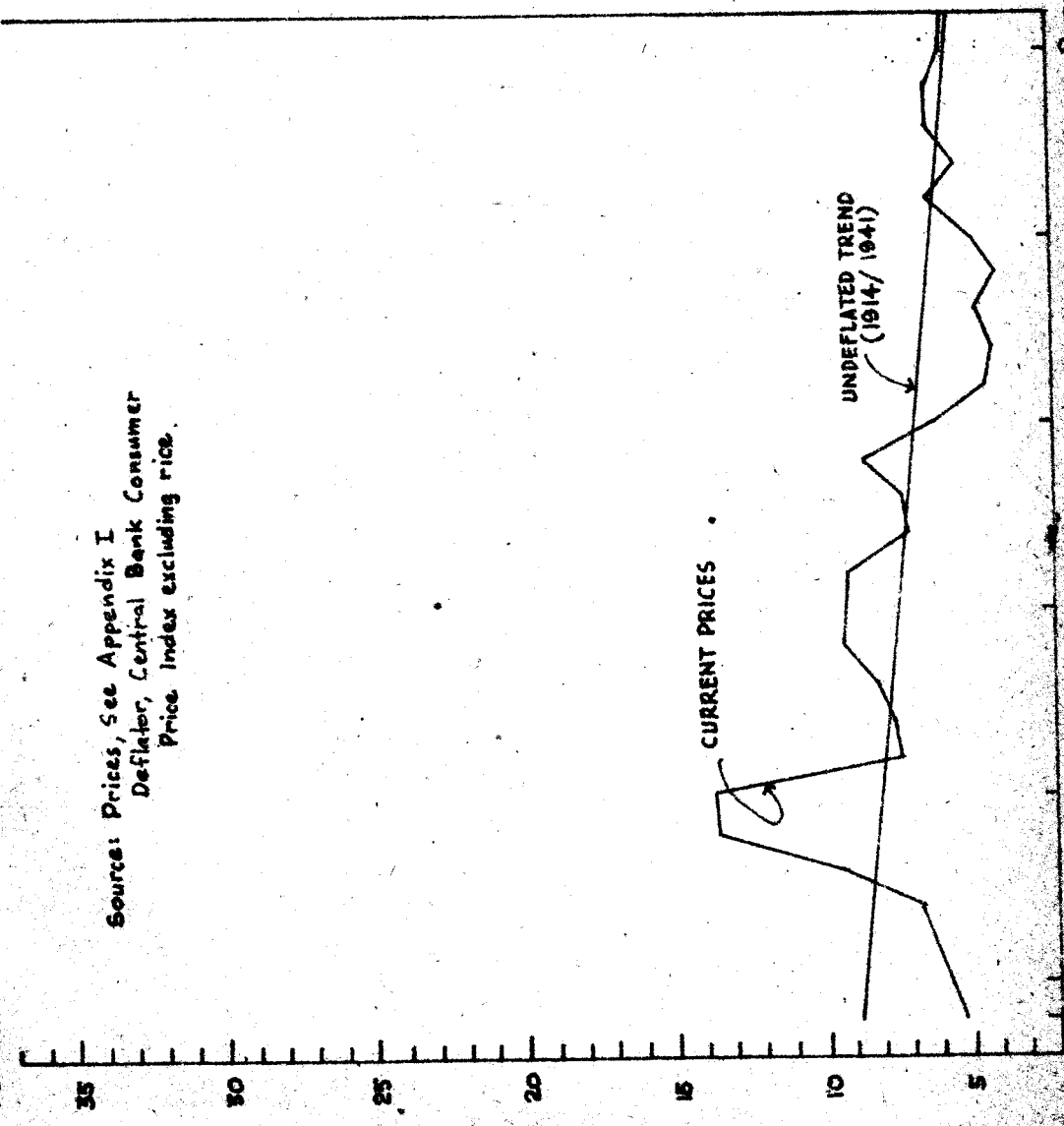
^{2/} Prices in 1925 and before were reported only as an average of all grades and rice varieties in the market. They are probably only loosely comparable with prices after 1925 which were an average of the prices of Macan 1st and 2nd class. In this long-term evaluation, this average price has been taken as a proxy for "the rice price" as different varieties and grades tend to move together maintaining relative price differentials.

^{3/} Gerardo P. Sicat offers another explanation. He points out that the rapidly increasing agricultural production from 1902-1918, induced by increased demand from the opening of the American market on a preferential basis to Philippine exports, slackened between 1918 and 1938. As exports fell from their high levels, the price of rice also went down, an offshoot of the reduced consumer purchasing power. See "Philippine Economic Growth Since 1902: An Overview," University of the Philippines, mimeographed Discussion Paper #67-1 (November 17, 1967), pp. 4-8.

CHART VIII-1 MONTHLY AVERAGE WHOLESALE PRICE OF MILLED RICE IN MANILA MARKET 1914 / 1970

Source: Prices, See Appendix I
Deflator, Central Bank Consumer
Price Index excluding rice.

PRICE IN PESOS
PER CAVAN



(4)

Since World War II, prices have been secularly increasing.^{4/}

Using current money terms to compare with the prewar period, the annual average rate of price increase has been 3.7 percent a year from 1950 to 1969. In deflated terms, the rate of increase has been very nominal, only approximately 0.9 percent a year. This increase occurred almost entirely since the devaluation in 1962. Similarly, another steep rise in money terms is expected after the institution of the floating exchange rate in 1970.

Since 1956, while its year to year fluctuations have differed somewhat from those of other prices, the average annual rate of increase in the Manila rice price has been less than 1 percent greater than for prices of the other goods in the Consumer Price Index (CPI).^{5/} The rice price index (1955 base) in mid-1970 was only 6 percent higher than the index for other goods, as shown on Chart VIII-2.

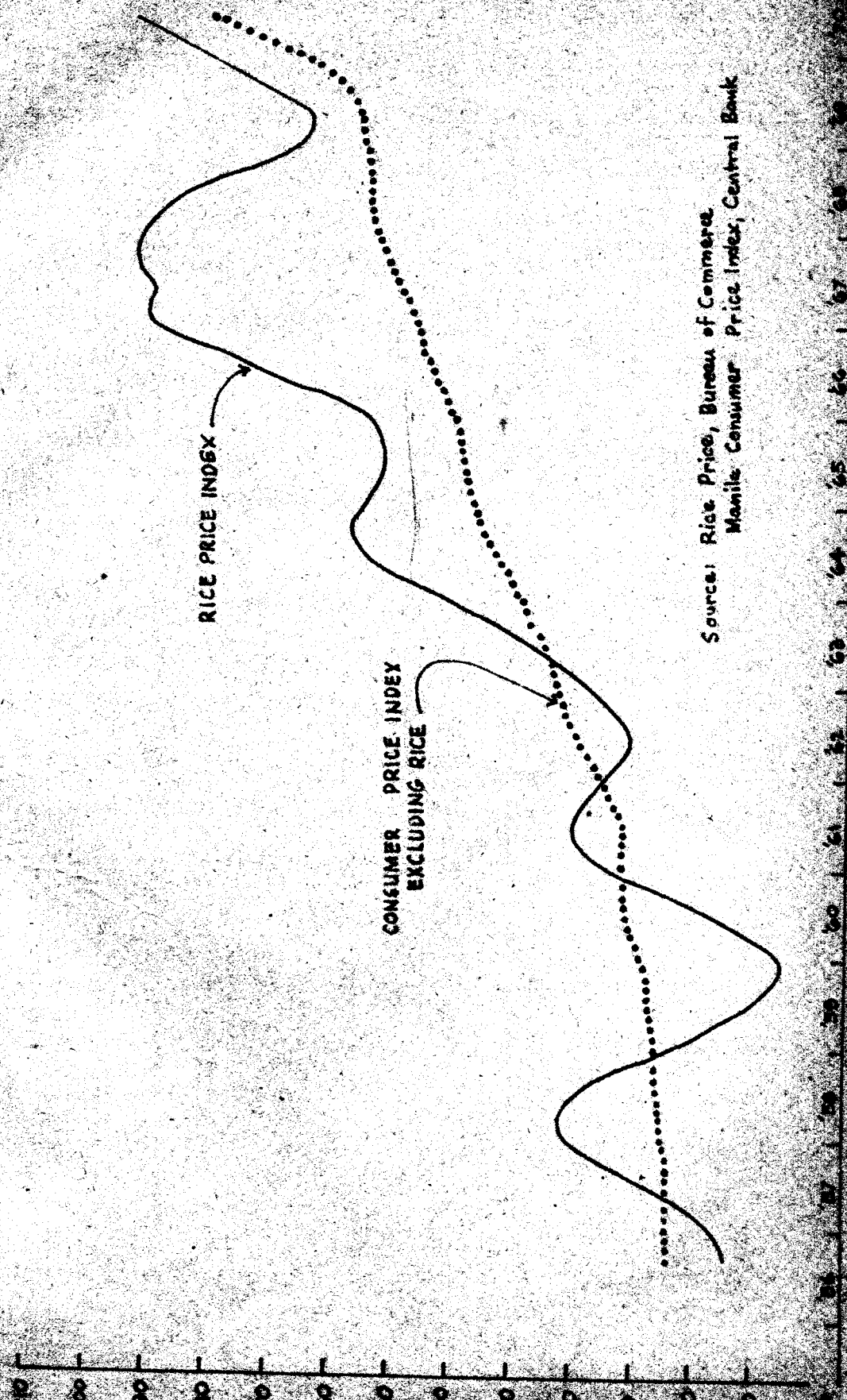
Some students of cyclical movements will undoubtedly unravel the reason for the cyclical nature of rice price movements. (Cyclical periods of rice prices appear approximately 3 years apart while the trend of prices of all other goods in the CPI is almost linear. ~~Obvious~~ possible factors such as elections, weather, and prices of important substitutes show no consistent correlation with the rice price cycles. If the answer could be determined, it could guide to action that might help reduce price fluctuations.

^{4/} More precise price statistics are available after the mid-1950's, with sampling methods and classification procedures being improved over the years. A more complete summary of sources of price data is shown in Appendix VIII-1.

^{5/} In the Central Bank Manila CPI, rice price refers to 1st class Waga and Elon-Elon varieties.

CHART VIII-2

COMPARISON OF TRENDS (12-MOS. MOVING AVERAGES) OF INDICES
FOR RICE PRICE (MACAN 2ND CLASS - MANILA MARKET) AND
THE MANILA CONSUMER PRICE EXCLUDING RICE



Source: Rice Price, Bureau of Commerce
Manila Consumer Price Index, Central Bank

b. Insulation from world prices. In recent years, rice prices have been effectively insulated from world price fluctuations by high tariffs and import restrictions. As will be seen from Chart VIII-3, peaks and troughs of world price trend cycles have coincided with those of domestic prices on an apparently uncorrelated basis.^{6/} For example, both sets of prices reached cyclical lows simultaneously in early 1960 but after that the cyclical variations showed no further parallel movements until 1966. Then after the peaks converged again in 1967/8, the cyclical movements of the two price trends separated in 1969.

This divergence of domestic and world rice prices is illustrated from a different viewpoint on Chart VIII-4 where average monthly export prices FOB Bangkok are compared with Manila wholesale prices adjusted to an FOB Manila basis. Since 1957, except for short periods in 1962 and 1968, equivalent domestic FOB prices have been considerably higher than Thailand export prices. This has had several advantages during the period of deficit production in the Philippines. The higher Philippine prices gave more stimulation to production than would otherwise have been the case. Also, with higher market prices, NARIC and RCA were often able to sell imports in domestic markets at a profit.

Different price policies would be called for under conditions of self-sufficiency or surplus, particularly if world prices were extremely depressed as was the case in 1970 and 1971. But this does not suggest that domestic rice prices should be allowed to adjust to world levels. In 1970,

^{6/} From this point on, Macan grade 2 or an equivalent ordinary quality is used as proxy for the "rice price".

CHART 7 COMPARISON OF INDICES OF TRENDS OF RETAIL PRICE (MACAN 2ND CLASS - MANILA MARKET) AND THAILAND EXPORT PRICE (A-1 SUPER FOB BANGKOK), 1958-1970 (1957 = 100)

Source: Manila Prices: Bureau of Commerce
Thailand Prices: Rice Committee, Board of
Trade of Thailand (as reported by
Delane Walech)

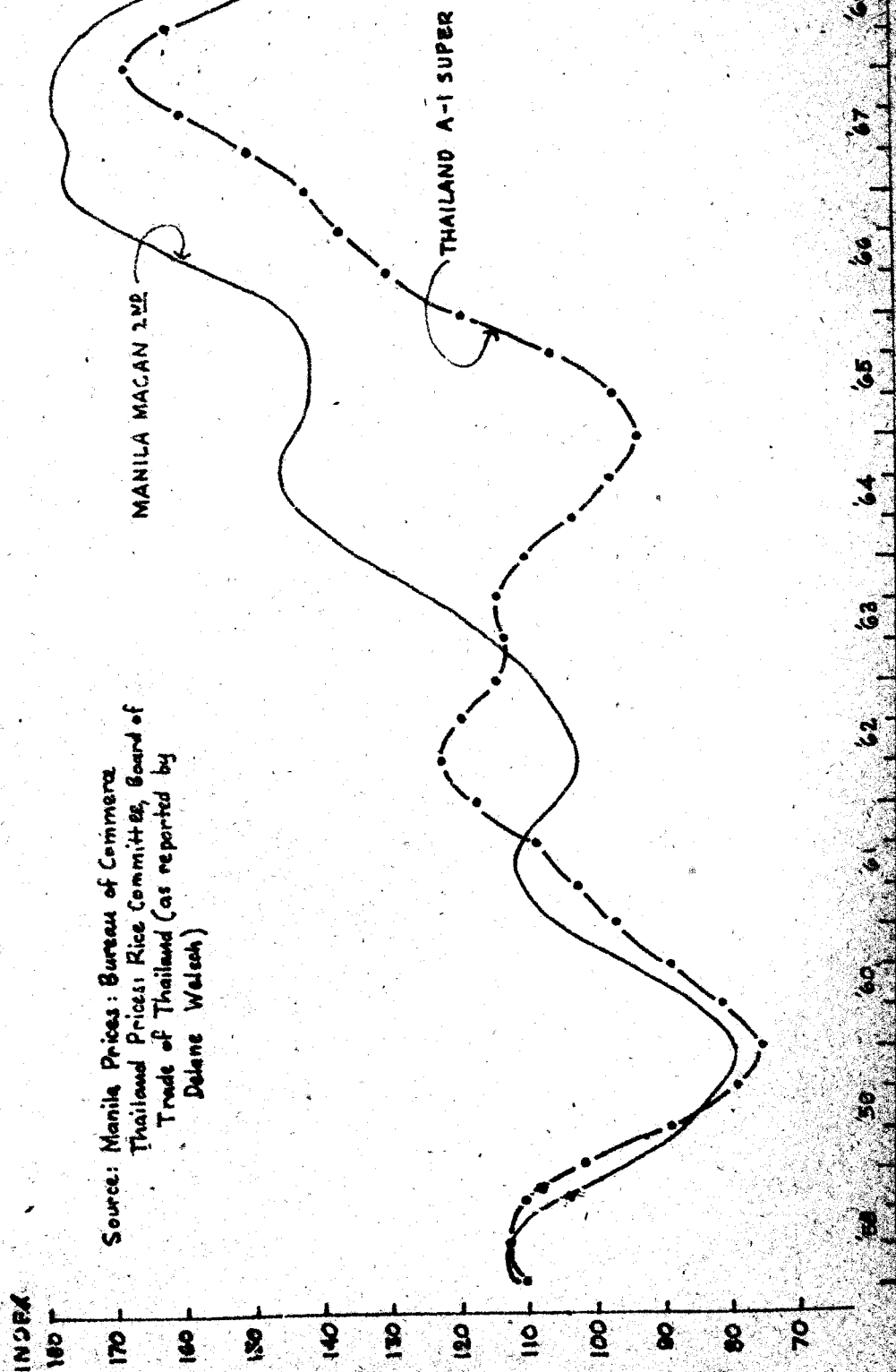
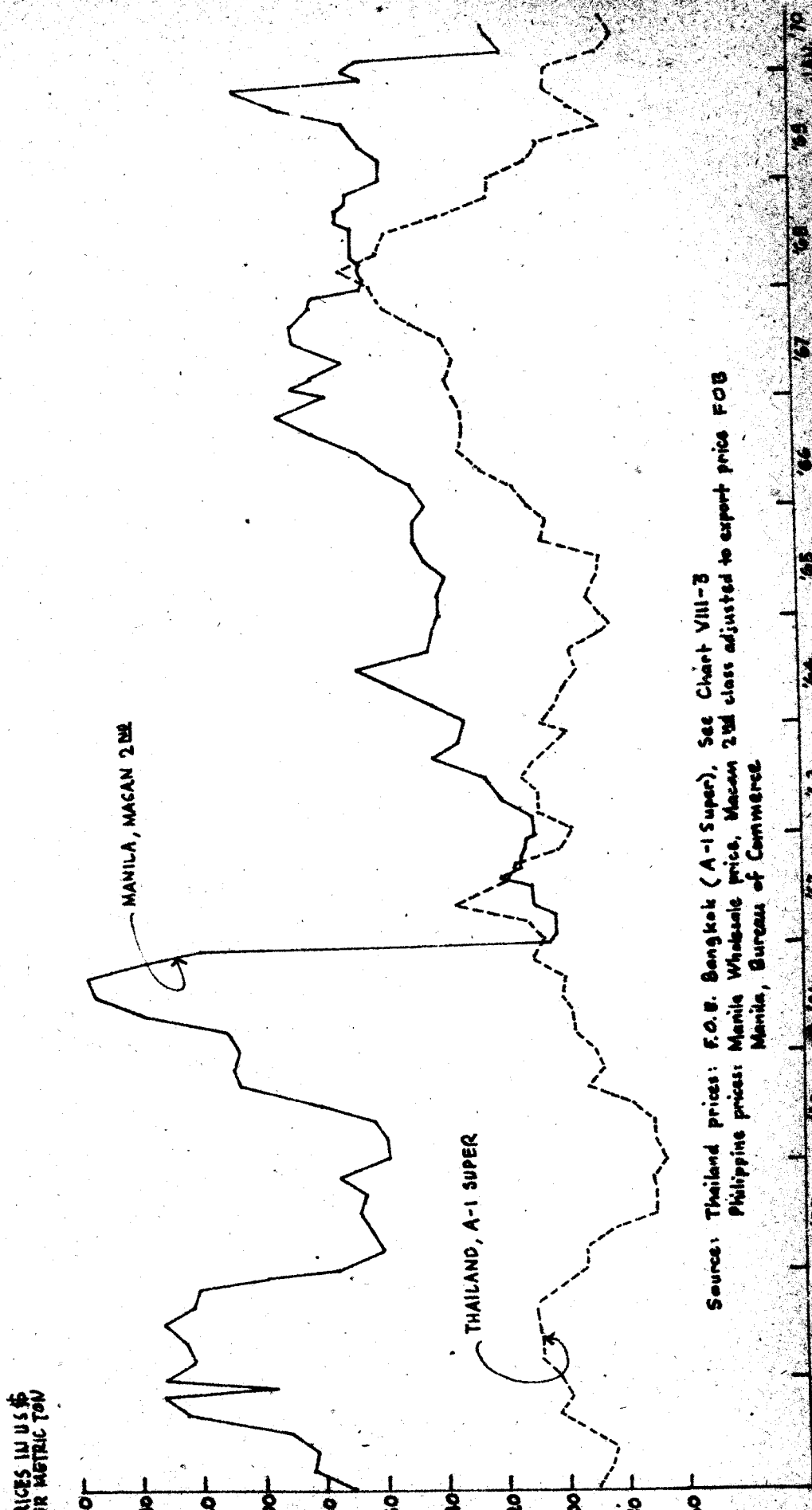


CHART VIII-4
COMPARISON OF EXPORT PRICES, THAILAND AND THE PHILIPPINES, 1957/1970
(PRICES IN US \$ / METRIC TON)



Source: Thailand prices: F.O.B. Bangkok (A-1 Super), See Chart VIII-3
Philippine prices: Manila Wholesale price, Macan 2nd class adjusted to export price FOB Manila, Bureau of Commerce

with low world prices, free importation could have tempered inflationary tendencies. A radical decline of rice prices relative to other prices, could have reduced rice production incentives and aggravated the rice deficit and drain on foreign exchange experienced in 1971.^E

c. Regional price movements. On the regional level since 1957, retail prices of rice in all the major trading centers have increased secularly at an annual rate of approximately 6 percent. In real terms, this annual increase was only about 2 percent (1 percent in Laoag), see Chart VIII-5. This rise in the rice price relative to other prices is one of the factors tending to mask the effect of a small income elasticity of demand for rice observed on cross-sectional studies.^{7/}

This similarity in different markets of the rate of price increase is indicative of the close inter-relationship of the separate markets in the longer run. This inter-dependence is less obvious in the shorter run. For example, in 1962 the average price in Cotabato was only 6 percent above that in Iloilo, the differential climbing to 13 percent in 1968. However, this price difference is much less than those observed between major population centers in Indonesia in the early 1950's. Average prices in some years were about 50 percent higher in cities in Sumatra and Borneo than in Djakarta.^{8/}

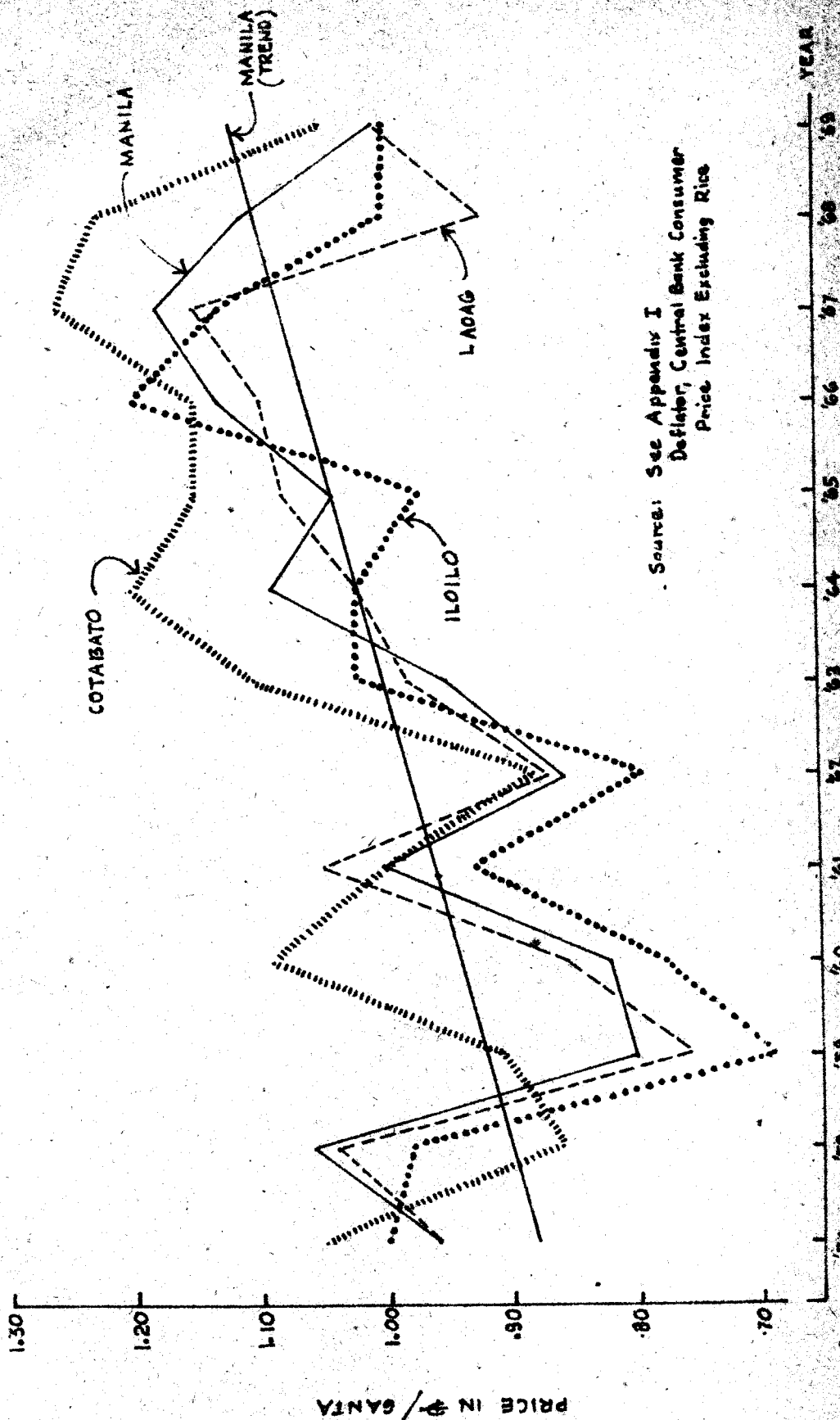
d. Relative price movements of rice and substitutes. On a secular basis from 1958 to 1969, the price relationships have changed very

^{7/} See Chapter IV, page ____.

^{8/} Leon Mears, Rice Marketing in the Republic of Indonesia, Pembangunan Press, Djakarta (1961), p. 109.

CHART VIII-5

AVERAGE ANNUAL RETAIL RICE PRICES IN SELECTED CITIES, 1957/1969
(IN CONSTANT 1957 PRICES)



Source: See Appendix I
Deflator, Central Bank Consumer
Price Index Excluding Rice

elastic between rice and two important substitutes, corn (in the Visayas and Mindanao) and wheat flour (in metropolitan areas), as shown on Table VI. However, on a year to year basis relative prices have changed appreciably, a factor that must be taken into account in estimating annual rice deficits or surpluses. As a percentage of Manila rice price, wheat flour price in Manila was 156 percent in 1960 but declined to 85 percent in 1967. On the other hand, corn price in Cebu ranged from below 50 percent to over 70 percent (1963).

Unfortunately there have been no definitive studies of the elasticity of substitution between rice and corn or wheat to provide guidance as to the importance of the relative price changes on rice consumption. However, based on studies in Indonesia, where carbohydrate eating habits show many similarities, high elasticities of substitution have been found in parts of the country between rice and both corn and wheat.^{2/}

2. Seasonal price variations. It would be expected that rice prices would be influenced seasonally by the harvests. From the economic viewpoint, the low to high price range should allow for costs of holding -- including risk from uncertainty -- and normal profit, if the private sector is to be induced to continue performing the marketing function of holding between harvests. With different harvest periods throughout the country, regional price patterns may differ to some extent. Knowledge of seasonal price variations is essential to the trader (including the farmer-trader) in his decisions to buy, sell and hold stocks. The Government also needs this information for the rational development of its rice price policy.

^{2/} See C. Peter Timmer, "Estimating Rice Consumption," Bulletin of Indonesian Economic Studies, Canberra, Australia (July 1971), pp. 70-71.

TABLE VIII-1

Relationship of Prices of Wheat Flour and Corn to the Price of
Rice, 1958/1970

Calendar Year	Manila Wholesale Prices (P/56 kgs)		Retail Price (P/panta)		Price as % of	
	Milled Rice		Milled White	Milled Rice	Wheat	Milled Rice
	Macan 2nd Class	Wheat Flour	Corn Cebu	Macan 2nd Manila	Flour Manila	Corn Cebu
1958	23.32	20.03	0.52	1.08	85.9	48.2
1959	17.18	22.59	0.41	0.83	131.5	49.4
1960	18.45	28.88	0.53	0.94	156.5	56.4
1961	24.52	30.36	0.65	1.08	123.8	60.2
1962	21.56	31.74	0.63	1.00	147.2	63.0
1963	25.50	32.25	0.82	1.15	126.5	71.3
1964	30.16	34.15	0.69	1.40	113.2	49.3
1965	29.38	33.76	0.88	1.34	114.9	65.7
1966	34.45	32.40	0.75	1.56	94.1	48.1
1967	37.69	31.71	0.79	1.71	84.1	46.2
1968	34.51	31.86	0.83	1.64	92.3	50.6
1969	35.87	32.77	0.75	1.52	91.4	49.3
1970	39.13	48.10	1.07	1.76	122.3	60.8

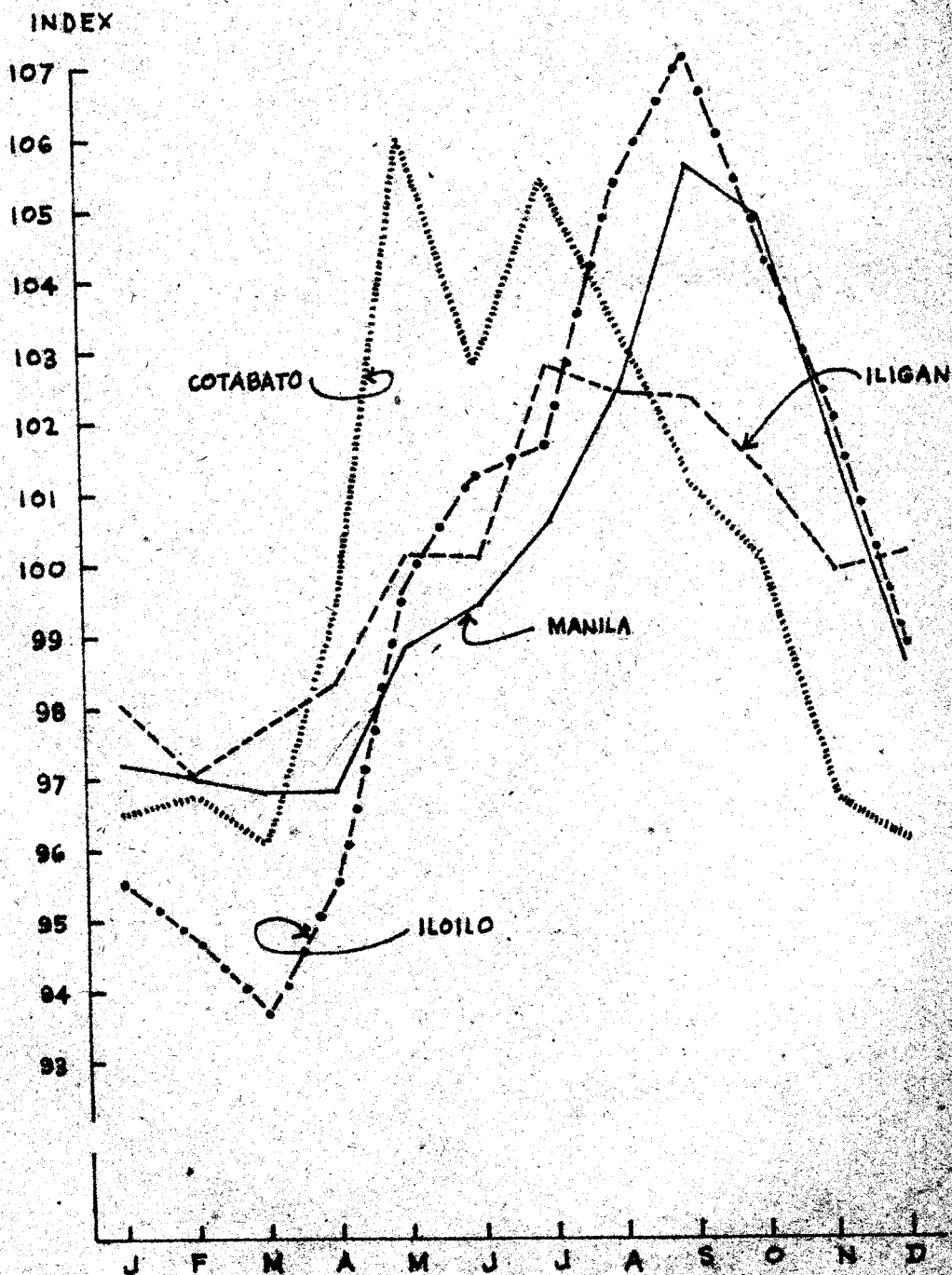
Sources: Corn and wheat flour, Central Bank, Department of Economic Research; Rice, Bureau of Commerce, Marketing Division.

a. Seasonal variations in and between markets

1) Seasonal variations at marketing centers and farm levels. Seasonal retail rice price indices in two major centers (Manila/Cabanatuan and Iloilo) follow roughly similar patterns with highs generally in September/October before harvest and lows from January to April after harvest, as shown in Chart VIII-6. In contrast, Cotabato and Iligan experience seasonal highs from May to July (July to October in Iligan) and lows from January to March, also before and after harvest. This arises from different monsoon and harvest seasons.

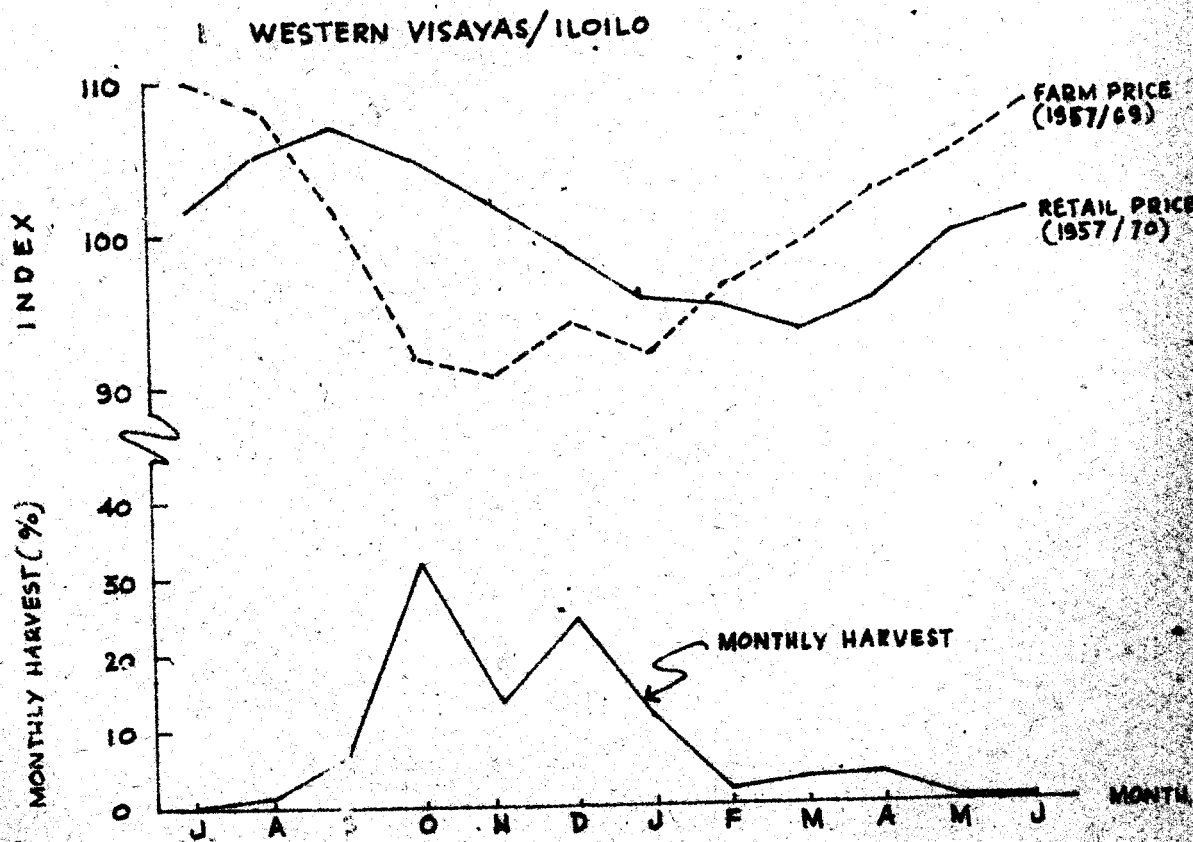
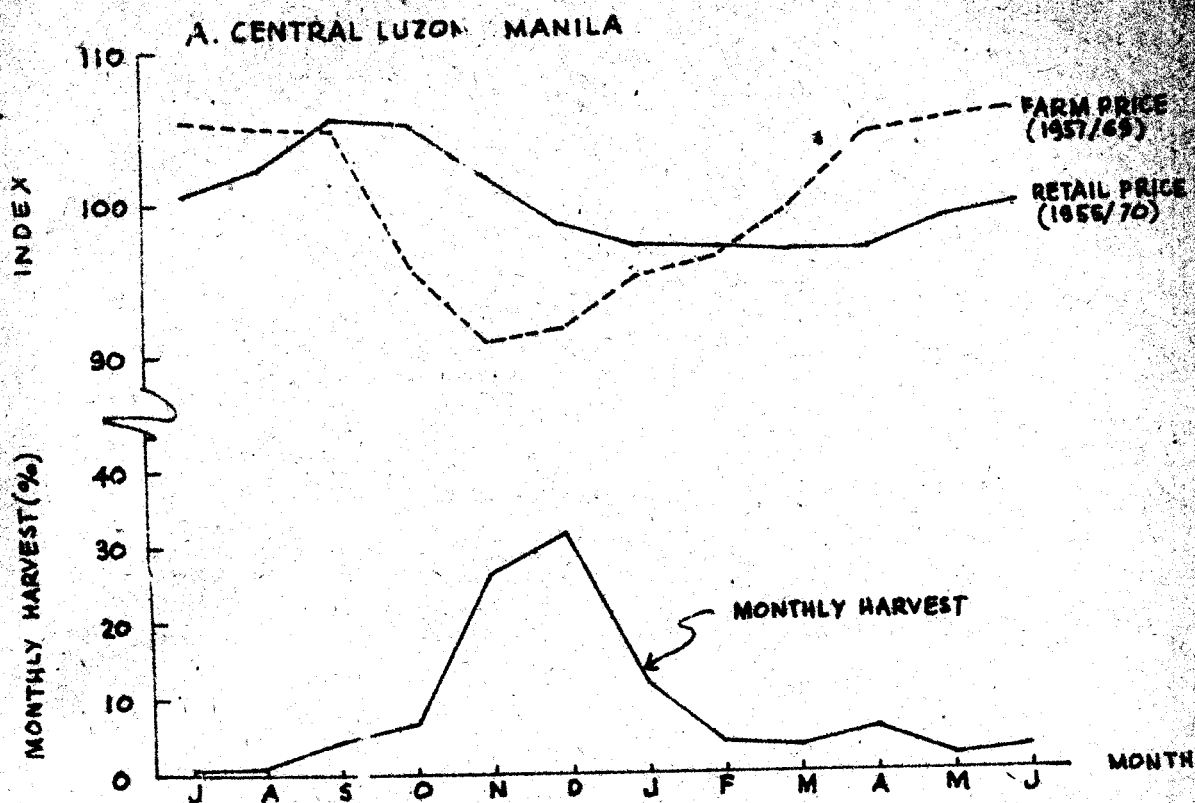
Seasonal variations of farm prices of palay follow somewhat similar patterns but precede (lead) the retail fluctuations. To illustrate, seasonal indices of farm and retail prices for Manila and Iloilo and their hinterland supplying-regions are related to harvest patterns on Chart VIII-7. Palay prices on the farm begin to decline from seasonal peaks as the major harvest starts and then drop rapidly to reach their low point at the height of the harvest. Considering the time required for processing and movement of palay and rice from farms to market centers, retail rice prices remain high even after harvesting has begun. They decline several months later than palay prices. Palay prices then start their rise soon after harvest season peaks with retail prices again following but not until somewhat more than 3 months later. The advantage of milling stocks rapidly to reduce heavy inventory-financing and prevent deterioration of insufficiently dried palay maintains a steady flow of milled rice in large volume that holds prices down in city markets.

CHART VIII-6
SEASONAL INDICES OF RETAIL PRICES OF RICE,
MACAN 2ND CLASS IN SELECTED CITIES
(1957 - 1970)*



Source: See Appendix I

COMPARISON OF SEASONAL INDICES OF RETAIL RICE PRICES
FARM PRICES RECEIVED BY FARMERS (MEAN ORDINARY) AND MONTHLY
HARVEST PERCENTAGES



Source: Prices, See Appendix I
Harvest Percentages, average of 1952/53 (Maulit) and 1957/58 (BAE) estimates

In Mindanao, regional farm prices lead retail prices in Cotabato by only 1 month. This smaller lead is probably related to the Cotabato miller's benefit if he processes the harvest early to take advantage of the high pre-season prices in Manila and Iloilo.^{10/}

2) Seasonal price ranges. Seasonal ranges of farm and retail prices in selected regions in the Philippines are shown in Table VIII-2, in terms of percentage increase from seasonal low to high. Except in the Cagayan Valley region, (the percentage price increase between the seasonal low and high is considerably larger (in one case double) at farm than at retail levels. This follows as the palay generally is sold in the primary market by the farmer who because of storage and finance difficulties cannot regulate supply to demand and is forced to sell most of his palay shortly after harvest. Strong price fluctuations are to be expected. In contrast, the amount of rice offered at retail is more evenly distributed throughout the year under the control of wholesalers and millers (and at times the RCA) who generally can arrange both storage and financing. Thus it would be expected that the rise in retail price from its seasonal low should be more closely related to the costs of holding, with exceptional fluctuations around this level arising because of incomplete crop, stock and weather information on which to base supply decisions.^{11/})

All marketing centers studied show a declining range of seasonal fluctuations of retail prices, comparing seasonal indices of the earlier

^{10/} Price lags of retail behind farm price fluctuations are discussed in more detail in Chapter IX, p. .

^{11/} Wide price fluctuations could also reflect poorly founded decisions by Government regarding the need for imports.

TABLE VIII-2

Farm and Retail Price Variations from Seasonal
Low to Seasonal High for Selected
Regions 1957/1970 & 1962/1970

R e g i o n	<u>FARM PALAY PRICE^{1/}</u>		Trading Center	<u>RETAIL RICE PRICE^{2/}</u>	
	% Price Increase from Seasonal Low to Seasonal High			% Price Increase from Seasonal Low to Seasonal High	
	1957/66 Index	1962/70 Index		1957/66 Index	1962/70 Index
Cagayan Valley	14.5	11.1	Tuguegarao	17.9	9.3
Central Luzon	17.9	15.2	Manila	9.6 ^{3/}	7.9
Ilocos *	20.8	22.8	Laoag	12.7	9.5
N.E. Mindanao	13.4	10.9	Iligan	7.4	4.5
S.W. Mindanao	23.2	19.2	Cotabato	15.6	12.3
Western Visayas	23.3	20.1	Iloilo	16.9	13.1

^{1/} Macan ordinario variety.

^{2/} Macan 2nd class variety.

^{3/} 1955/1966 period.

Sources: Basic prices: See Appendix I.

period 1957/66 with those of 1962/70.^{12/} These lower ranges suggest improved effectiveness of the RCA ceiling-price control (especially after 1965) and improving infrastructure including irrigation and second cropping.

Seasonal ranges of farm prices followed the same general pattern but with secular improvement less pronounced than at retail levels. Increasing production per hectare, with little accompanying increase in storage or drying facilities for the farmer, brought rapidly increasing palay sales at harvest time. Improved floor-price maintenance offset the effects of these increased sales but the remaining net gain in price stability was much smaller than at retail. In the Ilocos, the range of price fluctuation widened slightly at farm level. The increased price spread reflects a shortage of storage.^{13/}

^{12/} With price fluctuation range expressed as a percentage increase from seasonal low to high.

^{13/} Mangahas called attention to an interesting variant within the Central Luzon to Manila marketing channel. He found seasonal fluctuations from seasonal low to high for palay ordinario in Cabanatuan to be larger postwar than prewar. In the 1925/41 period this seasonal range was only 13.6 percent, rising to 17.3 percent in the 1949/64 period. Mahar Mangahas, et al, Production and Market Relationship for Rice and Corn in the Philippines, The International Rice Research Institute, Technical Bulletin No. 91, Los Baños, Laguna (1969), p. 50. More recent statistics indicate this trend of an increasing seasonal price spread is continuing, with a 20.0 percent range in the 1962/69 period. This recent increase could hardly reflect inadequate storage capacity growth if such capacity was surplus in the 1960's, as suggested in the Weitz-Hettelsater study, Storage, Handling and Marketing of Selected Crops in the Republic of the Philippines, Kansas City, Missouri (June 1968), p. 229. The increased spread in the latest period is partly a reflection of distress prices paid on new high-yielding varieties harvested during the rainy season when drying equipment was inadequate. However, this does not explain why Cabanatuan seasonal swings move contrary to those of its supply region, Central Luzon, or why this trend has continued since prewar.

Ranges of seasonal price fluctuations of selected different varieties were similar, except for the fancy Wagwag variety. As shown in Table VIII-3, its seasonal range was only a third as large as for the special Raminad or ordinary Macan varieties. This was surprising as it would be expected that the better varieties would face a more inelastic demand with their consumption derived largely from higher income groups.

By comparison, the degree of price fluctuations at retail from seasonal low to high are all considerably smaller than the range of 24 percent found in Djakarta, Indonesia in the mid-1950's.^{14/} In Taiwan, where almost universal double cropping plus sophisticated stock management has enabled holding fluctuations close to the minimum set by the cost-of-holding, the retail seasonal high (1959/63) was only approximately 10 percent above the low.^{15/} Fluctuations in most regions of the Philippines compared favorably with the Taiwan experience, some being even lower. With transport and warehousing (S.W. Mindanao) constraints, the larger variations found in Iloilo and Cotabato might be expected.

3) World market seasonal price variations. Knowledge of seasonal price fluctuations can be helpful in guiding decisions as to timing of imports or exports. Unfortunately, harvests in most other major producing and consuming countries are not timed to the advantage of the Philippines in this regard. The seasonal index of export prices for Thailand A-1

^{14/} Leon Mears, op. cit., p. 111.

^{15/} As reported by Randolph Barker in "Price Policy and Rice Production," mimeographed paper presented at International Rice Research Institute Seminar, Los Baños, Laguna (October 21, 1967) from Taiwan Provincial Bureau, Taipei.

TABLE VIII-3

Rice Price Variations from Seasonal Low to Seasonal High
for Wholesale Prices of Selected Varieties,
1956-1970, Manila Market

Variety	Seasonal Price		% Increase from Seasonal Low to Seasonal High
	Index Range	in % Low High	
Macan 1st ^{1/}	94.88	105.09	10.76
Macan 2nd	94.71	105.35	11.23
Wagwag 1st	98.29	101.54	3.31
Wagwag 2nd	97.71	101.53	3.91
Raminad 1st	94.54	106.41	12.56

^{1/} 1956/68 period.

Source: Basic prices, see Appendix I.