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A COMPARATIVE STUDY OF TRADE PATTERNS OF THE PHILIPPINES AND THAILAND: 1900-1935

by

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This study is essentially concerned with the pattern of trade of the export sector of the Philippines and Thailand for the period 1900-1935. Both countries have many things in common. In particular, their economies are based primarily on agriculture and forestry. They are so-called traditional economies. The period of economic transformation of both countries from agrarian societies to commercial ones came after 1900. This created dual economies in the two countries consisting of the traditional agrarian sector and the new commercial export sector. The central characteristic of these dual economies lay in the coexistence of the land-based agrarian production sector and the urban centered commercial production sector. However, most people worked in the traditional agrarian sector and Myint has cited this as one reason why, even with the expansion of exports, international trade did not contribute to the economic development of these countries.[1]

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[1] H. Myint, Economic Theory and the Underdeveloped Countries (London: Oxford University Press, 1971), p. 118.

This study is a comparative analysis of the development of export trade in the Philippines and Thailand and the effects of this trade on the economic development of both countries during this period. The analysis will be centered on export growth in general and in each commodity of both countries in particular. This analysis will start with a short note on the theory of international trade which can be applied to underdeveloped countries.

COMPARATIVE ADVANTAGE

For trade analysis in underdeveloped countries, the classical theory on international trade is not adequate. According to Linder, the basic commercial policies of underdeveloped countries are characterized by a multitude of tariffs, quotas, and exchange restrictions rather than by free trade. Most underdeveloped countries lack the capacity to respond to the challenges of trade to make the effects of trading disadvantageous. The factor proportions theory of trade postulates that underdeveloped countries have a meager capital co-existing with little inventive and innovative activity, which situation does not permit trade in manufactures to any considerable level for these countries. However, most underdeveloped countries

abundantly supplied with natural resources might enjoy a comparative advantage in the production and trade of primary products which are natural-resource-intensive.[2] Thus underdeveloped countries may be able to export various primary products, subject however to the constraint that foreign demand for primary products is inelastic, so that the export maximum is determined by the maximum for each of the individual commodities.[3] Furthermore, primary product exports which do not supply internal demand usually are dominated by foreign entrepreneurs. For instance, during the period 1900-1935, one of the major export products in Thailand was tin the entire output of which was always exported because of the favourable world-market price and a high external demand at that time. At the same time, tin was produced largely by foreign labour, foreign capital, and foreign enterprise.[4] The sector which is handled by foreigners who trade in primary products of the underdeveloped countries is supposed to be called the "foreign

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[2] Staffan Burenstam Linder, An Essay on Trade and Transformation (New York: John Wiley and Sons, 1961), pp. 86-87.

[3] Linder, Trade and Trade Policy for Development (London: Praeger, 1967), pp. 1-52.

[4] James C. Ingram, Economic Change in Thailand 1950-1960 (Oxford University Press, 1971), pp. 93-111.

sector".[5] Lastly, the fluctuation of world prices hits trade in primary products hardest.

A postulate called the law of declining importance of foreign trade states that although the ratio of foreign trade to national income rises when a country enters more fully into the world economy, the share of foreign trade in total income is bound to decrease in a growing country.[6] Thus foreign trade plays a more important role for underdeveloped countries and their economic development than for developed ones. But most underdeveloped countries trade in primary products and import manufactured goods, a reflection not only of the utilization of existing factors but also of factor growth. Since export prices do not rise as much as import prices or fall more than import prices, the terms of trade of primary producers tend to deteriorate. Special difficulty also arises out of the lack of flexibility in their production structure to respond to changes in the terms of trade between their exports and their imports. Therefore, the

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[5] Linder, An Essay on Trade and Transformation, p. 92.

[6] Charles P. Kindleberger, Foreign Trade and the National Economy (New Haven: Yale University Press, 1962), pp. 179-182.

problem of trade in underdeveloped countries often comes from the supply sector and is compounded by unstable export prices that causes instability in their export earnings. They can gain from participating in foreign trade, provided that they can move fast enough to take advantage of external demand.

THE PHILIPPINES

During the period under review (1900-1935), the Philippines was under American occupation. As is well known, during this period Philippine foreign trade, especially with the United States, expanded and new products were developed.

Table I shows the yearly volume of trade of the Philippines with all countries. Through most years in the beginning of the American occupation and during the period prior to World War I, the Philippines had a balance of trade deficit. In current pesos, total exports of the Philippines did not expand in every year. But on the average there was an export expansion of about 4.17 percent together with the expansion of total trade of about 3.83 percent. The leading export products of the Philippines were:

1. Abaca	-	raw abaca or hemp
	-	knotted hemp
	-	cordage
2. Sugar	-	refined
	-	centrifugal
	-	muscovado sugar
3. Coconut	-	copra
	-	coconut oil
	-	copra cake
	-	dessicated coconut
4. Tobacco	-	raw leaf
	-	cigarettes
	-	cigars
	-	smoking tobacco

Table II shows the value, price and quantity indices of Philippine exports for the period. A very noticeable thing about this series is the unstable character of the index numbers of value, price, and quantity over the period. To illustrate this, Chart I plots the three index numbers for the Philippines' total value of exports, quantity and price. It seems that the movement of the value index before 1930 shows a very close relationship to the movement of the quantity index; but after 1930 the movement of the value index shows a very close relationship to the

movement of price index.

The price elasticity of the export demand of the Philippines was computed, the results being in Table II. The value of the elasticity is very low (circa .42). This means that the total export earnings decreased if prices were increased since volume would not increase proportionately, and vice-versa.

Using the data in Table II, the total value index was regressed on the total quantity index and the price index to determine whether it was price or quantity which had greater effect on total export value. The regression estimates for one year-, two year- and five year-moving averages are shown in equations (1), (2) and (3) respectively.

$$V_1 = -45.6681 + \underset{(0.04962)}{0.60181}\ P_{x_1} + \underset{(0.07970)}{0.71144}\ Q_{x_1}, \qquad R^2 = 0.84037 \quad (1)$$

$$V_2 = -49.20155 + \underset{(0.04413)}{0.59626}\ P_{x_2} + \underset{(0.07706)}{0.77423}\ Q_{x_2}, \qquad R^2 = 0.87358 \quad (2)$$

$$V_3 = -21.62349 + \underset{(0.12296)}{0.45857}\ P_{x_3} + \underset{(0.08019)}{0.65240}\ Q_{x_3}, \qquad R^2 = 0.76165 \quad (3)$$

V_n = index of total value of exports (1964=100)

n = 1, 2, 3, one is for one year-moving average, two for two year-moving average and three for five year-moving average.

P = price index for exports in terms of the domestic currency; (1924=100)

Q = index of total export quantity (1924=100)

The two-year and five-year moving averages have to be considered because they are long enough to exhibit the effects of total quantity index and price index on the total value of export index in the short run and in the long run. The three equations above are all significant because of the high value of R^2 and the values of the standard error of the regression coefficients (shown in parenthesis) are about a third of the absolute value of the regression coefficients. Among the three equations, the second one (with a two year lag) is the best because it exhibits the highest value of R^2 (0.87358). This implies that around 87 per cent of the variance of the total value index is accounted for by the total quantity index and the price index and 13 per cent is residual. From equation (2), a unit change in P_x produces around 0.59 change in V (Q_x - constant and a unit change in Q_x produces around 0.77 change in V (P_x - constant). However, the partial correlation and computed T-value are equal to 0.92241 and 13.51036 respectively, for P_x and V, equal to 0.87138 and 10.4732 for Q_x and V. These would indicate that P_x is more significant or has more influence on V than

has Q_x. This result is reversed in the five-year moving average, equation (3). The partial correlation coefficient and computed T-value are equal to 0.813551 and 8.13551 for Q_x and V, and equal to 0.56934 and 3.72950 for P_x and V. These seem to indicate that in the short run, a change in P_x has more influence on V, while over a longer period a change in Q_x has more influence on V. This is reasonable because in that period, the Philippines exported mainly primary products that did not evince strong immediate response to changes in effective demand. That situation may be attributed to the fact that the Philippines traded almost all her major exports with the United States. From the time the United States market was opened to Philippine exports up to 1935, the U.S. accommodated all the latter could produce. After 1935 the system characterized significant parts of the trade between both countries. A case in point was sugar which led all other export products and went almost entirely to the United States, but which was subject to a quota. However, Philippine sugar could not compete cost-wise with Cuban and Javan sugar. There were also quotas on tobacco and cordage. Another limitation was the lack of a vigorous Asian market since at that time most Asian countries were largely self-sufficient economies. These seem to be

the reasons, along with the structure of colonization, why her export value is correlated with quantity. This observation confirms that the fluctuations of export value depended on the fluctuations of export quantity. Therefore, the main problem of Philippine exports then revolved mostly around the supply side.

THAILAND

The economy of Thailand is primarily based on agriculture, forestry, and fisheries. Rice and rubber are the most important among the major crops. Before 1850, production was only for self-sufficiency. Production increased when she started to trade with Western countries, but the system of production was primitive; not much technology was used to improve agriculture. Even though there was irrigation already at that time, land suitable for cultivation was still greater than the irrigated area.[7] The period from 1900-1935 exhibited a slow increase in production due primarily, it appears, to an anaemic supply response rather than to any appreciable price disincentive. Export price and export quantity moved at the same

[7] John H. Van de Heidi, "The Economic Development of Thailand During the Last Half Century," Journal of the Siam Society, III, Part II, (Bangkok: 1903), p. 76.

pace. Export demand was increasing satisfactorily. Except for rubber, the problem of the slow increase in exports was a problem on the supply side, a problem in production more than in marketing.

Table III shows the yearly trade of Thailand during the years 1900-1935. During this time the leading export products were:

1. Rice
   - cargo
   - cargo broken
   - cargo meal
   - white
   - white broken
   - white meal
2. Teak
3. Tin and Tin Ore
4. Rubber
   - rubber
   - rubber waste
   - rubber substitutes
5. Salted Fish
   - plaking
   - plasalit
   - platu
   - other kinds

6. Live Animals - buffaloes
- bullocks
- elephants
- goats and sheeps
- horses and ponies
- poultry
- swine
- all others

Export expansion was around 3.1 per cent, which was very near the growth rate in total trade of about 2.9 per cent. Except for 1920 and 1924, the ending years showed a surplus in balance of trade. This means that the demand for imports was not high, the growth rate of the surplus balance of trade being around 4.9 per cent.

By using five major export products to represent all export products of Thailand (except live animals for which no data exist for comparison), indices of value, quantity, and prices were derived. The total value, quantity and price indices of Thai exports during the period are shown in Table IV.

From 1918 to 1930, there was a boom in export prices but the total export quantity did not increase significantly until after 1930. The relationships

among total value, quantity, and price indices can be seen from Chart II. This Chart shows the wide fluctuations of the above-mentioned variables, especially from 1918 to 1921. After 1930, however, a close positive relationship is exhibited by value, quantity and price indices.

Again from the data in table IV, and using the same method that was utilized for the Philippines, the estimation of whether it is price or quantity which had more effect on the total value of Thai exports is shown in the regression equations (4), (5) and (6).

$$V_1 = -102.76147 + \underset{(0.11975)}{1.49648}\, P_{x_1} + \underset{(0.05516)}{0.65425}\, Q_{x_1}, \qquad R^2 = 0.87133 \tag{4}$$

$$V_2 = -118.20740 + \underset{(0.11539)}{1.57098}\, P_{x_2} + \underset{(0.05520)}{0.71380}\, Q_{x_2}, \qquad R^2 = 0.88967 \tag{5}$$

$$V_3 = -126.20122 + \underset{(0.06306)}{0.75407}\, P_{x_3} + \underset{(0.10987)}{1.60515}\, Q_{x_3}, \qquad R^2 = 0.91784 \tag{6}$$

Subscripts 1, 2, 3 are for one-year moving averages, two-year moving averages and five-year moving averages, respectively. The symbols have the same meaning as previously stated. These three equations are significant. It will be noticed in

the last equation that a unit charge in Q_x changed V by 1.6 (P_x - constant). Furthermore in the last equation, the partial correlation and computed T-value between Q_x and V (0.93829 and 14.60991, respectively) are bigger than the partial correlation and computed T-value between P_x and V (0.91181 and 11.95831). All are different from the preceding two equations. It seems that in the long pull, the effect of export quantity on the total export value was more important than the effect of export price, and vice versa for the short pull. Hence, the main problem of Thai exports was in the quantity of exports. This observation may be attributed to the fact that during this period, agricultural production took place largely in the Central Plain and irrigation was not used until 1920, so that production could not increase so fast. Although there was a high external demand for the leading exports, the gains from trade did not trickle down to the farmers; they accrued to the middlemen who were foreigners, mostly Chinese.[8] Thus there was no incentive for the farmers to increase production rapidly.

The price elasticity of the export demand for

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[8] Ingram, op. cit., p. 37.

Thailand was low, (about .82) because the bulk of Thai exports was rice which was a primary product and a basic good whose demand changes but slowly through time. Compared with the Philippines, the price elasticity of the export demand for Thailand was higher, meaning that the latter lost less in foreign trade than the Philippines when her export prices increased.

A COMPARATIVE ANALYSIS

A comparison of the gains from trade of Thailand and the Philippines will now be considered. The examination will focus on the terms of trade of both countries during the period. In trying to measure the terms of trade, one has to know the price indices of both exports and imports. Since no data on total imports in quantity terms is available, one has to use the data on major imports and exports of both countries in quantity terms which are available for the period 1914-1929.[9] Moreover, the commodity

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[9] In the case of the Philippines, the major exports consist of sugar, abaca, coconut and tobacco. The major imports consist of automobiles and accessories except tins, mineral oil, wheat flour and cotton cloth. In the case of Thailand, the major exports consist of rice, teak, rubber, tin, and salted fish. The major imports consist of textiles including cotton and linen, tobacco, cigar and cigarettes, mineral oil (kerosene, benzine, liquid fuel) and machinery.

terms of trade together with the income terms of trade will be used to analyze terms of trade for both the Philippines and Thailand.

The terms of trade of the Philippines from 1914 to 1929 (1924=100) can be seen in Table .V. It is clear that the yearly terms are predominantly less than 1, except for the year 1917. That this is so stems from the fact that during this period the major export products of the Philippines were primary products and most of the major imports were manufactured goods and generally, compared with the boom year of 1924, the prices of primary products had less upward bias than the prices of manufactured goods. Added to the existence of price inelasticity of demand for Philippine export was the free trade already existing in the Philippines during that time. Both of these factors contrived to make export prices move up but slowly. From this observation, it might be concluded that the Philippines had unfavourable "gains" from trade or that she was at the wrong end of an unequal international distribution of income. This statement is true even for the period 1917-1920 when a trade boom was obtained since although the prices of her exports were high, they were lower than the prices of her imports. From the viewpoint of "income terms-of-trade," as is shown in the last column of Table V,

she had favourable gains from trade after 1924 indicating a welfare movement to a high level. This may be attributed to the fact that after this year the volume of exports expanded very rapidly to offset the downtrend in export prices. Thus the total gains from trade increased.

For Thailand the terms of trade are presented in Table VI. From 1914 to 1923, except for the 1916 and 1919, she had unfavourable terms of trade (1924=100). The reasons advanced for a similar trend in the Philippines also apply for Thailand. The year 1916 was an exception because at the height of World War I Thailand just could not get whatever trade it wanted and in the quantity it wanted causing the volume of trade to drop. In 1916, there was a drought and most of the rice fields were destroyed, producing a collapse in the price structure for rice, resulting in the export prices of rice to become very high. After 1924, a high external demand for rice resulted in a rapid export expansion of rice. Thus, the commodity terms of trade and income terms of trade in those years were greater than one, a favourable development.

From the two tables, it can be seen that Thailand fared better than the Philippines as to terms of trade. During this period the Philippines had

fundamental foreign trade constraints. One was the problem of export supply which could not immediately respond to the increasing demand in the world market. Furthermore, most of the Philippine exports were primary products, a high percentage of which went to the United States. The Philippines did not benefit much from her major exports. She could not control her export prices. Thus she suffered from export instability, both in prices and quantities.

Less conspicuous relative to Thailand was the concentration in export products. During this period the three largest Philippine exports accounted for 83 per cent of total exports (sugar at 30.1 per cent, abaca 27.5 per cent, coconut 25.7 per cent). On the other hand, rice made up 75.79 per cent of total Thai exports for the same period. This fact has not been completely detrimental to the development of Thailand. Most of Thailand's population worked in the rice fields.

When she opened her doors to international trade, her economy was transformed from a barter economy to a money economy. Hence, there was an increase in total production due to internal and external demand pressures. A major factor in the growth of rice production was the introduction of a steady money demand for rice in Bangkok. The source of this

increased money demand was foreign. However, the production of rice was still carried out by traditional methods, which brought about no rise in productivity so that the expansion in production came only through an increase in the area of cultivated lands. When calamity struck in some years (which fortunately were rare), total production decreased and export prices increased sharply, as in 1919. Furthermore, the demand for Thai rice in the neighboring countries was erratic, depending on the success of the crop in those countries. Thus, even if Thailand could easily have produced an export surplus, the effort was rarely made.[10]

Another observation from the tables is that the export prices were not stable in both countries. In some years they increased but by less than import prices; when they decreased, they fell more than did import prices. Both export and import prices fluctuated following the trade cycle. From this, it would seem to follow that the terms of trade of the two countries, whose exports consisted largely of primary products and whose imports consisted largely of manufactures, tended to deteriorate during

[10] Ingram, op. cit., pp. 39-43.

business cycle upswings.[11]

CONCLUSIONS

Neoclassical theory, international trade creates the process of capital transfers from the capital-abundant country to the capital-scarce country. Usually, the countries with less capital resources belong to the underdeveloped world. Capital transfers then serve to promote their economic development by opening up these countries to modernizing stimuli or by increasing external economies. Most often, the change that accompanies trade is not only an increase in efficiency in the production of traditional outputs and inputs but also a change in the very structure of outputs and inputs. Hence, from the trade mechanism there will be increased kinds and quantity of goods for internal commerce as well as for external trade. Because international trade is now closely related to the economic development process of nations, it is now common to find the theory of trade enriched in dynamic rather than static terms.

However, the growth of trade in underdeveloped

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[11] Gottfried Harberler, "Terms of Trade and Economic Development," Economics of Trade and Development, edited by James D. Theberge (New York: John Wiley and Sons Inc., 1968), p. 236.

countries was not really accompanied by important developments in production methods even as growth of per capita income was evident. It was accomplished because labour spilled over into the hinterland. For instance, before the onset of the Great Depression in the 1930's, although exports in Thailand and the Philippines grew at an annual rate of 6 per cent or better, productivity increased only by approximately 0.2 per cent for Thailand and around 1 per cent for the Philippines.

In spite of export expansion in both countries during this time, their exports still followed the traditional pattern. There was no evidence of improvement in production of manufactured goods as was obvious with Japan which opened her doors to Western countries during the same period. Thus there was no industrial revolution in Thailand and the Philippines. There was only trade revolution in both countries since they entered the field of international trade. From one point of view, Thailand was in a better position than the Philippines during this time because the former was never colonized and she traded with many countries. Although most of her exports went to Great Britain and the British colonies, the percentage of these exports was still smaller than the percentage of Philippine total exports to

the United States. Philippine exports to the United States were as close as 80 per cent of her total exports. Thus in the period 1900-1935 when there was an increase in general world export trade, Thailand's terms of trade improved more than did those of the Philippines.

TABLE I

Values of Annual Trade of the Philippines with All Countries

(in million pesos at current prices)

YEAR	Total Trade[a]	Total Export	Growth Rate of Total Export (per cent)	Balance of Trade[b]
1900	95.7	46.0		- 3.7
1901	109.3	49.0	6.3	-11.3
1902	124.0	57.3	16.9	- 9.4
1903	132.4	64.8	13.1	- 2.8
1904	117.5	58.3	11.5	- 0.9
1905	127.0	66.9	14.8	6.8
1906	118.1	65.3	- 2.5	12.5
1907	127.1	66.2	1.4	5.3
1908	123.6	65.2	- 1.5	6.8
1909	132.0	69.8	7.1	7.6
1910	180.7	81.3	16.4	-18.1
1911	185.7	89.7	10.3	- 6.3
1912	233.2	109.8	22.0	-13.5
1913	202.2	95.5	-15.0	-11.1
1914	194.6	97.3	1.9	0.1
1915	206.3	107.6	10.5	9
1916	230.9	139.9	30.0	48.9
1917	322.8	191.2	37	59.6
1918	467.6	270.4	41	73.2
1919	463.5	226.2	-19.5	-11.1
1920	601.1	302.2	34	3.3
1921	407.9	176.2	-70	-55.1
1922	351.6	191.2	8.5	30.8
1923	416.5	241.5	26	66.5
1924	486.7	270.7	12.0	54.7
1925	537.2	297.8	10.0	58.3
1926	513.4	273.8	- 8.8	35.2
1927	542.8	311.1	13.6	79.4
1928	579.4	310.1	- 0.3	40.8
1929	623.2	328.9	6.0	34.6
1930	512.5	266.3	-24	20.1
1931	406.3	207.9	-29	9.5
1932	349.5	190.7	- 9	31.9
1933	346.3	211.5	10.9	76.8
1934	388.0	220.8	4.4	53.6
1935	359.5	188.5	-17.1	17.5
Average Growth	3.83%		4.17	(4.73)

[a] Total exports plus total imports.

[b] Total exports minus total imports.

Source: Bureau of Census and Statistics, Statistical Handbook of the Philippines 1903-1959 (Manila Bureau of Printing, 1954), pp. 205-230.

TABLE II
THE PHILIPPINES
TOTAL VALUE, QUANTITY AND PRICE INDICES OF EXPORTS

YEAR	Total Value (in millions of pesos)	Total Value Index (1924 = 100)	Total Quantity Index (1924 = 100)	Price Index (1924 = 100)
1900	42.03	26.41	19.31	139.11
1901	45.82	18.48	21.51	88.05
1902	54.42	22.23	39.31	57.22
1903	60.02	24.64	32.13	77.26
1904	56.14	23.04	36.08	64.19
1905	63.99	25.52	44.93	58.87
1906	62.20	24.96	39.58	64.95
1907	63.83	25.83	41.36	63.78
1908	62.57	25.44	48.70	53.12
1909	67.25	27.72	63.16	44.01
1910	77.55	31.50	50.26	63.78
1911	85.28	33.56	72.32	48.74
1912	102.11	41.18	71.71	58.85
1913	89.05	36.45	45.33	81.20
1914	91.52	36.96	44.59	84.84
1915	101.26	41.16	49.66	84.28
1916	125.53	51.33	59.41	87.34
1917	173.02	71.30	62.07	115.21
1918	249.47	101.91	79.91	129.04
1919	201.25	82.46	62.15	133.85
1920	263.22	110.20	58.25	190.34
1921	153.87	63.51	73.02	87.10
1922	171.78	70.56	98.02	72.44
1923	212.98	86.45	95.60	91.76
1924	241.90	100.00	100.00	100.00
1925	265.56	107.91	109.87	99.91
1926	271.08	111.15	117.87	95.05
1927	281.14	115.32	124.56	93.30
1928	274.07	111.78	138.22	81.96
1929	291.19	135.28	152.17	79.10
1930	237.93	97.68	148.18	66.37
1931	189.12	76.96	148.88	52.50
1932	174.48	71.81	167.56	43.04
1933	196.46	79.95	205.35	39.54
1934	198.59	80.29	217.43	37.75
1935	160.06	65.70	146.61	45.12

Sources: Bureau of Commerce and Industry, Statistical Bulletin No. 3 of the Philippine Islands 1920 (Manila:Bureau of Printing, 1921), pp. 178-184.

Bureau of Commerce and Industry, Statistical Bulletin of the Philippine Islands, 1929 (Manila:Bureau of Printing, 1930), pp. 97-166.

Bureau of Commerce, Summaries of Philippine Foreign Trade, 1931-1941 and 1946-1953 (Manila:Bureau of Printing, 1953), p. 1.

TABLE III
Values of Annual Trade of Thailand
With All Countries

YEAR	Total Trade a/ (Bh. million currencies)	Total Export (Bh. million currencies)	Growth Rate of Total Export (per cent)	Balance of Trade b/ (Bh. million currencies)
1900	95.39	52.00		8.6
1901	124.07	75.54	(42.5%)	27.02
1902	155.53	85.81	(13.5%)	16.00
1903	142.27	76.88	(-10.4%)	10.49
1904	180.19	104.13	(35.4%)	28.07
1905	175.84	106.96	(2.7%)	38.08
1906	182.92	105.86	(- 1.0%)	28.80
1907	178.42	99.73	(- 5.7%)	21.04
1908	177.57	100.75	(1.0%)	23.93
1909	172.37	102.56	(1.7%)	32.75
1910	177.10	108.89	(6.1%)	40.68
1911	157.77	84.63	(-22.2%)	11.49
1912	158.23	81.97	(- 3.1%)	5.76
1913	206.30	115.51	(40.9%)	24.72
1914	180.12	101.64	(-12.0%)	23.16
1915	181.42	105.97	(4.2%)	30.52
1916	209.32	121.48	(16.6%)	33.64
1917	220.87	123.79	(1.9%)	26.71
1918	256.94	162.03	(30.8%)	58.12
1919	315.73	177.29	(9.4%)	38.85
1920	213.47	66.14	(-62.6%)	-81.19
1921	298.21	164.49	(148.6%)	30.79
1922	283.78	150.06	(- 8.7%)	16.34
1923	307.68	171.43	(14.2%)	35.18
1924	335.31	165.94	(- 3.2%)	- 3.43
1925	377.96	196.58	(18.4%)	15.20
1926	394.10	197.59	(5.0%)	1.07
1927	477.36	276.26	(39.8%)	75.18
1928	442.25	252.46	(- 8.6%)	62.67
1929	426.48	219.77	(12.9%)	13.06
1930	316.52	161.51	(-26.5%)	6.50
1931	234.12	134.21	(-16.9%)	34.30
1932	242.02	152.52	(13.6%)	63.02
1933	237.03	144.07	(- 5.5%)	51.11
1934	274.32	172.59	(19.7%)	70.86
1935	266.97	158.22	(- 8.3%)	49.47
Average Growth	2.9%		3.1%	4.9%

Table III (cont.)

Sources:

Statistics of the Import and Export Trade of Siam, 1906.

The Foreign Trade and Navigation of the Port of Bangkok, 1908-1927.

Annual Statement of the Foreign Trade and Navigation of the Kingdom of Siam, 1928-1936.

a/ Total exports plus total imports.

b/ Total exports minus total imports.

TABLE IV

Total Value Quantity and Price Indices of Exports (Thailand)

YEAR	Total Value (in millions of baht)	Total Value Index (1931=100)	Total Quantity Index (1931=100)	Price Index (1931=100)
1900	44.49	45.14	58.47	77.20
1901	66.68	67.66	91.05	74.31
1902	72.41	78.58	99.05	80.34
1903	68.37	69.38	43.77	158.50
1904	95.23	96.64	62.35	155.00
1905	97.43	98.88	63.48	155.76
1906	96.98	98.39	60.54	162.52
1907	90.47	110.07	68.24	161.38
1908	93.11	94.49	63.06	149.84
1909	93.82	95.21	67.93	140.16
1910	100.78	102.27	72.76	140.56
1911	73.78	74.91	47.38	158.11
1912	72.54	73.60	42.91	171.52
1913	107.24	108.82	74.87	145.35
1914	91.40	92.83	66.76	139.05
1915	94.36	95.78	79.33	120.73
1916	106.76	108.35	83.71	129.44
1917	105.11	106.67	79.80	133.67
1918	139.10	141.18	60.04	235.14
1919	138.09	154.40	39.83	387.66
1920	43.60	44.23	24.91	177.54
1921	147.01	149.29	83.52	178.75
1922	133.05	121.08	84.11	160.48
1923	172.18	147.76	97.66	178.95
1924	173.67	176.28	87.16	202.25
1925	209.13	212.27	100.57	211.07
1926	206.13	196.71	96.12	217.65
1927	235.07	238.59	120.44	198.10
1928	212.83	215.99	111.31	194.04
1929	178.98	188.64	93.38	194.52
1930	133.42	135.39	85.36	158.61

Table IV (cont.)

YEAR	Total Value (in millions of baht	Total Value Index (1931=100)	Total Quantity Index (1931=100)	Price Index (1931=100)
1931	98.51	100.00	100.00	100.00
1932	144.23	115.92	119.31	97.16
1933	115.87	117.59	121.83	96.52
1934	141.41	143.51	135.94	105.57
1935	134.46	136.48	117.99	115.67

Sources:

Statistics of the Import and Export Trade of Siam, 1906.

The Foreign Trade and Navigation of the Port of Bangkok, 1908-1927.

Annual Statement of the Foreign Trade and Navigation of the Kingdom of Siam, 1928-1936.

TABLE V

Terms of Trade of the Philippines during the Period 1914-1929.
(1924=100)

YEAR	Price Index of Exports P_x	Price Index of Imports P_m	Commodity Terms of Trade $\frac{P_x}{P_m}$	Income Terms of Trade $\frac{P_x}{P_m} \cdot Q_x$
1914	.7088	.765	.927	.494
1915	.6913	.699	.989	.598
1916	.7830	.798	.982	.696
1917	1.0745	.986	1.090	.725
1918	1.3483	1.364	.989	.756
1919	1.3606	1.860	.732	.455
1920	1.4754	2.183	.676	.431
1921	.7635	1.766	.433	.360
1922	.6033	.964	.626	.736
1923	.8525	1.012	.843	.870
1924	1.0000	1.000	1.000	1.000
~~1925~~	~~1.0087~~	~~1.051~~	~~.960~~	~~1.045~~
1926	.9081	1.044	.870	.955
1927	.9547	.965	.990	1.537
1928	.8382	1.011	.829	1.120
1929	.8051	.959	.840	1.229

TABLE VI

Terms of Trade of Thailand during the Period 1914-1929
(1924=100)

YEAR	Price Index of Exports P_x	Price Index of Imports P_m	Commodity Terms of Trade $\frac{P_x}{P_m}$	Income Terms of Trade $\frac{P_x}{P_m} \cdot Q_x$
1914	.618	.637	.971	.826
1915	.616	.693	.889	.784
1916	.674	.296	2.277	2.076
1917	.698	.940	.743	.644
1918	1.258	1.485	.848	.539
1919	2.143	1.607	1.334	.494
1920	.927	1.617	.574	.155
1921	.899	1.062	.847	.797
1922	.878	.953	.928	.865
1923	.942	.966	.976	1.134
1924	1.000	1.000	1.000	1.000
1925	1.045	.933	1.120	1.319
1926	1.077	.906	1.189	1.309
1927	1.030	.849	1.214	1.468
1928	.978	.800	1.223	1.534
1929	.983	.798	1.232	1.275

CHART I. Indices of Value, Quantity, and Price of Exports of the Philippines: 1900-1935.

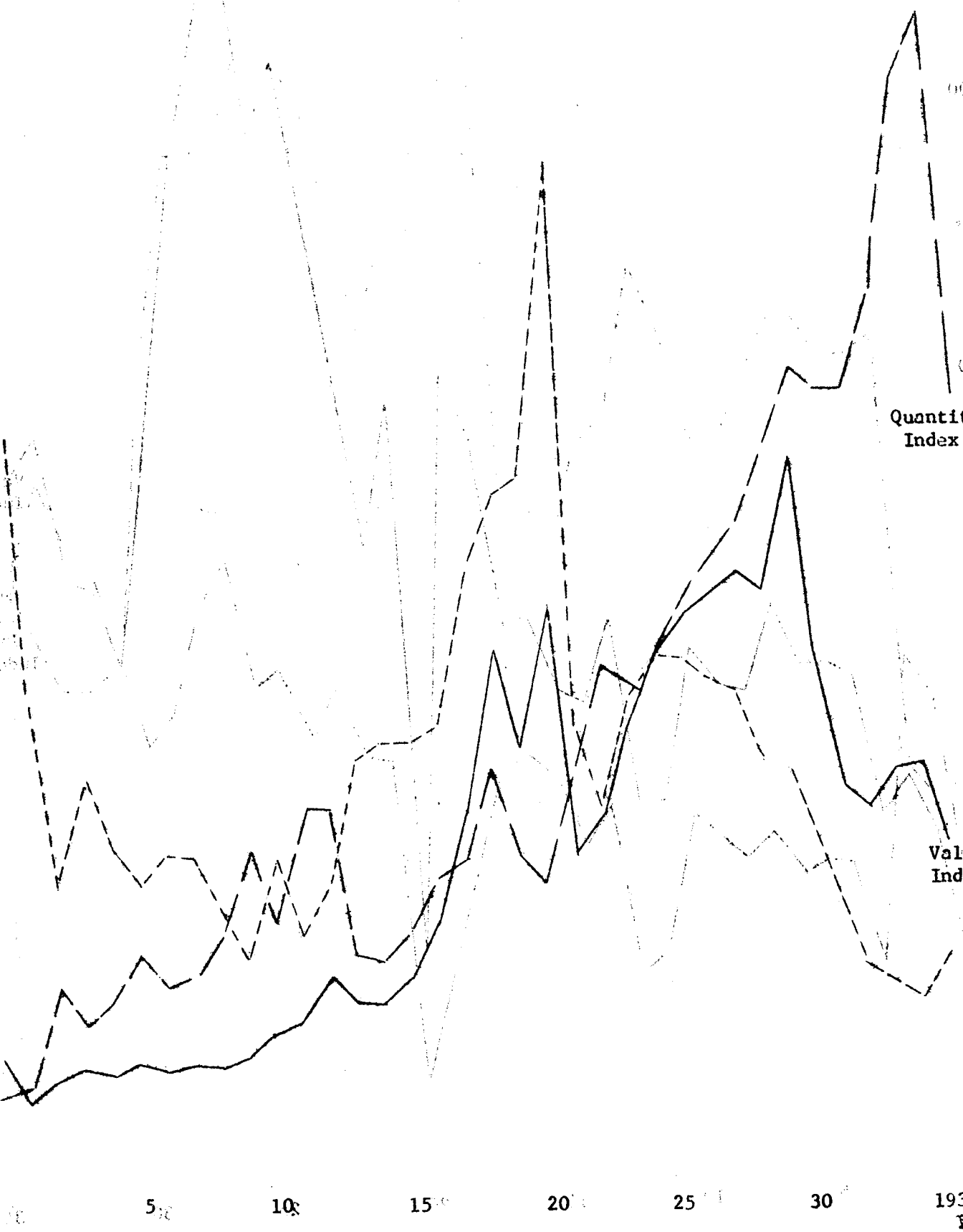

CHART II. Indices of Value, Quantity and Prices of Exports of Thailand: 1900-1935