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THE TRANSITION IN OPEN DUALISTIC ECONOMIES

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## CHAPTER 10

### THE POSTWAR TRANSITION IN THE PHILIPPINES

#### INTRODUCTION

This chapter is designed to demonstrate the applicability of the preceding chapter's analysis to the postwar transition experience of the Philippines. This is done by drawing upon empirical information of both a qualitative and quantitative nature. The chapter thus presents an empirical account of Philippine transition growth experience in terms of the analytical framework developed throughout this book as it is specifically focussed upon prolonged import substitution growth in the last chapter.

Philippine postwar transition experience until the late 1960s is fully explained by the model of Chapter 9. Beginning in approximately 1967, however, the pressures associated with prolonged import substitution growth appear to have induced a quest for new growth directions. While a new transition growth system has not yet been launched by these recent stirrings, Philippine experience since 1967 may be viewed as an outgrowth of the system analyzed in Chapter 9. The appearance of new growth phenomena, though still nascent, requires a

separate study. The present chapter, therefore, concentrates upon Philippine growth experience from the end of rehabilitation from World War II to 1966.

In Chapter 9 we have asserted that Philippine growth throughout the postwar period represented a particular type of transition from the colonial economy. This type is marked in the Philippines by a first brief period of rapid import substitution growth which eventually approached exhaustion. This tendency toward retardation became clear during the second half of the 1950s. Growth was obstructed both by sluggish export performance and the continued backwardness of the traditional agricultural sector, eventually reflected in growing food deficits. These joint problems eventually induced a policy reversal, beginning in 1960, as the society began to emphasize export expansion by easing the controls which had promoted import substitution growth. This reversal produced a period of modified import substitution growth, during which the economy expanded at modest rates but continued to be plagued by food deficits. These general contours of the postwar transition in the Philippines will be documented by empirical evidence in this chapter.

## 1. POSTWAR PHILIPPINES GROWTH: QUANTITATIVE INDICATORS

In this section we present quantitative data to confirm the validity of the analysis of Philippine import substitution growth as developed in Chapter 9. For this purpose aggregate national income data are largely relied upon, supplemented where necessary by associated accounts containing more disaggregated data. All aggregate data employed were collected within the national income accounting framework developed for open dualistic economies.<sup>99</sup> Considerable empirical work was required to estimate the aggregate flows within this framework, and the results for the Philippines, with an assessment of their accuracy, are found in an earlier paper.<sup>100</sup>

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<sup>99</sup>This framework, which has been applied to generate postwar time series for the Philippines, Thailand, and Taiwan, is described in several NPA working papers. See, for example, Douglas S. Paauw and John C. H. Fei, "The Structure of Open Dualism" (Washington: National Planning Association, Center for Development Planning, January, 1969), pp. 17-30, mimeographed; and Douglas S. Paauw, "The Philippines: Estimates of Flows in the Open, Dualistic Economy Framework, 1949-1965" (Washington: National Planning Association, Center for Development Planning, February, 1968), pp. 5-14, mimeographed.

<sup>100</sup>Douglas S. Paauw, ibid.

## 1.1 General Growth Indicators

The postwar record of Philippine economic growth should distinguish between two contrasting growth regimes, rehabilitation from World War II devastation and new growth under the impetus of import substitution. The Philippine economy recovered rapidly from the setbacks caused by the war, with aggregate prewar output levels restored by 1948.<sup>101</sup> Beginning in 1949 the Philippines turned to the problems of stabilization and establishing a new growth regime. By 1950 a system for transferring resources to industrial entrepreneurs under stringent import controls and high protection had been adopted, thus launching the first phase of import substitution growth.

### Real Gross National Product and Components

The overall performance of the Philippine economy during the 15-year period (1950-1965), in which import substitution growth held sway, may be shown from the average annual growth rates of real gross national product and its three major sectoral components, agriculture,

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<sup>101</sup> Douglas S. Paauw, "Economic Progress in Southeast Asia," Journal of Asian Studies, Vol. XXIII, No. 1 (November, 1963), pp. 71-72.

industry, and government.<sup>102</sup> Over the 15-year period, real gross national product grew at an average annual rate of 5.4 per cent, yielding per capita gains averaging near 2 per cent per year. There were, however, substantial differences among the growth of real value added in the three sectors. Agriculture showed an average annual growth rate of 3.5 per cent (only slightly above the population growth rate of 3.3 per cent), while industry showed an average growth rate of 6.3 per cent and government, 7.5 per cent.

Over the period 1950-1965, Philippine economic growth showed clear evidence of retardation. This is shown in Table 3 which presents average growth rates by five-year subperiods. The average growth of real gross national product fell substantially after the first five-year period, largely explained by a sharp drop in the growth of agriculture's value added. In the second five-year period (1955-1960) agriculture grew at a slightly negative rate ( - .004), compared to substantial progress (.075) in the first period. This is consistent with the theory presented in Chapter 9 which emphasizes the growth-retarding effects of import

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<sup>102</sup> Industry is defined to include all private sector nonagricultural activity. Annual data for the four series are presented in Table A1 of the Appendix to this chapter.

TABLE 3

GROWTH RATES: REAL VALUE ADDED BY AGRICULTURE,  
INDUSTRY, GOVERNMENT, AND GROSS NATIONAL PRODUCT,  
BY FIVE-YEAR SUBPERIODS

Year	Agriculture	Industry	Government	GNP
1950-55	.075	.056	.119	.069
1955-60	-.004	.076	.059	.045
1960-65	.035	.056	.048	.049
Average, 1950-65	.035	.063	.075	.054

substitution upon agriculture. Some recovery was achieved in the last period (1960-1965), after the government adopted prolongation policies aimed at stimulating the growth of primary product exports.

Growth of the industrial sector, as a whole, accelerated during the second five-year period and slowed down in the final period. Further disaggregation of the industrial sector reveals, however, that the heyday of import substitution growth in terms of manufacturing output began to terminate in approximately 1956.<sup>103</sup> This may be seen from Diagram 24 which shows growth rates of real value added in manufacturing.<sup>104</sup>

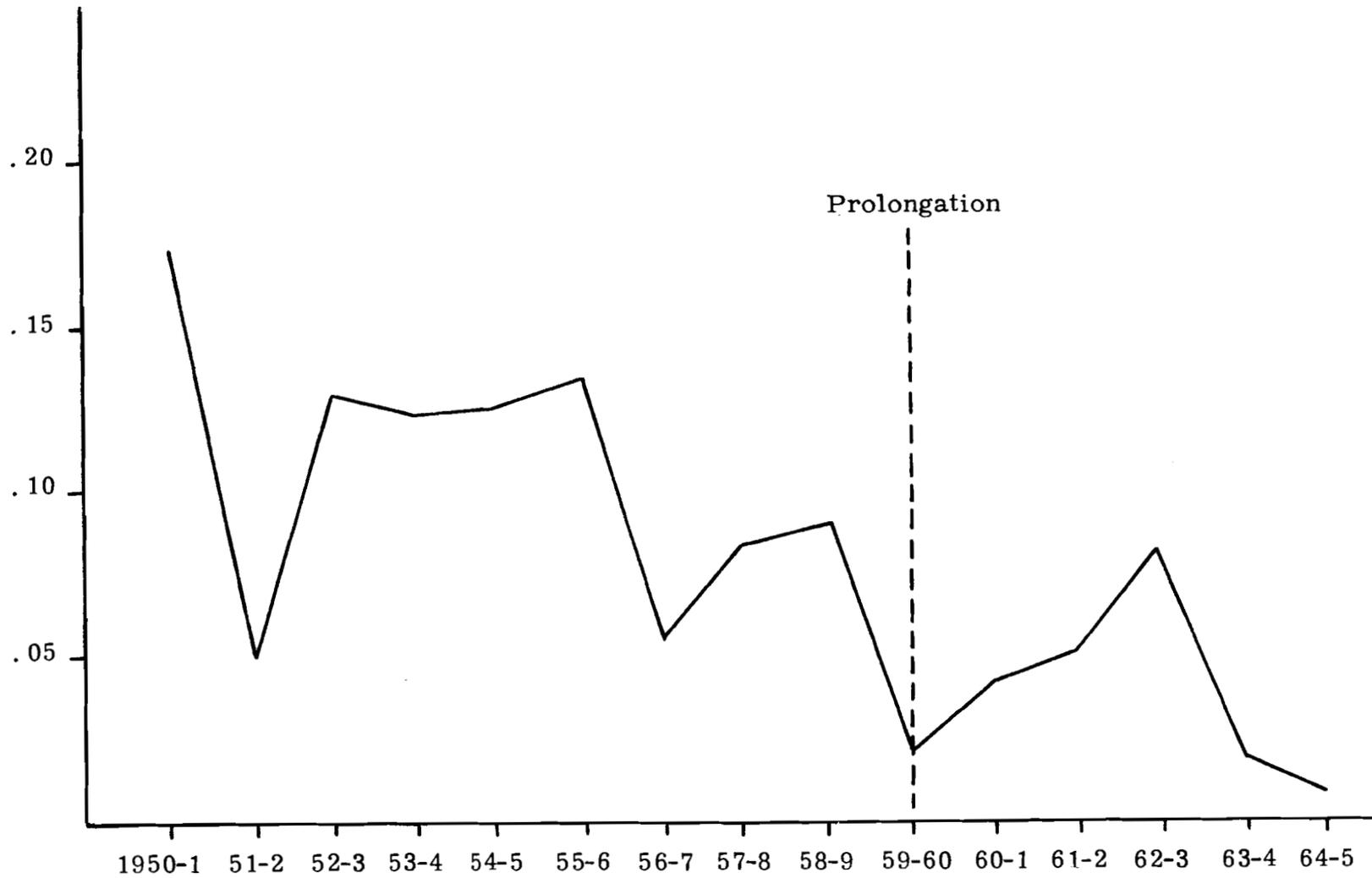
Although manufacturing output grew by an average annual rate of 7.9 per cent over the period 1950-1965, growth decelerated sharply. In the first five-year period (1950-1955), an average annual growth rate of 12.1 per cent was achieved, but it fell to 7.7 per cent in the period 1955-1960 and to only 4.0 per cent from 1960 to 1965. The effect of prolongation policies in eventually stimulating recovery in the manufacturing sector is apparent from the rising growth rate during the final period.

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<sup>103</sup> Underutilization of capacity began to appear in the second half of the 1950 decade. See United Nations, ECAFE, Economic Survey of Asia and the Far East, 1968 (New York: United Nations), p. 63.

<sup>104</sup> Data referred to in this paragraph and shown in the diagram are found in Table A2 of this chapter's appendix.

Diagram 24: Manufacturing Value Added: Annual Growth Rates  
(1955 Constant Prices)



Source: Table A2 of Appendix I

The disparity between the growth of industry, as a whole, and manufacturing by subperiods can probably be explained in terms of a lag between manufacturing activity and its acceleration effect upon the service sector, particularly construction. The important conclusion which emerges from Diagram 24, however, is the clear evidence of exhaustion of import substitution growth, as reflected in the progressive deceleration of the growth of real value added in manufacturing during the 1950s. The prolongation measures of the early 1960s appear to have had some temporary effect on bolstering the growth of manufacturing, but by the end of the period (1963-1965) a perceptible growth impasse had been reached.

#### Productivity

A second measure of overall performance of the Philippine economy, 1950-1965, is based upon the relationship between the growth of total output and total employment to show the change in productivity of employed labor for the economy as a whole. In an import substitution growth regime, where industrial expansion is emphasized, we would expect productivity gains to be confined largely to the industrial sector, reinforced by reallocation of labor from the lower (agricultural) productivity sector to the higher (nonagricultural) productivity sector.

To evaluate causation of changes in employed labor's productivity, therefore, aggregate productivity for the economy, as a whole, must be disaggregated by the two major sectors and the reallocation effect.

Letting  $g$  represent productivity of employed labor;  $X$ , real agricultural output;  $Y$ , real nonagricultural output; and  $L'$ , the employed labor force, we have:

$$10.1) \quad g = (X + Y)/L' \quad \text{productivity of employed labor}$$

Distinguishing between employed labor in agriculture,  $F$ , and in nonagriculture,  $W$ :

$$10.2a) \quad L' = F + W \quad \text{and}$$

$$b) \quad \theta = W/L'; \quad 1 - \theta = F/L' \quad \text{labor allocation fractions}$$

so that labor productivities in the two sectors are:

$$10.3a) \quad p = X/F \quad \text{labor productivity in agriculture}$$

$$b) \quad h = Y/W \quad \text{labor productivity in nonagriculture}$$

Changes in productivity of employed labor,  $\eta_g$ , can then be disaggregated among three contributing factors: changes in nonagricultural

productivity,  $\eta_h$ ; changes in agricultural productivity,  $\eta_p$ ; and changes caused by reallocation of labor from agriculture to industry,  $\eta_\theta$ . These factors may be combined into the following equation:<sup>105</sup>

$$10.4) \quad \eta_g = C_y \eta_h + C_x \eta_p + \eta_\theta \theta / g(h - p)$$

where  $C_y = h\theta/g$  and  $C_x = 1 - C_y$  are weights for the nonagricultural and agricultural sectors, respectively.

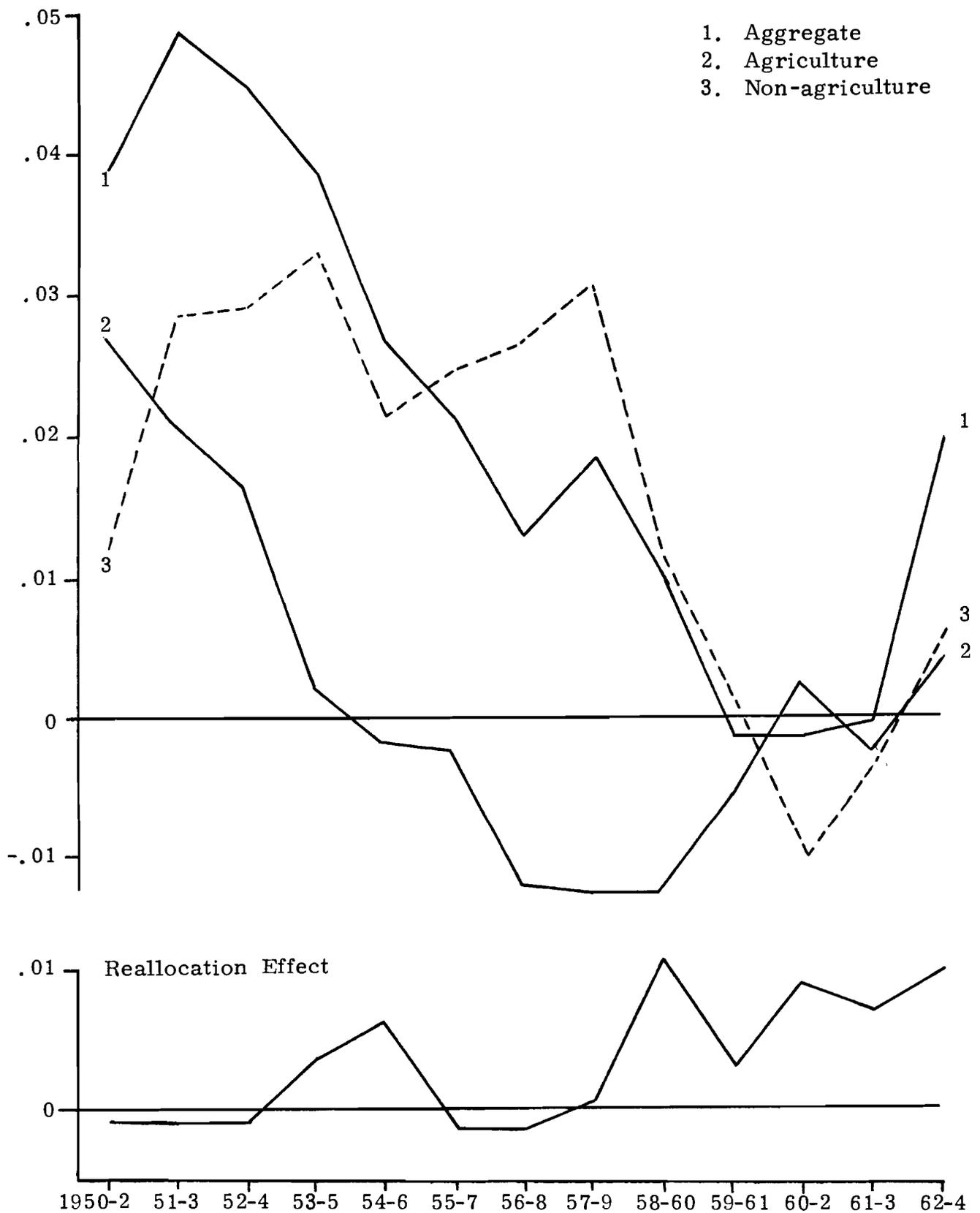
In Equation (10.4) the economy's labor productivity changes are thus disaggregated into the weighted nonagricultural sector's contribution ( $C_y \eta_h$ ), the weighted agricultural sector's contribution ( $C_x \eta_p$ ), and the reallocation effect,  $\eta_\theta \theta / g(h - p)$ .

Equation (10.4) was applied to Philippine data for the period 1950-1965. The results are presented as three-year averages in Table A3. These results are plotted in Diagram 25, with the three productivity measures ( $\eta_g$ ,  $C_y \eta_h$ , and  $C_x \eta_p$ ) shown in the top deck. The time paths of the three productivity growth rates shown in the top deck clearly confirm our analysis of the process of Philippine import

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<sup>105</sup>The model behind this equation and its derivation are given in Douglas S. Paauw, "The Postwar Record of Open, Dualistic Economies" (Washington: National Planning Association, Center for Development Planning, May, 1969), pp. 24-29 and 51-52 (mimeographed).

Diagram 25: Aggregate Labor Productivity and Components  
Growth Rates, 3-Year Averages



Source: Table A3 of Appendix I

substitution growth. Economy-wide labor productivity ( $\eta_g$ ) began from respectable growth levels between four and five per cent per year at the beginning of the period but began a continuous decline in about 1952, reaching a stagnant level in about 1960. Positive growth was resumed in about 1962, which may be construed as reflecting prolongation efforts after the initial thrust of import substitution growth had exhausted itself.

The two sectors' productivity contributions behaved differently. Nonagricultural labor productivity rose early in the period, and gains remained between two and three per cent per year until approximately 1958, when nonagricultural productivity fell precipitously. This may be interpreted as documenting a brief (7 or 8-year) period of effective nonagricultural sector growth under import substitution, followed by a sharp decline due to exhaustion of import substitution growth.

Exhaustion of import substitution growth, as shown by the productivity analysis, confirms our theory that the basic reason for termination lies in the lagging productivity of the agricultural sector. Neglect of agriculture is seen in the progressive decline of labor productivity's growth rate in that sector until 1960, and the eventual decline of nonagricultural productivity may be construed as being caused by this worsening agricultural stagnation. By approximately 1954-1955, agricultural productivity had fallen to a negative growth rate, and a small

positive rate of gain was not restored until the early 1960s, after public policy was consciously turned to export promotion.

After prolongation of import substitution through export promotion efforts, both nonagricultural and agricultural sector productivities fluctuated near zero. Recovery of economy-wide labor productivity near the end of the period (about 1963) reflected primarily the contribution of the reallocation effect. In general, this effect shows a greater contribution in the second half of the period than the first, a result which is unexplained by our theory.

In terms of the three subperiod breakdowns we employed in discussion of real gross national product, the productivity analysis supports our earlier conclusions. Employing actual annual data, economy-wide labor productivity ( $\eta_g$ ) grew at an average annual rate of 3.9 per cent during the period 1950-55, 1.9 per cent during 1955-60, and .6 per cent from 1960-65, showing clear deceleration by five-year periods. The nonagricultural productivity contribution ( $C_y \eta_h$ )--also employing actual annual data--showed an average annual increase of 2.2 per cent for 1950-55, 2.4 per cent for 1955-60, and .09 per cent for 1960-65. The agricultural productivity contribution ( $C_x \eta_p$ ) fell from an average growth rate of 1.9 per cent in the first period, 1950 to 1955, to a slightly negative rate ( - 0.1) between 1955 and 1960. From 1960 to 1965, the

nonagricultural contribution's growth rate averaged zero. Thus, the trends toward deceleration, aggregate and sectoral, verify our theory, showing agricultural stagnation preceding industrial slowdown, and only slight recovery after prolongation measures were adopted in 1960.

The productivity disaggregation also reflects another important feature of import substitution growth as implicitly predicted by our theory; i. e. , the lack of balance between productivity growth in the two aggregate sectors, agriculture and nonagriculture. Time regressions for productivity in the two sectors, agriculture,  $p$ , and nonagriculture,  $h$ , for the 1950-1965 period show a standardized coefficient,  $\bar{b}$ , of .002 for agriculture and .029 for nonagriculture.<sup>106</sup> Since this coefficient may be interpreted as the time trend of the sectoral productivities, these results reflect a notable lack of balance between growth in the two sectors. Behind this imbalanced sectoral growth lies the lack of integration between agriculture and nonagriculture, a feature consistent with the industrial bias of an import substitution growth regime. In later chapters on Thailand and Malaysia, we note relatively balanced growth of sectoral

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<sup>106</sup>The time regression results for agricultural productivity,  $p$ , are:  $a = 635.2$ ;  $b = 1.1$ ;  $r^2 = .774$ ;  $\bar{a} = .985$ ; and  $\bar{b} = .002$ . For nonagricultural productivity,  $h$ , the results are:  $a = 1364.8$ ;  $b = 53.4$ ;  $r^2 = .876$ ;  $\bar{a} = .74$ ; and  $\bar{b} = .029$ .

labor productivities in these countries where postwar transition growth has been of an export promotion nature.

## 1.2 Import Substitution Indicators

Our theory of import substitution growth describes a growth process in which two types of import substitution occur--one consisting of substitution of producer goods imports,  $M_p$ , for manufactured consumer goods imports,  $M_y$ ; and the other consisting of substitution of domestic production for imported consumer manufactures. Empirical indicators are available to measure the progress of import substitution of both types. In both senses, import substitution of the consumer manufacture variety--the meaning accepted in our study--is a one-shot phenomenon. Drastic reduction of imported consumer manufactures and the rapid rise of domestically produced consumer manufactures relative to total domestic availability can occur only once in a country's development history. We have identified this period to be the years 1950-1965 in the Philippine case, particularly the 1950 decade. We discuss empirical indicators of the two import substitution aspects in turn.

## Structure of Imports

Diagram 26 shows the time paths of the percentage shares of four components of imports, into which total imports have been disaggregated for the period 1949-1965.<sup>107</sup> These components are imported intermediate goods,  $M_R$ , imported capital goods,  $M_i$ , imported consumer manufactures,  $M_y$ , and imported foodstuffs,  $M_x$ . The import account aspect of import substitution is clearly shown from Diagram 26 by the decline in the share of imported consumer manufactures,  $M_y$ , which fell from 40 per cent of total imports in 1949-51 to 20 per cent by 1965. Retardation of import substitution in this sense is apparent after 1960. Beginning in 1961, the share of consumer manufactures in the import account remained essentially constant near the 20 per cent level.

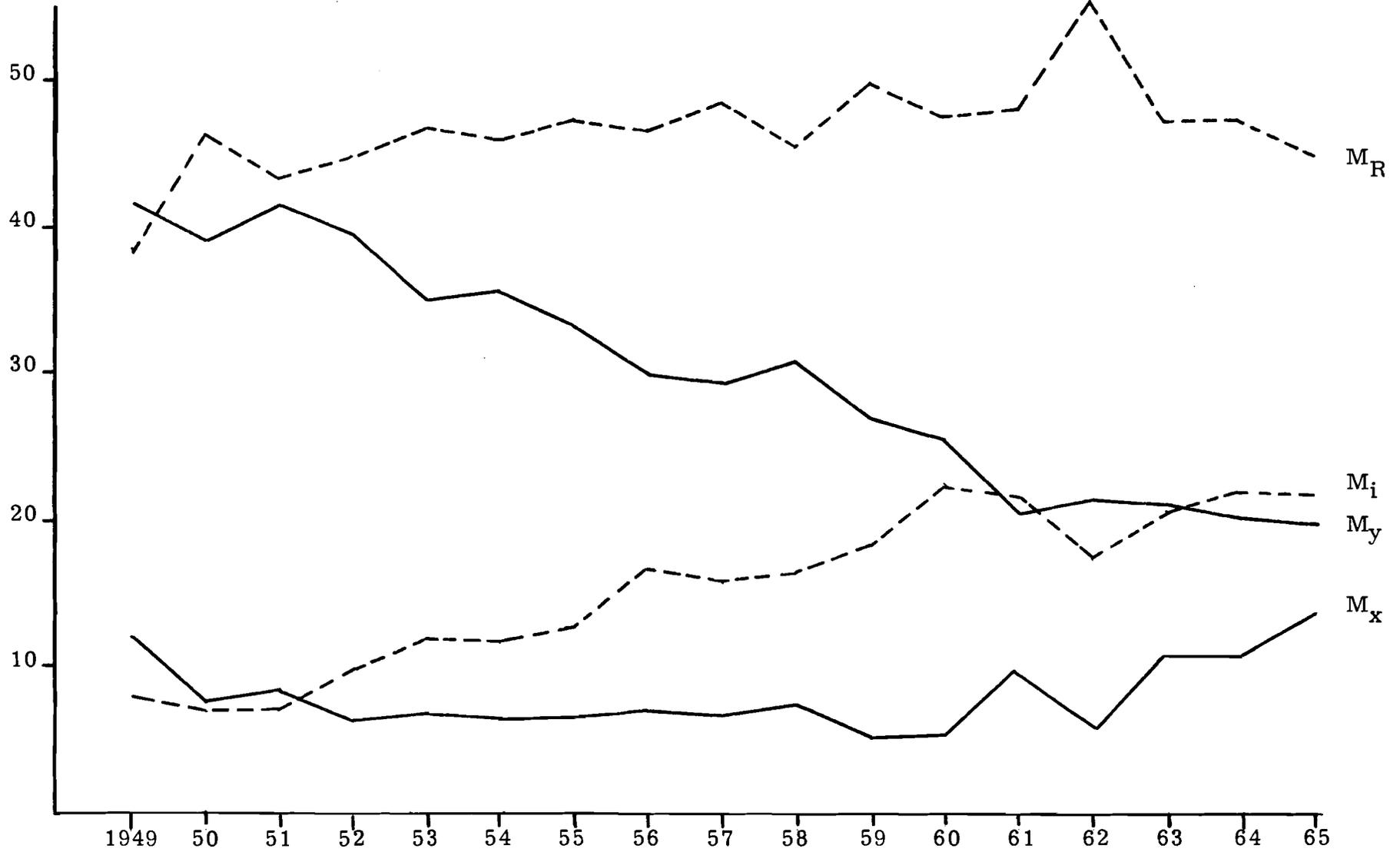
Our analysis of the time process of import substitution growth emphasizes expansion of producer goods imports, both capital goods and intermediate goods, as the basic cause of growing domestic capacity for producing consumer manufactures. This is clearly apparent in the Philippine case.<sup>108</sup> The share of producer goods in total imports rose

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<sup>107</sup>The actual annual value in constant prices and percentage shares are given in Table A4 of Appendix I.

<sup>108</sup>See Column 5, Table A4, of Appendix I.

Diagram 26: Composition of Imports, 1949-1965  
(Percent of Total)



Source: Table A4 of Appendix I

from 46 per cent in 1949 to 70 per cent by 1960. After 1962, however, a downward trend in the share of producer goods occurred, providing further evidence of the slackening pace of import substitution. This change also verifies another important phenomenon emphasized by our theory in the preceding chapter. The reduction in the share of producer goods imports after 1962 was associated with a sharp rise in imports of agricultural goods,  $M_x$ . This demonstrates the impact of the society's growing food deficit on import substitution growth as food imports displaced producer goods. We return to the empirical dimension of this latter problem in Section 1.4.

Growth of capital goods imports,  $M_i$ , was the dominant factor in the rapid rise of the share of producer goods imports. Capital goods imports rose from 7 per cent of total imports in 1950 to just over 20 per cent in the last few years of the period. Consistent with the behavior of the other indicators of the pace of import substitution, however, the growth of imported capital goods as a share of total imports ceased after 1960. Thus, this indicator also points to the year 1960 as a turning point in the Philippines' import substitution growth experience.

The dramatic growth of producer goods imports is an empirical phenomenon of the postwar transition in the Philippines which has received considerable attention. In fact, the rapid growth of these

imports has led to the characterization of postwar Philippine growth as "import-dependent import substitution."<sup>109</sup> Our theory of import substitution growth, however, demonstrates that import substitution is necessarily import-dependent inasmuch as a society in the early stages of the transition is patently incapable of producing the capital and intermediate goods required for rapidly expanding domestic production of consumer manufactures. The significant issue is whether a phase of import substitution prepares the society to progress eventually from import substitution to a new outlet for growth of domestic industrial capacity--an outlet found in foreign markets. Thus, import dependence upon producer goods, per se, is not the crucial problem. However, growing import dependence upon food, especially when unaccompanied by rapid export expansion--as in the Philippines--is an indication of unduly prolonged import substitution.

#### Supply of Manufactured Consumer Goods

We now turn to the second substitution aspect of import substitution, the displacement of imports by domestic production in the

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<sup>109</sup>See, for example, Gerardo P. Sicat, "Import-Dependent Import Substitution" (Manila: University of the Philippines, I. E. D. R. Discussion Paper No. 65-6, August, 1965), mimeographed.

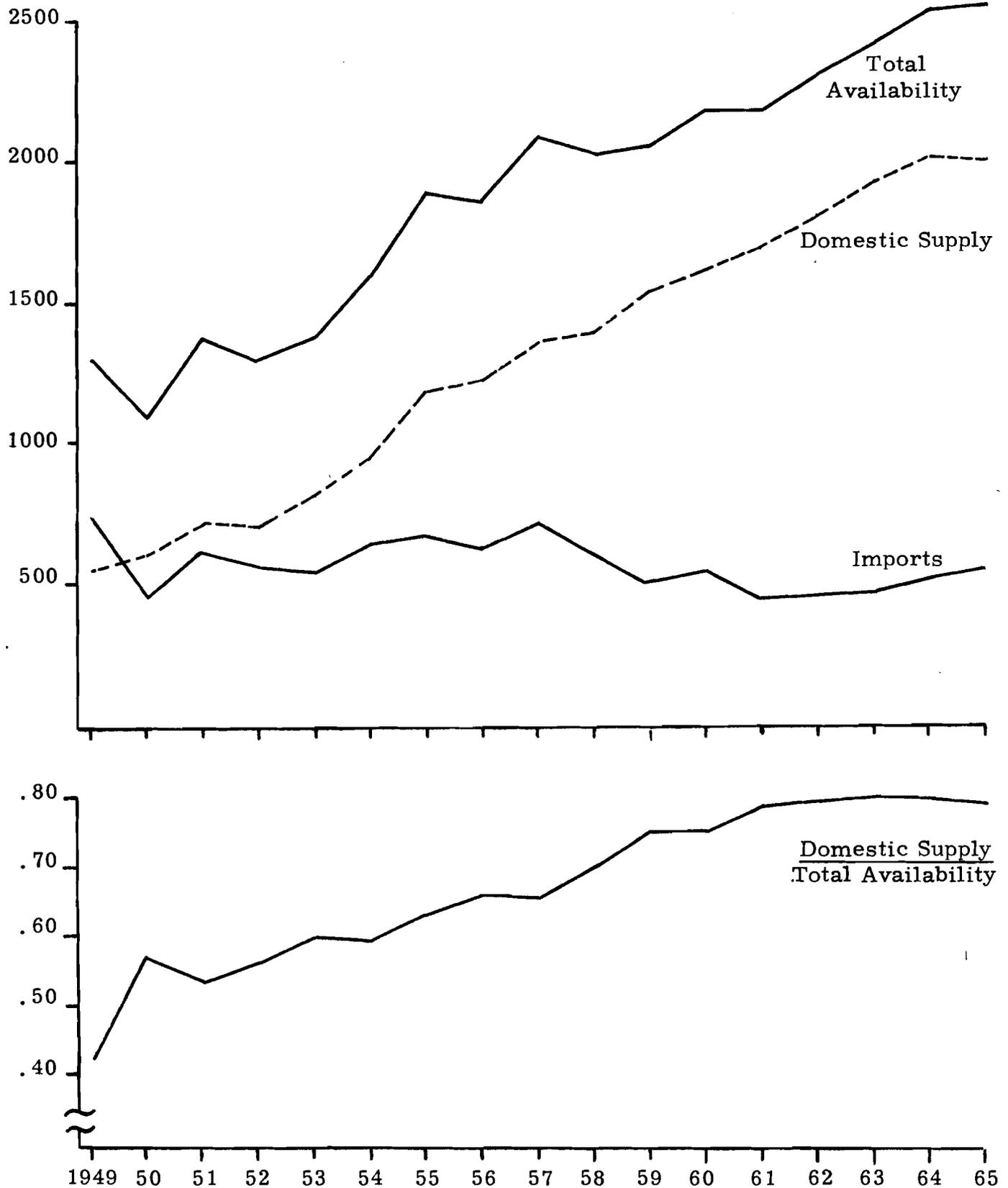
economy's total availability of consumer manufactures. It should be emphasized that the empirical basis for this section is somewhat shaky and, hence, the results presented should be viewed as illustrative of a general trend rather than a precise estimate of the change with which we are concerned.

Diagram 27 shows constant price series for domestically produced supply of manufactured goods,  $y$ ; imported consumer manufactures,  $M_y$ ; and total availability of manufactured goods in the domestic market,  $y + M_y$ .<sup>110</sup> While the annual real value of imported consumer manufactures remained roughly constant over the period 1949-1965, the domestically produced supply rose rapidly, showing an average annual rate of growth of 8.4 per cent. These disparate rates of expansion produced a significant alteration in the ratio of domestic output to total availability. This ratio rose from .42 in 1949 to near .80 at the end of the period. As in the case of several other indicators previously cited, however, there was a marked change in the rate of import substitution after 1960. Beginning in 1961, essentially no further displacement of imported consumer goods by domestic production occurred. Thus, this empirical evidence further supports our observation that import substitution growth neared termination after the 1950 decade.

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<sup>110</sup>The actual time series are presented in Table A5 of Appendix I.

Diagram 27: Manufactured Goods: Domestic Supply, Imports, and Total Availability (Million Pesos, Constant 1955 Prices)



Source: Table A5 of Appendix I

### 1.3 The Export Sector

The analytical framework introduced in Chapter 9 for analysis of Philippine postwar transition growth stresses the reliance of import substitution growth upon the export sector. The analysis depicts the rise of special problems associated with neglect of the export sector during the 1950 decade of vigorous import substitution growth, followed by resumption of export promotion to alleviate the emerging difficulties. In this section we introduce inductive evidence to support this crucial aspect of postwar transition experience in the Philippines. We begin by studying the growth of aggregate exports and then proceed to examine their sectoral and commodity composition.

Very serious statistical problems plague the estimation of postwar Philippine exports, particularly peso (domestic currency) estimates. On the one hand, reported exports show a persistent downward bias for much of the period due to underreporting.<sup>111</sup> On the other hand, exports are reported in U. S. dollar values, and there are very difficult

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<sup>111</sup>See George L. Hicks, "Philippine Foreign Trade, 1950-1965" (Washington: National Planning Association, Center for Development Planning, September, 1966), mimeographed; and George L. Hicks, "Philippine Foreign Trade Statistics, Supplementary Data and Interpretations" (Washington: National Planning Association, Center for Development Planning, September, 1967), mimeographed.

problems in converting dollar values to appropriate peso equivalents.<sup>112</sup> Our empirical work has sought to correct the most glaring deficiencies in the official estimates on both counts, and we present our estimates of constant price export series with relative confidence in their accuracy.<sup>113</sup>

### Aggregate Performance

The aggregate value of Philippine exports in constant 1955 prices for the period 1950-1965 and the ratio of exports to GNP are shown in Diagram 28. These estimates reconcile the national income account concept of export earnings with reported dollar earnings from both merchandise and service exports. As such, they provide both a reliable index of aggregate export performance and, when compared to real gross national product, a measure of changes in the economy's export orientation.

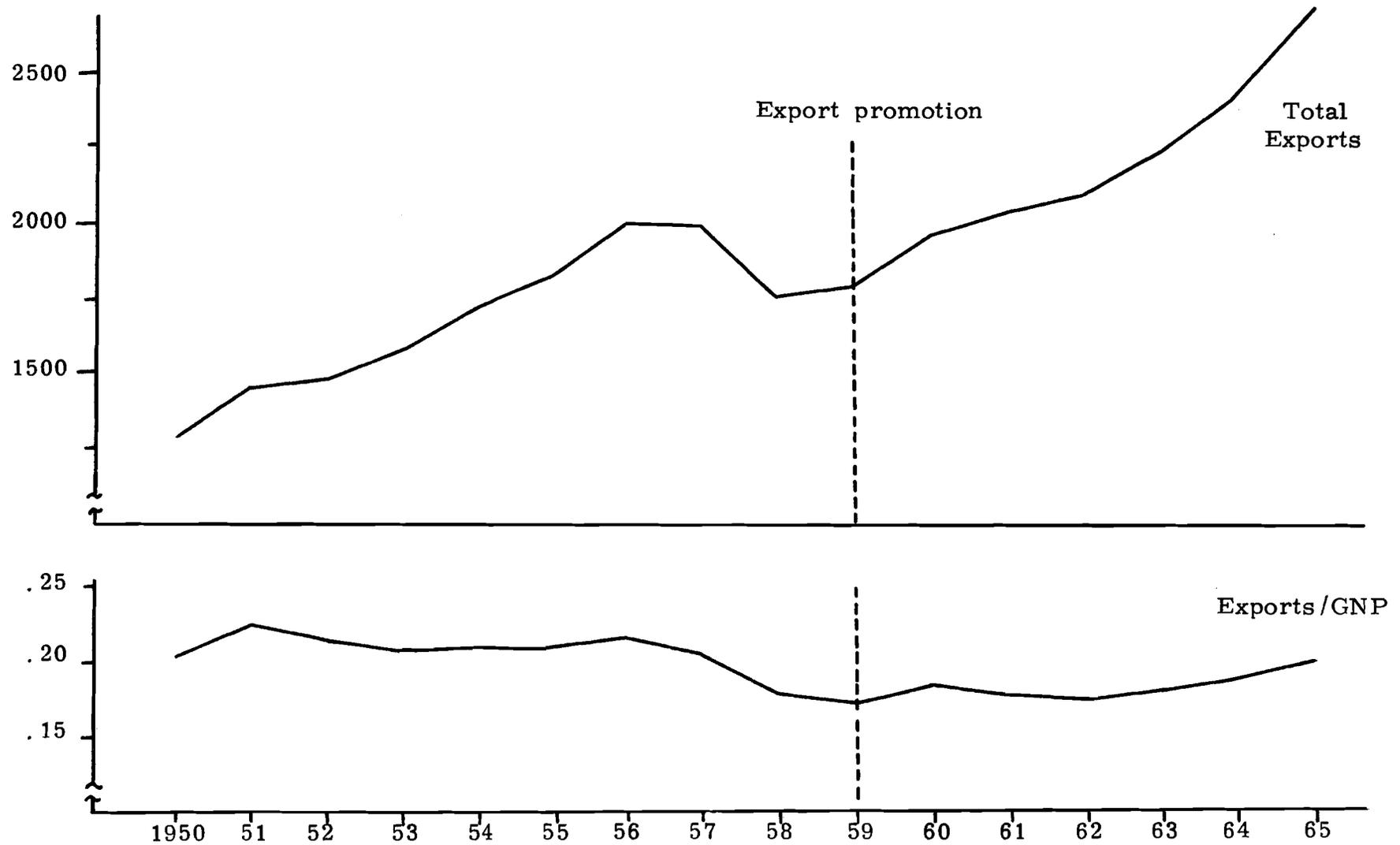
It is apparent from Diagram 28 that overall export performance varied significantly over the period 1950-1965. Until 1957, the real value of exports grew rapidly enough to maintain the economy's export

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<sup>112</sup>See Douglas S. Paauw, op. cit., pp. 26-37.

<sup>113</sup>The use of official Philippine estimates for export values in either current or constant prices leads to erroneous conclusions about postwar export experience.

Diagram 28: Total Exports and Export/GNP Ratio, 1950-1965  
(Million Pesos, 1955 Constant Prices)



Source: Table A6 of Appendix I

orientation (exports/GNP) slightly above 20 per cent. After 1957, however, export growth faltered, causing the economy's export orientation to decline. In 1958 the real level of export earnings fell sharply, and the 1957 level was not re-achieved until 1961. The ratio of exports to total output (GNP) fell below 20 per cent after 1957, and the 20 per cent export orientation (which had characterized the Philippine economy for 50 years) was not restored until 1965. Thus, it is clear that the export base, upon which import substitution relies for savings and foreign exchange resources, as well as for market creation, began shrinking after 1957.

The same conclusion may be reinforced by considering the rates of growth of real exports shown in Table 4. Over the entire period 1950 to 1965, exports grew at an annual rate of 5.2 per cent, slightly below the growth of real gross national product (5.4 per cent). The growth rates by five-year periods, however, show the rise of a serious problem in the latter half of the 1950 decade. After growing by 7.5 per cent per year from 1950 to 1955, annual growth of real exports fell to 1.5 per cent from 1955 to 1960. Thus, during the second five-year period of Philippine import substitution growth, growth was constrained by an essentially stagnant level of exports, which is consistent with the assumptions used for our analysis of import substitution growth in preceding chapters.

TABLE 4

EXPORT GROWTH RATES:  
1950-1965 AND BY FIVE-YEAR PERIODS  
(EXPORTS IN CONSTANT 1955 PRICES)

Period	Average Growth Rate
1950-1965	.052
1950-1955	.075
1955-1960	.015
1960-1965	.066

Source: Table A6 of Appendix I.

The adoption of export promotion policies after 1960 is clearly reflected in the rise in the export growth rate to 6.6 per cent from 1960 to 1965.<sup>114</sup>

### Composition of Exports

Our theory in earlier chapters emphasizes that the composition of exports is a crucial aspect of transition growth in open dualistic economies. All economies of this type enter the transition with a land-based primary product export base. Successful transition growth, though launched from this base, eventually involves a shift toward manufactured exports, based upon cheap and abundant labor supply rather than natural resources. Import substitution growth lays the basis for this shift by promoting the growth of a domestic industrial base and by offering a period of protection during which entrepreneurs can acquire experience for eventually competing in world markets.

In the previous chapter Philippine transition growth was analyzed in terms of prolonged import substitution. An important feature of this growth system consists of continued reliance upon primary product

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<sup>114</sup>The export data on which these estimates are based, it should be remembered, represent careful adjustments for both under-reporting and undervaluation during the control period. We have confidence, therefore, in the relative accuracy of the changes in growth rates by period.

exports, a characteristic which demonstrates the failure of the evolution of a new growth system based upon substituting manufactured for primary product exports. In this situation, import substitution as a growth phase is prolonged by primary product export promotion activities as stagnant exports threaten the viability of the system.

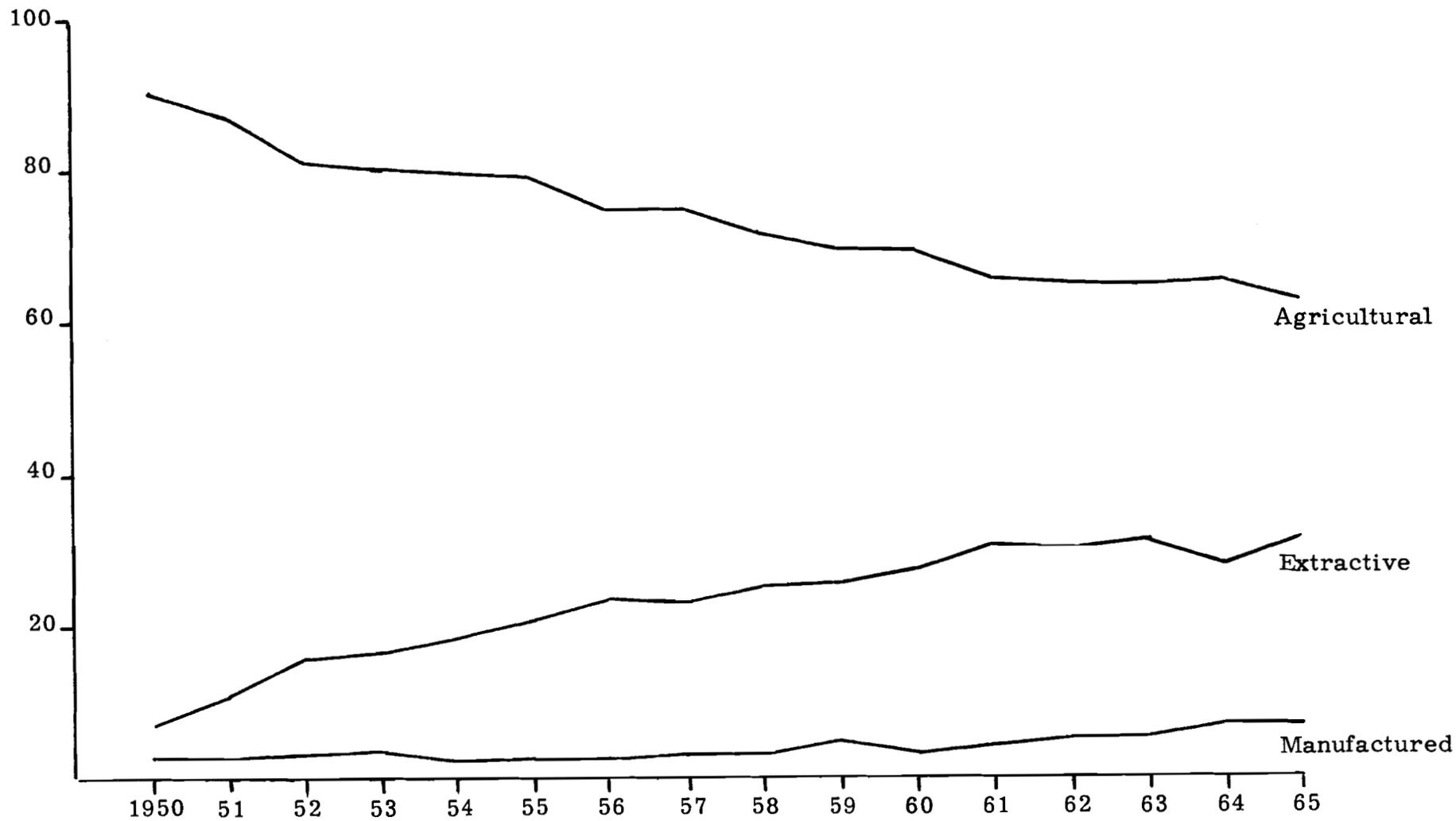
We now turn to empirical support for these export composition aspects of our interpretation of the Philippine case of prolonged import substitution. Diagram 29 classifies merchandise exports into primary products and manufactures for the period 1950-1965. Primary product exports are defined as those which are land-based; i. e., those in which the natural resource component represents the dominant share of final value.<sup>115</sup> Empirically, primary product exports include two broad categories, agricultural and extractive. Extractive exports comprise both minerals and forestry products. In the Philippines, major agricultural exports are copra, sugar, and coconut products while major extractive exports are copper and logs and lumber.

Scrutiny of Diagram 29 demonstrates the persistent dominance of Philippine exports by primary products (agricultural and extractive)

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<sup>115</sup>Using this criterion, Philippine food exports, including sugar, are classified as primary product exports.

Diagram 29: Composition of Exports, 1950-1965  
(Percent of Total)



Source: Table A7 of Appendix I

throughout the period 1950-1965.<sup>116</sup> Their share of total merchandise exports remained above 90 per cent throughout the period. Nevertheless, it is important to observe a very significant shift between the two components of primary product exports, agricultural and extractive. Agricultural exports declined continuously as a share of total merchandise exports, while extractive exports rose. The share of agricultural exports declined from 90 per cent in 1950 to 62 per cent in 1965, while extractive exports rose from 7 per cent to 31 per cent. The contribution of extractive exports to primary product export earnings rose from 7.4 per cent in 1950 to 33.3 per cent in 1965.

The significance of the rise of extractive type primary product exports was profound in enabling the prolongation of the import substitution growth phase. The combination of the disappearing arable land frontier<sup>117</sup> and low productivity gains in agriculture placed severe constraints upon expansion of traditional agricultural exports. The

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<sup>116</sup>See Table A7 of Appendix I for actual values.

<sup>117</sup>See George L. Hicks and Geoffrey McNicoll, "Foreign Trade and the Growth of the Dual Economy: A Case Study of the Philippines" (Washington: Center for Development Planning, National Planning Association, 1968), pp. 312ff (mimeographed); and Raymundo E. Fonollera, "Labor Intensity in Philippine Agriculture," in Population Institute of the University of the Philippines, First Conference on Population, 1965 (Quezon City: University of the Philippines Press, 1965), pp. 493-496.

opening up of new extractive industries for exports, particularly the rapid depletion of the Philippine forest reserves by logs and lumber production, provided a major escape from this impasse. Growth of both forest products and mineral exports was promoted by participation of foreign enterprise and foreign capital. These fortuitous circumstances provided the basis for prolonged import substitution growth; without this new land-based source of export earnings, stagnation of import substitution growth would have occurred long before the late 1950s.

The dramatic rise of extractive exports must, nevertheless, be viewed as palliative rather than as engendering positive growth effects. Common to extractive export activities in less-developed countries generally, these activities in the Philippines emphasized a very special land-based comparative advantage. The linkage effects of these exports with the domestic economy, particularly with the evolving manufacturing sector, tend to be weak. Similarly, they have little direct impact upon the modernization of the large and backward agricultural sector. In general, therefore, extractive exports fail to promote progress toward export substitution, the only genuine escape route from the difficulties associated with prolonged import substitution growth.

We now consider the other component of exports--manufactures. Diagram 29 shows that exports of manufactured goods remained a very

small percentage of total exports throughout the period, rising from 2.4 per cent of total exports in 1950 to only 6.4 per cent in 1965. While some may find encouragement in this modest growth of manufactured exports, one must, from a broader perspective, consider this accomplishment as an insignificant step toward export substitution. In the first place, it is clear that a smaller share of manufacturing output was being exported in 1965 than at the beginning of the transition. According to a recent study, the share of manufacturing output exported was 18 per cent in 1948, 13 per cent in 1956, 9 per cent in 1960, and 15 per cent in 1965.<sup>118</sup> On the basis of a study by Sicat, these estimates apparently overstate the export component of manufacturing.<sup>119</sup> Second,

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<sup>118</sup> John H. Power, "The Structure of Protection in the Philippines," Discussion Paper No. 69-8, University of the Philippines, School of Economics, April 30, 1969, Table VII, p. 14 (mimeographed).

<sup>119</sup> Sicat's study (for 1966) includes food exports, e.g., sugar, in manufactured exports; yet in 1966 he finds only 12 per cent of manufactured value added exported. Apart from food, in which the exported percentage was 32 per cent--with only sugar showing a large export coefficient--only wood products showed an export ratio above 10 per cent (44 per cent). Chemicals showed the next largest (9 per cent), almost entirely accounted for by glycerine from coconut processing. All remaining categories of manufactures showed a ratio of exports to value added under 2 per cent. Some examples: beverages, 1.1 per cent; tobacco, .7 per cent; textiles, 1.8 per cent; leather, 1.8 per cent; footwear and apparel, .4 per cent; paper and paper products, negligible; rubber, negligible; and petroleum, .3 per cent. Gerardo P. Sicat, "The Manufacturing Sector After Decontrol," Discussion Paper No. 67-9, University of the Philippines, School of Economics, August 20, 1967, Table 7, p. 35 (mimeographed).

countries which have shown significant progress toward export substitution have raised manufactured exports from less than 5 per cent to over 50 per cent of total exports during the postwar transition. Taiwan and Korea may be cited as examples.

A more detailed picture of the composition of manufactured exports is given in Table 5, which shows major types of manufactured exports as percentage shares of total manufactured exports, 1949-1965. A general conclusion from this table is that manufactured exports consisted primarily of processed natural resources rather than labor-intensive products. This distinction is significant since progress toward export substitution growth must involve a gradual shift from a land-based export orientation to a cheap and efficient labor-based orientation. Greatest progress in manufactured exports was made in wood products, essentially plywood, which rose from about 1 per cent of manufactured exports in 1949 to about 55 per cent in 1965. Nevertheless, forest product exports were still largely in crude form in 1965, when the value of (unmanufactured) log and lumber exports was more than five times as great as wood manufactures. In the other categories, tobacco is also a land-based manufacture, and this product represented over 90 per cent of the beverage and tobacco category, the other component being beer. In the chemical group, virtually the entire value of export was contributed by

TABLE 5

MANUFACTURED GOODS EXPORTS:  
COMPOSITION BY TYPE, 1949-1965  
(AS PER CENT OF TOTAL)

Year	Beverages and Tobacco	Chemicals	Wood Products	Textiles	Other
1949	30.0	10.0	.7	27.9	31.3
1950	19.0	7.3	3.7	31.1	38.9
1951	26.3	16.5	1.4	34.5	21.2
1952	34.2	9.1	1.3	21.9	33.4
1953	32.0	7.9	15.0	16.4	28.6
1954	41.7	11.6	5.1	18.3	23.2
1955	34.9	10.9	14.0	17.8	22.4
1956	39.4	9.4	18.2	18.7	14.4
1957	36.0	8.7	24.5	18.0	12.9
1958	37.2	5.4	39.7	11.6	6.1
1959	27.1	5.2	53.8	9.8	4.1
1960	29.7	7.8	43.9	13.2	5.4
1961	31.7	7.2	44.1	13.5	3.5
1962	33.6	3.8	49.2	9.6	3.7
1963	28.2	3.2	57.1	7.4	4.1
1964	26.8	4.8	56.4	6.5	3.9
1965	28.4	3.4	54.4	8.3	5.5

Source: Central Bank of the Philippines, Statistical Bulletin,  
Vol. XVIII, No. 4, December, 1966.

glycerine, a manufacture (entirely by foreign firms) from coconut oil. Since textiles represent an export emphasizing labor efficiency, it is significant to note that textile manufactures fell as a share of total manufactured exports.

### Results of Export Promotion

Stagnation of exports under import substitution growth eventually induced an easing of profit transfer mechanisms by adoption of conscious export promotion policies.<sup>120</sup> These policies served to prolong import substitution growth by mitigating the disincentive effects associated with the transfer of export profits to foster industrial growth. We have already noted the positive response of the aggregate level of exports to the relaxation of import substitution controls. We now consider the effect of these export promotion policies upon the three categories of exports, agricultural, extractive, and manufactured. Table 6 presents the growth of exports of each type from 1960-1965 in terms of index numbers (1960 = 100). These data suggest that export promotion policies had a positive effect upon all three types of exports, with growth of manufactured exports (though beginning from a very low base) outstripping

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<sup>120</sup>These policies are discussed in Section 2.3.

TABLE 6

INDEX OF EXPORT PROMOTION RESULTS  
 BY SECTORS AND MAJOR EXPORTS, 1960-1965  
 (1960 = 100)

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I. <u>Primary Products</u>		
A. Agricultural:		119
(1) Copra	123	
(2) Sugar	99	
(3) Coconut Products*	255	
B. Extractives:		149
(1) Logs and lumber	177	
(2) Minerals	125	
II. <u>Manufactures</u>		243
(1) Wood products	283	
(2) Beverages and tobacco	213	
(3) Chemicals	100	
(4) Textiles	141	

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\*Largely coconut oil.

Source: Appendix I, Table A7; and Central Bank of the Philippines, Statistical Bulletin, Vol. XVIII, No. 4, December, 1966.

both components of primary product exports. The average annual growth rate of manufactured exports was raised from 11.8 per cent (during the 1955-1960 period) to 19.5 per cent from 1960 to 1965. The growth rate of extractive exports was left virtually unchanged, while growth of traditional agricultural exports showed a rise from 1.9 per cent per year in the earlier period to 3.6 per cent after 1960.

The major conclusion from Table 6 is that relaxation of controls had its greatest impact upon accelerating the growth of a very few natural resource-based manufactured exports, particularly wood products (i. e., plywood).<sup>121</sup> From 1960 to 1965, plywood accounted for 63 per cent of the growth of manufactured exports and tobacco, 26 per cent; thus plywood and tobacco exports explain 89 per cent of manufacturing's export growth after 1960. Export promotion policies appear to have had some effect upon expanding traditional primary products. In the case of coconut product exports, which showed the greatest progress, however,

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<sup>121</sup>This observation is confirmed by Sicut's study, referred to earlier. He finds only three manufacturing industries (wood products, beverages, and chemical products) whose growth depended on exports. Sicut, op cit., p. 37.

other factors outweighed the impact of improved domestic incentives.<sup>122</sup> Extractive exports were essentially unaffected by export promotion policies for special reasons. As we noted, there was a significant amount of foreign participation in their production; and, given their large natural comparative advantage, they had grown significantly even during the heyday of the controlled import substitution system.

#### 1.4 Traditional Agriculture and Food Deficiency

The theory of prolonged import substitution growth predicts the eventual emergence of food deficits, aggravating the problems associated with growth exhaustion. While we believe the food deficit symptom of prolonged import substitution growth to be a rather common phenomenon in less-developed countries, discussion here focusses upon the Philippine case. In the appendix to this chapter we present evidence of its appearance in other countries sharing prolonged import substitution experience.

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<sup>122</sup>The major factor accounting for expansion of agricultural exports was a large freight rate reduction for shipping coconut oil, increasing the profitability of coconut oil exports relative to copra. See George L. Hicks, "The Philippine Coconut Industry: Growth and Change, 1900-1965" (Washington: National Planning Association, Center for Development Planning, June, 1967), pp. 160-166 (mimeographed).

## Domestic Food Supply

The basic cause of food deficiency in countries of this type is the continued backwardness of the large traditional agriculture. Industrial expansion requires growing food transfers from traditional agriculture to maintain the rapidly increasing labor force in the industrial sector. During the early phase of import substitution, control policies discriminate against agriculture generally and both private and public investment is directed toward expansion of the industrial sector, to the neglect of agriculture. During prolongation, export promotion policies leave traditional agriculture, the domestic source of food supply, untouched. In fact, export promotion policies are likely to encourage growth of agricultural exports by encroaching upon land available for traditional food crops. Given stagnant labor productivity in traditional agriculture, therefore, export promotion devices to prolong import substitution may very well tend to aggravate the tendency toward food deficiency.

Philippine agricultural growth during most of the twentieth century is explained by bringing new land under cultivation, with both per capita areas planted to cereals and production per capita remaining

constant.<sup>123</sup> During the postwar period, population pressure on land was reflected in the necessity to extend cultivation to increasingly marginal land, testifying to the fact that the Philippine land surplus was nearing exhaustion. The operational conclusion is that further increases in total food production require infrastructure investment as well as technological change.<sup>124</sup> During the period of prolonged import substitution growth, 1950-1965, the required investment and technological inputs were not forthcoming, and a food-deficit situation emerged. The situation became critical when export promotion policies shifted agricultural land from food to export production after 1960.

Philippine basic food supply has long been primarily a matter of two commodities, rice and corn. During the period 1949-1964, these two

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<sup>123</sup> Frank H. Golay and Marvin E. Goodstein, "Philippine Rice Needs to 1990: Output and Input Requirements," p. 30 (mimeographed).

<sup>124</sup> Evidence of backward technology and low productivity in traditional agriculture is cited by F. L. Wernstedt and J. E. Spencer in The Philippine Island World (Berkeley: University of California Press, 1967). On Page 179 these authors state: "One simple and significant fact is that Filipino agriculture is not very productive at best; its per-acre and per capita yields are among the lowest in Southern and Eastern Asia, and rank low in world comparison. Despite the growth of a significant export agriculture and the continual expansion of the agricultural landscape, the technology of crop growing remains simple and not greatly influenced by the elements of modernization which have appeared elsewhere in the world."

commodities provided about 90 per cent of total cereal absorption, with rice providing approximately 75 per cent of the total.<sup>125</sup> Of the domestic value of total production of food crops, rice accounted for 74 per cent in 1950 and 59 per cent in 1965; corn accounted for 12 per cent in 1950 and 14 per cent in 1965.<sup>126</sup> The declining share of rice production in total output relative to corn is clearly reflected in a marked shift in consumption toward corn in the postwar period.<sup>127</sup> Although Filipinos show a preference for rice, availability constraints on rice relative to corn is alleged to account for the shift.<sup>128</sup>

Growth rates of the food crop sector and the two major crops, rice and corn, are shown in Table 7. Over the period 1950-1965 all food crops grew at an average rate of 4.5 per cent per year, though the growth rate by each subsequent five-year period fell. Growth of corn output

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<sup>125</sup>Golay and Goodstein, op. cit., Table A12, p. 24.

<sup>126</sup>Calculated from Joseph L. Tryon, "The Behavior of Production, Prices, and Productivity in Philippine Agriculture, 1949-1964" (Washington: National Planning Association, Center for Development Planning, July, 1968), Table 3 (mimeographed).

<sup>127</sup>Ibid., p. 42.

<sup>128</sup>Ibid.

TABLE 7

GROWTH RATES OF THE FOOD CROP SECTOR, 1950-1965  
(CONSTANT PRICE, EX-FARM VALUE)

	1950-1965	1950-1955	1955-1960	1960-1965
All Food Crops	.045	.062	.043	.030
Rice	.029	.042	.031	.013
Corn	.057	.061	.086	.025
Other Food Crops	.091	.146	.053	.075

Source: Basic data from Joseph L. Tryon, "The Behavior of Production, Prices, and Productivity in Philippine Agriculture, 1949-1964" (Washington: National Planning Association, Center for Development Planning, July, 1968), Table 8 (mimeographed).

substantially outstripped rice throughout the period by an average growth rate of 5.7 per cent to 2.9 per cent. This difference is generally accounted for by the diminishing cultivable land frontier. Extension of cultivation increasingly required use of rougher land, less suitable to rice than to corn.<sup>129</sup>

Retardation of expansion of food crop output during the postwar period was aggravated by the resort to export promotion policies after 1960. These policies resulted in a significant shift in the use of cultivable land from food to export crops. According to Golay and Goodstein, the relaxation of controls caused area planted to rice and corn to decrease by 6 per cent (313,000 hectares) in the six years after 1959 (although total area under cultivation expanded by 4 per cent), while area planted to export crops rose by 691,000 hectares.<sup>130</sup> The impact of this factor can be seen from Table 7, which shows sharp retardation of growth rates for food crop output in the 1960-1965 period. Total food crop production grew by only 3 per cent per year, well below the population growth rate of 3.5 per cent during this period. Growth of rice output was particularly depressed, averaging only 1.3 per cent per year while corn

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<sup>129</sup>Golay and Goodstein, op. cit., p. 28.

<sup>130</sup>Ibid.

output grew by 2.5 per cent. Thus, the food deficiency problem was most critically raised in the case of rice, the mainstay and preferred cereal in the Filipino diet.

Throughout the postwar period rice output grew more slowly than population growth (2.9 per cent compared to 3.2 per cent). Golay and Goodstein believe that per capita absorption of rice during this period was restrained by this supply limitation rather than demand behavior. Augmentation of rice availability by imports, similarly, is believed to have responded to administrative decision rather than to market demand forces.<sup>131</sup> We note that these phenomena in the Philippines are consistent with our theory of import substitution under controlled economy and food deficiency conditions.

#### Food Imports

The lagging domestic production of food is clearly reflected in Philippine import accounts. In Table A4 of Appendix I, total imports are disaggregated into four components, including  $M_x$ , finished agricultural consumption goods, virtually all food. The time paths of the four import components, as shares of total imports, were shown in Diagram 26.

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<sup>131</sup> Ibid., p. 49.

Excluding 1949 as an atypical year in which recovery from wartime damage to agriculture was still being completed, we observe that  $M_x$  (food imports) during the 1950s remained between 5-8 per cent of total imports. After 1960, however, food imports rose significantly, averaging 10 per cent of total imports from 1960-1965--and reaching 14 per cent in 1965.

Comparing the real level of food imports in 1963-1965 with that in 1950-1952, we find that the real value of food imports had virtually tripled over the 14-year period. Using these initial and terminal three-year averages, food imports grew at an average annual rate of 8.7 per cent over this period (1950-52 to 1963-65). However, this obscures the fact that virtually all of the increase occurred after 1960.

The year 1961, the year in which "decontrol" effects began to take hold, marks the emergence of serious food shortfalls, as shown by import data. The resort to export promotion to overcome the exhaustion of import substitution growth, therefore, appears to have precipitated a serious food deficit problem, clearly reflected in the aggregate import data. The food deficiency, in terms of an equilibrium market situation, is very likely understated by import data. The largest component of the food import account from 1960-1965 was rice, and we have already stressed that rice consumption was artificially depressed by availability conditions.

Rice import data are not presented fully in official Philippine import account statistics. This reflects the political volatility of rice imports and the use of import adjustments in rice availability for political ends.<sup>132</sup> However, data have become available through studies of an Inter-agency Committee and private scholars. Based on these data, Table 8 shows the volume of domestic output of rice, net rice imports, the ratio of imports to total rice availability, and rice availability per capita--all for the period 1955-1965. These data clearly confirm the growing rice deficit problem confronted after 1960. From crop year 1960-61 to 1965-66, the ratio of rice imports to total availability averaged .081, compared to .031 for the period 1955-56 to 1959-60. With the much larger rice imports in the later period, however, rice availability per capita remained essentially constant; i. e., averaging 88.5 kg. per capita in 1960-61 to 1965-66, compared to 89.5 kg. per capita in 1955-56 to 1959-60.

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<sup>132</sup>Ibid., p. 33.

TABLE 8

## RICE AVAILABILITY, 1955-56 TO 1965-66

Crop Year	Domestic Output <sup>1</sup> (1)	Net Imports <sup>1</sup> (2)	Total Availability <sup>1</sup> (3)	Ratio: Imports to Availability (4)	Availability per capita <sup>2</sup> (5)
1955/56	2125	42	2167	.019	89.2
1956/57	2172	78	2250	.035	89.9
1957/58	2079	231	2310	.100	89.6
1958/59	2392	6	2398	.003	90.2
1959/60	2427	- 2	2425	- .001	88.5
1960/61	2405	186	2591	.072	91.5
1961/62	2538	0	2538	0	85.0
1962/63	2575	256	2831	.090	93.6
1963/64	2494	299	2793	.107	81.3
1964/65	2591	560	3151	.178	97.4
1965/66	2644	108	2752	.039	82.2

<sup>1</sup>Thousand metric tons, milled rice equivalent.

<sup>2</sup>Annual population (midyear) estimates taken from United Nations, Demographic Yearbook.

Source: Columns (1) and (2) data from Mahar Mangahas, "Estimates of the Task of Rice Price Stabilization in the Philippines," Discussion Paper No. 69-12, University of the Philippines, School of Economics, July 12, 1969, Table 2, p. 7 (mimeographed).

## 2. THE ORGANIZATIONAL MILIEU

### Introduction

We have emphasized in Chapter 7 that import substitution growth is accompanied by an organizational milieu described as economic nationalism. The creation of such a milieu was considered to be a political response to the background economic conditions inherited from colonialism. The growth manifestation of economic nationalism is found in forced industrialization through the promotion of import substitution. This strategy requires the adoption of politically enforced control measures to transfer primary product export profits to industrial entrepreneurs for investment in import substitution industries. The growth mission of the milieu of economic nationalism is interpreted to be the nationalization of growth functions, focussing primarily upon the creation of a viable indigenous entrepreneurial class to carry growth eventually beyond the confines of consumer goods import substitution.

In this section we discuss the organizational milieu which the Philippines erected to pursue the strategy of forced import substitution growth. We begin by briefly considering the emergence of the system. We then discuss the major aspects of the Philippine organizational system by distinguishing between the two periods which have characterized

prolonged import substitution growth in the Philippines. Our quantitative indicators have confirmed the existence of two distinct phases: (1) a period of pure import substitution growth, roughly coterminous with the 1950 decade and (2) a period of elongated import substitution growth (1960-1965), during which the system of controls for pure import substitution came to be modified by export promotion policies.

### 2.1 Emergence of Import Substitution

Philippine manufacturing development, contrary to popular belief, has a relatively long history. During the four decades prior to World War II substantial development occurred, and by 1938 manufacturing contributed approximately 17 per cent of net output.<sup>133</sup> However, manufacturing during the prewar period was clearly oriented toward processing primary products, particularly food, for export.<sup>134</sup> This prewar status of manufacturing is precisely what we would expect in a primary product export colonial economy.

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<sup>133</sup>This estimate of manufacturing's percentage share in total output is taken from Marvin E. Goodstein, The Pace and Pattern of Philippine Economic Growth: 1938, 1948, and 1956 (Ithaca: Southeast Asia Program, 1962), Data Paper No. 48, p. 26.

<sup>134</sup>Salvador C. Umana, "Growth of Output of Philippine Manufacturing, 1902-1960," in R. Hooley and R. Barker, Growth of Output in the Philippines, pp. 21-24 (mimeographed).

Growth of prewar Philippine manufacturing clearly responded to the underlying conditions affecting growth of primary product exports. After imposition of tariffs on Philippine products by the United States in the mid-1930s, growth of export-based manufacturing languished.<sup>135</sup> This reversal and the assumption of partial independence in 1935 precipitated an interest in promoting manufacturing to serve the domestic market, and an effort was made to create new manufacturing industries under government enterprise.<sup>136</sup> This first effort at import substitution, however, failed; and its failure may be interpreted to reflect inability to foster entrepreneurship at the public level, as well as lack of access to primary product export profits (e. g., through taxation) to finance industrial expansion.

In the postwar period the Philippines clearly opted for encouraging import substitution through reliance upon transfer of export profits to private entrepreneurs. Industrial development, through import substitution led by private entrepreneurs, became a dominant national

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<sup>135</sup>Ibid.

<sup>136</sup>Golay dates this period as the two decades after the establishment of the Commonwealth in 1935. Frank H. Golay, The Philippines: Public Policy and National Economic Development (Ithaca: Cornell University Press, 1961), p. 242.

goal early in the post-World War II period. As executed in practice, preference was overwhelmingly given to promotion of manufacturing for the home market, at the expense of exports. This emphasis is apparent in both the government's official regulations and the structure of incentives resulting from the entire organizational milieu.

The firm espousal of economic nationalism, expressed in import substitution growth under political aegis, represents a political response to the background conditions inherited from colonialism. Colonialism left the Philippines with a large and rapidly growing population, beginning to press upon the society's land resources. Alien groups dominated the entrepreneurial functions in the society, and the real welfare of Filipinos had remained relatively stable under colonialism.<sup>137</sup> Contemporary Filipino scholars view the pursuit of forced industrialization as a conscious response to these conditions:

"One should appreciate that the main raison d'etre of the import substitution was that in the postwar period the structure of the economy had to be altered. The prewar economy based on primary production and exports, while it did achieve for Filipinos high living standards, was no longer sufficient for a nation with

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<sup>137</sup>Golay et al, op. cit., pp. 29-30.

a vastly increased population, a disappearing frontier area and diminishing uncultivated land, and rising expectations. The import substitution drive during the control period of 1950-65 was necessary to effect the change in structure. "<sup>138</sup>

The blossoming of Filipino nationalism clearly supports this economic rationale for the rise of import substitution. Postwar economic organization has been dominated by the principles of nationalization (or "Filipinization") of the export base and aggressive fostering of Filipino industrial entrepreneurs. Golay finds that "substantial Filipinization of the export sector" occurred during the postwar period; while, simultaneously, political power shifted from the class controlling the traditional export base to those benefitting from policies of Filipinism; i. e., the new industrial class.<sup>139</sup>

## 2.2 Organization for Pure Import Substitution, 1950-1960

The essential feature of the society's organization during the first phase of aggressive promotion of import substitution was the use

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<sup>138</sup> Amado A. Castro, "Import Substitution and Export Promotion: Trade and Development," Discussion Paper No. 69-10, University of the Philippines, School of Economics, June 27, 1969, p. 15 (mimeographed).

<sup>139</sup> Golay et al, op. cit., p. 33.

of political controls to transfer profits to industrial entrepreneurs. The Philippine postwar economy has clearly not been competitive, nor has the system emphasized efficiency.<sup>140</sup> "Instead," according to Golay, "the state by dispensing the various items of largesse inherent in its powers to tax and to spend--and not to tax--to create money and credit, and to intervene in market processes, regulates private economic activity."<sup>141</sup> This political role in the economy has been directed toward creating profits as liberal rewards for the entrepreneurial activity called for by the goals of economic nationalism.

This profit transfer emphasis in the government's role during the phase of pure import substitution growth must now be analyzed in terms of the major policy devices employed. In Chapter 7 we have pointed out that in an open dualistic economy these policies will be basically foreign trade-oriented, since export profits are the economy's major source of finance as the economy emerges from colonialism. This led us to a distinction between primary profit transfer policies and ancillary policies supporting the thrust of the basic policies. This distinction is clearly appropriate to Philippine import substitution experience during the 1950s.

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<sup>140</sup>Ibid., pp. 34-35.

<sup>141</sup>Ibid., p. 34.

The basic devices employed to transfer primary product export profits to industrial entrepreneurs during the 1950s conform to the analysis of profit transfers in Chapter 7. In that chapter we emphasized the exchange rate system as the basic mechanism for subsidizing the importer (industrial sector) at the expense of the export sector. The key feature of this system is the stipulation of an "official" exchange rate below the equilibrium or free market rate. Such a system leads to the emergence of trade profits to importers, and these profits, in turn, are converted to investment in the form of imported capital goods.<sup>142</sup>

Philippine exchange rate policy during the 1950s was closely akin to the system described by these generalizations, indicating the relevance of profit transfer analysis. The essential feature of the Philippine profit transfer mechanism was the maintenance of an overvalued "official" exchange rate. The basic rate throughout the 1950 decade was the old prewar parity of two pesos to one U. S. dollar. However, this basic rate was applicable only to exporters and to a special group of importers, those representing approved import substitution industries, known in the Philippines as "new and necessary industries." The latter group thus became the major beneficiaries of the profit transfer

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<sup>142</sup>See Chapter 7, Section 3.1.

mechanism. The extent of profit transfer in the exchange rate overvaluation can be seen from Table 9, which shows the estimated free market rate from 1952-1959. The average free market rate during this period was ₱3.20 to U. S. \$1.00. Thus, to use our terminology of Chapter 7, we may think of an average exploitation profit rate--in the case of the import substitution industries--of  $₱3.20 - ₱2.00 = ₱1.20$  for each dollar of export earnings.<sup>143</sup> Table 9 also shows that other import transactions were conducted at a slightly higher peso rate, but one still substantially below the free market rate.

With the basic device of an overvalued exchange rate, profit transfers were effected by use of a system of exchange controls. Such controls were imposed in December, 1949. All export earnings were surrendered to the Central Bank at the official rate, and imports were constrained by rationing foreign exchange. Rationing was carried out to restrict imports of manufactured consumer goods while encouraging imports of capital and intermediate goods. This policy lies at the heart of import substitution in the import composition sense. The restriction of manufactured consumer goods imports provided protection from competition, assuring high domestic prices for domestically produced

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<sup>143</sup>See Equation (7.1b) of Chapter 7.

TABLE 9

EXCHANGE RATES: 1952-1959  
(PESOS PER U.S. \$1.00)

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Year	Rate for Ordinary Transactions	Rate for Import Substitution Industries	Free Market Rate
1952	2.34	2.00	2.70
1953	2.34	2.00	2.82
1954	2.34	2.00	2.96
1955	2.34	2.00	2.85
1956	2.34	2.00	3.21
1957	2.31	2.00	3.49
1958	2.27	2.00	3.21
1959	2.56	2.00	4.30

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Source: Gerardo P. Sicat, "Import Demand and Import Substitution in the Philippines, 1953-1963," Discussion Paper No. 69-2, University of the Philippines, School of Economics, January 25, 1969, Table 6-4, p. 6-15.

output. Provision of imported capital and intermediate goods to industrial entrepreneurs at the overvalued rate thus led to a widening profit margin from industrial production. In effect, these devices transferred profits from exporters to industrial entrepreneurs.

The profit transfer effects of the overvalued exchange rate and foreign exchange rationing were supported by other policies. Chief among the ancillary policies were those which were specifically addressed to the promotion of "new and necessary" industries,<sup>144</sup> a program begun in 1951. Originally, the impact of these policies was largely in the form of tax concessions; i. e., exemptions from taxes for specified time periods. During the period of the overvalued exchange rate, the exemption from a 17 per cent tax on foreign exchange purchases was particularly significant. (Thus, for all non-exempted purchasers the effective import rate was \$2.34, compared to the \$2.00 basic rate applicable to new and necessary industries.) Over the decade of the 1950s, however, the primary significance of new and necessary industry status came to be the conferral of a prior claim to foreign exchange at the preferential rate--as well as credit at subsidized interest rates. Golay

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<sup>144</sup>"New and necessary" industries were defined by law as those which did not exist prior to 1945 and whose potential development was consistent with achieving a "stable and balanced national economy." In practice, the industries--almost exclusively manufacturing--were identified by administrative discretion.

believes that the new and necessary industry policies, as administered during the 1950s, constituted a major vehicle to shift ownership and control of the modern sector to Filipino entrepreneurs.<sup>145</sup>

This system held sway, without substantial modification, throughout the 1950 decade. As the decade proceeded, the bite of the overvalued exchange rate into export earnings, in fact, increased as the discrepancy between the official and free market rate increased. By the end of the decade the free market rate had fallen to over four pesos to one U. S. dollar, substantially increasing the profit transfer to the industrial sector.<sup>146</sup> The stagnation of export earnings (resulting from the system) after 1955 caused increasingly stringent control of imports. With preference given to the "new and necessary" import substitution industries and given their continued dependence upon imports for

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<sup>145</sup>Golay et al, op. cit., pp. 85-90.

<sup>146</sup>From Equation (7.2a) in Chapter 7, we see that the trade profit transferred to industrialists is  $\pi = (b - r)M$ , where  $b$  is the free market rate;  $r$ , the official rate; and  $M$ , the dollar value of all imports. [In Equation (7.2a) of Chapter 7,  $M$  is written as  $MP_M + CP_C$  where  $M$  is the volume of capital goods imports,  $P_M$  is their dollar price,  $C$  is volume of consumer goods imports, and  $P_C$ , their price.]

intermediate goods,<sup>147</sup> other sectors of the economy suffered for want of imported supplies. The combined effects of the increasing squeeze on export earnings and import shortages produced severe retardation of traditional agricultural exports, particularly apparent after 1955 (see Table 6).

This pattern of protection and profit transfers afforded to import substituting industries enabled rapid growth of consumer goods manufactures during the 1950 decade, as the evidence in Section 1 suggests. Our theory in Chapter 7 concludes that such a system yields substantial windfall profits to the industrial entrepreneurs who are the major beneficiaries. With the added fillip of foreign exchange licensing, these profits are easily converted into producer goods imports. The net result of this concatenation is the financing of industrial investment by unilateral transfers from the primary producing export sector. While the real saving behind such transfers is borne by the export sector, the apparent saving is accomplished by the industrial sector from the windfall profits. These phenomena are shown clearly by Diagram 10c in Chapter 7.

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<sup>147</sup>The high imported supplies component of these industries is documented in Gerardo P. Sicat, "Import Demand and Import Substitution in the Philippines," Discussion Paper No. 69-2, University of the Philippines, School of Economics, January 25, 1969, Table 6-3, p. 6-14.

The covert or hidden nature of the real saving and the unilateral transfer from the export sector implies that the magnitude of these transfers cannot be measured from reported savings data. In fact, one may argue that the absence of reported intersectoral savings flows (of a voluntary, explicit nature) from agriculture to industry is perfectly consistent with unilateral transfers created by the control policies we have described. In the Philippine case, explicit intersectoral savings flows from agriculture to industry were negligible during the 1950s, with a small positive voluntary transfer occurring in only one year of the decade--1959. By contrast, very large voluntary savings flows from agriculture to industries were recorded for both Taiwan and Thailand.

The major empirical evidence pertinent to the profit transfer phenomenon must therefore remain circumstantial rather than direct. In the Philippine case this evidence may be found largely in the rapid growth of the favored industries and the entrepreneurial response to the powerful profit incentives provided by the system. There is some scattered evidence on profit rates in these industries which support the presumption of profit transfer, but these are too dubious to be formally used. Implicit evidence may also be found in the rapid growth of industrial savings (and investment) during the phase of pure import substitution. From 1949 to 1959, industrial sector savings--in constant 1955 prices--rose

from ₱380 million to ₱1,015 million, or at the rate of 10.3 per cent per year. The ratio of industrial sector savings to industrial sector income similarly rose from 12 to 15 per cent, with income expanding at an average annual rate of 8.2 per cent.<sup>148</sup> The presumption is that a significant component of the industrial sector's rapidly growing reported savings represented unilateral transfers from the export sector.

The response of indigenous Filipino entrepreneurs to the profit transfer system was apparently dramatic. Golay reports a significant increase in Filipino entrepreneurship during the control period, finding that by 1961 Filipino entrepreneurs represented the controlling ownership in 79 per cent of all large nonagricultural establishments and 90 per cent in small.<sup>149</sup> In the manufacturing sector, similarly, Filipinos controlled 90 per cent of total enterprises by 1961,<sup>150</sup> Golay finds this indigenization of nonagricultural sector entrepreneurs to be the most significant consequence of the control policies of the 1950s: "The remarkable change

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<sup>148</sup>Savings and income data are taken from Douglas S. Paauw, "The Philippines: Estimates of Flows in the Open, Dualistic Economy Framework" (Washington: National Planning Association, Center for Development Planning, February, 1968), p. 143 (mimeographed).

<sup>149</sup>Golay et al., op. cit., p. 104.

<sup>150</sup>Ibid., Table 7, p. 106.

attributed to the post-1949 Philippine economy was not the modest growth and industrialization which was initiated, but the rapid transfer to ethnic Filipinos of ownership and control of the modern sectors of the economy."<sup>151</sup> Hence, import substitution growth during the 1950s served to achieve the major goal of economic nationalism, the domination of modern sector entrepreneurial roles by indigenous agents.

### 2.3 Prolongation of Import Substitution, 1960-65

Our theory in Chapter 9 predicts the exhaustion of pure import substitution growth because of export stagnation. Retardation of growth under this system may lead either toward the emergence of a new growth system or attempts at prolongation by reviving primary product export growth. Empirical evidence presented in the first part of this chapter shows clear retardation of Philippine import substitution growth during the second half of the 1950 decade. Political awareness of this fact<sup>152</sup> brought efforts to modify the profit transfer mechanisms in an

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<sup>151</sup>Ibid., p. 104.

<sup>152</sup>For example, this perception was clearly stated by President Macapagal: "The country has fully exhausted the potentialities for growth offered by the complement of policies ruling over the decade of the 1950s. . . . It has become obvious that the impetus to investments which exchange controls and various incentives provide has worked itself out." Quoted by Amado A. Castro, op. cit., p. 16.

attempt to remove the deleterious effects on primary product export growth. The effect of these efforts was to prolong import substitution growth, accompanied by the emergence of a serious food deficiency.

### Major Organizational Changes

As foreign trade and exchange policies had dominated the profit transfer focus of the 1950s, so, too, they became the focal point of organizational change to prop up the import substitution growth system. Elongation of the import substitution phase through export promotion comprised two essential features, devaluation and decontrol. Devaluation sought to establish an exchange rate near the free market level, while decontrol aimed at removing the controls over import allocation. Both devaluation and decontrol were initiated in early 1960 and were accomplished in gradual stages. By early 1962 both changes had been largely carried out, although until 1965 20 per cent of export earnings were required to be converted at the old overvalued exchange rate of ₱2.00 to U.S. \$1.00.

By 1965 both exporters' peso earnings from foreign exchange and the price of foreign exchange to those importers who had received the official rate had been raised by almost 100 per cent. In the period between 1960 and 1962, the privileged import rate had been maintained while

exporters' peso proceeds were gradually increased. (During this period there was a complex multiple rate structure on the import side.)

The changes in the rates of key significance to our analysis--the buying rate for exporters' foreign exchange and the selling rates to new and necessary industries--are shown in Table 10 to have taken a sharp jump toward equivalence in 1962.

By early 1962, therefore, the profit transfer aspect of the previous exchange rate system had been largely eliminated. Exporters received the equivalent of the free market rate (slightly less until 1965) while all importers were required to pay the equivalent of the free market rate. The substantial unilateral transfer of resources from export earnings to industrialists, prevailing during the 1950s, was wiped out over a two-year period of exchange reform. Moreover, the protection afforded by the exchange rationing system was gradually withdrawn as foreign exchange was increasingly freed from control.

In the earlier part of this chapter we observed the impact of these changes on expanding exports. We also noted that expansion of agricultural exports during this period affected food supply adversely by shifting land use from food crops to export crops. Thus, the effects of export promotion through devaluation and decontrol were not unmixed in

TABLE 10

SELECTED EXCHANGE RATES, 1960-1965  
(PESOS PER U.S. DOLLAR)

	1960	1961	1962-65	Nov., 1965, on
Buying Rate (Exports)	2.30	2.50-2.75	3.51	3.90
Imports: New and Necessary Industries	2.00	2.00	3.90	3.90
Other Preferential Imports	2.50	2.30-2.40	3.90	3.90
All Other Imports	3.75-4.00	3.45-3.60	3.90	3.90

giving a new lease to the life of import substitution. A significant part of the increased export earnings were utilized to cover the economy's growing food deficiency.

### Import Tariffs

A second major organizational change was the resort to reliance upon import tariffs to overcome the depressing effects of devaluation and decontrol on industrial investment. Adoption of an increasingly high, but selective, tariff structure, in fact, came to be the major vehicle for preserving the import substitution orientation of the growth system. Based upon a new tariff law enacted in 1957, tariff policy during the 1960-1965 period sought largely to compensate for the withdrawal of protection associated with devaluation and decontrol. By 1965, the Philippine tariff system is reported to have offered protection similar to that provided by the controlled system of the 1950s.<sup>153</sup>

Our analysis of tariff policy under economic nationalism in Chapter 7 demonstrates that a properly devised tariff structure can have

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<sup>153</sup>John H. Power, "The Structure of Protection in the Philippines," Discussion Paper No. 69-8, University of the Philippines, School of Economics, April 30, 1968, p. 25.

both profit transfer and protection aspects. If tariff duties discriminate against imported consumer goods, while favoring the importation of producer goods, both consequences emerge. The Philippine tariff structure, as it emerged during the 1960s, clearly had this discriminatory quality.<sup>154</sup>

Average tariff rates for manufactured goods, by type, are shown in Table 11 for the years 1961 and 1965. The pattern of discrimination against consumer goods imports is clearly apparent. This tariff structure continued to encourage allocation of resources to finished consumer goods manufactures by maintaining a combination of high domestic prices for these goods and lower prices for the imported producer goods required for their production. Thus the structure of tariff rates after 1960 was consistent with the essential mechanism of import substitution growth, as analyzed in the previous chapter.

The erection of a highly protective system for import substitution industries during the 1960s can be shown even more clearly by using John Power's concept of "value added protection"; i. e., "the proportion by which value added in domestic prices (under protection) exceeds the value added that world prices of inputs and outputs would permit

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<sup>154</sup>Ibid.

TABLE 11

AVERAGE TARIFF RATES FOR MANUFACTURING, 1961 AND 1965  
(PER CENT)

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	1961	1965
Consumption Goods	64.1	70.1
Intermediate Goods	24.6	27.4
Inputs into Construction	49.0	55.1
Capital Goods	16.2	16.2
Total Manufacturing	46.2	50.8

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Source: John H. Power, "The Structure of Protection in the Philippines,"  
Discussion Paper No. 69-8, University of the Philippines,  
School of Economics, April 30, 1968, p. 26.

under free trade.<sup>155</sup> Table 12 gives Power's estimates of value added protection by the economy's major sectors, based on data for 1965. The highly favored position of manufactures, compared to other sectors, stands out. Moreover, within the manufacturing sector, value added protection offered to consumption goods was 95 per cent,<sup>156</sup> compared to 52 per cent for the entire sector.

The Philippine tariff structure of the 1960s not only continued profit transfers from primary product exports to manufacturing but also presented severe obstacles to the growth of manufactured exports. Manufactured exports faced the double disincentive of selling at world market prices below domestic prices and purchasing producer goods at protected levels. We have seen earlier in this chapter that the post-1960 growth of manufactured exports with a high natural resource content and a low import component was more rapid than growth of manufactured exports generally. Thus, the replacement of the strict exchange control system of the 1950s by tariff controls continued to obstruct progress toward export substitution, which requires rapid diversification of manufactured exports.

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<sup>155</sup>Power, op. cit., p. 27.

<sup>156</sup>Ibid., p. 44.

TABLE 12

## AVERAGE RATES OF PROTECTION BY MAJOR SECTORS, 1965

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Sector	Rate of Protection
Fisheries	0
Manufacturing	52
Agriculture	17
Mining	- 17
Forestry and Logging	- 26

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Source: John H. Power, "The Structure of Protection in the Philippines," Discussion Paper No. 69-8, University of the Philippines, School of Economics, April 30, 1968, p. 46.

## Supporting Policies

The organizational changes described were reinforced by many other policies after 1960 to prolong the life of import substitution. Chief among these ancillary policies was the food import policy, aimed at stabilizing food prices. These policies may be construed as promoting industrial growth by maintaining a relatively low real wage level in the nonagricultural sector. Manufacturing industries, such as the textile industry, which appeared to suffer from the effects of devaluation, decontrol, and tariff revision were exempted from import duties on producer goods. Though credit demands were greatly increased by the major organizational changes, access to preferential interest rates at government institutions continued to foster the growth of "new and necessary" import substitution industries.

While import substitution continued as the economy's dominant growth regime under these changed policies, the evidence suggests that even the moderate reduction of protection and profit transfers from the 1950 levels posed serious problems of adjustment for the "new and necessary" industries. Both rates of utilization of capacity and profit rates retreated from their 1950 levels, though, paradoxically,

manufacturing investment continued to expand.<sup>157</sup> These results are what we would expect, however, from our analysis of prolonged import substitution growth. In fact, the progressive decline of the system, notwithstanding the major export promotion policies of 1960-1965, appears to have induced a search for more basic solutions, beginning in the 1966-1969 period. These emerging gropings toward a new basis for Philippine transition growth, however, are not covered in the present study.

#### 2.4 Conclusion

The organizational milieu of the Philippine economy shaped the patterns of postwar transition growth. Following a brief period of rehabilitation from wartime damage (1946-1949), a system of strict controls was adopted to promote the nationalistic goal of fostering Filipino entrepreneurship in manufacturing oriented toward the domestic market. This system discriminated against the growth of primary product exports, an effect which was perfectly consistent with the goal of

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<sup>157</sup> Eliezer B. Ayal, "Manufacturing and Economic Growth: An Application to the Philippines" (Washington: National Planning Association, Center for Development Planning, December, 1969), passim (mimeographed).

Filipinization of the enclave sector. Primary product export promotion as a device to prolong import substitution growth was politically acceptable by 1960 because control of the export sector had been shifted from foreigners to indigenous agents during the 1950 decade.<sup>158</sup>

The organizational changes of the early 1960s were inadequate to break the pattern of faltering import substitution growth. Concessions to import substitution industries were continued, though the profit transfer mechanisms employed were less potent than those in existence during the 1950s. The moderate relaxation of discrimination against the export sector produced an upsurge of growth of primary product exports. Even manufactured exports with a high domestic natural resource component showed a significant response. The major weakness of the organizational changes was that they failed to remove serious obstacles to the growth of exports of manufactures which do not have a high natural resource comparative advantage. The continuation of high levels of protection for consumer goods manufactures, through tariffs, discouraged entrepreneurs in these industries from making the efficiency adjustments required for penetration of foreign markets.

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<sup>158</sup> Golay, op. cit., p. 33.

Import substitution of consumer goods manufactures, under a high wall of protection, offers entrepreneurs a first training ground for undertaking new modes of production. The artificial atmosphere of assured high domestic prices for their output and artificially low input costs is not, however, conducive to the growth of efficiency required for breaking into highly competitive export markets. The difficulties experienced by industrial firms during the period of moderate reductions in profit transfers and protection cause grave concern about the future of Philippine manufacturing growth. Prolonged import substitution offers only modest expansion opportunities, circumscribed by the growth of primary product exports. The significant avenues for a new wave of rapid industrial growth lie in export substitution. The organizational milieu prevailing during the 1960s, in prolonging import substitution growth, did not offer a climate in which industrial entrepreneurs could progress toward assimilating the new tasks required for export substitution growth.

**APPENDICES I AND II**

TABLE 10-A1

ANNUAL RATES OF CHANGE IN REAL GROSS VALUE ADDED  
BY SECTOR AND IN GROSS NATIONAL PRODUCT

Year	Agriculture	Industry	Government	GNP
1950-51	.115	- .002	.030	.045
1951-52	.066	.069	.210	.076
1952-53	.112	.049	.157	.082
1953-54	.063	.081	.070	.073
1954-55	.035	.087	.141	.069
1955-56	.008	.155	.020	.085
1956-57	.017	.051	- .008	.034
1957-58	.041	.014	- .005	.023
1958-59	- .068	.115	.297	.058
1959-60	- .017	.053	.018	.027
1960-61	.062	.076	.039	.069
1961-62	.026	.030	.049	.030
1962-63	.051	.056	.053	.054
1963-64	- .022	.049	.050	.027
1964-65	.059	.068	.050	.064
Average: 1950-1965	.035	.063	.075	.054

Source: Douglas S. Paauw, "The Philippines: Estimates of Flows in the Open, Dualistic Economy Framework, 1949-1965" (Washington: National Planning Association, Center for Development Planning, February, 1968), p. 101 (mimeographed). Detailed discussion on sources and methods is given on pp. 68-97.

TABLE 10-A2

MANUFACTURING VALUE ADDED: ANNUAL GROWTH RATES  
(1955 CONSTANT PRICES)

Year	Percent growth
1950-51	.173
1951-52	.052
1952-53	.131
1953-54	.124
1954-55	.126
1955-56	.134
1956-57	.058
1957-58	.084
1958-59	.090
1959-60	.021
1960-61	.041
1961-62	.053
1962-63	.081
1963-64	.017
1964-65	.009
1950-65	.079
1950-55	.121
1955-60	.077
1960-65	.040

Source: National Economic Council, "The National Accounts of the Philippines, CY 1946-1967," The Statistical Reporter, Vol. XIII, No. 1, January-March, 1969.

TABLE 10-A3

RATES OF CHANGE:  
AGGREGATE LABOR PRODUCTIVITY AND COMPONENTS  
(THREE-YEAR AVERAGES)

	Nonagriculture ( $C_{y\eta_h}$ )	Agriculture ( $C_{x\eta_p}$ )	Reallocation Effect [ $\eta_{\theta}/g (\eta - p)$ ]	Aggregate ( $\eta_g$ )
1950-52	.01204	.02697	-.00061	.03840
1951-53	.02822	.02102	-.00098	.04825
1952-54	.02952	.01606	-.00070	.04487
1953-55	.03290	.00216	.00348	.03854
1954-56	.02159	-.00134	.00646	.02672
1955-57	.02458	-.00221	-.00133	.02104
1956-58	.02643	-.01182	-.00173	.01288
1957-59	.03027	-.01224	.00014	.01817
1958-60	.01183	-.01247	.01014	.00950
1959-61	.00156	-.00506	.00237	.00113
1960-62	-.01018	.00252	.00877	.00111
1961-63	-.00339	-.00267	.00681	.00075
1962-64	.00607	.00416	.00947	.01971

Sources: Output data, Table 1.

Employment data, derived from Bureau of Census and Statistics, Philippine Statistical Survey of Household Bulletin and Central Bank, Statistical Bulletin. Assistance from Theodore K. Ruprecht is gratefully acknowledged.

TABLE 10-A4

COMPOSITION OF IMPORTS, 1949-1965  
(IN MILLION PESOS, CONSTANT 1955 PRICES)

	Agricultural Consumer Goods, $M_x$		Consumer Manufactures, $M_y$		Capital Goods, $M_i$		Intermediate Goods, $M_R$		Producer Goods, $M_p = M_i + M_R$		Total Imports, M
	Value (1)	% (1)	Value (2)	% (2)	Value (3)	% (3)	Value (4)	% (4)	Value (5)	% (5)	
1949	220.8	12.0	763.8	41.7	146.8	8.0	702.6	38.3	849.4	46.3	1834.0
1950	91.9	7.6	475.6	39.0	87.7	7.2	561.8	46.2	649.5	53.4	1217.0
1951	129.4	8.3	645.3	41.3	113.0	7.2	674.3	43.2	787.3	50.4	1562.0
1952	93.4	6.2	589.8	39.4	144.2	9.7	668.6	44.7	812.8	54.4	1496.0
1953	106.8	6.7	557.8	34.8	190.3	11.9	746.1	46.6	936.4	58.5	1601.0
1954	120.3	6.6	655.2	35.7	213.8	11.7	844.7	46.0	1058.5	57.7	1834.0
1955	145.7	6.8	710.2	33.2	274.7	12.8	1008.4	47.2	1283.1	60.0	2139.0
1956	153.7	7.2	641.8	29.9	357.2	16.6	992.3	46.3	1279.5	62.9	2145.0
1957	169.4	6.7	733.4	29.1	399.8	15.8	1221.4	48.4	1621.2	64.2	2524.0
1958	151.1	7.5	621.1	30.6	333.4	16.4	923.4	45.5	1256.8	61.9	2029.0
1959	102.1	5.2	526.1	26.8	355.2	18.1	977.6	49.9	1332.8	68.0	1961.0
1960	115.0	5.2	560.5	25.3	495.1	22.4	1044.4	47.6	1539.5	70.0	2215.0
1961	231.4	9.9	478.8	20.5	504.0	21.5	1126.8	48.1	1630.8	69.6	2341.0
1962	130.4	5.8	480.1	21.5	384.5	17.2	1240.0	55.5	1624.5	72.7	2235.0
1963	254.1	10.8	494.7	21.1	488.0	20.8	1111.2	47.3	1599.2	68.1	2348.0
1964	284.6	10.7	534.7	20.0	585.9	22.0	1260.8	47.3	1846.7	69.3	2666.0
1965	386.3	13.5	564.4	19.7	622.7	21.8	1289.6	45.0	1912.3	66.8	2863.0

Source: Douglas F. Paauw, "The Philippines: Estimates of Flows in the Open Dualistic Economy Framework, 1949-1965" (Washington: National Planning Association, Center for Development Planning, February, 1968), p. 62 (mimeographed). See pp. 52-66 for discussion of method.

TABLE 10-A5

MANUFACTURED GOODS: DOMESTICALLY PRODUCED SUPPLY,  
IMPORTS AND TOTAL AVAILABILITY, 1949-1965  
(MILLION PESOS, IN CONSTANT 1955 PRICES)

Year	Domestic Supply (1)	Imports (2)	Total Availability (Col. 1 + Col. 2) (3)	Domestic Supply/ Total Availability (Col. 1 ÷ Col. 3) (4)
1949	557	764	1321	.422
1950	634	476	1110	.571
1951	737	645	1382	.533
1952	741	590	1331	.557
1953	834	558	1392	.599
1954	962	655	1617	.595
1955	1200	710	1910	.628
1956	1241	642	1883	.659
1957	1381	733	2114	.653
1958	1429	621	2050	.697
1959	1552	526	2078	.747
1960	1637	561	2198	.745
1961	1712	479	2191	.781
1962	1832	480	2312	.792
1963	1944	495	2439	.797
1964	2019	535	2554	.791
1965	2009	564	2573	.781

Note: Domestic supply was derived by adjusting value added estimates on the basis of annual ratios of value added/domestic supply as developed in Douglas S. Paauw, "The Philippines: Estimates of Flows in the Open, Dualistic Economy Framework, 1949-1965." Value added estimates were taken from National Economic Council, "The National Accounts of the Philippines, CY 1946 to CY 1967," loc. cit.; import data, from Douglas S. Paauw, op. cit.

TABLE 10-A6

TOTAL EXPORTS AND EXPORT/GNP RATIO, 1950-1965  
 (ALL IN MILLION PESOS, 1955 CONSTANT PRICES)

Year	Exports	Export/GNP Ratio
1950	1,279	.204
1951	1,455	.222
1952	1,507	.214
1953	1,587	.208
1954	1,708	.209
1955	1,833	.210
1956	2,006	.212
1957	1,991	.203
1958	1,755	.175
1959	1,802	.170
1960	1,978	.182
1961	2,049	.176
1962	2,098	.175
1963	2,250	.178
1964	2,429	.187
1965	2,724	.197

Sources and Methods: See Douglas S. Paauw, "The Philippines: Estimates of Flows in the Open Dualistic Economy Framework, 1949-1965" (Washington: National Planning Association, Center for Development Planning, February, 1968), pp. 26-37.

TABLE 10-A7

MERCHANDISE EXPORTS: CLASSIFIED BY TYPE, 1950-1965  
(MILLION PESOS, 1955 CONSTANT PRICES)

Year	Primary Product			Manufactures		Total		
	Agricultural (E <sub>x</sub> )		Extractive (E <sub>m</sub> )	Sub-Total (E <sub>x</sub> + E <sub>m</sub> )	(E <sub>i</sub> )			
	<u>Value</u>	<u>% of Total Exports</u>	<u>Value</u>	<u>% of Total Exports</u>	<u>Value</u>		<u>% of Total Exports</u>	
1950	730	.904	58	.072	.976	19	.024	807
1951	897	.872	108	.105	.977	24	.023	1029
1952	856	.816	164	.156	.972	29	.028	1049
1953	794	.802	162	.164	.966	34	.034	990
1954	912	.798	207	.181	.979	24	.021	1143
1955	993	.770	266	.206	.976	31	.024	1290
1956	1091	.744	343	.234	.978	32	.022	1466
1957	1093	.743	342	.233	.976	35	.024	1470
1958	965	.720	334	.249	.969	41	.031	1340
1959	953	.698	350	.256	.954	63	.046	1366
1960	1085	.692	430	.274	.966	54	.034	1569
1961	1082	.656	497	.302	.958	69	.042	1648
1962	1128	.651	516	.298	.949	88	.051	1732
1963	1233	.645	579	.303	.948	99	.052	1911
1964	1332	.656	561	.277	.933	135	.067	2028
1965	1286	.624	642	.312	.936	131	.064	2059

Source: Calculated from basic data from George L. Hicks and Geoffrey McNicoll, "Foreign Trade and the Growth of the Dual Economy: A Study of the Philippines, 1950-1966" (Washington: National Planning Association, Center for Development Planning, October, 1968), Table 7, p. 172.

## APPENDIX II

### PROLONGED IMPORT SUBSTITUTION AND FOOD DEFICIENCY: LATIN AMERICA

This appendix suggests that our analysis of prolonged import substitution growth (applied in this chapter to the Philippines) is relevant to other countries where the economy's organizational system may be characterized as economic nationalism and where controls were employed to maintain a prolonged period of import substitution.

Selected Latin American countries are classified in Table A8 on the basis of the major characteristics of their growth regimes during the postwar transition period. Mexico is excluded since that country has proceeded beyond the import substitution phase to a more complex growth regime.

The remainder of this appendix concerns only those countries in which the society's organizational framework has emphasized economic nationalism and where import substitution has been the reigning growth regime for a decade or more. These countries, as shown by Table A8, are Brazil, Chile, Colombia, Costa Rica, and Guatemala.

TABLE 10-A8

CLASSIFICATION OF ORGANIZATIONAL SYSTEMS AND GROWTH  
REGIMES: SELECTED LATIN AMERICAN COUNTRIES

Country	Organization	Growth Regime
Brazil	Economic Nationalism	Import Substitution
Chile	Economic Nationalism	Import Substitution
Colombia	Economic Nationalism	Import Substitution
Costa Rica	Economic Nationalism	Import Substitution
Guatemala	Economic Nationalism	Import Substitution
Jamaica	Neo-Colonialism	Export Promotion
Panama	Neo-Colonialism	Export Promotion
Peru	Neo-Colonialism	Export Promotion
Venezuela	Neo-Colonialism	Export Promotion

Table A9 suggests that food deficit problems have plagued import substitution growth in all of the prolonged import substitution countries. The problem has been particularly acute in the cases of Brazil and Chile, where food imports have averaged, respectively, 15 per cent and 18 per cent of total imports.

The food deficiency problem is also confirmed for three of these countries, Chile, Colombia, and Guatemala, by stagnation of agricultural productivity. An earlier NPA study shows negligible productivity gains in agriculture for all three countries during the postwar transition period--all below the average for a sample of 16 open dualistic economies.<sup>159</sup>

The problem of food-deficit import substitution growth has received little attention in development literature. Our formal analysis of this problem in Chapter 9 is, to our knowledge, the first effort to demonstrate analytically the depressing effects of food deficiency on import substitution growth. There are, however, scattered references

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<sup>159</sup>Douglas S. Paauw, "The Postwar Record of Open, Dualistic Economies" (Washington: National Planning Association, Center for Development Planning, May, 1969), p. 54 (mimeographed).

TABLE 10-A9

FOOD DEFICIT CONDITION:  
PROLONGED IMPORT SUBSTITUTION IN LATIN AMERICA

Country	Food Deficit Condition	Average: Food/Total Imports*
Brazil	Large and increasing	.15
Chile	Large	.18
Colombia	Moderate, fluctuating	.08
Costa Rica	Large	.12
Guatemala	Large	.12

\*Length of series varies from 7 to 14 years.

Source: United Nations, International Trade Statistics (New York: United Nations), various years.

in the literature on Latin America referring to the interference of food deficits with the substitution of producer goods imports for consumer goods imports--an essential feature of import substitution growth.<sup>160</sup>

Our analysis of prolonged import substitution growth in the Philippines points to the conclusion that the very fact of prolongation and the emergence and/or persistence of food deficits demonstrate that the phase of import substitution growth has failed to perform its historical growth mission of preparing indigenous entrepreneurs (both public and private) for new growth tasks. These tasks, required to maintain transition growth momentum, are modernization of the traditional agricultural sector (the source of domestic food supply) and expanding the horizons for industrial growth by shifting from domestic to export markets. These policy lessons, stemming from prolonged import substitution growth, appear to apply to many countries--including the Latin American countries cited previously--where economic nationalism has outlived its growth significance.

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<sup>160</sup>See, for example, Markos Mamalakis and Clark Reynolds, Essays on the Chilean Economy (Homewood, Illinois: Richard D. Irwin, Inc., 1965), p. 9, where it is stated in regard to Chile: "Overall growth suffered both because of lagging agricultural output and because the increasing use of foreign exchange reserves to import agricultural commodities, normally produced in Chile, made the importation of capital goods more difficult."

## CHAPTER 11

### EXPORT PROMOTION TRANSITION GROWTH SYSTEMS

#### INTRODUCTION

This chapter applies our general framework of analysis to countries where transition growth has assumed the major characteristics of export promotion under a neo-colonial system of economic organization. The theory in this chapter is adapted to the transition growth experience of Thailand and Malaysia. While occasional reference is made in this chapter to the reality conditions which justify the theory developed, more detailed empirical verification of the theory is undertaken in the two following chapters (Chapter 12 is devoted to Thailand and Chapter 13, to Malaysia).

The postwar experience (1950-1970) of both Thailand and Malaysia is commonly considered as indicating successful (or at least satisfactory) growth performance. It is our purpose in this chapter to analyze the dynamics of the basic growth process in these countries. This will enable us to prognosticate about the future potential of these export promotion growth systems. We will introduce criteria of success in growth performance somewhat more fundamental than the traditional

welfare indicators (e.g., growth of real gross national product) to evaluate the consequences of the first generation of transition growth for future prospects.

A unique aspect of export promotion growth in Thailand and Malaysia is its persistence as a transition growth phase throughout the postwar generation. This implies that pressures toward exhaustion, or termination, of this growth system have not yet appeared. A crucial question of development strategy is implicit in this experience. This question concerns the long-run viability of the export promotion system. More concretely, this issue involves investigation of the exogenous and/or endogenous forces which may arise to jeopardize the continuation of the system and its capacity to yield at least moderate success, as measured by traditional growth performance indicators.

The analysis of this chapter begins with a brief recapitulation of the major characteristics of export promotion growth under neo-colonialism, as introduced in Chapter 8. Two variants of this transition growth type are identified, and models are developed for each type to investigate their long-run growth prospects. The prospects from endogenous growth models are contrasted for the two variants of export promotion growth. Long-run development strategy considerations are

distinguished from short-run stability issues. While the strategy issues are discussed in the text, a brief appendix is devoted to the problems of short-run stability.

## 1. GENERAL FEATURES OF EXPORT PROMOTION GROWTH

### 1.1 Historical Perspective

In Chapter 3 we inquired into the background conditions, inherited from colonialism, which tend to give rise to export promotion as an initial phase of transition growth. This emphasis places our treatment of this type of transition growth in a broad historical perspective. Such a perspective is particularly relevant for understanding the export promotion system, since it maintains a high degree of continuity with the colonial past. Export promotion growth is a direct outgrowth of the colonial economy background, both in terms of the economy's operation and the organizational milieu under which the economy functions.

Organizationally, the most important residue of the colonial-type economy is the preservation of a free market system, the system analyzed in Chapter 8. Acceptance of this major feature of colonialism, without its infringement by new political controls, is likely to occur only where the colonial economy growth mechanism, dependent

upon primary product export expansion, is capable of offering at least moderate growth prospects during the transition. Fundamental to this prospect is the existence of a land surplus; i. e., freedom from population pressure on the economy's natural resources--which constitutes the basis for primary product export growth. Export promotion can become a viable transition growth system only where this condition of a favorable land-population ratio is present at the beginning of the transition. Thailand and Malaysia shared this initial land-surplus condition. In both, primary product export expansion during the first generation of the transition has been facilitated by substantial increases in the utilization of land, and this feature is documented in the two following chapters for the two countries.

Participation of a large part of the indigenous labor force in enclave activities is also conducive to the emergence of export promotion. This condition, too, existed in both countries. In Thailand, a large percentage of the agricultural labor force has traditionally participated in production of rice for export, and an easy shift to other indigenous crops for export marked the transition experience throughout the first generation. In Malaysia, though there is a pronounced dichotomy between traditional and export agriculture, the enclave sector has traditionally dominated employment. The relatively large size of the export enclave,

in both cases, made possible reliance upon primary product exports for generating real income increases for the society as a whole. In particular, continued growth of the enclave and its export output offered resources for government rural infrastructure programs to raise productivity in the smaller, depressed, traditional sector.

The maintenance of the free market system of colonialism preserves the colonial emphasis on efficiency in the export-oriented enclave. The lack of protection from foreign competition, inherent in such a system, has important implications for the development of indigenous entrepreneurship. On the one hand, participation in the world market without controls requires continued participation of alien entrepreneurs who dominated the economic roles in the enclave during colonialism. On the other hand, conditions are unfavorable for attracting indigenous agents into new, domestic-oriented industries. Thus, a compromise with alien control in the economy is needed, and nationalistic goals for development of indigenous entrepreneurship must be held in restraint.

In Thailand, where outright political colonialism had not existed, disappointing experience with a controlled system to foster indigenous Thai entrepreneurship led to the free market compromise. The Chinese minority thus enjoyed continued domination of entrepreneurship in the

enclave, with modest growth of Thai participation under the generally competitive entry system. The peaceful decolonization process in Malaysia encouraged a similar compromise with both the former colonial masters, the British and the Chinese minority.

## 1.2 Variants of Export Promotion Growth

Transition growth under a free market system was analyzed in Chapter 8. In the present chapter, we move closer to reality by modifying the earlier analysis to accord with the transition growth systems that have occurred in Thailand and Malaysia. We have observed throughout our study that realism in transition growth theory dictates attention to two types of knowledge. On the one hand, we must take note of the impact of the society's organizational system upon the major growth forces which emerge. On the other hand, we must understand the growth process which is fostered by the forces generated by the organizational milieu. In this chapter we are concerned with analyzing two alternative growth processes which emerge under the neo-colonial free market system.

Our analysis in Chapter 8 led to the conclusion that the forces determining the volume of agricultural exports, J, and the demand for industrial investment, I, are the two growth issues crucial for

understanding the growth dynamics of the export promotion system. Analysis of export expansion requires elaboration of the free market model of Chapter 8 to take account of forces operating within the agricultural and industrial sectors. This leads to a distinction between two alternative export-led growth systems which are analyzed in detail in this chapter.

To analyze the growth of agricultural exports, J, four categories of real costs associated with the production and export of agricultural goods must be distinguished:<sup>161</sup>

- (i) Intrasectoral Resources: labor, land, and natural resources internal to the agricultural sector.<sup>162</sup>
- (ii) Commercial Services: human and capital services needed for trading (e.g., transport, shipping, handling, wholesale and retail

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<sup>161</sup> All four categories of real costs were neglected in the analysis of Chapter 8 and must now be admitted into the model. With the exception of the category (i) type, the real costs involve acquisition of resources from outside the agricultural sector; and, hence, a model conducive to inclusion of both intersectoral and intrasectoral relationships is essential.

<sup>162</sup> We have implicitly asserted in the introduction to this chapter that this category of real costs must be favorable if the export promotion system is to emerge during the transition.

distribution) of both agricultural exports, J, and goods purchased by the agricultural sector from outside that sector.<sup>163</sup>

(iii) Processing Services: human and capital services needed for processing (e.g., packing, grading, simple transformation of agricultural exports).

(iv) Modern Inputs: intermediate production inputs (e.g., fertilizer, bio-chemical products, farm implements) manufactured by industry.

In all export promotion systems, real costs of categories (i) and (ii) are indispensable. The presence of real costs of categories (iii) and (iv) depends upon the nature of the export commodity. If the exported good is an indigenous agricultural product (e.g., rice in Thailand), we can neglect modern input costs [category (iv)].<sup>164</sup> We assume that production of these indigenous crops relies exclusively upon the sector's internal resources [i.e., real costs of type (i)] and involves traditional production techniques. This contrasts with the case where the exported

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<sup>163</sup>In Southeast Asian countries, including Malaysia and Thailand, this category of real costs represents payments of services performed largely by their Chinese minorities.

<sup>164</sup>In fact, modernization of production, through improved technology and the introduction of modern techniques, has failed to appear in such cases, particularly in rice production in Thailand.

good is a product introduced from abroad, typically by foreigners during the colonial epoch. These products (e.g., rubber, tin, and palm oil in Malaysia) are exclusively produced for the export market, and their production involves modern inputs and the application of modern, scientific technology.

The distinction, just made, leads to identify two subtypes of export promotion growth systems. We conceive of Thailand as representing the indigenous good type, while Malaysia represents the modern good type.<sup>165</sup> This requires that the extension of our model, to include (endogenous) changes in J, must be handled somewhat differently for the two cases. We begin by considering the case of indigenous export goods, found empirically in Thailand.

## 2. INDIGENOUS PRODUCT EXPORT PROMOTION

### 2.1 Real Costs of Indigenous Export Production

We begin by analyzing the indigenous product export promotion variant. In this case we may neglect modern inputs

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<sup>165</sup>The fact that Thailand escaped overt political colonialism leads us to hypothesize that the indigenous crop system is more likely to be found where the political control of foreigners was circumscribed during the colonial period. Just as the Thailand type of limited colonial intervention was rare in Southeast Asia, so too is the absence of a modern-type commodity export base.

[category (iv)] into the agricultural sector and treat minimum industrial processing (e.g., rice milling) as an input of category (ii) costs, i.e., commercial services, rather than category (iii). In addition to its internal resources (i), therefore, the agricultural sector must acquire commercial services from the nonagricultural sector only to facilitate trade. In addition, a part of export proceeds is typically withdrawn, by taxation, to finance current expenditures of government since agricultural exports are the core of the monetized economy.<sup>166</sup>

To enhance the realism of our discussion, we portray the operation of such an economy by using a numerical example. In Table 13, we assume that \$10 worth of rice is exported. We further assume that the income from rice exports is allocated among the claimants [real costs categories (i) and (ii) and government under the "Allocation" heading] by percentages and actual amounts as indicated in Columns (1) and (2). We then show the uses to which the various shares of income are put under the "Disposition" heading. Thus, of the \$3 tax payments from rice exports, \$2.4 (or 80 per cent) is assumed to be spent (by government employees) on industrial goods (Column 3) and the balance,

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<sup>166</sup>This is indeed true for Thailand, where the "rice premium," a tax imposed upon rice exports, is a major source of current government revenue.

on agricultural goods; i. e., food (Column 4). Commercial services income is broken down into payments for labor and capital services. Income received for commercial labor services (\$2 or 20 per cent) is assumed to be disposed in the same consumption pattern as for government. By contrast, income for capital services (\$1 or 10 per cent)<sup>167</sup> is assumed to be largely saved (80 per cent or \$.80) while the small remainder (\$.20) is spent for industrial goods. Agricultural sector income from exports (\$4 or 40 per cent) is spent entirely for industrial goods.<sup>168</sup>

This example helps to emphasize that industrial growth in the export promotion system is agriculture-led--primarily because a major part (in our example, over 80 per cent) of agricultural export income eventuates as demand for industrial goods (see y in the bottom row of Table 13).<sup>169</sup> This demand is generated by agricultural exports,

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<sup>167</sup> Thus, we assume that as much as 30 per cent of export earnings represents the cost of acquiring commercial services, an assumption empirically valid for economies exporting indigenous products, as we shall see in Chapter 12. Of this "cost," one-third is assumed to represent capitalist income (i. e., profits).

<sup>168</sup> The income realized by the agricultural sector is assumed to be spent entirely for industrial goods since the rice exports are over and above requirements for local agricultural sector consumption.

<sup>169</sup> This is a modification in the direction of greater realism of the more restricted model in Chapter 8, in which all export income was viewed as "agricultural sector" income.

TABLE 13

ALLOCATION AND DISPOSITION OF EXPORT  
EARNINGS FROM INDIGENOUS PRODUCTS  
(A NUMERICAL EXAMPLE: \$10 OF RICE EXPORTS)

Destination	Allocation		Disposition (in \$)				
	%	\$	Spent on Industrial Goods	Spent on Agricultural Goods	Savings		
	(1)	(2)	(3)	(4)	(5)		
1) Tax Payments	30%	3.0	2.4	.6	-		
2) Commercial Services							
Labor Services	20%	2.0	1.6	.4	-		
Capital Services	10%	1.0	.2		.8		
3) Internal Inputs (Agricultural income)	40%	4.0	4.0	-	-		
Total	100%	10 (J)	8.2 (y)	+	1.0	+	.8

the proceeds of which, when spent in the market, constitute the only force pulling industrialization. We may, as a first approximation, think of a constant fraction,  $h$ , of export income becoming demand for industrial goods (in our Table 13 example,  $h = .82$ ), and we shall refer to  $h$  as the industry-pull coefficient. This coefficient obviously measures the "pull" which agricultural exports exert upon growth of the industrial sector. The higher the value of the coefficient, all other things being equal, the greater is the likelihood that industry will grow.

Given the indigenous product base and the associated traditional methods of production, the gains in agricultural productivity will be slow and moderate. Typically, gains are derived from diversification, the introduction of other indigenous crops for exports, retaining the traditional production milieu. We do not expect spectacular gains in agricultural productivity, such as we find attending introduction of modern inputs and agricultural innovations. Rather, slow and moderate progress is dependent upon the abundance of the essential resources internal to the sector, controlled entirely by forces internal to the sector.<sup>170</sup> Hence, the assumption appropriate to expansion of

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<sup>170</sup>"Windfall gains," due to exogenous market forces and not based upon productivity gains, are excluded from consideration at this point.

agricultural exports,  $J$ , under this regime is described in Chapter 8 by Equation (8.10), where  $J$  grows at a slow rate,  $i$ , determined completely by dynamics internal to the sector.

## 2.2 The Dynamics of Indigenous Export Led Growth

Taking into account these characteristics of indigenous exports, we can investigate indigenous export-led growth by slightly modifying the basic model structure presented in Chapter 8.<sup>171</sup> The essential behavioral assumptions for the static and dynamic applications are:

### Static

11.1a)  $y = hJp^{-\alpha}$  (Demand function;  $\alpha \geq 0$  is price elasticity of demand;  $h \geq 0$  is industry-pull coefficient)  
by Equation (8.1) of Chapter 8.

b)  $y = K/k$  (Production of  $y$ ;  $k$  is capital-output ratio.)  
See Equation (8.2) of Chapter 8.

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<sup>171</sup>The model of Chapter 8 is summarized in the system of equations [(8.1) to (8.7)] presented on Page 256 of that chapter.

11.1c)  $I = a'p^\beta$  (Investment demand function;  $\beta \geq 0$  is price elasticity;  $a' \geq 0$  is coefficient of demand level.)  
See Equation (8.3) of Chapter 8.

### Dynamic

d)  $dK/dt = I$  See Equation (8.8) of Chapter 8.

e)  $\eta_J = i$ , or  $J = J_0 e^{it}$  See Equation (8.10) of Chapter 8.

Equation (11.1a) is a demand function for industrial goods chosen to represent for this particular case the general function presented in Diagram 16 of Chapter 8.<sup>172</sup> In this equation,  $\alpha \geq 0$  is price elasticity of demand and  $hJ$  denotes the effect of income on demand. Notice that  $h$  is the pull coefficient, just introduced, and that it is assumed to be constant. Higher values of  $J$  will be represented by upward shifts of the demand curve, as shown in Diagram 16. Equation (11.1b) is the production function (Diagram 16b) based on a constant capital-output ratio, and Equation (11.1c) is a concrete form of the general investment demand function of Diagram 16c. In this latter equation,  $\beta \geq 0$  is the

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<sup>172</sup>Found on Page 250.

price elasticity of demand, while  $a' \geq 0$  is a coefficient of the investment demand level.<sup>173</sup> The equations, (11.1d) and (11.1e), for the dynamic application are merely reproductions of Equations (8.8) and (8.10) of Chapter 8. The justification for the latter assumption (constant growth rate of exports) has been given in the previous section. Thus, the six parameters of the system are  $h$ ,  $\alpha$ ,  $k$ ,  $a'$ ,  $\beta$ , and  $i$ , representing the basic behavioral forces in operation.

To facilitate our analysis, we relate the pair of key variables in the export-led growth system,  $J$  and  $K$ , in an index:

$$11.2) \quad j = J/K \quad (\text{Relative Agricultural Strength})$$

which we will refer to as the index of relative agricultural strength. Applied to the neo-colonial economy, this index relates the two sources of strength bearing upon the agricultural (export) sector; i. e., agricultural exports,  $J$ , and capital stock,  $K$ , in the servicing industrial sector. Thus interpreted, we may conceive of both  $J$  and  $K$  on a per laborer basis. Suppose  $L$  represents employment in the agricultural (export) sector; then  $J/L$  measures agricultural productivity and  $K/L$

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<sup>173</sup> In Diagram 16c, the dotted investment demand function corresponds to a higher value of  $a'$ .

represents industrial capital per agricultural laborer. A large  $j$  (high relative agricultural strength) means that the agricultural sector's economic strength is traceable more to agricultural productivity than to its service support from the industrial sector.

For solution to the system, let us first express  $p$  (price of industrial goods),  $I$  (investment), and  $py$  (expenditure on industrial goods) in terms of  $j = J/K$ , the index of relative agricultural strength:

$$11.3a) \quad p = k'j^{1/\alpha} \quad \text{where } k' = (hk)^{1/\alpha}$$

$$\text{Proof: } p^\alpha = hJ/y = hJk/K = hjk \quad [\text{by Equations (11.1a, b)}]$$

$$b) \quad I = aj^{\beta/\alpha} \quad \text{where } a = a'(hk)^{\beta/\alpha} \quad [\text{Investment}]$$

$$\text{Proof: } I = a'(k')^\beta j^{\beta/\alpha} \quad [\text{by Equations (11.1c) and (11.3a)}]$$

$$c) \quad py = hJp^{1-\alpha} \quad (\text{Total Expenditure}) \quad [\text{by Equation (11.1a)}]$$

We can then also deduce the rate of growth of industrial capital,  $\eta_K$ , in terms of  $j$  and  $J$ :

$$11.4a) \quad dK/dt = aj^{\beta/\alpha} \quad [\text{by Equations (11.1d) and (11.3b)}]$$

$$b) \quad \eta_K = aj^{u/J} \quad \text{where } u = 1 + \beta/\alpha \quad [\text{by Equation (11.4a)}]$$

$$\text{Proof: } \eta_K = aj^{\beta/\alpha}/K = aj^{\beta/\alpha}j/J = aj^{1 + \beta/\alpha}/J$$

From the definition of  $j$ , we readily see that:

$$11.5) \eta_j = \eta_J - \eta_K$$

which leads directly to the following differential equation in  $j$ :

$$11.6) \dot{\eta}_j = i - a_j^u/J_0 e^{it} \quad \text{[by Equations (11.5), (11.1e), and (11.4b)]}$$

With the aid of Equation (11.6) we can investigate the time path of  $j$ . We can readily see that the value of  $j$  cannot be bounded from above. For, suppose that  $\beta \geq j$  is an upper bound for  $j$ . Then Equation (11.6) implies:

$$\dot{\eta}_j \geq i - aB^u/J_0 e^{it} \rightarrow i \text{ as } t \rightarrow \text{infinity}$$

This is a contradiction,<sup>174</sup> and, hence,  $j$  must increase without bound in the long run.

Let us compute from Equation (11.6) the rate of acceleration of  $j$  to obtain:

$$11.7a) \frac{d\dot{\eta}_j}{dt} = (i - \eta_j)(i - u\eta_j) \quad \text{(Rate of acceleration)}$$

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<sup>174</sup>A value of  $\eta_j$  close to  $i$  is inconsistent with a bounded value for  $j$ .

$$11.7b) \quad \bar{\eta}_j = i/u = i/(1 + \beta/a) \quad (\text{Stationary value of } \eta_j)$$

$$c) \quad j \rightarrow \infty \quad \text{as } t \rightarrow \infty \quad (j \text{ approaches infinity})$$

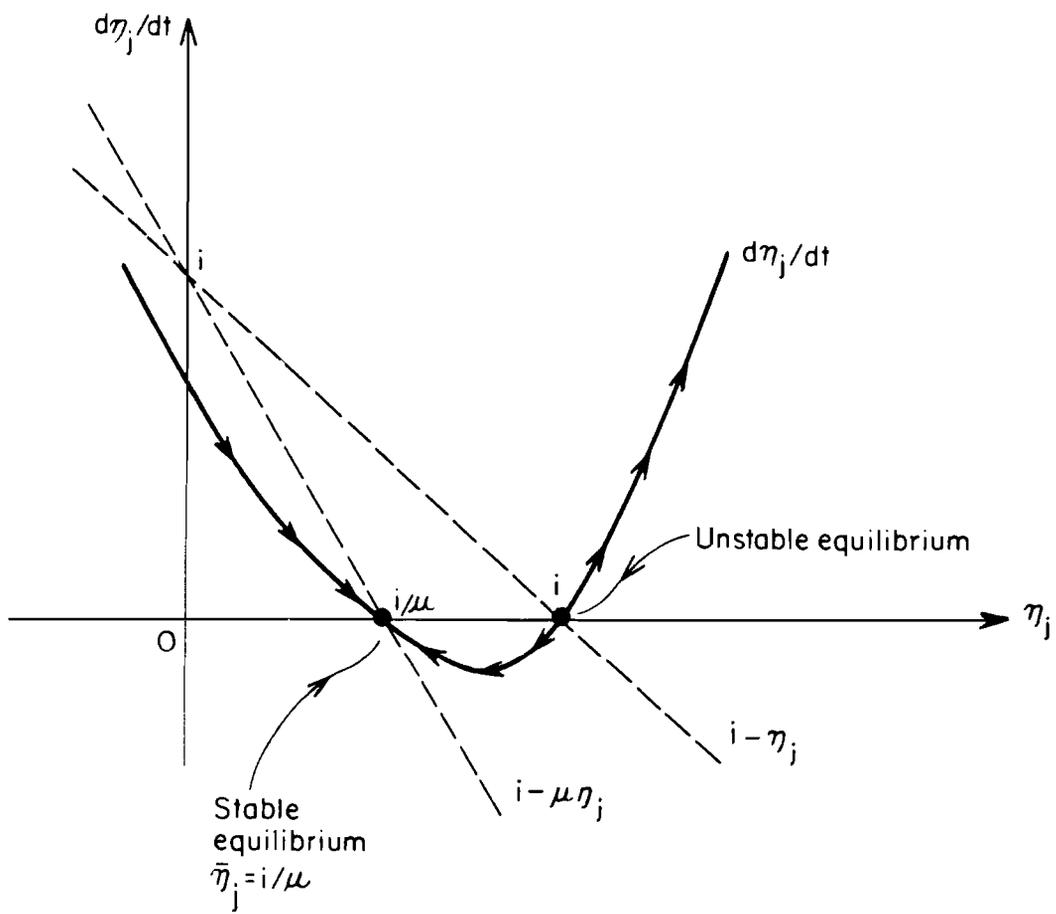
$$\begin{aligned} \text{Proof: } d\eta_j/dt &= -\frac{a}{J_0} \frac{e^{it} u j^u - 1}{e^{2it}} \frac{dj/dt - j^u i e^{it}}{e^{2it}} \\ &= (a j^u / J_0 e^{it})(i - u \eta_j) \\ &= (i - \eta_j)(i - u \eta_j) \quad [\text{by Equation (11.6)}] \end{aligned}$$

Let  $\eta_j$  be measured on the horizontal axis in Diagram 30. Let the values of  $i$  and  $i/u$ <sup>175</sup> be marked off on the horizontal axis, through which points the two (dotted) straight lines are drawn to represent the two factors on the right-hand side of Equation (11.7a). The acceleration,  $d\eta_j/dt$ , is now seen to be represented by the parabola shown in the diagram. There are two long-run stationary values for  $\eta_j$  (i.e.,  $i/u$  and  $i$ ), of which the former,  $(i/u)$  of Equation (11.7b), is stable equilibrium. The direction of change of  $\eta_j$  through time is indicated by the arrows on the parabola. As long as the initial value of  $\eta_j$  is less

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<sup>175</sup>From Equation (11.4b) we see that  $u > 1$  so that  $i/u < i$ .

Diagram 30: Indigenous Export-led Growth:  
Rate of Acceleration



than  $i$ ,  $\eta_j$  will always converge toward  $i/u$  in the long run.<sup>176</sup> If the initial value of  $\eta_j$  is greater than  $i$ , then  $\eta_j$  will increase without bound. We will concentrate on the long-run behavior in the first case, assuming that  $j$  increases at a constant rate, as in Equation (11.7c), toward infinity.<sup>177</sup> Since we have expressed other variables (prices,  $p$ ; investment,  $I$ ; expenditures on industrial goods,  $py$ ) in terms of  $j$  [Equations (11.3a, b, c)], the constancy of the rate of growth of  $j$  allows us to predict the behavior of these other variables through time.

To consider briefly the economic meaning of the preceding technical discussion, we see, first, that gains in the relative strength of agriculture,  $j$ , are directly related to the rapidity of agricultural export expansion,  $i$ , and the price elasticity,  $\alpha$ , of demand for industrial goods. The higher this price elasticity, the more consumption of industrial goods is discouraged, leading to a slower growth rate of (industrial) capital stock and accentuating the economy's agricultural-export orientation. Second, we see that a larger  $\beta$  (reflecting more price

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<sup>176</sup>There are two types of transient behavior of  $\eta_j$  as it returns to the stable equilibrium of  $i/u$ , either monotonically decreasing (if the initial value of  $\eta_j$  is less than  $i/u$ ) or monotonically increasing (if the initial value of  $\eta_j$  is greater than  $i/u$ )--as shown in Diagram 30.

<sup>177</sup>The long-run behavior of the second case (in which  $\eta_j$  increases indefinitely) is one in which  $j$  increases toward infinity at a faster rate than in the first case and, hence, it would produce no qualitative differences in our conclusions.

elasticity of investment demand) will promote a domestic orientation because it induces a larger (industrial) investment response to the price stimulation effects exerted by increasing export income.

The foregoing analysis supports our conclusion in Chapter 8<sup>178</sup> that with even a moderate rate,  $i$ , of export growth, the economy will inevitably shift toward agriculture and export and away from industry (i. e., show an increase in the index of relative agricultural strength,  $j$ ). However, this growth system may be both tolerable and viable in the short run since industrial investment will increase under the stimulation of continuous price increases,  $p$ , for industrial goods.<sup>179</sup> Moreover, if we let  $(z = py/hJ)$  represent an index measuring the share of the industrial market supplied by domestic production<sup>180</sup> and  $w = J/(J + py)$  be an export ratio (exports as a fraction of GNP),<sup>181</sup> we have:

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<sup>178</sup>See Section 2, Chapter 8.

<sup>179</sup>From Equations (11.3a, b), we see that  $p$  and  $I$  are increasing functions of  $j$ .

<sup>180</sup>Notice that  $py$  is total expenditure on domestically produced industrial goods and  $hj$  is total expenditure on all industrial goods, domestic plus imported.

<sup>181</sup> $J$  is the value of exports and  $J + py$  (the sum of exports and domestically produced goods) may be taken as an approximation of GNP.

$$11.8a) \quad z = py/hJ = k'j^{(1 - \alpha)/\alpha} \quad [\text{Domestic Market Share}]$$

$$\text{Proof: } py/hJ = p^{1 - \alpha} = (k'j^{1/\alpha})^{1 - \alpha} \text{ [by Equations (11.3a, c)]}$$

$$b) \quad w = J/(J + py) = 1/(1 + py/J) = 1/(1 + hz) \quad [\text{Export Ratio}]$$

We see from Equation (11.8b) that  $z$  and  $w$  move in opposite directions, signifying that growing external orientation (increasing  $w$ ) is consistent with declining domestic industrial market shares (decreasing  $z$ ) and vice versa. From Equation (11.8a) we see that increasing  $j$  may cause the index  $z$  to increase ( $\alpha < 1$ ) or to decrease ( $\alpha > 1$ ); i. e., depending on the price elasticity of demand for industrial goods. If the elasticity is near unity, the short-run viability of the system is enhanced by a resemblance to "balanced growth" as shown by stability of internal (constancy of  $z$ ) and external (constancy of  $w$ ) structure.

Continuous expansion of  $j$ , however, and the consequent increase in industrial goods prices will eventually render the economy vulnerable to import competition. When the domestic industrial price level rises to the ceiling corresponding to the import price level,  $P_M$  (in Diagram 16 of Chapter 8), the phenomenon of industrial price stability will be encountered. Thus, a turning point will be reached when  $j$

increases sufficiently. The value of  $j$  at this turning point can be calculated by substituting  $P_M$  (the import price level) in Equation (11.3a):

$$11.9 \quad j_T = P_M^\alpha kh \quad \text{Turning Point Value of } j'$$

After this point, further export expansion will be accompanied by stable industrial prices and the domestic economy will be constrained by constant investment (and the linear increase of  $K$  and  $y$ ), as we have explained in Chapter 8.

As a summary, constrained growth after the turning point may be described by the following system of equations:

$$11.10a) \quad \bar{I} = a'P_M^\beta \quad \text{[Constant Investment]}$$

[Equation (11.1c), substituting  $P_M$  for  $p$ ]

$$b) \quad K = K_0 + \bar{I}t \quad \text{[Linear Increase of Capital]}$$

[Equations (11.1d), (11.10a)]

$$c) \quad y = y_0 + (\bar{I}/k)t \quad \text{[Linear Increase of Output]}$$

[Equations (11.1b) and (11.10b)]

$$11.10d) z = py/hJ$$

$$= P_M[y_0 + (\bar{I}/k)t]/hJ_0 e^{it} \rightarrow 0 \quad \text{[Decreasing Domestic Market Share]}$$

[Equations (11.1e) and (11.10c)]

$$e) j = J_0 e^{it} K_0 + \bar{I}t \rightarrow \infty \quad \text{[Increasing Agricultural Strength]}$$

$$f) \eta_j \rightarrow i \quad \text{Long-run Value of } \eta_j$$

From the time path of the  $z$  index [Equation (11.10d)], it is apparent that the domestic share of the industrial market will inevitably decrease through time; and, hence, from the  $w$  index [Equation (11.8b)] we see that the economy will assume increasing export orientation. The time path of  $j$  [Equation (11.10e)] shows that its rate of growth will, in the long run, increase to the value of  $i$ . Comparing Equation (11.10f) with Equation (11.7b), we learn that import competition raises the rate (i.e., the value of  $\eta_j$ ) at which the economy progresses toward external orientation. This acceleration of pace toward external orientation, caused by import competition, is the force which leads the economy eventually to revert to enclavism.

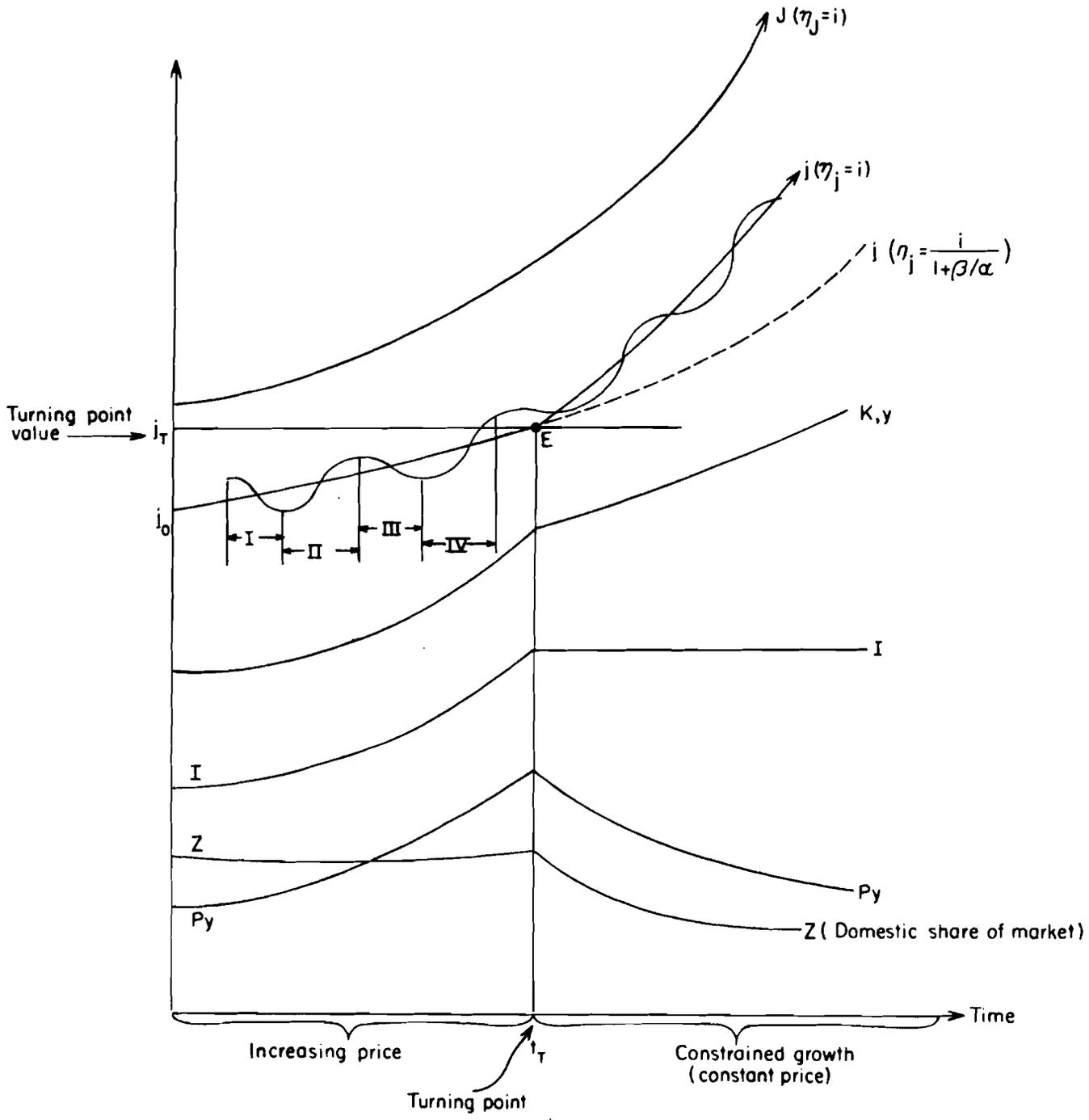
The analysis of this section is summarized by the time paths shown in Diagram 31. The uppermost curve, J, shows agricultural exports expanding at the constant rate,  $i$ . This leads to an increasing time path for  $j$  (beginning from  $j_0$  at a rate  $i/[1 + \beta/\alpha]$ ) until the turning value of  $j_T$  is reached.<sup>182</sup> At this point, the force of rising prices for industrial goods is replaced by the constant price,  $P_M$ , as import competition comes into play. Thus, there are two growth phases, marked off by the turning point on the horizontal axis. They differ in several respects. In the second ("constrained") growth phase,  $j$  grows at the higher rate  $i$ , causing increasing external orientation and industrial expansion to lag behind agricultural export growth. Moreover, at the turning point the previously increasing industrial investment is replaced by constant investment, and increasing growth of capital and output give way to linear growth. As a result, what may have been an increasing share of domestic production in the industrial market<sup>183</sup> during the first phase (before the turning point) is reversed, and the domestic share declines during the second phase.

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<sup>182</sup>After point E, the dotted curve is irrelevant, replaced by the solid  $j$  curve.

<sup>183</sup>Assuming relatively inelastic demand.

Diagram 3I: Indigenous Export Economy:  
Long-run Potential



### 3. MODERN PRODUCT EXPORT PROMOTION

#### 3.1 Real Costs of Modern Export Production

In contrast to the case of indigenous export products, just discussed, modern export products<sup>184</sup> (with either product or technology introduced from abroad) rely heavily upon modern input costs. We may classify income generated from modern exports as we did in Table 13 for indigenous product exports. In Table 14, \$10 of assumed income from modern exports is thus classified from the viewpoints of allocation and disposition. In this table, the category of modern inputs is now added, representing purchase of intermediate good inputs from the industrial sector.

As we would expect, the addition of a new kind of industrial inputs into agriculture, modern inputs of Column 3, results in allocation of a larger share of export income to industrial sector producers (60 per cent) than in the indigenous export product case (30 per cent). This yields slightly higher (\$8.7) spending on industrial goods than in the indigenous products case. Thus, the industry-pull coefficient is  $h = .87$ ,

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<sup>184</sup>In this section, modern exports refer to both the agricultural and mineral products.

TABLE 14

ALLOCATION AND DISPOSITION OF EXPORT  
EARNINGS FROM MODERN PRODUCTS  
(A NUMERICAL EXAMPLE: \$10 OF MODERN EXPORTS)

Destination	Allocation		Disposition (in \$)		
	%	\$	Spent on Industrial Goods	Spent on Agricultural Goods	Savings
1) Tax Payments	15%	1.5	1.2	.3	-
2) Commercial Services	30%	3.0	2.0	.8	.2
3) Modern Inputs	30%	3.0	3.0	-	-
4) Internal Inputs	25%	2.5	2.5	-	-
Total	100%	10 (J)	8.7 (y)	1.1	.2

compared to .82 in Table 13. This reflects the fact that an economy based upon export of modern goods necessarily involves a higher degree of integration between agriculture and industry.

Notice that export income spent in the industrial sector now includes purchase of intermediate inputs (\$3) as well as consumer goods (\$5.7). In the present model, therefore, industrial output,  $y$ , includes both consumer goods and intermediate goods inputs supplied to the agricultural sector. We may refer to the ratio of intermediate goods inputs to total industrial goods demand as the real cost coefficient,  $q$ . In the Table 14 example,  $q = 3/8.7$ .

In the export promotion system based upon modern exports, the source of agricultural productivity gains lies in the injection of these modern intermediate goods inputs and the accompanying transmission of technology. Thus, modernizing forces are transmitted from outside the agricultural sector. We may now define  $qy/J$  as modern inputs per unit of exports. We may reasonably assume:

$$11.11) \quad dJ/dt = u(qy/J)^\gamma$$

where  $u \geq 0$  is the stimulation constant and  $\gamma \geq 0$  is the stimulation coefficient.

Equation (11.11) may be referred to as the agricultural stimulation function, providing the major growth-promotion force affecting the value of exports,  $J$ , through time. The equation states that the higher the value of modern inputs per unit of exports,  $qy/J$ , the larger will be the gain in output per unit of time,  $dJ/dt$ . The elasticity of this gain,  $dJ/dt$ , per unit of modern inputs,  $uy/J$ , is the stimulation coefficient,  $\gamma$ , where  $u$  is a stimulation constant.<sup>185</sup> This behavioristic assumption is based on the following grounds: (i) modernization of agriculture originates from contact with the industrial sector; (ii) in particular, productivity gains are associated with the transmission of technology and resources embodied in modern inputs; and (iii) it is consistent with a learning-by-doing thesis, according to which greater application of modern inputs will not only affect the existing level of output but also will continue to engender productivity gain in the future.<sup>186</sup>

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<sup>185</sup> Thus,  $\gamma$  describes the elasticity while  $u$  describes the level of stimulation.

<sup>186</sup> Thus, the agricultural stimulation assumption of Equation (11.11) involves more than a purely "resource oriented" approach to agricultural productivity growth.

The assumption of Equation (11.11), therefore, signifies a major growth-promotion force of a new kind, contrasting with the assumption of Equation (11.1e) for the model in the previous section.<sup>187</sup>

### 3.2 The Dynamics of Modern Export-led Growth

The only difference between the present modern export product model and the model of the last section is the replacement of Equation (11.1e) by Equation (11.11). With this exception, Equations (8.1) to (8.7) of Chapter 8 and Equations (11.1) to (11.10) of this chapter remain valid. Expressing  $dJ/dt$  in terms of  $j$ , we have:

$$11.12a) \quad dJ/dt = bj^{-\gamma} \quad \text{where } b = u(q/k)^{\gamma}$$

$$\text{Proof: } dJ/dt = uq^{\gamma}(K/kJ)^{\gamma} = u(q/k)^{\gamma}j^{-\gamma} \quad \begin{array}{l} \text{[by Equations (11.1d)} \\ \text{and (11.11)]} \end{array}$$

$$b) \quad \eta_j = bj^{-1-\gamma}/K$$

$$\text{Proof: } \eta_j = bj^{-\gamma}/J = bj^{-\gamma}/jK = bj^{-1-\gamma}/K \quad \text{[by Equation (11.12a)]}$$

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<sup>187</sup>Specifically, gains in agricultural productivity in the earlier model were determined by forces internal to the agricultural sector, whereas they are determined here by external forces.

which, when substituted in Equation (11.5), leads to the differential equation:

$$11.13) \quad K \eta_j = bj^{-1-\gamma} - aj^{\beta/\alpha} \quad \text{[by Equations (11.4a), (11.5), and (11.12b)]}$$

In Diagram 32, let  $j$  be measured on the horizontal axis and let the two terms on the right-hand side of Equation (11.13) be represented by the two curves in the upper deck of the diagram. The increasing curve represents stimulation of industrial investment [see Equation (11.3b)], while the decreasing curve represents stimulation of agricultural productivity.<sup>188</sup> The two curves necessarily intersect at a point, E, determining a point marked on the horizontal axis as  $j_e$ , the value of which is:

$$11.14a) \quad j_e = (b/a)^v \quad \text{Long-run Stationary Value of } j$$

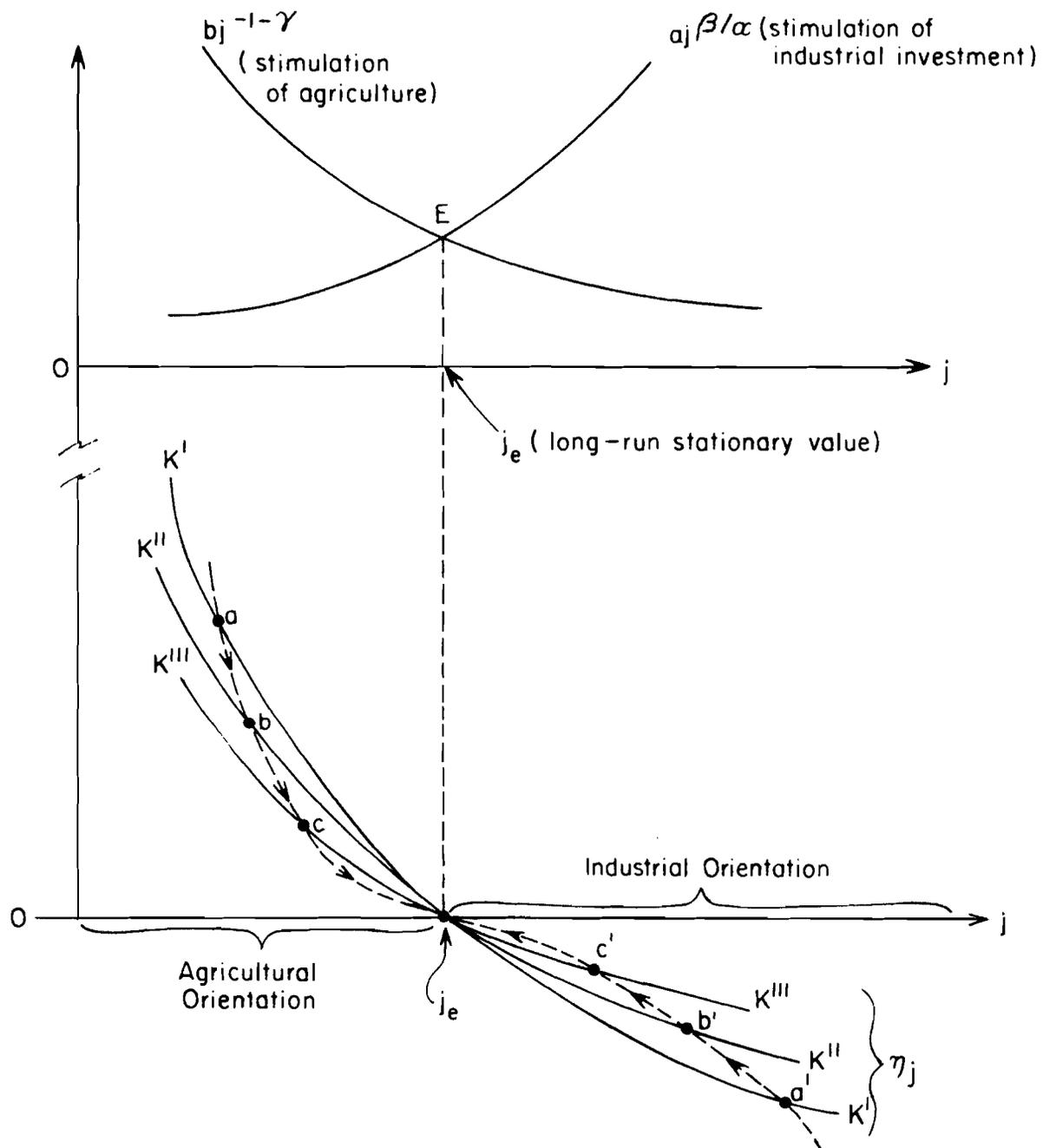
$$\text{where: } bj^{-1-\gamma} = aj^{\beta/\alpha} ; \quad j^{1+\gamma+\beta+\alpha} = b/a$$

$$b) \quad v = \alpha / (\alpha + \beta + \gamma\alpha)$$

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<sup>188</sup> Notice that as relative strength shifts to agriculture (i.e., increasing  $j$ ), stimulation of agricultural productivity is diminished because of the lagging industrial sector.

Diagram 32: Modern Export Economy:  
Long-run Potential



$$11.14c) \quad b = u(q/k)^\gamma \quad \text{and}$$

$$a = a'(hk)^{\beta/\alpha}$$

If  $K = 1$ , we see from Equation (11.13) that the vertical gap between the two curves in the upper deck is  $\eta_j$ . At any point this gap may be represented by a negatively sloped curve, as in the lower deck of Diagram 32. For a sequence of increasing values of  $K$ , e.g.,  $K'$ ,  $K''$ ,  $K''' \dots$ , the corresponding values of  $\eta_j$  may be shown as a family of such curves, each indexed by a fixed value of  $K$ . Note that "flatter" curves are indexed by larger values for  $K$ .

Beginning with a point, "a," lying between the origin and  $j_e$ , we observe that  $\eta_j$  is positive and its movement is rightward, toward increasing values of  $j$ . Simultaneously, an increase in the value of  $K$  causes a shift to a lower  $\eta_j$  curve. Thus, the typical growth path is shown by the dotted curve  $a, b, c \dots$ , toward the long-run stationary value,  $j_e$ . Similarly, beginning from a point,  $a'$ , beyond  $j_e$ , a growth path  $a', b', c' \dots$  emerges, representing decreasing values of  $j$  and  $\eta_j$ . Thus,  $j_e$  is the long-run stationary value of  $j$ .<sup>189</sup> The two types of

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<sup>189</sup>When Equations (11.14b, c) are substituted into Equation (11.14a), we can investigate the direction of changes in  $j_e$  resulting from changes in any of the parameters,  $u, \alpha, k, \gamma, \beta$ , and  $q$ . It can be shown that  $j_e$  is an increasing function of  $u$  and  $\alpha$  and a decreasing function of  $k, \gamma$ , and  $\beta$  --with obvious economic interpretations.

transient behavior of  $j$  are determined by the initial value of  $j$ ; i. e.,  $j_0$ , as compared to the stationary value,  $j_e$ :

11.15a)  $j_0 < j_e$  (Agricultural orientation:  $j$  increases monotonically.)

b)  $j_0 > j_e$  (Industrial orientation:  $j$  decreases monotonically.)

In Equation (11.15a) we see a case with monotonically increasing  $j$  which may be described as agricultural orientation, while in Equation (11.15b)  $j$  decreases monotonically and represents an industrial orientation case.

With time measured on the horizontal axis in Diagram 32, the behavior of the two cases is represented by the dotted long-run  $j$  curves, which both converge toward the long-run stationary value,  $j_e$ . We conclude, therefore, that the long-run tendency of the modern export type of export promotion is toward dynamic equilibrium, characterized by constancy of the value of  $j$ .<sup>190</sup> A feature of this behavior is

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<sup>190</sup>Note that this is a type of long-run export promotion growth behavior which has not been confronted before in our formal analysis. In Chapter 8 we discussed two "extreme cases," one where  $j$  persistently increased ("reversion to enclavism") and the other where  $j$  continuously decreased ("agricultural stagnation"). In the case of indigenous exports of the previous section, we also saw a long-run tendency toward increasing  $j$ .

"balanced growth" between the growth-pulling sector of agriculture and the industrial sector, which is propelled by the pull from agriculture. The long-run balance aspect is reflected in the tendency toward constancy of price,  $p$  [seen from Equation (11.3a)] and investment,  $I$  [seen from Equation (11.3b)]. Moreover, it can be readily shown [see Equations (11.18d, e)] that the domestic share of the industrial market, as measured by the  $z$  index, and, hence, the export ratio,  $w$ , take on a constant value in the long run.

Compared to the alternative case discussed in this chapter (and the simple cases of Chapter 8), the balanced nature of dynamic equilibrium suggests that it is a more viable type of growth in terms of its political tolerability. We believe, further, that the assumed conditions exist in several cases of postwar country experience. Thus, we envisage the feasibility of testing the results of our model of this section. The stability (or constancy) of the structural characteristics, just cited, in a slowly expanding economy, presents testable hypotheses. These hypotheses are explicitly tested for Malaysia in Chapter 13.

We have suggested earlier--on the basis of intuitive reasoning--that the export promotion system is likely to possess only short-run viability as a growth system. We now investigate, more rigorously,

whether this presumption also applies to the dynamic equilibrium type of export promotion growth under neo-colonialism.

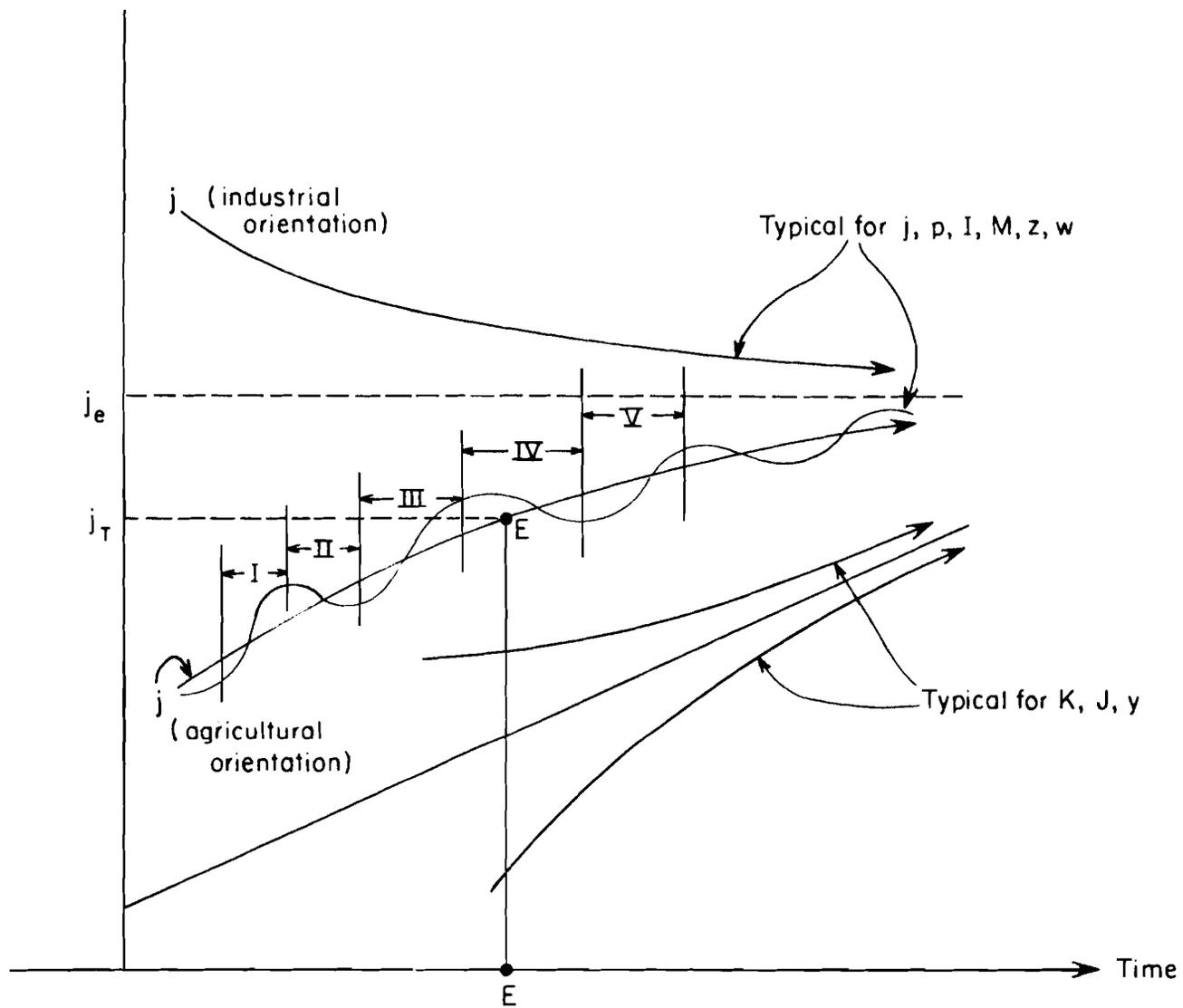
### 3.3 The Viability of Dynamic Equilibrium

It is quite clear from the preceding discussion that dynamic equilibrium may not possess long-run viability because eventually import competition may induce reversion to enclavism. Suppose that the critical turning point value for  $j_T$ , as determined by Equation (11.9), is at the level shown on the vertical axis of Diagram 33. Then, as in the case of Diagram 31, increases in the value of  $j$  beyond point E will lead to stability of the price of industrial goods,  $p = P_M$ --determined by the import price level--and the system will gravitate toward increasing export orientation and a reversion to enclavism.<sup>191</sup> While this consequence may be significant in some types of neo-colonial dynamic equilibrium, we emphasize another threat to the long-run viability of

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<sup>191</sup> Under the assumption in Equation (11.11) an increase in  $j$  and the attendant lag of industrial sector growth may cause retardation in agricultural export growth itself. Hence, unlike the earlier case of "reversion to enclavism," the present growth system, when constrained by a constant price for industrial goods, implies a stagnation force originating from the agricultural sector, transmitted to industry and back to agriculture.

Diagram 33: Dynamic Equilibrium:  
Balanced Growth and Retardation



the system, one traceable to "internal" forces, on the assumption that keen import competition does not exist or is politically tolerable.<sup>192</sup>

The inner difficulty of the dynamic equilibrium characterizing this modern export product case is readily grasped when we realize that the condition of a constant growth rate of exports,  $J$ , always implies that  $j$  will grow at a constant rate.<sup>193</sup> Thus, balanced growth can be achieved only at the price of slow growth or, more precisely, with a decreasing growth rate. Since in the long run  $j$  takes on a stationary value,  $j_e$ , the growth rates of capital,  $K$ , and exports,  $J$ , become:

$$11.16a) \quad \eta_K = aj_e^{\beta/\alpha}/K \rightarrow 0 \quad \text{Long-run Growth Rate of Capital}$$

[By Equations (11.4a) and (11.14a)]

$$b) \quad \eta_J = bj_e^{-1-\gamma}/K \rightarrow 0 \quad \text{Long-run Growth Rate of Exports}$$

[By Equations (11.12b) and (11.14a)]

indicating that in the long run both growth rates decline to zero and are inversely proportional to the growing capital stock,  $K$ .

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<sup>192</sup> In Diagram 33, the case of constrained growth can occur only where  $j$  increases. From Equation (11.15a) we see that such a case is characterized by a low initial value of  $j_0$ . In most export economies, initial export orientation is already high (e.g., Malaysia) so that we neglect this case. Technically, from Diagram 33, we see that constrained growth will not occur if  $j_e < j_T$  where  $j$  will never confront the price constraint.

<sup>193</sup> This was shown rigorously by Equation (11.7b).

This result is primarily caused by the fact that the long-run growth of K, y, and J is linear; i. e., they increase by a constant amount per unit of time:

$$11.17a) \quad K = K_0 + \bar{I}t \quad \text{Long-run Growth Path of K}$$

$$\text{where } \bar{I} = aj_e^{\beta/\alpha} \quad \text{[By Equations (11.3b) and (11.14a)]}$$

$$b) \quad y = y_0 + (\bar{I}/k)t \quad \text{Long-run Growth Path of y}$$

$$\text{[By Equations (11.1d) and (11.17a)]}$$

$$c) \quad J = J_0 + \Delta J^t \quad \text{Long-run Growth Path of J}$$

$$\text{where } \Delta J = bJ_e^{-\gamma} \quad \text{[By Equations (11.12a) and (11.14a)]}$$

The behavior of K, y, and J thus exhibits the long-run growth patterns as portrayed in Diagram 32 and reproduced in Diagram 33.

We conclude, therefore, that the dynamic equilibrium case of export promotion implies long-run retardation of growth. In fact, it is precisely this retardation effect which gives this growth system its balanced growth feature--as reflected, for example, in the constancy of the following set of observable economic magnitudes (in addition to  $j_e$ ):

- 11.18a)  $p_e = k'j_e^{1/\alpha}$  Long-run Stationary Value for Price  
 [By Equation (11.3a)]
- b)  $I_e = aj_e^{\beta/\alpha}$  Long-run Stationary Value for Investment  
 [By Equation (11.3b)]
- c)  $M_{i_e} = mI_e = maj_e^{\beta/\alpha}$  Long-run Stationary Value for Capital Imports  
 [By Equation (11.18b)]
- d)  $z_e = py/hJ = p_e^{1-\alpha}$  Long-run Stationary Value for  $z$   
 [By Equation (11.3c)]
- e)  $w_e = 1/1 + hz_e$  Long-run Stationary Value for  $w$   
 [By Equation (11.8b)]

Notice that all of the variables whose stationary values are given in Equation (11.18) exhibit the same general growth pattern as that portrayed for  $j$  in Diagram 33; i.e., they all converge toward stationary values by way of an increasing or decreasing transient path.

#### 4. INDIGENOUS VERSUS MODERN EXPORT-LED GROWTH

We summarize the results of our analysis of export promotion growth systems by comparing the two cases, one based upon indigenous products and the other upon modern products. Diagram 31 shows long-run growth trends for the indigenous product case, and Diagram 33 portrays the modern export case. The fundamental difference between the two cases, and the cause of different growth trends shown in the two diagrams, lies in the determinants of exports,  $J$ . In the indigenous export case, growth is pushed by forces within the agricultural sector, and these forces are summarized in the constant rate of export expansion,  $i$ , of Equation (11.1e). By contrast, growth of modern exports is externally pushed by forces emanating from contact with the industrial sector. The stimulation to export growth resulting from this contact is described by Equation (11.11).

This key difference in the forces determining the major growth-promotion force of exports,  $J$ , produces contrasting long-run growth consequences between the two cases. A first difference lies in the fact that the indigenous export growth system always leads industrial growth to progress toward the import price ceiling,  $P_M$ , and thus to confront foreign competition, while this does not occur in the modern export case. The internal momentum of growth within the indigenous

agricultural export sector relentlessly pushes the system toward this point, the turning point E in Diagram 31. By contrast, the dynamic equilibrium nature of growth in the modern export case (shown in Diagram 33), in which agricultural and industrial growth are closely linked, produces constancy of industrial goods prices, averting price increases to the ceiling price,  $P_M$ .

Both indigenous and modern export promotion growth involve long-run difficulties, though of a different nature. In the indigenous export case, we see from Diagram 31 that after the turning point,  $t_T$ , industrial growth will slow down as shown by the constant value assumed by industrial investment,  $I$ , and the consequent retardation of the growth of capital stock,  $K$ , and industrial output,  $y$ . This produces a falling  $z$  index after the turning point, reflecting a decreasing domestic share of the industrial goods market. Agricultural export orientation (shown by the  $w$  index) accelerates after the turning point because the growth of  $j$ , the index of relative agricultural strength, accelerates. Combined, these trends may be described as a return to colonial-type enclavism, the very growth system from which the transition is intended to provide escape. For this reason, this long-run result is likely to be politically intolerable. The dynamic equilibrium nature of modern export promotion growth involves long-run difficulties of another kind. Diagram 33 shows

that all growth variables converge toward a constant rate of growth, involving retardation and eventual slow growth.

Moreover, both types of export promotion growth fail to provide a long-run tendency toward shifting the economy's center of gravity to the industrial sector. In both cases, the long-run result shows that investment,  $I$ , and capital stock,  $K$ , will eventually grow linearly for the indigenous export case after the turning point (Diagram 31) and for the modern export case, as the growth paths approach the stationary growth rate,  $j_e$  (Diagram 33). In the former case, lagging industrial growth is caused by the economy's growing agricultural export orientation; in the latter, by the loss of internal growth momentum. We conclude, therefore, that both systems may be viable as short-run transition vehicles but that neither is satisfactory to complete a transition to modern growth over the longer run.

## APPENDIX

### STABILITY OF EXPORT PROMOTION GROWTH

Two short-run policy issues are of overriding importance where neo-colonial export promotion growth is found: maintenance of an adequate rate of export expansion and enhancing the system's stability. The first emphasis is obvious, given the export-pulled nature of these growth systems. Government policy to promote export productivity gains must be consistent with the competitive market system required for neo-colonialism. Development policy is thus likely to focus upon social overhead investment to promote the growth of export production and trade; and, given the land-based nature of the system, public investment will concentrate upon improving land resources. These policy implications are relatively self-evident so we will restrict our discussion to a second short-run policy issue, the quest for stability.

All export-oriented economies confront problems of economic instability because of the fluctuating nature of external demand. For reasons well known, primary products are particularly subject to sharp price fluctuation in the world market. In the neo-colonial system, fluctuations in  $J$  are readily transmitted throughout the domestic economy

through the relatively unfettered market mechanism. As a consequence, growth of the economy is characterized by short-run instability, alternating between expansionary and contractionary phases. These short-run fluctuations are superimposed upon the smooth underlying long-run growth trends analyzed in the text of this chapter.

#### INDIGENOUS EXPORT PRODUCT CASE

Short-run fluctuations will be integrated into our analysis of the two variants of export promotion growth. To begin with the indigenous export product case, we refer back to Diagram 31. Fluctuations occur around the long-run growth path of  $j$ . We may think of Equation (11.6) as describing an expansionary phase, during which the expansion of  $j$  is sustained at the rate given by Equation (11.7a). A short-run departure (contractionary phase) may then be described by letting  $i = 0$  so that  $J$  maintains a constant value. Thus, the two phases may be described by:

$$11.19a) \quad n_j = i - a_j^u / J_0 e^{it} \quad \text{Expansionary Phase}$$

$$b) \quad n_j = -a_j^u / \bar{J} \quad \text{Contractionary Phase}$$

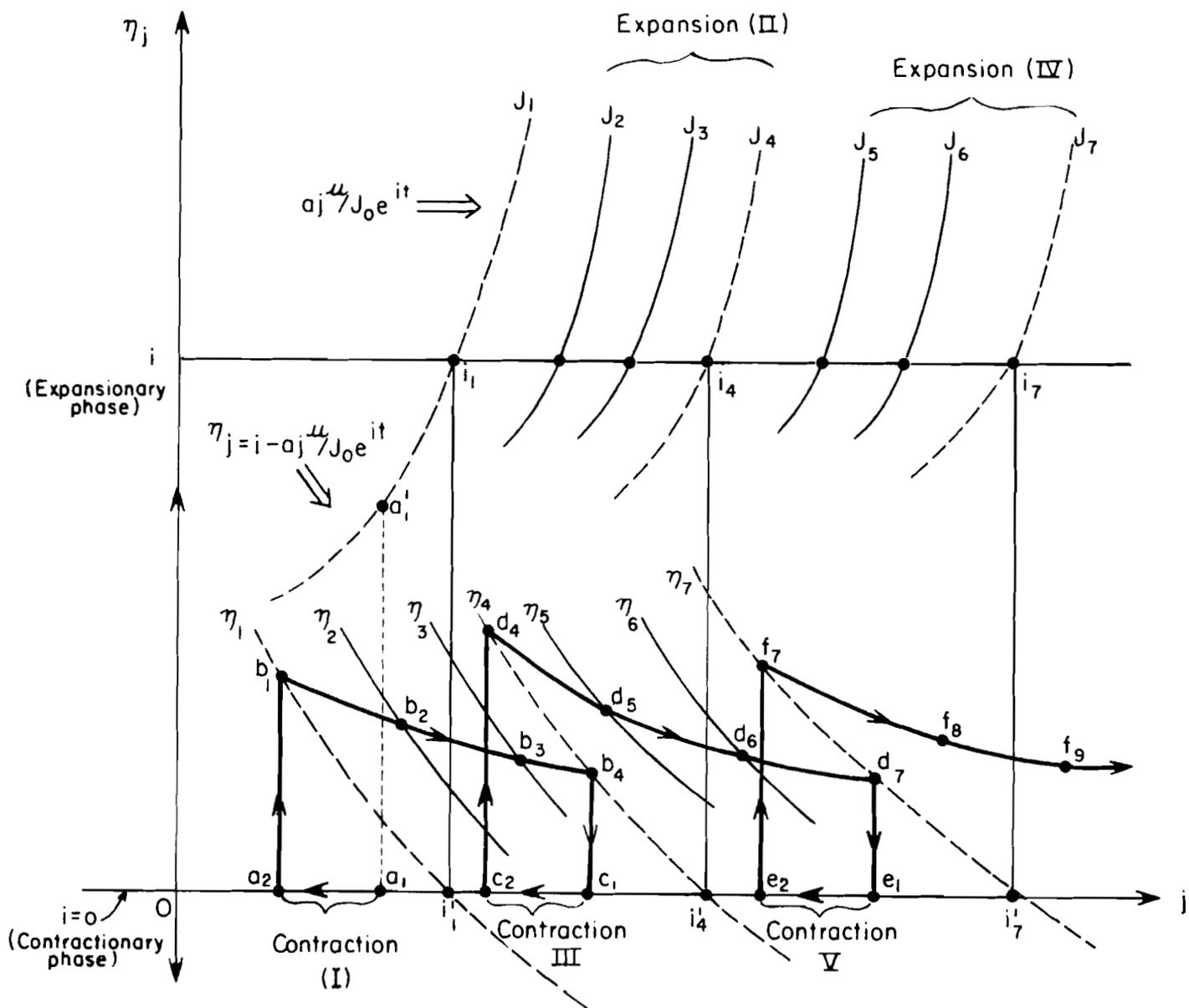
In Diagram 34, let  $j$  be plotted on the horizontal axis and let the term  $aj^u/J_0 e^{it}$  be represented by a system of positively sloped curves, each indexed by a particular value of  $J$ ; i. e.,  $J_1, J_2, J_3 \dots$ , indicating that these curves shift to the right as  $J$  expands through time during expansionary phases. The horizontal line through  $i$  (on the vertical axis) intersects these curves at points  $i_1, i_2, i_3 \dots$ . With the aid of these points of intersection the vertical gap between the  $J$  curves and the horizontal line is measured and represented by the negatively sloped curves indexed by  $\eta_1, \eta_2, \eta_3 \dots$ , the height of which, by Equation (11.19a), measures  $\eta_j$ .

Let us begin with a contractionary phase (Phase I in Diagram 34) when  $J$  is held at a constant level,  $J_1$ . The dotted  $J_1$  curve, whose position is fixed, is now relevant.<sup>194</sup> Suppose the initial value of  $j$  is  $a_1$ , as shown on the horizontal axis. Then, by Equation (11.19b),  $\eta_j$  is negative and, hence, the value of  $j$  decreases toward  $a_2$ . A contractionary phase is thus characterized by a decreasing value of  $j$ , caused by the stagnation (constant absolute value) of exports,  $J$ .

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<sup>194</sup> However, the  $\eta_1$  curve is irrelevant because  $i = 0$ ; i. e.,  $J$  is constant. The magnitude of  $\eta_j$  is now indicated by the negative of the  $J_1$  curve. For example, for  $j = a_1$  (on the horizontal axis),  $\eta_j$  is the negative of the distance  $a, a'_1$ .

Diagram 34: Short-run Fluctuations:  
Indigenous Export Case



We now suppose that an expansionary phase (Phase II) begins. The growth path<sup>195</sup> that ensues is described by points  $b_1, b_2, b_3, b_4$ , showing the effect of increasing exports,  $J$ , as the value of  $j$  increases through time.<sup>196</sup> Again, a contractionary phase (Phase III) sets in when  $j = c_1$ , causing the value of  $j$  to recede to  $c_2$ . This is again followed by an expansionary phase, Phase IV.

Had the first and later expansionary phases not been interrupted by temporary setbacks, caused by flagging export demand, growth would have maintained the smooth growth path (shown in Diagram 30) toward the eventual expansion of  $j$  at the constant rate of Equation (11.7b).<sup>197</sup> In the real world of fluctuating external demand for indigenous exports, however, the system will be periodically interrupted by the temporary setbacks of the contractionary phases (I, III, V), causing an alternation between expansionary and contractionary phases. These are superimposed upon the long-run growth trends as shown by the wave-like movements around the smooth path of  $j$  in Diagram 31.

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<sup>195</sup>The points  $b_1, b_2, b_3, b_4$ , lie on successively lower  $\eta$  curves.

<sup>196</sup>Since  $i$  now is positive,  $j$  increases and, hence, the  $\eta_j$  curves become relevant during the expansionary phase.

<sup>197</sup>In Diagram 34, this is shown by the fact that the growth paths for the expansionary phases ( $b_1, b_2, b_3, b_4$ ), ( $d_4, d_5, d_6, d_7$ ), and ( $f_7, f_8, f_9$ ), all converge toward a positive constant value.

MODERN EXPORT PRODUCT CASE

To analyze fluctuations in the other case--modern export-pulled growth--we may take Equation (11.13) as describing the expansionary phase. For the contractionary phase, we let  $u = 0$  in Equation (11.11),<sup>198</sup> signifying that increases in  $J$  cease and, hence, exports,  $J$ , temporarily assume a constant value. Thus, we have:

$$11.20a) \quad J \eta_j = bj^{-\gamma} - aj^{1+\beta/\alpha} \quad \text{Expansionary Phase}$$

[By Equation (11.13)]

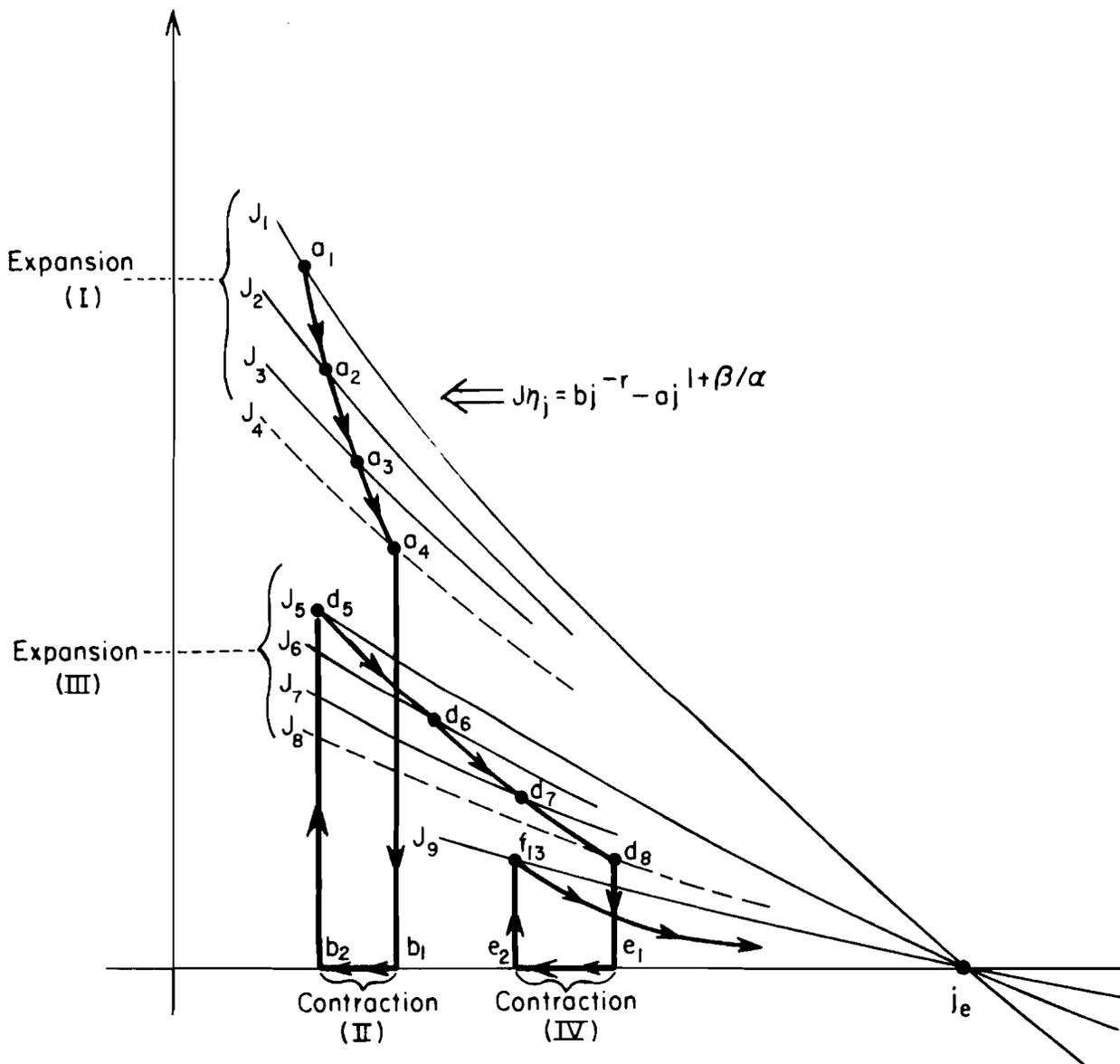
$$b) \quad \eta_j = -aj^{1+\beta/\alpha}/\bar{J} \quad \text{Contractionary Phase}$$

The negatively sloped family of  $\eta_j$  curves of Diagram 32 is reproduced in Diagram 35, the only modification being that each curve is now indexed by a fixed value of  $J$ ; i. e.,  $J_1, J_2, J_3 \dots$  according to Equation (11.20b). Let us begin with  $J = J_1$  for an expansionary phase (Phase I) at the point  $a_1$ . The ensuing growth path is  $a_1, a_2, a_3, a_4$ . Now suppose that at  $J = b_1$  (on the horizontal axis), a contractionary phase

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<sup>198</sup>From Equation (11.12b) we have  $b = 0$  and, hence, the first term of Equation (11.13) vanishes--as shown in Equation (11.20b).

Diagram 35: Short-run Fluctuations:  
Modern Export Case



(Phase II) sets in. The value of  $j$  will decrease toward  $b_2$ , according to Equation (11.20b). Resumption of expansion occurs in Phase III, shown by the growth path  $d_5, d_6, d_7, d_8$ . Thus, alternation between the two phases continues. The superimposition of these short-run fluctuations on the long-run smooth growth path of  $j$  may be seen from the wave-like movements around the  $j$  curve in Diagram 33. In the dynamic equilibrium case, in which  $j$  approaches a constant long-run value, the short-run phases will be observed as fluctuations around the constant trend value of  $j$ .

The short-run instability of  $j$ , originating from fluctuations in exports,  $J$ , will induce fluctuations in all the other variables in the system. In the expansionary phase, prices of industrial goods,  $p$ , investment,  $I$ , and imports on capital account,  $M_i$ , will increase, attended by an "adequate" growth of capital stock ( $K$ ) and industrial output,  $y$ . Conversely, during the ensuing contractionary phase, growth of all these variables will slow perceptibly. Thus, growth in the neo-colonial system of export promotion is inherently unstable because of its exclusive dependence upon the growth momentum provided by exports. Preoccupation with short-run stability by policies consistent with the free market regime is thus an inevitable by-product of this growth system.

## CHAPTER 12

### THE POSTWAR TRANSITION IN THAILAND

In the preceding chapter we analyzed transition growth under a free market system with a neo-colonial organizational framework.<sup>199</sup> Two models of transition growth were developed, one appropriate to an economy whose growth is dominated by expansion of indigenous primary product exports and the other for an economy whose growth is led by modern primary export products. Two Southeast Asian countries are interpreted as empirical examples of these growth systems. Thailand's postwar transition experience falls into the indigenous export product type, while Malaysian experience has been construed as a modern export product growth system.

Both countries are generally considered to have enjoyed relatively successful growth accomplishments during the postwar generation. In both, government policy has focused upon providing infrastructure investment to accommodate the primary product export growth system. Private enterprise, operating in relatively uncontrolled

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<sup>199</sup> In this chapter the terms neo-colonial and neo-enclave are used interchangeably to denote the organizational system analyzed in Chapter 8.

markets, has been primarily responsible for export expansion and the industrialization that has occurred. In both Thailand and Malaysia, however, private entrepreneurship has been drawn largely from Chinese minorities rather than from indigenous groups. The free market system may, in fact, be construed as a vehicle to countenance minority group domination of the entrepreneurial roles on competitive terms, avoiding the profit transfer and protective features of forced industrialization through rapid import substitution.

In the present chapter we consider the empirical aspects of transition growth in Thailand, while the Malaysian case will be discussed in the next chapter. The empirical evidence cited in this chapter is selected to support the theory of the preceding chapter, as well as to verify the existence of a neo-colonial organization system (analyzed in Chapter 8). In the first section we briefly stress some unique historical features that lie behind the transition in Thailand and the empirical dimensions of the background conditions associated with the emergence of a neo-enclave system. The actual organizational features of this system, as exhibited in Thailand, are discussed in Section 2. In Section 3 we present quantitative data to support the applicability of the indigenous product export model to analysis of Thailand's postwar transition growth experience. Conclusions and prognosis for Thailand's future transition growth are presented in Section 4.

## 1. UNIQUE FEATURES OF THAILAND

### 1.1 The Historical Perspective

Thailand is frequently singled out among less-developed countries as one of few which escaped colonialism. In Southeast Asia, Thailand is the only country which was never an overt colony. Compared to other less-developed countries, this absence of colonialism is alleged to have created distinctive attitudes and social processes in Thailand. Nevertheless, Thailand is found to share with her Southeast Asian neighbors an interest in nationalism.<sup>200</sup>

Thailand's nationalism is associated with the dominance of alien and minority group entrepreneurship.<sup>201</sup> This fact is a key to a proper interpretation of Thailand's historical experience as it fits into the analytical framework developed in our study. In our interpretation, Thailand shared all of the common properties of a colonial economy, though, indeed, the absence of overt political colonialism may have led to some significant differences in national attitudes.

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<sup>200</sup>See Frank H. Golay et al, Underdevelopment and Economic Nationalism in Southeast Asia (Ithaca: Cornell University Press, 1969), pp. 267-268.

<sup>201</sup>Ibid., p. 268.

It is clear from Thailand's economic history that Thailand's economy was converted into an open colonial-type economy in the second half of the nineteenth century.<sup>202</sup> Under the force of treaties with Western powers, colonial foreign trade was introduced, eventually becoming the major growth force in the economy.<sup>203</sup> To operate the rice and tin trade which became dominant in Thailand, Chinese immigrants became established as the society's entrepreneurs and middlemen. Thus, by the twentieth century, the Thai economy exhibited both a structure and mode of operation very similar to that of Thailand's colonial neighbors.

Thai society thus showed the ethnic specialization characteristic of colonial economies. While political control remained in indigenous hands, alien and minority groups controlled economic functions in the enclave, with traditional agriculture remaining as the preserve of indigenous Thais. A major, and unique, feature of the Thai colonial economy, however, was the extensive involvement of the traditional sector

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<sup>202</sup>The event precipitating this change is usually considered to be the Bowring Treaty of 1855. For details, see, for example, Wendell Blanchard et al, Thailand: Its People, its Society, its Culture (New Haven: Human Relations Area Files, 1958).

<sup>203</sup>"Economic changes subsequent to the Bowring Treaty converted the economy of Thailand from a subsistence-dominated and self-sufficient economy into one oriented toward foreign trade with consequent extension of monetization." Ibid., p. 270.

with the enclave, reflecting the monetization caused by the important position of rice in Thailand's exports. Throughout the century after 1850, rice accounted for more than half of Thailand's export earnings. Production of exports requiring more sophisticated processing, as well as rice milling, were, however, largely controlled by aliens, Chinese or European.<sup>204</sup>

The superior position of aliens and minority groups in the economy, in control of the export base, meant that decolonization and nationalization (in the sense used in this book) became real objectives of Thai leadership. These nationalistic stirrings clearly began to appear during the 1930s, precipitating in Thailand a first tortuous transition effort toward a modern economy free from the constraints of colonialism. A highly nationalistic political regime came to power in 1938, consciously oriented toward transferring the export base to indigenous control and using the resources therefrom for modernization. A first step in this direction was the final repudiation of the unequal treaties between Thailand and the Western powers.

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<sup>204</sup> Charles A. Fisher, South-east Asia (London: Methuen and Company, 1964), p. 501. Fisher remarks that "In this respect, therefore, the experience of independent Siam has not differed fundamentally from that of formerly dependent Burma, and indeed the size and influence of its alien Asian minority are predominantly greater than in any other Southeast Asian country apart from Malaya."

Forced industrialization in Thailand, beginning in the late 1930s and continuing until the 1950 decade, assumed a very special character. In view of the lack of indigenous private entrepreneurship, the government promoted industrial development by transferring resources to public officials, resulting in a pattern which might be termed "bureaucratic industrialization." These industrial undertakings were largely of an import-substitution variety, eventually covering several industrial activities.<sup>205</sup> The motivation behind this bureaucratic industrialization effort was clearly a nationalistic political desire to promote indigenous control of modern industry vis-a-vis the Chinese minority.<sup>206</sup>

This experience would seem to place Thailand in the position of launching transition growth through a forced industrialization strategy of import substitution, as analyzed in Chapter 7. The significant fact for our present inquiry, however, is that this strategy was eventually rejected. The failure of indigenous entrepreneurship, though conducted through official bureaucratic channels, became recognized, and an eventual

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<sup>205</sup>For a listing see Robert J. Muscat, Development Strategy in Thailand (New York: Frederick A. Praeger, 1966), pp. 188-196 and Appendix, pp. 295-300.

<sup>206</sup>According to Muscat, "The real driving force behind the government's industrial program was the desire to prevent the Chinese community in Thailand from dominating industry." Ibid., p. 193.

compromise with Chinese private entrepreneurs emerged.<sup>207</sup> The compromise arrangement involved a gradual re-ordering of the society's organizational system to restore promotion of primary product exports as the focus of the economy's growth. This latter system has existed in Thailand during most of the postwar period, the time horizon of our study.

The recognized failure of forced bureaucratic industrialization in Thailand to produce a class of indigenous Thai entrepreneurs naturally induced a return to primary product export-led growth. Thailand's background conditions were consistent (as we shall see) with such a growth system, and force-fed industrialization oriented toward private entrepreneurs was precluded by Chinese minority domination of private entrepreneurial roles.<sup>208</sup> During the 1950s, therefore, a compromise arrangement evolved under which industrial development was subject to competitive free market forces, and government development efforts emphasized infrastructure support for expansion of indigenous primary product exports.

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<sup>207</sup>Ibid., pp. 195-196.

<sup>208</sup>Fisher, op. cit., p. 514.

## 1.2 Background Economic Conditions

Thailand's reversion to a primary product export-led growth system during the 1950s reflects the fact that the country's background economic conditions are more conducive for an export promotion system than for import substitution. In earlier chapters (Chapters 3, 8, and 11) we have emphasized that two initial conditions of economic geography are significant for explaining the successful emergence of a neo-enclave export promotion system. The first and most essential condition is the absence of population pressure on land, reflected in a land-surplus condition capable of supporting expansion of primary product exports. Second, export promotion is more viable where the country possesses a relatively large export-oriented enclave, involving the participation of a large segment of the indigenous population. A third condition has to do with entrepreneurship, neo-colonial transition growth being associated with scarcity of indigenous entrepreneurship. We now briefly discuss empirical aspects of these background economic conditions in Thailand.

## The Land-Surplus Condition

Thailand was one of a handful of less-developed countries possessing a land frontier for agricultural use at the beginning of the postwar transition. Population density is relatively low compared to other less-developed countries, averaging 64 per square kilometer.<sup>209</sup> The absence of population pressure has permitted continued expansion of land primary product cultivation throughout the postwar transition period.

In Table 15 data on land under cultivation for the period 1950-1966 are presented. During this period, all major crops shown (rice, maize, cassava, rubber, kenaf, and jute) have been important in the export account, although most dramatic growth has been shown in exports of maize, cassava products, and kenaf and jute. Land used for rice (the traditional major export) expanded by 26 per cent over the 1950-1966 period, compared to an increase of 63 per cent for all land under cultivation. The large increases in land brought under cultivation for indigenous products such as maize, cassava, and kenaf and jute lie behind Thailand's rapid expansion of exports during the postwar period.

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<sup>209</sup>This compares to 22 for Malaysia (East and West Malaysia combined), 116 for the Philippines, 365 for China (Taiwan), and 193 for South Korea.

TABLE 15

AREA UNDER CULTIVATION, BY MAJOR CROPS, 1950-1966  
(IN 1,000 RAI)\*

Year	Rice	Maize	Cassava	Rubber	Kenaf and Jute	Other	Total
1950	38,507	226	85	2160	49	2180	43,207
1955	40,215	347	86	2597	63	3024	46,332
1960	43,232	1785	447	3009	930	5665	55,068
1966	48,353	4083	814	4570	3378	9151	70,349

\*1 rai = .4 acre (i.e., 1 acre = 2.5 rai).

Source: Agricultural Statistics of Thailand, 1966.

It is for this reason that Thailand has been characterized as an indigenous product type of export promotion growth system.

#### Size of Enclave

Thailand inherited from her open economy growth history a unique type of enclave situation. Because of the dominance in the export account of indigenous export products, produced by traditional methods of production, the dichotomy between traditional agriculture and export agriculture is blurred. Historically, producers in the traditional agricultural sector participated in the monetized economy in producing rice for export, and nonagricultural activities focused on accommodating these exports from traditional agriculture. This feature of the indigenous export economy created widespread participation in export agriculture, enhancing the viability of export promotion as a transition growth system. During the postwar generation, diversification of indigenous crops for export (e.g., maize, cassava, kenaf) has offered farmers growing access to export markets.<sup>210</sup>

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<sup>210</sup> Empirical evidence on the composition of exports is presented in Section 3 of this chapter.

## Entrepreneurship

Export promotion growth is a natural transition response to an initial situation where the conditions of economic geography are conducive to land-based export expansion and where indigenous entrepreneurship is limited in supply. In Thailand, the evidence of entrepreneurial shortcomings among indigenous Thais was dramatically confirmed by the unsatisfactory experience during the attempt at bureaucratic industrialization. With entrepreneurial capabilities in the private sector concentrated among the Chinese minority, there is a natural aversion to the profit transfer policies inevitably associated with forced industrialization. Thus, both natural resource and entrepreneurial conditions strongly favored the rise of the export promotion growth system which became firmly established during the early 1950s.

## 2. ORGANIZATION FOR EXPORT PROMOTION GROWTH

During most of the period since 1950 Thailand has exhibited all of the organizational requirements for export promotion growth. Foreign exchange markets have been relatively uncontrolled, the exchange rate has reflected purchasing power parity forces, profit remittances have been freely allowed, and domestic price levels have remained stable.

Moreover, there has been an increasingly strong tendency to open industrial investment opportunities to all contenders, alien as well as national, as the government gradually divested itself of its industrial holdings acquired during the bureaucratic industrialization era.

Meanwhile, public investment policy has become clearly oriented toward rural infrastructure, while public policy toward domestic industrialization has been mildly promotional.

While it is true that special privileges have enabled influential Thais to amass wealth through commercial and industrial undertakings, these privileges have not been significant in the broad picture. The more significant feature of the postwar transition has been the rapid spread of compromise arrangements between Chinese entrepreneurship and the Thai bureaucracy. Such a compromise is a natural outgrowth of an export promotion growth system which relies upon minority group entrepreneurship in the absence of an adequate supply of indigenous entrepreneurs. The effective cooperation between Thais and the Chinese minority that has evolved in Thailand to facilitate export promotion growth

with modest industrialization has been documented in several recent studies.<sup>211</sup>

## 2.1 The Agricultural Orientation

The agricultural orientation of public policy is clearly stated in Thailand's current development plan:

"The agricultural sector is the foundation upon which the country's economic development must be based. About 80% of the country's population is engaged in agricultural employment; agricultural exports earn the foreign exchange required for capital imports to modernize the economy; and the agricultural sector is the primary market for industrial production."<sup>212</sup>

There is also a clear recognition of agriculture as the base for the economy's growth:

"The country's development policy considers agriculture the key sector from which growth stimulants will flow to the other sectors in a pattern of balanced

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<sup>211</sup>See, for example, Hans-Dieter Evans, "The Formation of a Social Class Structure: Urbanization, Bureaucratization and Social Mobility in Thailand," Yale University, Southeast Asia Studies, Reprint No. 36, 1969; and G. William Skinner, Leadership and Power in the Chinese Community in Thailand (Ithaca: Cornell University Press, 1958).

<sup>212</sup>National Economic Development Board, The Second National Economic and Social Development Plan, 1967-1971 (Bangkok: Government of Thailand, n.d.), p. 5.

growth. The Government will encourage increased agricultural production and higher quality, as well as further diversification toward products which command high prices in the world market and which serve as raw materials for domestic industries.<sup>213</sup>

The public development program has been consistent with this emphasis on agricultural development. Direct agricultural development programs absorbed 22 per cent of public development expenditures during the first plan period, 1961-1966, and other infrastructure programs related to agricultural expansion made up the bulk of the remaining expenditures (e. g., opening up new land by irrigation and other programs).<sup>214</sup> It is significant to note that the plan review observes that 70 per cent of the increase in agricultural output was channeled into exports.<sup>215</sup> This focus clearly reflects the primary product export promotion orientation in public development policy.

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<sup>213</sup> Ibid., pp. 23-24.

<sup>214</sup> National Economic Development Board, Evaluation of the First Six-Year Plan, 1961-1966 (Bangkok: Government of Thailand, June, 1967), p. 13.

<sup>215</sup> Ibid., p. 21.

## 2.2 Moderate Industrial Promotion Policy

After the demise of the bureaucratic industrialization strategy, promotion of industrial development became moderate, relying upon explicit methods of encouragement. There is an unmistakable interest in industrial development, but the important point is that promotion policies have been conducted in a free market context without resort to the profit transfer policies characteristic of the import substitution strategy.

The non-discriminatory nature of Thai industrial promotion policies may be seen from the ethnic composition of firms to which industrial promotion certificates (the major promotional device) were awarded. Since this program's inception, 55 per cent of promotion certificates were issued to joint ventures between Thais and foreigners, 31 per cent to wholly Thai-owned firms, and the remaining 14 per cent to totally foreign-owned firms.<sup>216</sup>

Industrial promotion certificates entitle investors to receive benefits in the form of tax exemptions and reduced import duties on capital goods and raw materials (the maximum reduction being 33 per cent).

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<sup>216</sup>Ibid., p. 64.

These benefits are modest, indeed, compared to the advantages conveyed by the profit transfer and protection features of an import substitution strategy. It is significant to note that 57 per cent of the promoted industries were export-oriented industries (agricultural processing and minerals).<sup>217</sup>

While we do not have access to a study of the effective rate of tariff protection in Thailand, indications are that protection is moderate, with tariffs largely employed for revenue purposes.<sup>218</sup> In Thailand's official statement on industrial development policy, a very moderate position is enunciated in regard to use of tariffs for protection, with emphasis placed on reducing duties on intermediate goods rather than placing tariffs upon final products for protection.<sup>219</sup>

An emphasis upon early participation by promoted industries in export market penetration also reflects Thailand's free trade policy:

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<sup>217</sup>Ibid.

<sup>218</sup>Muscat, op. cit., pp. 232-235; and T. H. Silcock (ed), Thailand: Social and Economic Studies in Development (Durham, N. C.: Duke University Press, 1967), pp. 163-165. The latter contains an account of Thailand's tariff policies as a whole.

<sup>219</sup>Ministry of Industry, Industrial Development and Investment in Thailand (Bangkok, 1966), pp. 74-75.

"If these (promoted) industries are to be of greater benefit to their country, their products must also be exported, because the local market is sometimes too small for economical and efficient operation. Moreover, the present policy of free trade often creates difficulties for local entrepreneurs, since a good portion of their already small local market is being supplied with foreign imported goods. It is, therefore, planned to encourage these 'promoted' industries to enter foreign neighboring markets as much as possible, so as to ensure full production with subsequent lower cost." <sup>220</sup> [underlining added]

### 2.3 Other Aspects of the Free Market System

The significant features of a free market system for operation of an export promotion transition growth system obviously refer to the treatment of foreign trade and investment. In this connection, since the mid-1950s, Thailand's policies have been remarkably free of the interventionist controls associated with forced industrialization.

Thailand's organizational system for export promotion growth may be interpreted as having been completed by the general liberalization reforms of 1955, which abolished the previous multiple exchange rate system. These reforms also removed quantitative import restrictions and freed trade in rice from complete official control. These

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<sup>220</sup> Ibid., p. 215.

changes represent the termination of the controlled system which had been associated with Thailand's earlier bureaucratic industrialization strategy.

Since the 1955 liberalization, the monetary exchange rate has been maintained near the free market value by an Exchange Equalization Fund. Profit and capital transfers have been liberally treated as a facet of official private foreign investment promotion policy.<sup>221</sup> Tariffs have not been raised to levels where they have a serious effect on restricting imports, and the impact of a limited number of continuing quantitative import restrictions has been minor.<sup>222</sup> Moreover, domestic price policies have been deliberately anti-inflationary.<sup>223</sup>

Thailand's fiscal structure includes a substantial revenue component from taxes on exports, particularly upon rice. The "rice premium" (in fact, a tax on rice export) in effect since 1955 has been

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<sup>221</sup> National Economic Development Board, Evaluation of the First Six-Year Plan, 1961-1966 (Bangkok: Government of Thailand, June, 1967), pp. 62-63.

<sup>222</sup> Silcock, op. cit., pp. 163-164.

<sup>223</sup> National Economic Development Board, The Second National Economic and Social Development Plan, 1967-1971 (Bangkok: Government of Thailand, n.d.), p. 25; and Silcock, op. cit., pp. 174-178.

extensively discussed.<sup>224</sup> In the analysis of the organizational features of a neo-enclave export promotion system, the government's access to a part of the economy's agricultural surplus was viewed as a natural, if not essential, aspect of the system. Export taxation represents an easily administered device for this purpose. The significant factor for export promotion growth is the government's employment of its share of the agricultural surplus for primary product export promotion through infrastructure investment. This function has been clearly apparent in Thailand. One observer considers the government's expenditures on irrigation, transport, and communications as having "obvious effects on raising the capacity to export and [are]...probably more important than the tax system."<sup>225</sup>

### 3. EMPIRICAL VERIFICATION OF INDIGENOUS EXPORT-LED GROWTH

The theoretical framework in this book emphasizes two major aspects of transition growth, an economy's mode of operation and the organizational system associated with a particular operational mode. The

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<sup>224</sup>See, for example, T. H. Silcock, op. cit., pp. 159-162.

<sup>225</sup>Ibid., p. 151.

discussion in the preceding section stressed the policy reversals which occurred in Thailand in the mid-1950s. This complex of liberalization policies is construed as providing the organizational basis for relatively unhampered export promotion growth, after economic growth faltered under the control policies pursued in the early postwar years. We thus date the beginning of the export promotion phase at approximately 1955. The organizational changes of that year provided the framework for the economy's mode of operation in terms of growth led by expansion and diversification of indigenous primary product exports. We now turn to quantitative evidence documenting the existence of this transition growth system in Thailand from the mid-1950s to the present.

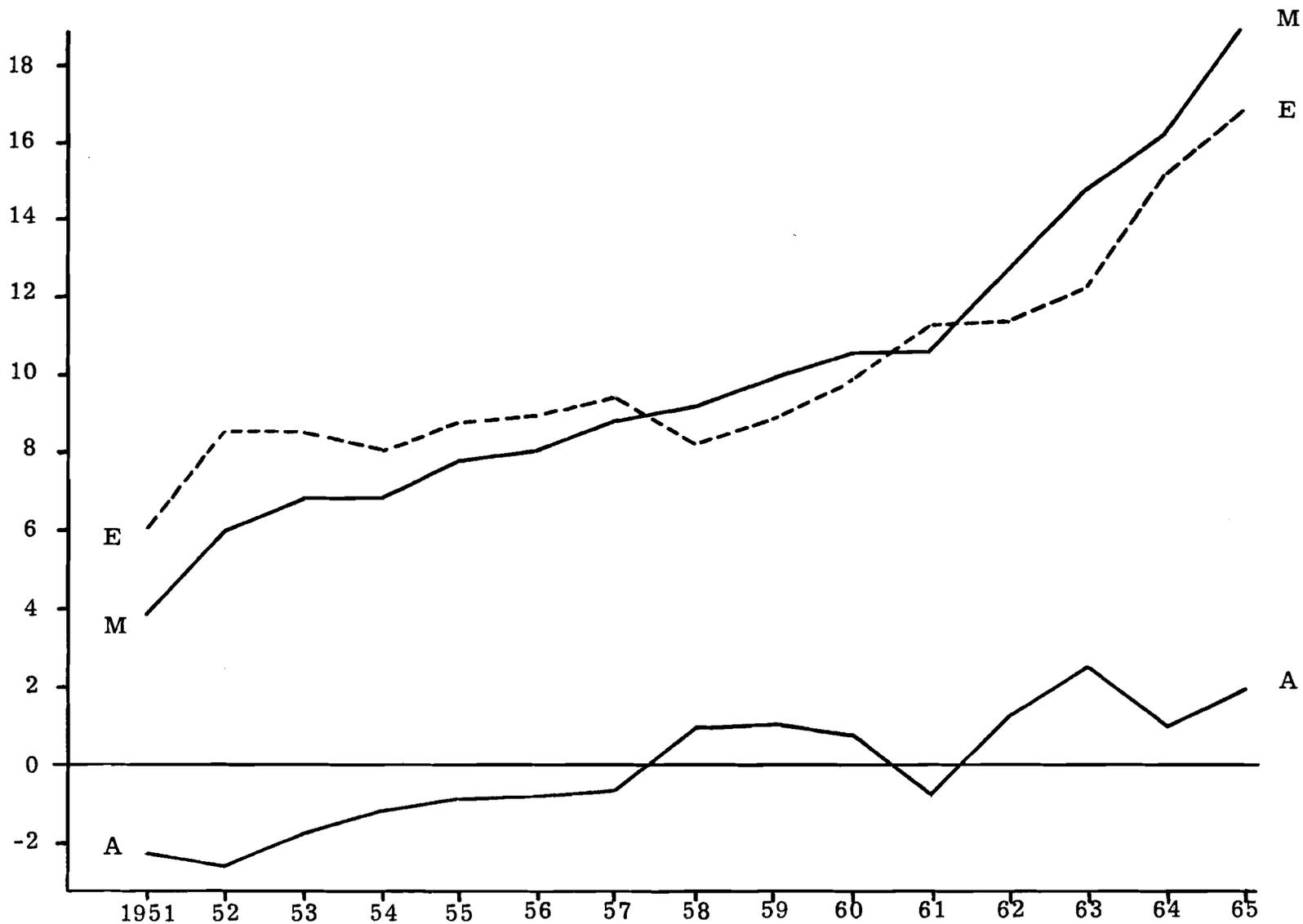
### 3.1 Foreign Trade Indicators

We begin by presenting data on Thailand's postwar foreign trade, among which we find the most significant indicators of the type of transition growth system found in open economies. Time series for aggregate foreign trade variables in 1962 constant prices are shown in Diagram 36 for the period 1951-1965; they include total exports, E, total imports, M, and capital inflow, A.<sup>226</sup>

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<sup>226</sup> Actual annual data behind this diagram and the other diagrams of this section are presented in the appendix to this chapter.

Diagram 36: Exports, Imports, and Capital Inflow, 1951-1965  
 (in billion baht, 1962 constant prices)



Source: Table A1 of Appendix

The export series demonstrate the existence of two subperiods in the growth of real exports, 1951-1958 and 1958-1965. After the 1951-52 boom in exports (associated with the Korean war), the level of exports fluctuated around a near-constant trend until 1958. In 1958, however, exports began a period of almost consistent rapid expansion. These data confirm the emergence of a new regime of export promotion during the 1950s. Though the organizational reforms discussed in the preceding section were introduced in 1955, the economy's response began to be exhibited in 1958. After that year, however, the response in terms of export growth was both consistent and vigorous.

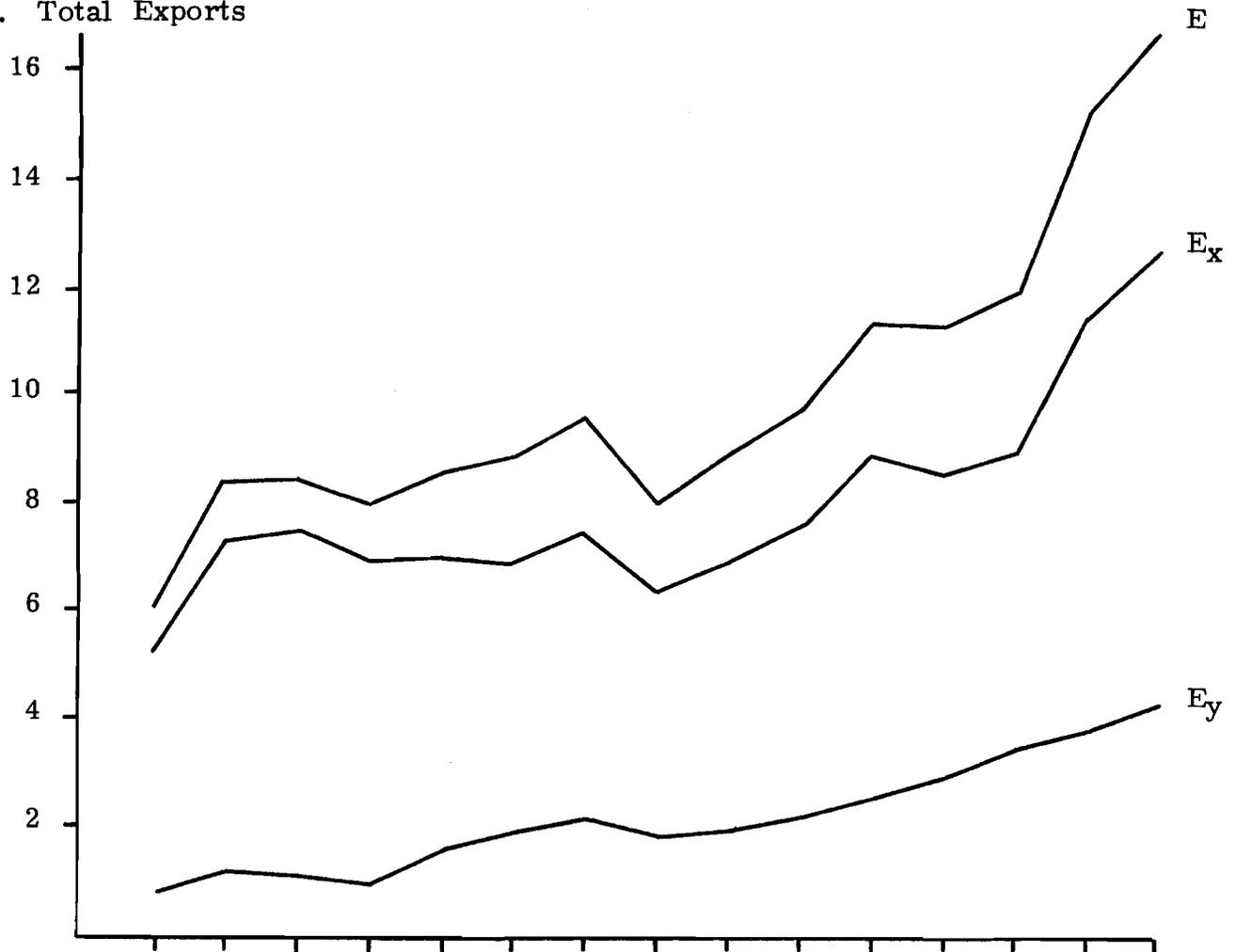
In an export promotion growth system, the growth of exports is dominated by land-based agricultural exports. In Diagram 37a, total exports,  $E$ , are disaggregated between exports from the agricultural and industrial sectors ( $E_x$  and  $E_y$ , respectively).<sup>227</sup> Growth rates of agricultural exports,  $E_x$ , and total exports are shown in Diagram 37b. Both parts of Diagram 37 show a clear relationship between growth of total exports,  $E$ , and exports from the agricultural sector,  $E_x$ . This general relationship confirms the continuation of an agricultural basis for

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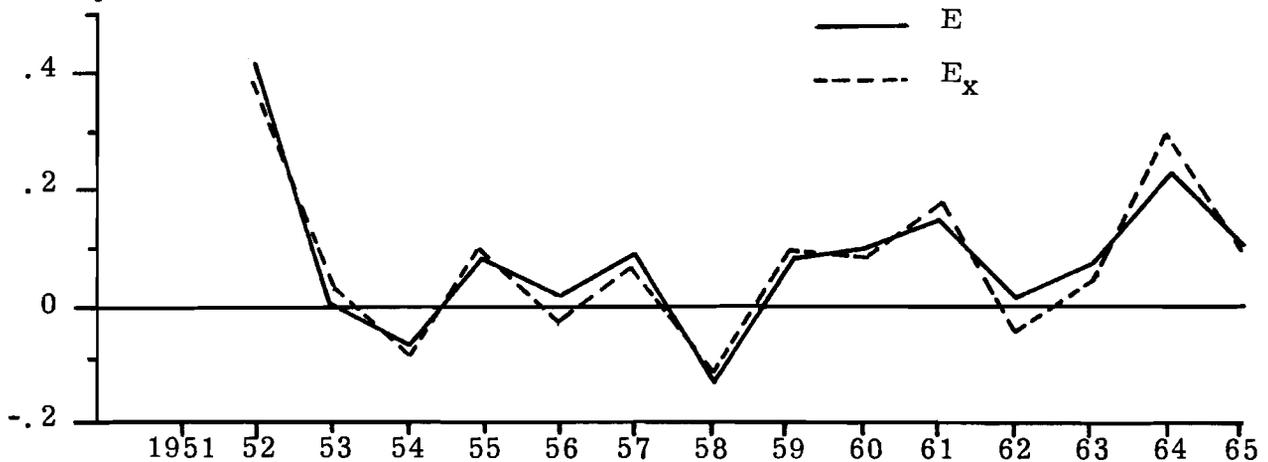
<sup>227</sup>The procedure for disaggregating exports is similar to that employed for the Philippines in Chapter 10.

Diagram 37: Exports Disaggregated by Agriculture and Non-agriculture  
and Growth Rates  
(in billion baht, 1962 constant prices)

a. Total Exports



b. Export Growth Rate



Source: Table A2 of Appendix

export growth. It should be noted, however, that after 1960 exports from the industrial sector,  $E_y$ , became increasingly significant. This reflects the rise of service exports (rather than manufactured goods), a phenomenon which has added to the viability of Thailand's export promotion growth system. This new feature of Thailand's transition experience is discussed in the concluding section of this chapter.

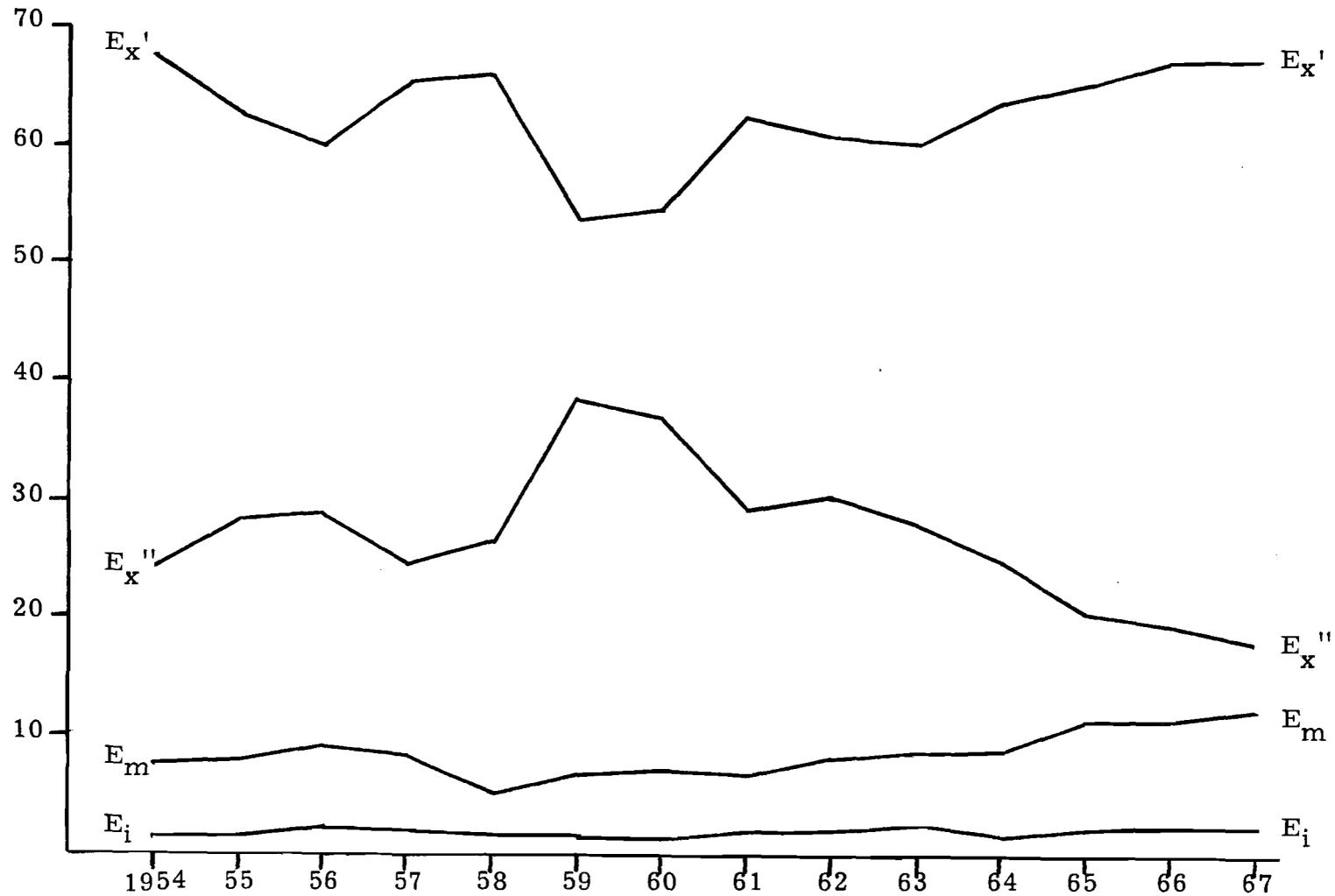
More significant results for substantiation of our theory of export promotion growth in Thailand can be obtained by further disaggregating both total exports and imports. Diagram 38 presents time series for components of total exports, 1954-1967, distinguishing among crude (unprocessed) agricultural products,  $E_x'$ , processed agricultural products,  $E_x''$ , mineral products,  $E_m$ , and manufactured products,  $E_i$ .<sup>228</sup> The first, and most significant, conclusion from Diagram 38 is the persistent domination of total exports by unprocessed agricultural products.<sup>229</sup> While these exports fell as a share of the total during the 1950s, they showed significant gains during the 1960s (their 1967 share, 66.7 per cent, being about the same as in 1954, 67.5 per cent). This

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<sup>228</sup>Data are not available for disaggregation of exports into these components prior to 1954.

<sup>229</sup>Examples of this component are rice, maize, jute, and kapok.

Diagram 38: Composition of Exports by Type, 1954-1967  
(Percent of Total)



Source: Table A3 of Appendix

evidence confirms the basically indigenous product export system prevailing in Thailand after the resumption of an export promotion system in 1955.

Export of processed agricultural products,  $E_x''$ , as a share of total exports behaved erratically over the 1954-1967 period.<sup>230</sup> In the 1959-1960 period these products showed a sharp rise,<sup>231</sup> but over the period as a whole they exhibited a downward trend. This component may be interpreted as the equivalent of modern exports from the agricultural sector; their behavior over the export promotion period clearly suggests that they were not the major focus of the export promotion growth system.

The two other components, minerals,  $E_m$ , and manufactures,  $E_i$ , also behaved erratically, showing a slight tendency to increase. Minerals (largely tin) responded primarily to world market conditions, and this may be viewed as somewhat peripheral to the central agricultural-based export promotion growth system. Export of manufactures remained insignificant, comprising only 2.5 per cent of total exports in 1967.

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<sup>230</sup>Examples of this component are rubber, which almost completely dominates this type, processed vegetables, and sugar.

<sup>231</sup>This rise in the share of processed exports is explained by an increase in rubber exports in these years and a decline in rice exports.

The aggregate import series in Diagram 36 shows a fairly modest growth trend from 1952-1961 (excluding 1951-1952 because of the atypical rise in both exports and imports). Beginning in 1961, however, the rate of growth of imports increased. This increase was associated partly with the government's more aggressive development program beginning in that year (under the aegis of the first development plan, 1961-1966) and partly with the growth of U. S. military assistance expenditures during the years after 1961. Associated with the more rapid growth of imports after 1961 was a substantially increased inflow of foreign capital, A.

Export promotion growth is also reflected in observable phenomena on the import side of the foreign trade account. The model of indigenous export-led growth predicted modest import substitution, dictated by the operation of market forces. Thus, we expect very different results on the import substitution indicators from countries where forced import substitution growth prevailed (in our empirical perspective, for example, Taiwan and the Philippines). Diagram 39 presents total imports disaggregated into four components, manufactured consumer goods,  $M_y$ , capital goods,  $M_i$ , intermediate goods,  $M_R$ , and agricultural consumer goods,  $M_x$ . The series of primary interest in assessing the progress of import substitution is the share of manufactured consumer goods,  $M_y$ , in

total imports. Diagram 39 shows modest decline in this share, from about 35 per cent to 31 per cent from 1951 to 1965.<sup>232</sup>

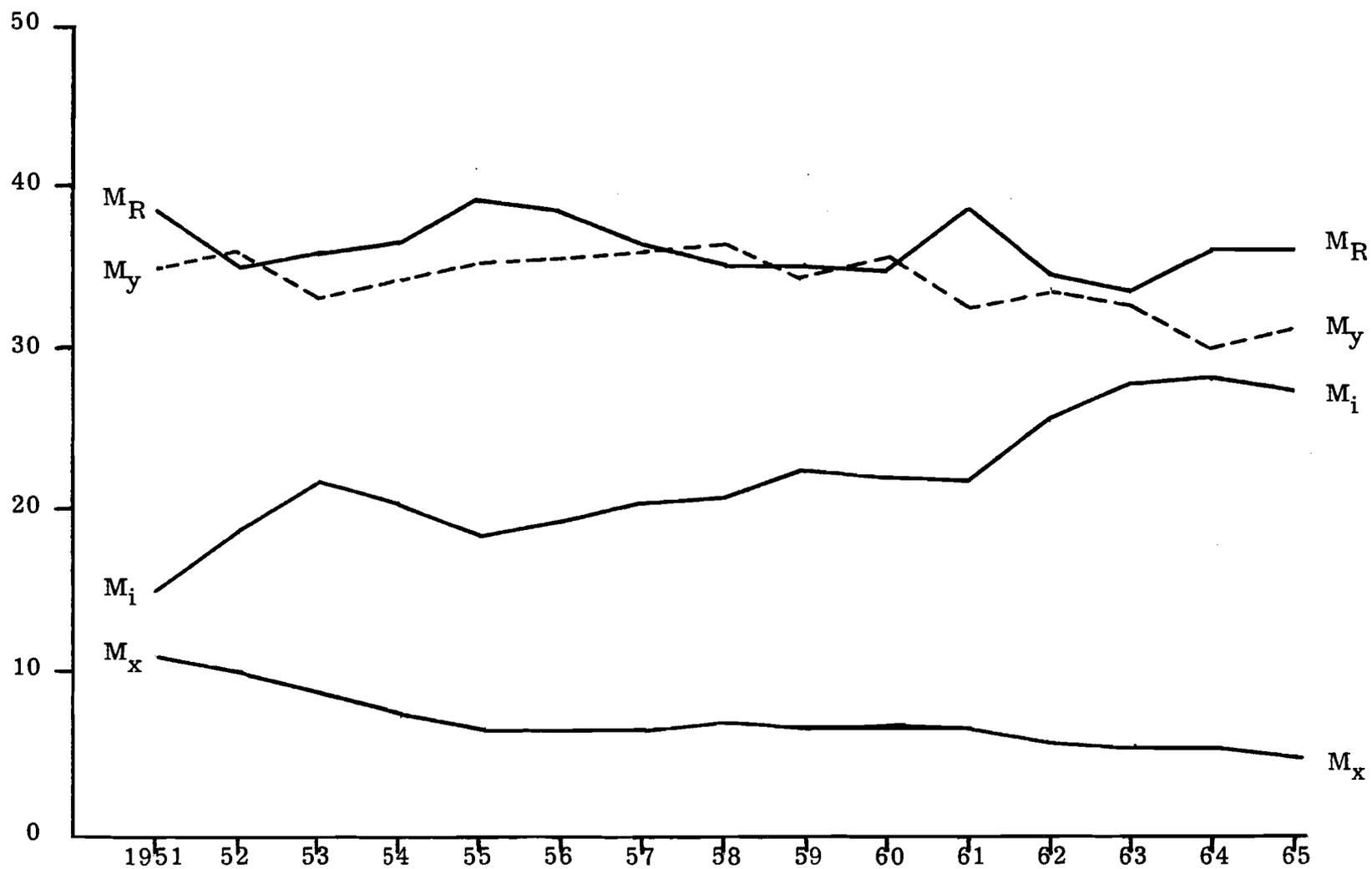
The basic import substitution process reflects a shift from imports of manufactured consumer goods to producer goods imports (capital goods,  $M_I$ , and intermediate goods,  $M_R$ ). In Thailand this shift did not occur to a significant extent. Rather, there was a noticeable decline in imports of finished agricultural goods,  $M_X$  (which fell from 11 per cent of the total to 5 per cent), associated with an increase of capital goods imports,  $M_I$  (which rose from 15 per cent of the total to 28 per cent). This result emphasizes the agriculture-based nature of Thailand's transition growth. Capital goods imports were devoted largely to raising agricultural productivity and accommodating primary product exports rather than expanding capacity for output of manufactured consumer goods.

The failure of Thailand's system of export promotion growth to produce a significant amount of import substitution during the postwar period may be seen even more clearly by comparing imports of manufactured consumer goods,  $M_Y$ , with total consumer spending on

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<sup>232</sup>This contrasts with a decline in  $M_Y/M$  in the Philippines from 45 per cent to 18 per cent and in Taiwan from 30 per cent to 15 per cent over the same period.

Diagram 39: Import Disaggregation by Components, 1951-1965  
(Percent of Total)



Source: Table A4 of Appendix

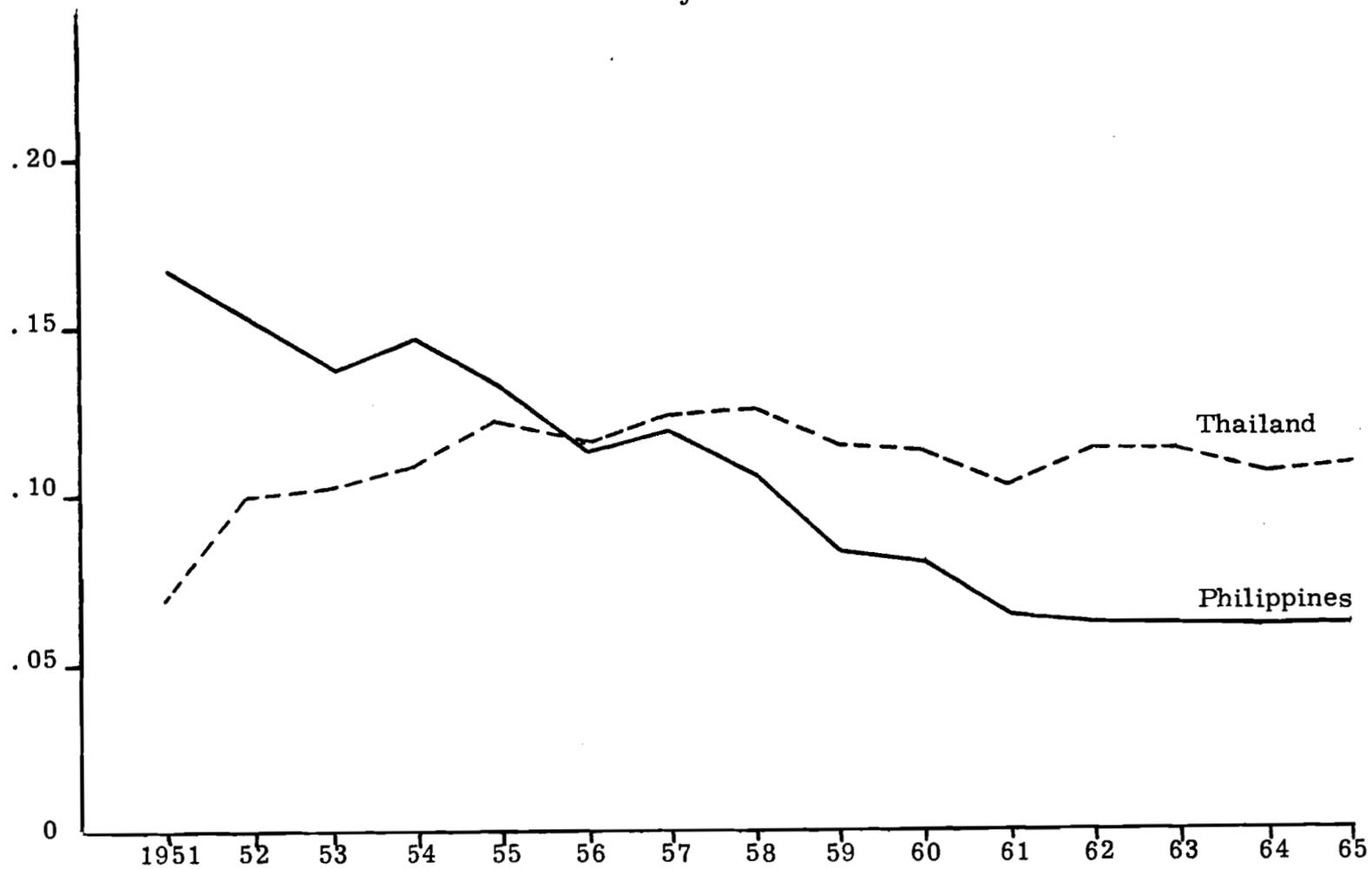
nonagricultural goods and services,  $Y_a$ . This is shown in Diagram 40, which also shows the same ratio for the Philippines. In Thailand, imported consumer goods rose as a share of total consumer expenditures on nonagricultural goods and services (from 7 per cent in 1951 to 11 per cent in 1965). By contrast, in the case of the Philippines (which represents an import substitution case), the  $M_y/Y_a$  ratio fell from 17 per cent in 1951 to 6 per cent in 1965.

### 3.2 Allocation of Agricultural Export Income

In Chapter 11, a hypothetical example was given to show allocation of income from indigenous product exports. In the example it was assumed that a substantial part of the final export value was allocated to government and commercial services accommodating export (see Table 13). We now examine the empirical validity of these assumptions for the case of Thailand's indigenous product exports.

Rice has remained Thailand's leading export, though growing diversification of indigenous product exports since 1960 has reduced the share of rice. Rice remains the one export product which bears a heavy export tax burden. The results of recent studies on the allocation of rice export income are given in Table 16.

Diagram 40: Philippines and Thailand, 1951-1965:  
Ratio of Imported Consumer Good  
Manufactures ( $M_y$ ) to Total Availability ( $Y_a$ )



Source: Table A5 of Appendix

TABLE 16

ALLOCATION OF EXPORT-GENERATED INCOME FROM RICE  
(PER CENT OF EXPORT VALUE)

	Central Plain, 1964 (1)	Northeast, 1964 (2)	Bangkok Environs, 1965 (3)
Export Tax (including "premium")	34.6	34.6	42
Commercial Services:			
Milling	4.2	13.5 )	
Domestic trade and transport	11.9	17.9 )	12
Exporters	7.6	7.6 )	
Agricultural Income	41.7	26.4	46

Sources: Columns (1) and (2): Sapon Paramaratat, "The Rice Premium"  
(in Thai), Bangkok, 1966.

Column (3): Dan Usher, "The Thai Rice Trade," in  
T. H. Silcock (ed.), Thailand: Social and Economic  
Studies in Development (Durham: Duke University  
Press, 1967), p. 221.

These results all show that a substantial share of rice export value is allocated as income to the nonagricultural sector. Rice export taxation (which varies because of the flexible premium) absorbs approximately 35-40 per cent of the income created, while the share accruing to commercial services varies from 12-40 per cent. (It appears that distance from the export port of Bangkok is a factor in the variation.) The income allocated to original agricultural producers is under 50 per cent of the export value, substantially so in the case of the Northeast, where agricultural income was estimated to account for only 26 per cent of the export value.

Studies on other major indigenous products show that the absence of export taxation allows the agricultural producer to reap a larger share of the export value. Two products which have led indigenous export product diversification, kenaf and maize, are shown in Table 17. In both cases, agricultural income accruing from exports is substantially higher than in the case of rice, the agricultural producer's share being 67.6 per cent for kenaf and 62.2 per cent for maize. The rapid growth of these indigenous product exports relative to rice is apparently partially explained by this differential in export income accruing to the agricultural sector.

TABLE 17

ALLOCATION OF EXPORT-GENERATED INCOME  
FROM KENAF AND MAIZE  
(PER CENT OF EXPORT VALUE)

	Kenaf	Maize
Commercial Services:		
Exporters	3.0	16.5
Processing	17.0	
Domestic trade and transport	12.4	21.3
Agricultural Income	67.6	62.2

Sources: Kenaf: Division of Agricultural Economics, Ministry of Agriculture, "Marketing Margins and Marketing Channels of Major Agricultural Commodities and Livestock in the Northeastern Region of Thailand, 1963-1964," Bangkok, 1964.

Maize: Department of Agricultural Economics, Kasetsart University, "Production and Marketing Problems Affecting the Expansion of Corn-Growing in Thailand," Bangkok, 1962.

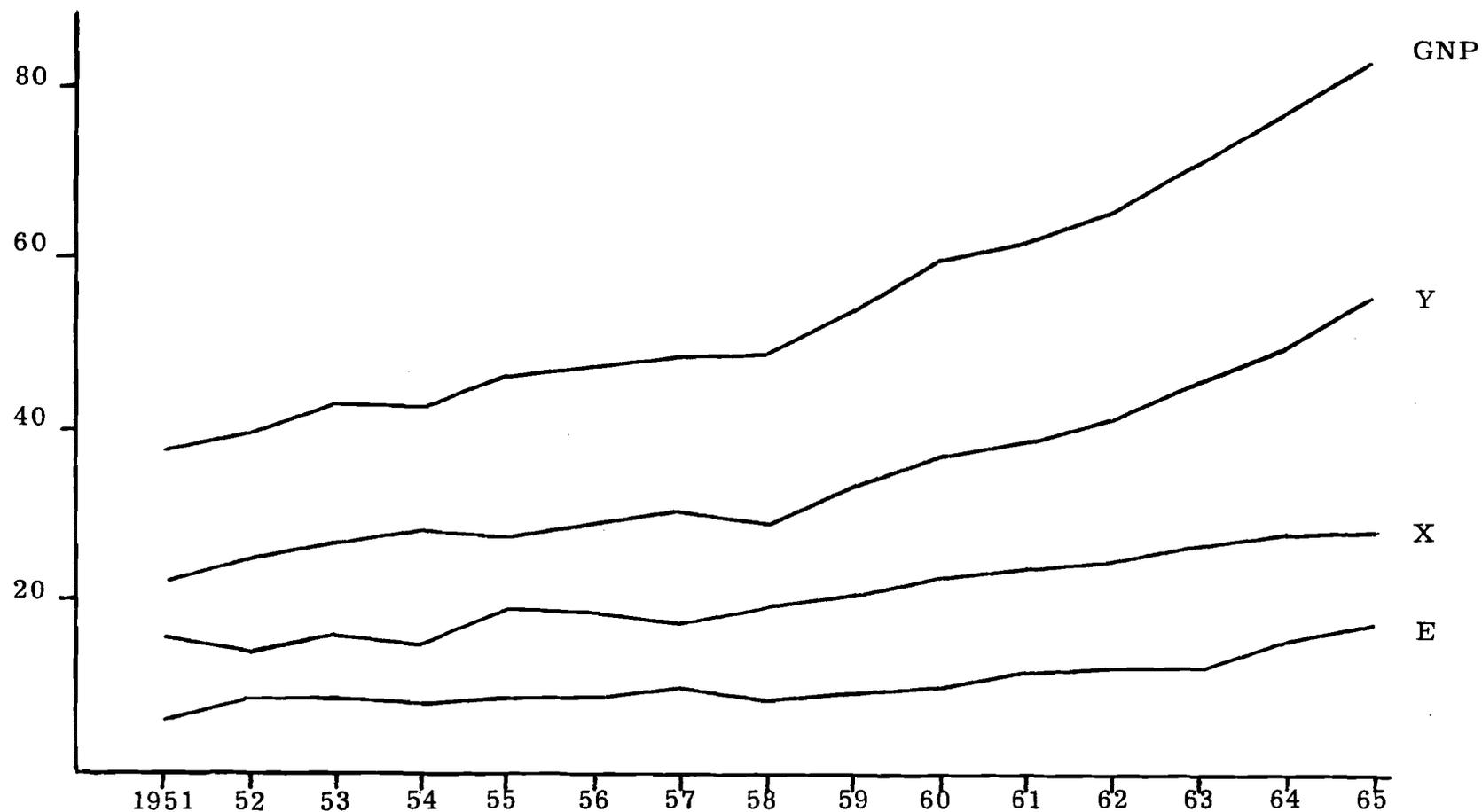
These studies of allocation of income from Thailand's indigenous product exports, though scanty, provide empirical support for our analysis of Thailand's export promotion growth system. They show a close relationship between indigenous product exports and nonagricultural sector income. They also present a basis for our assumption that a large part of export-generated income involves payment for intermediate goods and services provided for accommodation of agricultural exports. These functions are the dominant orientation of the nonagricultural sector.

### 3.3 Output and Productivity Indicators

We now turn to output and productivity indicators to trace the course of Thailand's aggregate and sectoral growth during the postwar period. As in the case of foreign trade indicators, emphasis will be placed upon the applicability of the export promotion model to Thailand's transition growth during this period.

Diagram 41 presents gross national product in constant (1962) prices and its agricultural, X, and nonagricultural, Y, components. Notice that all three time series show relatively sluggish growth from 1951 to 1958, while showing more rapid growth from 1958 to 1965. Thus, real product growth shows the same general trends as export growth, as shown by the export series, E. From 1951 to 1958, real gross national

Diagram 41: Gross National Product, Agricultural and Non-agricultural Contributions and Exports, 1951-65  
 (in billion baht, constant 1962 prices)



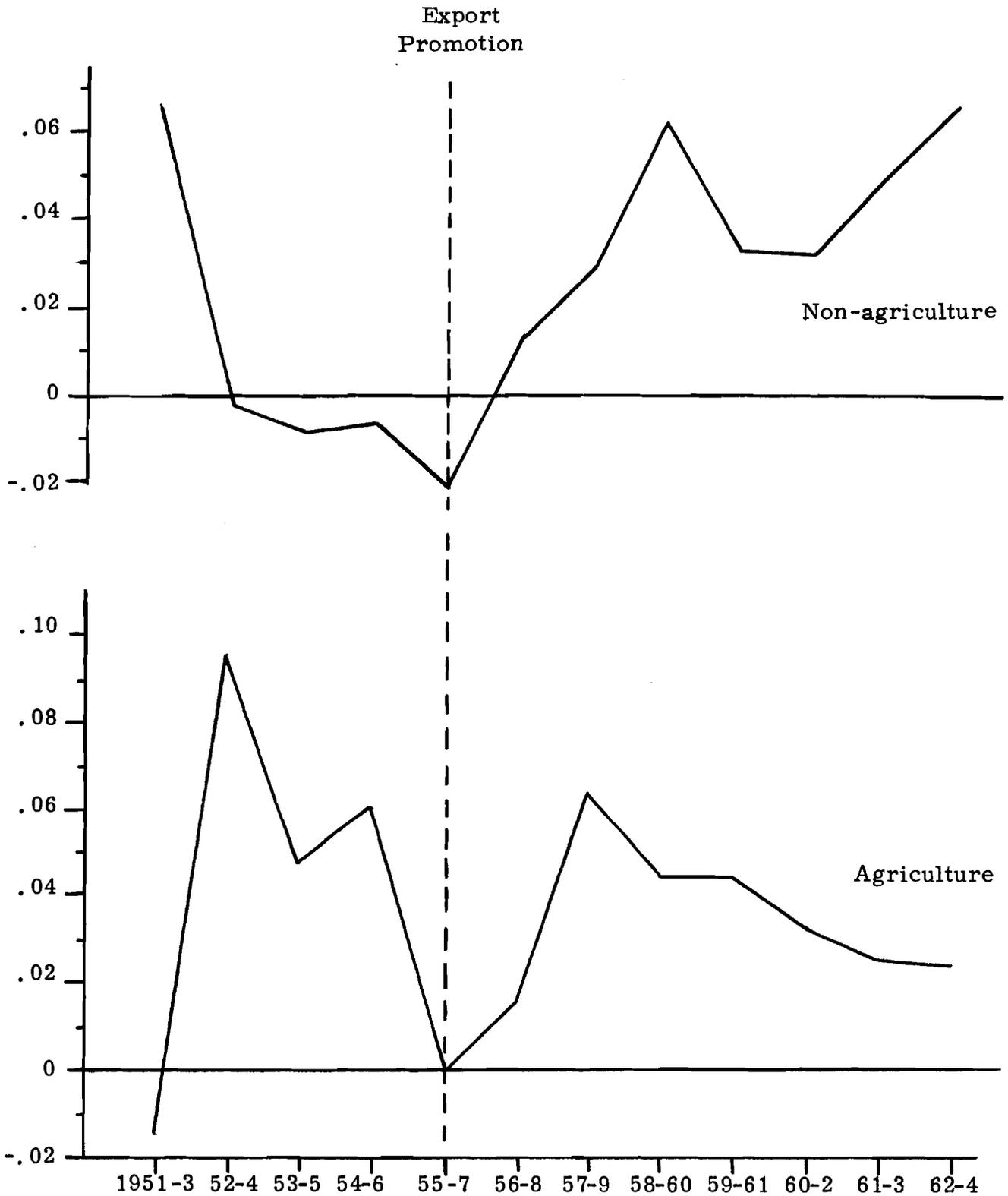
Source: Table A6 of Appendix

product grew at an average annual rate of 3.7 per cent, compared to 7.9 per cent for the period 1958 to 1965. Both sectors showed an increasing growth rate in the latter period, particularly nonagriculture. The average annual growth rate in 1951-1958 was 3.7 per cent for agriculture, compared to 5.1 per cent for the 1958-1965 period, while it was 3.8 per cent and 9.6 per cent, respectively, for nonagriculture. Exports grew by an annual average of 4.5 per cent for the 1951-1958 period and by 10.9 per cent for the 1958-1965 period. Thus, we see a clear relationship between export growth and output in both sectors--a basic assumption behind our theory in Chapter 11.

Labor productivities in the two dualistic sectors, agriculture and nonagriculture, are important for confirming the existence of a particular transition growth system. In the case of indigenous product export-led growth, our model of Chapter 11 predicts modest growth in both sectors, with a tendency toward balanced growth of productivity in the two sectors, agriculture and nonagriculture, through time. We now investigate empirical support for this important feature of export promotion growth in Thailand.

Diagram 42 shows three-year averages of growth rates of labor productivities in the nonagricultural ( $\eta_h$ ) and agricultural ( $\eta_p$ ) sectors. The first striking observation is the difference in both series for the two

Diagram 42: Labor Productivity in Agriculture and Non-agriculture:  
Growth Rates, Three-year Averages



Source: Table A7 of Appendix

periods marked off by the vertical line, denoting the approximate beginning of the export promotion system. Prior to that point, both productivity series showed a downward trend, while after the turning point both series rose and remained positive. Thus, the liberalization of 1955, interpreted as a definite choice for export promotion, clearly was associated with a subsequent improvement in productivity growth in both sectors.

The actual productivity series for the two sectors, 1951-1965, are shown in Table 18. This table also shows the results of time regressions for both series. Both series show a significant  $r^2$  value, as we would expect from the large values of the annual observations. The significant result of the time regressions for our purposes is the standardized coefficient,  $\bar{b}$ , for each sector. This coefficient may be interpreted as the average growth trend of the sector's labor productivity. The values of  $\bar{b}$  are .032 for agriculture and .023 for nonagriculture. This result confirms two facets of export-led growth, the presence of productivity gains in agriculture (consistent with the agricultural emphasis in public investment programs) and a significant degree of balance between productivity growth in the two sectors.<sup>233</sup>

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<sup>233</sup>To emphasize this feature of balance in Thailand, we may refer to the results of similar time regressions for the Philippines (1949-1965) which showed a  $\bar{b}$  coefficient of only .002 for agriculture and .029 for nonagriculture, a result we would expect from the anti-agriculture bias of import-substitution growth.

TABLE 18

## LABOR PRODUCTIVITY IN AGRICULTURE AND NONAGRICULTURE

Year	AGRICULTURE			NONAGRICULTURE		
	Actual	Regression Value	Residual	Actual	Regression Value	Residual
1951	1807.824	1701.114	+106,710	9,123.821	9,481.864	-358.048
1952	1706.307	1771.249	- 64.942	10,486.134	9,743.348	+742.786
1953	1885.340	1841.384	+ 43.956	10,901.865	10,004.832	+897.033
1954	1708.300	1911.519	-203.219	11,010.248	10,266.316	+743.932
1955	2176.004	1981.654	+194.350	10,409.368	10,527.800	-118.432
1956	2094.871	2051.789	+ 43.082	10,599.412	10,789.284	-189.872
1957	1979.104	2121.924	-142.820	10,786.978	11,050.768	-263.790
1958	2163.030	2192.059	- 29.029	9,725.893	11,312.252	-1586.359
1959	2182.189	2262.194	- 80.005	10,911.235	11,573.736	-662.501
1960	2374.592	2332.329	+ 42.263	11,615.409	11,835.220	-219.811
1961	2459.658	2402.464	+ 57.194	11,602.861	12,096.704	-493.843
1962	2452.527	2472.599	- 20.072	11,994.721	12,358.188	-363.467
1963	2612.910	2542.734	+ 70.176	12,754.304	12,619.672	+134.632
1964	2645.582	2612.869	+ 32.713	13,412.565	12,881.156	+531.409
1965	2632.676	2683.004	- 50.328	14,366.989	13,142.640	+1224.349
mean 2192.061				mean 11,313.454		
a = 1630.979				a = 9,220.38		
b = 70.135				b = 261.484		
r <sup>2</sup> = .876				r <sup>2</sup> = .848		
$\bar{a}$ = .744				$\bar{a}$ = .815		
$\bar{b}$ = .032				$\bar{b}$ = .023		

Sources and methods: See appendix.

### 3.4 The Orientation of Manufacturing and Trade Sectors

In an export-promotion economy, the nonagricultural sector focusses heavily upon supporting the growth of primary product exports and accommodating the foreign trade flows associated with the economy's export orientation. Manufacturing is predominantly oriented toward processing of domestic agricultural products rather than consumer goods import substitution, while trade is oriented toward agricultural products and importation of goods for both productive input and consumption purposes.

Table 19 presents the composition of manufacturing, 1957-1966. The orientation toward processing of agricultural products is clear, representing 71 per cent of manufacturing's net output in 1957, 66 per cent in 1963, and 58 per cent in 1966. Moreover, as late as 1966 rice milling alone comprised one-fifth of manufacturing output.<sup>234</sup> On the other hand, textiles, a leading import substitution product, contributed less than 5 per cent. Nevertheless, a shift from the agricultural processing emphasis in manufacturing is apparent after 1963. In large part, this shift is associated with the growth of petroleum refining and automobile

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<sup>234</sup> National Economic Development Board, National Income of Thailand, 1966 Edition, p. 60.

TABLE 19

GROSS DOMESTIC PRODUCT  
ORIGINATING FROM MANUFACTURING  
(IN MILLION BAHT, CURRENT PRICES)

Year	Agricultural Processing		Other Manufacturing		Total
	(G <sub>1</sub> )	%	(G <sub>2</sub> )	%	(G)
1957	3895.6	.707	1614.0	.293	5,509.6
1958	3647.9	.698	1581.2	.302	5,229.1
1959	4139.4	.710	1691.1	.290	5,830.5
1960	4003.4	.681	1878.6	.319	5,882.0
1961	4545.4	.684	2096.6	.316	6,642.0
1962	5155.8	.693	2281.2	.307	7,437.0
1963	5192.5	.659	2681.8	.341	7,874.3
1964	5241.2	.602	3463.0	.398	8,704.2
1965	5712.7	.567	4354.2	.433	10,066.9
1966	6772.5	.575	5009.9	.425	11,782.4

Source and Method: National Economic Development Board, The National Income of Thailand, 1965 and 1966. Agricultural Processing includes food, beverages, tobacco, wood and cork manufactures, including furniture and rubber products. All others are included in the residual.

assembly. Import substitution activity of this kind is perfectly consistent with the dominant mode of operation in the export promotion economy.

The composition of capital stock in the manufacturing sector reflects this same emphasis. Table 20 presents data from the 1964 industrial census on the breakdown of capital stock by major manufacturing activities. Food processing industries dominated capital stock, representing 36 per cent of the total. Of this, rice milling and sugar alone absorbed 27 per cent of total capital stock. All manufacturing industries of an agricultural raw material processing nature (food processing, tobacco, wood and cork, and paper) accounted for 59 per cent of capital stock. Of the remainder, significant shares of capital stock were represented by textiles (11.5 per cent), chemicals (6.2 per cent), and nonmetallic mineral products (9.2 per cent).

The orientation of the trade sector, 1957-1966, is shown in Table 21. Trade in agricultural products and imports continued to overshadow trade in manufactured goods throughout this period, although a tendency toward an increased share devoted to manufactured goods is apparent during the 1960s. Nevertheless, throughout the period, the orientation of trade reflected the export promotion nature of the economy, emphasizing the movement of agricultural products and imports.

TABLE 20

CAPITAL STOCK IN MANUFACTURING,  
BY MAJOR ACTIVITIES, DECEMBER, 1963  
(PER CENT OF TOTAL)

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Food Processing		35.8
Rice milling	9.6	
Sugar	17.0	
Beverages		4.1
Tobacco		10.7
Textiles		11.5
Wood and Cork		6.4
Sawmills and plywood	5.6	
Paper, Pulp, and Cardboard		6.1
Chemicals		6.2
Nonmetallic Mineral Products		9.2
Cement	6.4	
All Other		10.0

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Source: National Statistical Office, Report of the 1964 Industrial Census, Vol. 1 (Bangkok, 1968). Data refer only to "large" firms, representing 87 per cent of the manufacturing sector's total receipts.

TABLE 21

GROSS DOMESTIC PRODUCT ORIGINATING FROM WHOLESALE AND RETAIL TRADE  
(MILLION BAHT, CURRENT PRICE)

Year	Import Trade		Agricultural Trade		Trade in Mining		Trade in Manufacturing		Total
	Value	Per cent of Total	Value	Per cent of Total	Value	Per cent of Total	Value	Per cent of Total	
1957	2676.3	.308	3207.4	.369	119.8	.014	2681.0	.309	8,684.5
1958	2572.8	.316	2939.2	.361	64.6	.008	2570.4	.315	8,146.9
1959	2792.1	.317	3236.2	.368	80.9	.009	2697.9	.306	8,807.1
1960	2944.7	.305	3523.8	.365	93.8	.010	3097.9	.320	9,660.2
1961	3145.0	.305	3855.8	.374	97.7	.010	3209.4	.311	10,307.8
1962	3460.8	.299	4099.3	.354	138.2	.012	3875.6	.335	11,573.9
1963	3747.6	.312	4047.9	.336	110.7	.009	4128.2	.343	12,034.4
1964	4068.4	.293	5186.5	.373	134.0	.010	4506.9	.324	13,895.8
1965	4709.9	.311	5044.7	.333	179.9	.012	5197.2	.344	15,131.7
1966	5331.4	.316	5274.1	.313	203.1	.012	6051.9	.359	16,860.5

Source: National Economic Development Board, National Income of Thailand, 1965 (p. 136) and 1966 (p. 101).

### 3.5 The Allocation of Investment

Thailand's export promotion growth system has been fueled by rapidly growing investment in both the private and public sectors. The success of the organizational changes of the mid-1950s are borne out by a vigorous investment response. Capital formation has focused upon the promotion of agricultural diversification and export, however, rather than upon import substitution.

Table 22 shows fixed capital formation by sector for selected years during Thailand's postwar transition. The first striking fact is the dramatic rise in the ratio of (fixed) investment to gross national product, which grew rapidly after the organizational changes of the mid-1950s. From 1952 to 1956 this ratio hovered near 11 per cent (11.1 per cent in 1952 and 11.5 per cent in 1956). By 1960, however, investment had risen to 16 per cent of GNP and by 1965, to approximately 22 per cent.

The allocation of the economy's capital formation reflects the society's emphasis upon export promotion. In 1960, for example, investment in agriculture absorbed 21 per cent of the total, while agriculture, transport and communication, mining, and commerce, combined, accounted for 56 per cent of investment. This contrasts with

TABLE 22

GROSS FIXED CAPITAL FORMATION, BY SECTOR, SELECTED YEARS  
(CURRENT PRICES, MILLION BAHT)

	1952		1956		1960		1965		Percentage Increase (1952-65)
	Amount	%	Amount	%	Amount	%	Amount	%	
Agriculture	698.8	18.8	931.7	18.4	1,871.9	21.1	2,707.2	15.4	287.4
Transport and Communication	1,125.9	30.3	1,229.7	24.3	1,912.9	21.5	3,520.8	20.0	212.7
Manufacturing	942.1	25.4	1,281.3	25.3	2,037.3	22.9	4,103.8	23.4	335.6
Mining	251.9	6.8	341.6	6.8	507.7	5.7	1,041.4	5.9	313.4
Electricity	177.7	4.8	267.7	5.3	516.5	5.8	1,270.2	7.2	614.8
Commerce	166.1	4.5	443.7	8.8	701.4	7.9	2,284.1	13.0	1275.1
Construction	168.0	4.5	307.4	6.1	585.1	6.6	1,442.0	8.2	758.3
Services	182.2	4.9	253.4	5.0	751.0	8.5	1,208.6	6.9	563.3
Total	3,712.7	100.0	5,056.5	100.0	8,883.8	100.0	17,578.1	100.0	373.5
Ratio of Investment to GNP	11.1		11.5		15.9		21.6		

Sources: 1952-65: National Economic Development Board, National Income of Thailand, 1964 and 1965 editions.

only 22 per cent devoted to manufacturing (which, as we have seen, itself emphasized the processing of agricultural raw materials).

By 1965, however, a shift toward even greater concentration of investment in the economy's sectors providing services had occurred. While manufacturing accounted for 23 per cent of capital formation in that year, commerce, construction, and services absorbed 28 per cent (compared to 14 per cent in 1952). This shift toward investment in the service sector clearly reflects the trend toward promotion of service exports (e. g., tourism) to strengthen the economy's basic primary product export orientation. The same conclusion may be seen from the increase in investment among the economy's sectors over the 1962-1965 period. Capital formation in the service sectors rose substantially faster than investment in either agriculture or manufacturing (both declining as a share of total investment).

Table 23 shows the share of public investment in total fixed capital formation for selected years. Though the public share fell somewhat over the 1952 to 1965 period, public investment was consistently an important component of total investment (33 per cent in 1952, 25 per cent in 1960, and 29 per cent in 1965). The share of public investment to total fixed capital formation in key sectors reveals the strong export promotion bias in the public sector investment programs. The two sectors,

TABLE 23

SHARE OF PUBLIC INVESTMENT IN TOTAL FIXED  
CAPITAL FORMATION, BY KEY SECTORS, SELECTED YEARS

Sector	1952	1956	1960	1965
Agriculture	35	35	24	33
Transportation and Communication	52	63	35	43
Manufacturing	4	4	2	8
Commerce	30	15	12	17
Total	33	32	25	29

Source: Based on data from National Economic Development Board,  
National Income of Thailand, 1964 and 1965 editions.

agriculture and transportation-communications, consistently showed a very important public investment contribution while the public share in manufacturing was small, though showing a greater emphasis in the year 1965. The significant, but varying, share of public investment in capital formation in the commerce sector also reflects the underlying export promotion orientation of the public sector.

#### 4. CONCLUSION AND PROGNOSIS

Thailand's transition growth since the mid-1950s has been based upon the promotion of indigenous primary product exports. This growth system has enabled the country to show significant progress in raising real income, and growth has shown balance between the two sectors, agriculture and nonagriculture. The relatively unfettered export promotion system emerged from a period of organizational change during the 1950s, which promoted relatively free market allocation and enlisted the cooperation of Chinese minority group entrepreneurship in expansion of the trade and service sector to accommodate rapid growth and diversification of indigenous primary product exports. The public sector has played a very strong supporting role by providing large-scale infrastructure development programs, primarily oriented toward promoting the growth and diversification of agriculture.

Primary product export-led growth is reflected in the various quantitative indicators introduced in Section 3. The rapid growth of diversified indigenous product exports after 1959 was associated with a quickening of economic activity throughout the economy, as capital formation, labor productivity in both sectors, and gross national product showed accelerated growth. The close relationship between agricultural exports and the nonagricultural sectors of the economy caused the successful burst of export promotion growth to have balanced impact upon growth in these sectors.

The growth of imports and their composition also reflect the export promotion nature of Thailand's transition growth. The acceleration of growth brought rapid growth of imports and only moderate changes in their composition. Agricultural progress is reflected in the decline of the share of total imports devoted to finished agricultural products, enabling an increase in the share of imports comprising producer goods. Import substitution in the traditional sense of substituting domestic production for imported manufactured consumer goods, however, showed very moderate progress in the climate of foreign competition and modest levels of protection and promotion. The manufacturing sector continued to emphasize its traditional agricultural processing orientation, with inroads of consumer good substitution beginning to occur only during the last few years.

These empirical features of Thailand's transition growth conform closely to the essential aspects of export promotion growth as developed in our theory of the previous chapter. The theory of that chapter envisages short-run viability of an export promotion growth system where initial background conditions are conducive to its emergence. The remaining issue, therefore, involves the longer-run viability of the indigenous product export promotion growth system which has offered Thailand more than a decade of rapid and balanced growth.

Thailand's export promotion growth system has been led by expansion and diversification of indigenous export products during the decade and a half since the organizational reforms of the mid-1950s. Yet one cannot ignore the emerging tendencies toward change in this growth system which have become conspicuous in recent years. Chief among these tendencies is the growing emphasis upon supplementing primary product exports by service exports<sup>235</sup> and the shift in investment to export promotion of service type exports. While this tendency is partly associated

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<sup>235</sup>The importance of this shift may be seen in the growth of service exports and their contribution to total exports. In 1965 service exports comprised 16 per cent of the total, rising to 35 per cent in 1968 and 28 per cent in 1969. From 1965 to 1969 service exports increased by 166 per cent compared to 47 per cent for commodity exports. Data are taken from National Economic Development Board, Annual Plan, 1971, p. 30.

with the growing U. S. involvement in Thailand for mutual defense reasons, the export of Thailand's urban labor surplus through service-intensive tourist trade must be emphasized as the underlying economic basis for the shift. The significance of this shift toward service exports, therefore, is that it represents a harbinger of export of surplus labor, supplementing the traditional export of land-intensive primary export products.

One may only speculate on the extent to which Thailand's rapid progress in expanding service exports is attributable to the growth of U. S. expenditures in Thailand and the likelihood of continued success at this type of export promotion after the inevitable reduction in these expenditures. The relevance of this issue to Thailand's continuation of an export promotion system is readily apparent from the growing dependence of Thailand's growth system upon service exports, as shown by the footnote to the previous paragraph.

A second emerging tendency in Thailand is one predicted by our theory of Chapter 11, the eventual threat to an export promotion growth system from political pressures toward renunciation of the enclave features of export-promotion growth. This tendency is apparent from the appearance of growing national interest in industrialization, with an orientation beyond the scope of mere agricultural processing. This

political factor points toward the eventual resurgence of an import substitution emphasis in national policy.

There is undoubtedly considerable scope for a more aggressive import substitution program in Thailand. A labor surplus appears to be emerging in urban areas, providing the labor condition for import substitution growth. Our study of import substitution growth points, however, to the more critical issues of entrepreneurship in determining the long-run success of an import-substitution based growth phase. If Thailand's present organizational framework for export promotion growth, necessarily emphasizing efficiency and competitiveness, can be maintained with appropriate inducements for investment in consumer good manufacturing and if the society's minority group entrepreneurial talent responds positively, a labor surplus-based growth system may indeed prove as viable in Thailand as it has in Taiwan. A reversion to a highly controlled import-substitution system, particularly one with the previous nationalistic overtones, would, however, run the risk of choking off the economy's growing supply of entrepreneurship.

## APPENDIX

TABLE 12-A1

EXPORTS, IMPORTS, AND FOREIGN CAPITAL INFLOW, 1951-1965  
(IN BILLION BAHT, CONSTANT 1962 PRICES)

Year	Total Imports (M)	Total Exports (E)	Capital Inflow (A)	(E + A)
1951	3.786	6.015	-2.229	3.786
1952	6.000	8.553	-2.553	6.000
1953	6.788	8.569	-1.781	6.788
1954	6.942	8.054	-1.112	6.942
1955	7.805	8.689	- .884	7.805
1956	8.024	8.790	- .766	8.024
1957	8.896	9.506	- .610	8.896
1958	9.176	8.206	.970	9.176
1959	9.904	8.869	1.035	9.904
1960	10.572	9.809	.763	10.572
1961	10.617	11.349	- .732	10.617
1962	12.703	11.369	1.334	12.703
1963	14.724	12.246	2.478	14.724
1964	16.183	15.154	1.029	16.183
1965	18.891	16.896	1.995	18.891

Source and Method: Data from Thailand, Department of Customs, Annual Statement of Foreign Trade, various years. Total export and import figures are taken directly from the credit and debit items on the balance of payments current account. Capital inflow (A) is the residual (M - E). Export and import deflators are taken from International Financial Statistics.

TABLE 12-A2

EXPORTS DISAGGREGATED BY AGRICULTURE AND  
NONAGRICULTURE AND GROWTH RATES

Year	Agricultural (E <sub>x</sub> )		Nonagricultural (E <sub>y</sub> )		Total (E)	
	Value	Growth	Value	Growth	Value	Growth
1951	5,191		824		6,015	
1952	7,312	0.4085	1,214	0.5060	8,526	0.4219
1953	7,440	0.0175	1,129	-0.0902	8,569	0.0018
1954	6,975	-0.0625	1,079	-0.0442	8,054	-0.0601
1955	7,039	0.0091	1,650	0.5291	8,689	0.0788
1956	6,855	-0.0261	1,935	0.1727	8,790	0.0116
1957	7,337	0.0703	2,169	0.1209	9,506	0.0814
1958	6,379	-0.1305	1,827	-0.1576	8,206	-0.1389
1959	6,916	0.0841	1,953	0.0689	8,869	0.0807
1960	7,548	0.0913	2,261	0.1577	9,809	0.1059
1961	8,760	0.1605	2,589	0.1450	11,349	0.1569
1962	8,401	-0.0409	2,968	0.1463	11,369	0.0017
1963	8,738	0.0401	3,508	0.1819	12,246	0.0771
1964	11,399	0.3045	3,755	0.0704	15,154	0.2374
1965	12,581	0.1036	4,315	0.1491	16,896	0.1149

TABLE 12-A3

COMPOSITION OF EXPORTS BY TYPE, 1954-1967  
(PER CENT OF TOTAL)

Year	$E_x'$	$E_x''$	$E_m$	$E_i$
1954	67.5	23.4	7.8	1.3
1955	62.4	28.3	7.9	1.4
1956	60.0	28.7	9.2	2.1
1957	65.2	24.1	8.7	1.9
1958	65.9	27.5	5.0	1.6
1959	53.2	38.6	6.8	1.4
1960	54.7	36.8	7.1	1.4
1961	62.1	29.1	7.0	1.8
1962	59.1	30.3	8.5	2.1
1963	60.3	28.5	8.7	2.5
1964	63.9	25.0	9.2	1.9
1965	65.4	21.0	11.6	2.0
1966	66.5	19.4	11.5	2.6
1967	66.7	18.3	12.6	2.4

Source and Method: Original data from U. N. Yearbook of International Trade Statistics, various years. Unprocessed agricultural exports,  $E_x'$ , include all of S.I.T.C. Category O, except for prepared and canned foods, sugar and spices; unmanufactured tobacco in Category 1; and hides, oil seeds, wood, silk, jute and other vegetable fibers, and crude animal and vegetable materials from Category 2. Processed agricultural exports,  $E_x''$ , include prepared and canned foods, sugar and spices from Category O; tobacco manufactures from Category 1; rubber from Category 2; and all of Category 4. Mineral exports,  $E_m$ , include fertilizers and crude minerals, iron and steel scrap, and non-ferrous ores and concentrates from Category 2; and all of Category 3. In later years, tin appears in Category 6 but is included with  $E_m$ . Industrial exports,  $E_i$ , include Categories 5-8, excluding tin in later years.

TABLE 12-A4

IMPORT DISAGGREGATION BY COMPONENTS, 1951-1965  
(PER CENT OF TOTAL)

Year	$M_x$	$M_y$	$M_i$	$M_R$
1951	11.1	35.0	15.0	38.9
1952	10.2	35.9	18.8	35.1
1953	9.0	33.1	22.0	35.9
1954	7.5	35.4	20.5	36.6
1955	6.6	35.5	18.7	39.2
1956	6.6	35.5	19.3	38.6
1957	6.7	36.0	20.9	36.3
1958	7.1	36.6	20.9	35.4
1959	6.8	35.4	22.6	35.2
1960	6.9	35.7	22.2	35.2
1961	6.5	32.5	22.2	38.8
1962	5.9	33.8	25.5	34.8
1963	5.7	32.7	27.9	33.7
1964	5.4	30.0	28.6	36.0
1965	4.8	31.2	27.8	36.2

Source: Basic data from Thailand, Department of Customs, Annual Statement of Foreign Trade, various years. The method used to disaggregate total imports into components is essentially that used by D. S. Paauw for the Philippines. See his "The Philippines: Estimates of Flows in the Open Dualistic Economy Framework, 1949-1965" (Washington: National Planning Association, Center for Development Planning, February, 1968), pp. 52-66 (mimeographed).

TABLE 12-A5

RATIO OF IMPORTED CONSUMER GOODS,  $M_y$ , TO TOTAL  
 AVAILABILITY OF NONAGRICULTURAL GOODS,  $Y_a$ ,  
 PHILIPPINES AND THAILAND, 1951-1965:  $M_y/Y_a$

Year	Philippines	Thailand
1951	.168	.070
1952	.152	.099
1953	.138	.104
1954	.145	.109
1955	.132	.122
1956	.114	.115
1957	.117	.122
1958	.105	.126
1959	.082	.114
1960	.079	.114
1961	.064	.102
1962	.063	.112
1963	.062	.113
1964	.062	.105
1965	.062	.110

Source and Method: For the Philippines see D. S. Paauw, "The Philippines: Estimates of Flows in the Open Dualistic Economy Framework, 1949-1965" (Washington: National Planning Association, Center for Development Planning, February, 1968). Data on  $Y_a$  and  $M_y$  are found in Tables III-13 and III-43 on pp. 61 and 145; and explanations of their derivation are found in the text. Essentially the same method was used by Forrest Cookson in his derivation of  $Y_a$  and  $M_y$  for Thailand. His basic data on production can be found in the national accounts of Thailand (see Statistical Yearbook of Thailand for earlier years and National Economic Development Board, National Income of Thailand for later years). For basic data on imports, see Table A4.

TABLE 12-A6

GROSS NATIONAL PRODUCT, AGRICULTURAL AND  
NONAGRICULTURAL CONTRIBUTIONS AND EXPORTS, 1951-1965  
(IN BILLION BAHT, CONSTANT 1962 PRICES)

Year	X	Y	X + Y (GNP)	E
1951	15.296	22.259	37.555	6.015
1952	14.391	24.962	39.353	8.553
1953	16.114	26.888	43.002	8.569
1954	14.799	27.936	42.735	8.054
1955	18.916	27.339	46.255	8.689
1956	18.460	28.846	47.306	8.790
1957	17.711	30.480	48.191	9.506
1958	19.729	28.846	48.575	8.206
1959	20.314	33.315	53.629	8.869
1960	22.561	36.791	59.352	9.809
1961	23.748	38.125	61.873	11.349
1962	24.307	40.904	65.211	11.369
1963	26.474	45.163	71.637	12.246
1964	27.395	49.317	76.712	15.154
1965	27.909	54.925	82.834	16.896

Source and Method: For later years, the constant price series, with minor adjustments for consistency within an aggregate accounting framework, is found in National Economic Development Board, The National Income of Thailand, 1965 (p. 121) and 1966 (p. 87). The agricultural sector (X) includes all gross national product originating in agriculture (lines 1-5). Nonagriculture (Y) is the residual obtained from subtracting (X) from total GNP. Earlier production series for 1951-1957 can be found in the Statistical Yearbook of Thailand, various years, in current prices. Regressions on overlap years were used to link the two series.

TABLE 12-A7

LABOR PRODUCTIVITY IN AGRICULTURE AND NONAGRICULTURE:  
GROWTH RATES, THREE-YEAR AVERAGES

Years	Agriculture	Nonagriculture
1951-53	-.01505	.06629
1952-54	.09493	-.00166
1953-55	.04752	-.00879
1954-56	.06040	-.00621
1955-57	.00012	-.02081
1956-58	.01550	.01373
1957-59	.06331	.02934
1958-60	.04427	.06245
1959-61	.04036	.03313
1960-62	.03277	.03272
1961-63	.02499	.04956
1962-64	.02433	.06202

Basic data from which growth rates are calculated are presented in Table 18 of the text.

## CHAPTER 13

### THE POSTWAR TRANSITION IN MALAYSIA

#### INTRODUCTION

In this chapter we make an empirical application of our general analytical framework to the postwar transition in Malaysia.<sup>236</sup>

Organizationally, Malaysia has been construed as a country which has maintained a neo-colonial system. The major features of this system have been a relatively free market system, in regard to both foreign and domestic trade, and low levels of protection for domestic manufacturing. This absence of controls has been conducive to the continuation of primary product export-led growth throughout the first decade and a half since independence.

The uninterrupted sway of the neo-colonial export promotion growth system in Malaysia deserves emphasis for its rarity. A peaceful transfer of sovereignty from the British to the newly independent

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<sup>236</sup> Because of variability of the geographical scope of the political unit now known as Malaysia during the period 1950-1970, quantitative data employed in this chapter refer mainly to West Malaysia; i.e., the area equivalent to the previous Federation of Malaya, unless otherwise specifically noted.

government offered a climate for an effective compromise among several contending power groups--the former British colonial masters, the Chinese and Indian minorities who dominated the economic roles in the enclave, and the indigenous Malays to whom political power was transferred.<sup>237</sup> The compromise was instrumental in preventing experimentation with a nationalistic control system, which marked decolonization in many newly independent countries. Thus, Malaysia's export promotion growth system did not require a period of decontrol and liberalization for its launching; it was rather a natural continuation of the colonial system, with some modifications associated with independence.

The industrial sector retained the colonial orientation of primary product export promotion. Unlike the Thailand case, however, the industrial sector has been oriented toward increasing the flow of modern inputs into primary product exports rather than merely providing accommodating services for a larger volume of crude primary product exports. Though some diversification of exports has occurred, the major emphases have been upon raising productivity in primary product export production and increasing the industrial processing component in these exports.

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<sup>237</sup>The presence of disaffected groups, largely of the Chinese minority, and the long struggle against dissident guerillas during the "Emergency" period promoted cooperation between the new independent Malayan government and the British.

The retention of the primary product export base for growth has been accompanied by efforts to improve conditions in the lagging traditional agricultural sector. The chief economic impact of independence, therefore, has been the use of government policy to redirect a part of the economy's export surplus to foster the development of traditional agriculture through both infrastructure programs and provision of modern inputs. Given the large size of the export-oriented enclave, the economy had historically been able to support a persistent food deficit without difficulty. The emphasis on modernizing traditional agriculture has stemmed not so much from the existence of a food deficit as from the political necessity to improve the welfare of the Malay component in the population, who are predominantly involved in subsistence food-crop agriculture. The impact of these programs, however, has reduced the economy's food deficiency, thus bolstering export promotion growth.

We begin in Section 1 by verifying the presence of the inherited background conditions which we have associated with the emergence of a neo-colonial export promotion system to initiate the transition. In Section 2 we substantiate the existence of the neo-colonial organizational system, as we have described it in Chapter 8. In Section 3 we present quantitative data to demonstrate that the performance of the Malaysian economy has been consistent with the modern product export promotion

model developed in Chapter 11. In the concluding section we briefly consider the problem of the future course of Malaysia's transition growth.

## 1. BACKGROUND CONDITIONS

In earlier chapters (Chapters 3, 8, and 11) Malaysia has been pictured as a country which entered the transition from colonialism with two favorable conditions. First, and of primary importance, the country emerged from colonialism with a land-surplus condition, enabling expansion of primary product exports by opening up new land for export production and facilitating productivity gains from public development programs. Second, Malaysia was asserted to have a large export-oriented enclave and a relatively small traditional agricultural sector so that export promotion could be relied upon to overcome the backwardness of traditional agriculture. These two conditions were interpreted as the essential exogenous economic factors explaining the emergence of the neo-colonial export promotion system and its survival during the first generation of post-independence transition growth.

### 1.1 The Land-Surplus Condition

The presence of a land surplus in Malaysia is best documented by the expansion of agricultural land under cultivation during

the postwar period. Table 24 shows cultivated area under agricultural crops in West Malaysia for the period 1951-1966.<sup>238</sup> Land under cultivation grew both prior to independence (1951-1957) and in the period after independence; however, the expansion of land under cultivation proceeded much more rapidly after independence (growing by 18 per cent during the nine-year period, 1957-1966, compared to 6 per cent during the six-year period, 1951-1957). Over the decade and a half (1951-1966), land under agricultural use increased by approximately one-fourth.

Land under cultivation for both export and domestic crops showed significant gains, with land for export crop use increasing by 24 per cent over the period 1951-1966 and domestic crop use, by 28 per cent. (Thus, the colonial allocation of the land supply between export and domestic use was roughly maintained.) In fact, land brought under cultivation for export crops proceeded much more rapidly in the nine years after independence than during the earlier period. Moreover, after independence, expansion of land cultivation for export crops was somewhat more rapid than for domestic crops, reversing the relationship during

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<sup>238</sup> Post-independence Malaysia, as a whole, contains West Malaysia (previously known as the Federation of Malaya) and East Malaysia (the two areas of Sabah [formerly known as North Borneo] and Sarawak). West Malaysia contains 85 per cent of Malaysia's estimated 1967 population of 10 million but only 39 per cent of its total land area.

TABLE 24

WEST MALAYSIA:  
CULTIVATED AREA UNDER AGRICULTURAL CROPS  
(THOUSAND ACRES)

Crop	1951	1957	1966	Percentage Increase		
				1951-57	1957-66	1951-66
<u>Chiefly Export</u>						
Rubber	3557	3721	4342	5	17	22
Oil Palm	97	116	304	20	162	213
Coconut	486	518	506	7	- 2	4
Subtotal	4140	4355	5152	5	18	24
<u>Chiefly Domestic</u>						
Rice	726	748	898	3	20	24
Fruits	161	214	239	33	12	48
Other Food Crops	67	107	124	60	16	85
Miscellaneous	116	124	108	7	-13	- 7
Subtotal	1070	1193	1369	11	15	28
Total	5210	5548	6521	6	18	25

Source: Department of Statistics, Malaysia, Monthly Statistical Bulletin of West Malaysia, August, 1968.

the 1951-1957 period. This evidence, therefore, verifies the continued land-surplus condition and its use to provide for expansion of primary product export production.

Economic geographers foresee the possibility of further expansion of cultivable land as well as access to unexploited mineral resources. According to one, "there is as yet no absolute shortage of land for settlement in the Federation, and indeed, provided that the market for Malayan export produce remained unsated, vast areas in the eastern two-thirds of the country could be planted with rubber, and many others might well be found to contain mineral deposits no less intrinsically valuable than those of the West."<sup>239</sup> Despite the rapid increase in utilization of the society's natural resources under government aegis during the postwar period, therefore, West Malaysia's land surplus condition does not appear to be nearing exhaustion.

Malaysia's largest frontiers for longer-run expansion of primary products, however, lie in the underpopulated areas of East Malaysia (Sabah and Sarawak).<sup>240</sup> While average population density per

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<sup>239</sup> Charles A. Fisher, Southeast Asia: A Social, Economic and Political Geography (London: Methuen and Co., Ltd., 1964), p. 628.

<sup>240</sup> In Sabah, cultivated land devoted to export crops grew by 81 per cent in the brief six-year period from 1960-1966. (Calculated from data in Malaysia, Department of Statistics, Annual Bulletin of Statistics: Sabah, 1964-66.)

square kilometer (1967) was 65 in West Malaysia, it was only 8 in Sabah and 7 in Sarawak--yielding a population density for Malaysia as a whole of 22. This compares with population densities of 64 for Thailand, 116 for the Philippines, 365 for Taiwan, and 302 for South Korea.<sup>241</sup> Thus, on the sheer basis of population densities, Malaysia as a whole clearly possesses a land-surplus condition--relative to other countries mentioned in our empirical work.

### 1.2 Dominance of the Export-Oriented Enclave

Against the background of "unlimited supply of land," Malaysia entered the postwar transition with a predominantly export-enclave economy, perhaps the world's outstanding example of an export-oriented economy. The dominance of export activities may be seen from the pattern of agricultural land use, presented in Table 24. At the time of Malaysian independence (1957), 78 per cent of land under cultivation was devoted exclusively to export crops and 69 per cent to the economy's major export, rubber--and these percentages remained unchanged after the

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<sup>241</sup>All data are population densities per square kilometers taken from United Nations, Demographic Yearbook, 1967 (New York: United Nations, 1968).

first decade of independence. In addition, tin and other extractive exports (e.g., timber, iron ore) from the natural resource base grew rapidly during this period.

The export-oriented enclave in West Malaysia is a clearly defined geographical entity comprising the West Coast provinces of Penang, Perak, Selangor, Negri Sembilan, Malacca, and Johore. In 1957 this area, representing about two-fifths of West Malaysia's land area, contained about 75 per cent of the population. Most Malays--57 per cent-- as well as the very great majority of the Chinese and Indians lived in this clearly demarcated enclave. The remainder of West Malaysia may be considered as the society's traditional sector, including the densely populated Malay areas of rice cultivation in the northwest and northeast and the entire backward east coast.<sup>242</sup>

The domination of the enclave in Malaysian economic activity is reflected in the unusually high degree of urbanization and its rapid increase during the postwar period. According to Caldwell, the percentage of the population living in urban areas was 35 per cent in 1947 and 51 per

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<sup>242</sup>All facts in this paragraph are taken from J. C. Caldwell, "The Demographic Background," in T. H. Silcock and E. K. Fisk (eds.), The Political Economy of Independent Malaya (Berkeley: University of California Press, 1963), p. 65.

cent in 1957.<sup>243</sup> Caldwell attributes this high urbanization to factors clearly associated with the dominant role of the enclave sector in the economy.

The most fundamental indicator of the relative sizes of the export enclave and the traditional agricultural sector is the share of the total labor force absorbed by each. The 1957 census reported that rice growing, the major traditional sector occupation, accounted for only 19 per cent of the employed labor force, compared to 29 per cent engaged in rubber cultivation. In the same year, traditional agriculture, as a whole, absorbed 27 per cent of the labor force, while export agriculture absorbed 32 per cent. The remaining labor force was employed in other activities in the enclave, with services absorbing 15 per cent; commerce, 9 per cent; manufacturing, 6 per cent; transport, storage, and communication, 4 per cent; building and construction, 3 per cent; and mining, 3 per cent.

Malaysia's enclave-dominated economy, as inherited from colonialism, left a relatively high per capita income in the neighborhood of U. S. \$200 at the time of independence in 1957. However, this achievement was marred by unequal distribution between the Malays and

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<sup>243</sup>Ibid., p. 83.

the Chinese and Indian minorities. While Chinese annual per capita income was approximately U. S. \$280 and Indian, U. S. \$225, Malay annual per capita income was only U. S. \$120.<sup>244</sup> These discrepancies largely reflected the concentration of a large part of the Malay population in the low-income traditional agricultural sector and their relatively low level of attainment in the modern enclave sector. This basic maldistribution of the lucrative returns from the colonial export economy provided the impetus for the new Malayan-controlled government to focus upon rural development and welfare programs oriented toward improving the lot of the Malayan component of the population.

The basic economic factors in the colonial heritage--land surplus and a large, prosperous enclave--were accompanied by a third factor which was important in explaining the emergence of neo-colonialism, the exclusion of Malays from entrepreneurial and managerial roles in the colonial enclave. The one exception was British tutelage of indigenous Malays for positions in the government bureaucracy.<sup>245</sup> This preparation

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<sup>244</sup>Silcock and Fisk, op. cit., Appendix A, p. 279.

<sup>245</sup>See Robert O. Tilman, "Education and Political Development in Malaysia," Reprint Series No. 27, Yale University, Southeast Asia Studies, 1968, especially Section II.

of Malays for government service enabled the British to relinquish political power to the Malays, which set the stage for a compromise solution in regard to the economy's organization.<sup>246</sup>

The compromise countenanced a continued British role in the economy and open competition between Western and minority group (primarily Chinese) capital in the economy's development. This is seen as an expression of Malayan nationalism by Golay. "Inasmuch as the Malays are precluded by their economic backwardness from substituting for existing alien entrepreneurial and managerial resources and capital, policies of indigenism would benefit primarily citizens of Chinese and Indian descent. The absence of pressure on alien enterprise, therefore, is a manifestation of Malayism, rather than a denial of Malayan indigenism."<sup>247</sup>

## 2. THE ORGANIZATIONAL SYSTEM

The organizational system adopted by the Malaysian government, and steadfastly adhered to since independence in 1957, reflects the force

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<sup>246</sup>The effects of British education in producing strong Malay political leadership and an effective civil service are emphasized as positive factors in Fred R. von der Mehden, Politics of the Developing Nations (2nd edition; Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1969), pp. 26-27.

<sup>247</sup>Golay et al, op. cit., pp. 346-347.

of the background conditions, just discussed. The compromise political arrangement, which accompanied independence, allowing Western, minority group, and indigenous Malays equal access to the export sector and domestic industrialization, required the continuation of the colonial laissez-faire system. Emphasis upon efficiency and competitiveness in export industries has precluded the use of control devices involving serious bias against exports. Nevertheless, the fundamental Malay purpose of advancing the economic position of the Malay segment of the population has been vigorously pursued. Thus, the society's economic organization has reflected two strains; namely, the maintenance of a free market system and policies to elevate the economic status of the indigenous Malay population. These two aspects will be discussed in turn.

## 2.1 The Free Market System<sup>248</sup>

As a highly open economy, reflected in a ratio of exports to GNP near 50 per cent, the acid test of Malaysia's maintenance of a free market system lies in the foreign trade arena. In this area, Malaysia

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<sup>248</sup> Selected aspects of Malaysia's free market system, most relevant to our analysis, are emphasized here. For a fuller description of the system as a whole, see Golay et al, op. cit., Chapter 6, and Silcock and Fisk, op. cit., Chapter 11.

stands out among less-developed countries for the degree of restraint exercised in abstaining from imposition of controls after independence was achieved. Flows of both factors and goods have remained relatively uncontrolled.<sup>249</sup> Capital movements have been subjected only to the restrictions applicable to the general sterling area. No quantitative restrictions have been imposed on foreign trade, and, in general, tariff policy has been employed for revenue, rather than protection, purposes.

Freedom of capital flows has been accompanied by freedom of entry to all nationalities, Western, Asian, and Malay, into domestic industries. The Malaysian government is on record, in its First Five-Year Plan, that "foreign entrepreneurs will be accorded the same incentives as local industrialists and, in addition, will continue to be given guarantees regarding the security of foreign investment."<sup>250</sup> The Pioneer Industries Ordinance, which seeks to promote industrial development by tax holidays, has been carried out with no serious distinctions between foreign and domestic investment.<sup>251</sup> Similarly, government assumes no direct role

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<sup>249</sup> An exception to freedom of factor flows is the presence of politically induced barriers to immigration to avoid increasing minority group (Chinese and Indian) representation in the total population above the present politically volatile level of near 50 per cent.

<sup>250</sup> First Malaysia Five-Year Plan (Kuala Lumpur, 1965), p. 131.

<sup>251</sup> Golay et al, op. cit., pp. 376-379.

in industrial development, leaving industrialization to the dictates of the market. Assistance provided to Malay entrepreneurs takes the form of credit, training, and advisory services on a modest level. As we note below, the government's predominant effort for Malay uplift has been concentrated in rural development programs.

Malaysian tariff policy and the degree of protection it offers deserve attention in establishing the essential nature of the society's organization for transition growth. If Malaysia's present neo-colonial system eventually moves toward a larger component of nationalism to foster import substitution, indications are that tariff policy will be the major vehicle for both protection of new industries and discrimination against export industries. While such a tendency is just beginning to evolve in Malaysia, the period since independence, comparatively speaking, has been marked by the absence of a significant protectionist component in tariffs.

In general, such consumer goods industrialization as has occurred has not been prompted by tariff protection. The average level of protection throughout the period was modest, yet some expansion of industrial output, y, destined for consumer goods markets, took place. Thus, the free market model of Chapter 11, explaining the forces

promoting industrial growth, is the relevant model. This conclusion is supported by John Power, who has studied protection systems in several less-developed countries:

"Contrary to the experience of some less developed countries, the initial impetus to industrialization did not come from a sudden and drastic attempt to control imports...natural comparative advantage factors plus growth of the market played a larger role in initiating industrial growth in Malaysia than in many other countries more dependent on protection."<sup>252</sup>

There is a clear efficiency emphasis in official Malaysian government statements on the use of tariff policy for infant industry protection, a concern which has appeared in Malaysia only within recent years. The government's industrial development policy is clearly free market-oriented, with the government's role defined as maintaining stability and providing proper incentives, infrastructure, and education.<sup>253</sup> Protective tariffs are to be employed within this free market framework, as is clear from the following official pronouncement on tariff policy:

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<sup>252</sup> John H. Power, "The Structure of Protection in West Malaysia," Discussion Paper No. 69-11, University of the Philippines, School of Economics, July 8, 1969, p. 7.

<sup>253</sup> See, for example, the statement in the First Malaysia Five-Year Plan, pp. 130-131.

"In recognition of the problems of infant industries and those which arise from the limited industrial experience of the country, major attention will be given to the imposition of protective tariffs and the establishment of common tariff arrangements for the whole of Malaysia. . . . The government, however, is intent on ensuring that no more protection than is necessary will be accorded, for the cost of industrialization to the domestic consumer must be minimized. . . . The growth of the industrial sector in the long run will demand that eventually production be extended to supply not only the domestic market but also markets overseas. This makes it essential that domestic enterprise be constantly prodded to increase efficiency so that there will be progressive reductions in production costs. "<sup>254</sup>

The system of tariff protection envisaged is very different from the indiscriminate use of tariff policy to foster rapid import substitution, regardless of efficiency considerations--the pattern which has evolved in the Philippines (described in Chapter 10). In implementing this policy in the 1960s, Malaysia began to introduce a protection component in its otherwise free market-oriented system, but the level of protection afforded remained low. Average rates of protection have been calculated by John Power, both for value added protection and whole value of product. Results by major sectors for the year 1965 are presented in Table 25.

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<sup>254</sup>Ibid., pp. 132-133.

TABLE 25

AVERAGE RATES OF PROTECTION BY MAJOR SECTORS, 1965  
(PER CENT)

	Value Added	Whole Product
Forestry	-17	-14
Mining	-17	-14
Rubber Planting	0	0
Fishing	1	2
Agriculture and Livestock	2	6
without tobacco	-1	4
Manufacturing	-5	2
without exports	14	8

Source: John H. Power, "The Structure of Protection in West Malaysia,"  
Discussion Paper No. 69-11, University of the Philippines,  
School of Economics, July 8, 1969, Table XII, p. 3-12.

The average rates of protection offered are clearly modest when compared to other less-developed countries. For all manufactures, for example, value added protection was slightly negative ( -5 per cent), compared to 52 per cent in the Philippines (see Chapter 10, Table 12). However, Power finds that there was considerable variation of protection within the manufacturing sector, with some consumption goods industries receiving high levels of protection.<sup>255</sup> Nevertheless, these exceptions which were introduced during the 1960s represent isolated attempts to implement the infant industry principle in the case of a few industries rather than a broad-gauged profit transfer system of forced import substitution.

There is evidence, however, that a decade of neo-colonial growth under relatively free markets may be producing stresses and strains pushing Malaysia toward more aggressive nationalistic import substitution policies. The combination of problems which our analysis of Chapter 11 predicts as likely to arise under neo-colonial export-led growth appears to have emerged in Malaysia in the late 1960s. Serious fluctuations in primary product export earnings and a persistent tendency toward rising capital flight have caused concern about the future of Malaysia's high

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<sup>255</sup>Power, op. cit., p. 3-11.

degree of primary product export orientation under free markets. Moreover, the slow pace of industrialization (as predicted by our model) appears to be creating a re-evaluation of the political viability of the neo-colonial system.

## 2.2 Rural Development Focus in Public Investment

The free market system in Malaysia, as described in the previous section, has been supplemented by a public investment program which is entirely consistent with export promotion growth under neo-colonial organization. Two aspects of this program deserve emphasis. On the one hand, the agricultural orientation of both public investment and planning supports the primary product export base of the growth system. In Chapter 11 we construed public infrastructure and other public expenditure programs as a component of the total flow of intermediate goods from nonagriculture to agriculture--a composite flow which is the major stimulant to expansion of primary product production. On the other hand, the public development programs aimed at improving productivity in the traditional sector are a natural response to independence. The compromise solution which provided the political basis for neo-colonialism endorsed the principle of elevating the depressed sector, populated by Malays, by application of resources made available from the primary product export surplus.

The rural focus of Malaysia's public development programs is apparent from both public pronouncements<sup>256</sup> and the actual public expenditure programs. The Ministry responsible for supervising and expediting execution of national development plans, in fact, was known as the Ministry of Rural Development until 1964, when its name was changed to the Ministry of National and Rural Development. In the First and Second Malayan Five-Year Plans (1956-60 and 1961-65), expenditures for agriculture and Malay-oriented social services absorbed almost half of total expenditures, the remainder concentrated in infrastructure development. Such expenditure as was made for industrial development (two per cent of the total) was largely intended as assistance to Malay nationals. Expenditures for agricultural development emphasized both exports and the traditional sector, with rubber replanting alone representing 16 per cent of total development expenditures during the 1956-60 period.<sup>257</sup>

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<sup>256</sup>This focus has been reiterated in each of the national plans (the First and Second Malayan Five-Year Plans and the First Malaysian Five-Year Plan).

<sup>257</sup>Data in this paragraph are taken from First Malaysia Plan, 1966-1970. For emphasis on rural development programs in the 1961-65 plan, see Clair Wilcox, The Planning and Execution of Economic Development in Southeast Asia, Harvard University, Center for International Affairs, Occasional Papers in International Affairs, No. 10, January, 1965, pp. 23-24.

The concentration of social services upon efforts to modernize the Malay community have gone hand in hand with the rural infrastructure program. These efforts, according to Golay, "are concentrated presently in blanketing the countryside with agricultural extension, education, and public health services. At the same time a disproportionate share of public investment is allocated to feeder roads and other communication facilities, land settlement, and rural water supply and electrification works."<sup>258</sup>

The magnitude of the government's effort to promote agricultural development and the improvement of the economic status of Malays in the traditional sector is indeed remarkable. One estimate places these expenditures during the 1963-1965 period at 59 per cent of total government expenditures, equivalent to at least one-eighth of the economy's real product.<sup>259</sup> Public expenditures were clearly financed from taxation of export enclave activities --since the tax structure was virtually entirely oriented toward foreign trade and export production.<sup>260</sup> Thus, the massive program to raise the Malay-dominated traditional sector into modernization was fed by resources made available by the economy's export-oriented sector.

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<sup>258</sup>Golay et al, op. cit., p. 344.

<sup>259</sup>Ibid., p. 389.

<sup>260</sup>Ibid., p. 353.

### 3. QUANTITATIVE INDICATORS OF THE MALAYSIAN GROWTH TYPE

#### 3.1 Introduction

The Malaysian economy has been identified in Chapter 11 as a primary product export-led growth system throughout the postwar transition period. Of the two variants of export-led growth analyzed in that chapter, the Malaysian economy was described as the modern export product type. The economy's growth, both historically under colonialism and since independence, has been led by export of "modern" primary products to which the nonagricultural sector contributes a significant processing component. Two export products of this type, rubber and tin, have dominated West Malaysia's growth, still comprising two-thirds of that region's export earnings during the period since 1960. Modest diversification of exports has occurred since independence, as iron ore, timber, and canned pineapple have assumed some significance in the export account. Diversification has not, however, proceeded rapidly enough to overcome serious terms-of-trade difficulties. Malaysia's real hope of export diversification appears to lie in the historically more diversified export base in East Malaysia.

Prices of West Malaysia's major exports have declined steadily since the mid-1950s, while import prices have shown a gradual

upward movement. Though major primary product exports have shown substantial gains in quantity, gains in export earnings have been severely dampened by declining world market prices. In West Malaysia, export quantity has almost kept pace with growth of real output in the economy as a whole (GNP in constant prices), but export values have grown much more slowly than gross national product in current prices. Thus, West Malaysia has suffered a falling export ratio, attributed to falling prices for an expanding volume of the highly concentrated exports. However, this conclusion is apparently not true for Malaysia as a whole.

Unfortunately, combined national accounts for West and East Malaysia extend back only to 1964. This limited series indicates, however, that for the period 1964-1968, the ratio of exports to GNP for Malaysia, as a whole, has remained stable at near .45. This is roughly the value of the historical export ratio which has characterized the highly open economy of Malaysia (formerly Malaya) during the past 50 years.

Thus, the additional land resources (with low population density) and more diversified land base in Sabah and Sarawak made available through the merger of East Malaysia (Sabah and Sarawak) and West Malaysia into Malaysia have significantly strengthened the land resource base for the primary product export-based growth system. Specifically, the more rapid growth of exports from East Malaysia has served to offset West

Malaysia's falling export ratio (associated with weak market conditions for rubber which occupies a disproportionately large position in total West Malaysian exports).

The newly independent government's development program has had a significant impact upon the nature of export-led growth in Malaysia. In Chapter 11, the public development inputs affecting primary product expansion were viewed as a component of the flow of intermediate goods and services,  $N$ , the basic stimulant to export expansion. Given the crucial role of foreign trade (both export and import) in Malaysia's highly open economy, the growth impact of the public investment program must be evaluated in terms of these public "N" services injected into the agricultural sector.

On the export side, the agricultural orientation of the public development program has helped to offset the depressing effect of falling world prices for Malaysia's major export product--rubber--and has begun to diversify primary product exports. On the import side, the government's major emphasis on the traditional agricultural sector has substantially reduced food imports, freeing a greater part of the slowly growing import capacity for nonfood imports; i. e., producer goods,  $M_p$ , and industrial

consumer goods,  $M_y$ .<sup>261</sup> For purposes of empirical verification, the focus of this chapter, it is important to note that the export expansion and diversification function is increasingly located in East Malaysia, while the food substitution process largely occurs in West Malaysia.

Because of the overriding significance of the foreign trade indicators in this growth type, we begin by presenting empirical evidence on exports and imports. We then consider overall and sectoral growth indicators to verify the applicability of the modern export product export promotion model to Malaysia's transition experience.

### 3.2 Foreign Trade Indicators

In this section we present empirical evidence to demonstrate the applicability of the modern export product type of export promotion model to Malaysia's first generation of transition experience. We have already noted that the continuation of a primary product export-led growth system was strengthened by incorporation of the land-surplus areas of Sabah and Sarawak into Malaysia at the time of independence. Access to the primary product export potential of these areas allowed Malaysia as a whole to maintain a fairly constant ratio of exports to total product at a very high level (about .45).

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<sup>261</sup> This phenomenon was described in analytical terms in Chapter 9 as equivalent to elongation of the import frontier.

## Exports

Table 26 presents data on aggregate merchandise exports for the period 1959-1967<sup>262</sup> for both East and West Malaysia in current prices as well as a constant price series for West Malaysia, 1959-1966. In current prices, the annual rate of growth of total Malaysian exports averaged 2.9 per cent, with a significant difference between East Malaysia (6 per cent) and West Malaysia (2.2 per cent). West Malaysia's export performance was substantially better in constant price (real) terms than in current prices. For the period 1959-1966, West Malaysia's exports in constant prices grew at an annual average rate of 5.9 per cent.

During the period 1959-1966, West Malaysia's aggregate exports in real terms grew almost as rapidly as real gross domestic product; i. e., 5.9 per cent for exports compared to 7 per cent for GDP. This performance in real terms is consistent with our prediction in Chapter 11 of a tendency toward a relatively constant export ratio for the "dynamic equilibrium" growth which characterizes the Malaysian type of export promotion. The deterioration of prices for West Malaysia's major exports,

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<sup>262</sup> Difficulties in eliminating intra-Malaysian export trade prior to 1959 prevent using a longer series of annual observations.

TABLE 26

MERCHANDISE EXPORTS:  
EAST AND WEST MALAYSIA, 1959-1967  
(MILLION MALAYAN DOLLARS)

Year	East Malaysia	West Malaysia		Total
	Current Prices	Current Prices	Constant 1959 Prices	Current Prices
1959	491.1	2391.7	2391.7	2882.8
1960	546.7	2825.1	2690.6	3371.8
1961	496.5	2522.4	2899.3	3018.9
1962	519.7	2575.1	2559.9	3094.8
1963	540.8	2660.8	3244.9	3201.6
1964	522.8	2736.8	3258.1	3259.6
1965	615.6	3050.3	3546.9	3665.9
1966	705.4	3079.5	3580.8	3784.9
1967	780.8	2852.5		3633.3
Average growth rate:	6.0	2.2	5.9	2.9

Source: Current price series: U.N., Yearbook of International Trade Statistics, various issues.

Export price index, used to deflate current price series, provided by Malaysian Department of Statistics.

however, poses a serious threat to the viability of export promotion growth so narrowly focused upon a few major primary export products.<sup>263</sup>

Disaggregation of Malaysian exports is essential to establishing the modern export product variant of export promotion growth.

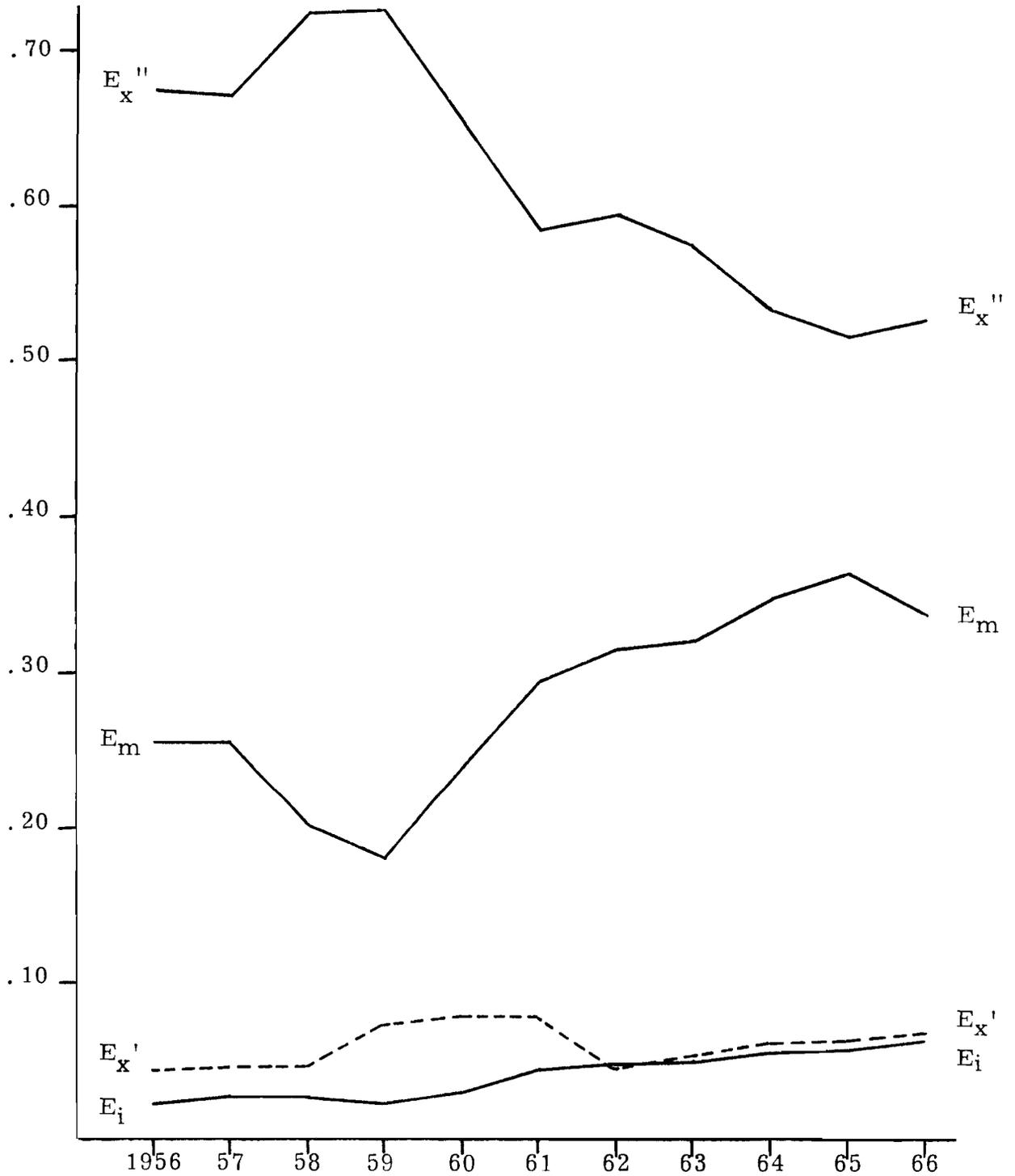
Diagram 43 presents the composition of West Malaysian exports, 1956-1966, in terms of a breakdown relevant for verifying the nature of the export promotion variant. Exports are classified into the four components used in Chapter 12 to analyze Thailand's export composition. The components are: (i) unprocessed traditional agricultural products,  $E_x'$ ; (ii) modern, processed agricultural products,  $E_x''$ ; (iii) mineral products,  $E_m$ ; and (iv) manufactured products,  $E_i$ .

Modern export products referred to in the theory of Chapter 11 include the two components, processed agricultural products and mineral products. Both are primary product exports involving a significant industrial processing component. Diagram 43 shows that these two components continued to represent the overwhelming share of West Malaysia's exports during the period 1956-1966, falling slightly from

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<sup>263</sup> Rubber and tin contributed 80 per cent of West Malaysia's total export value in 1957 and 68 per cent in 1967.

Diagram 43: Composition of West Malaysian Exports, 1956-1966  
 (by type, as fraction of total)



Source: Table A1 of Appendix

93 per cent of the total in 1956 to 87 per cent in 1966. However, a significant change in their mix between processed agricultural products (primarily rubber) and minerals (primarily tin) occurred. While processed agricultural products fell from 68 per cent of West Malaysia's exports in 1956 to 53 per cent in 1966, minerals rose from 26 to 34 per cent. This change largely reflects the conflicting fortunes of rubber and tin prices in the world market.

We have seen in the previous chapter that export products with a major industrial processing component continued to be overshadowed in Thailand by traditional unprocessed agricultural exports. (Unprocessed primary products continue to comprise two-thirds of merchandise exports in Thailand at the end of our first generation of postwar transition experience.) Thus, the quantitative difference in export composition confirms the classification of Malaysia and Thailand into the two variants of export promotion models presented in Chapter 11.

We have hypothesized in Chapter 11 that injection of modern inputs from the nonagricultural sector is the major cause of expanding production of modern exports, such as rubber and tin in Malaysia. In our general discussion of export promotion growth in Chapter 5 we posited an export expansion function:

$$13.1 \quad dJ/dt = F(N, dN/dt)$$

Equation (5.3) reproduced

which relates growth of exports, J, to the flow of inputs, N, from the nonagricultural sector to primary product export industries. These inputs were defined to include a wide variety of nonagricultural stimulants to production, including both private services and physical ingredients as well as public sector infrastructure and institution-building.<sup>264</sup> In the modern export product model of Chapter 11, these inputs, per unit of export, were employed to explain the growth of modern exports.

Ideally, one would like to verify this type of export expansion function by detailed quantitative data documenting the pattern of nonagricultural inputs through time. In the absence of adequate data, we must settle for less exhaustive verification. (The orientation of the manufacturing sector toward providing processing services for primary product exports is discussed in Section 3.4.)

In the case of Malaysia's two dominant modern export products, rubber and tin, scattered data and information have been surveyed in a recent ECAFE report. We briefly summarize its major conclusions to demonstrate the validity of our export expansion hypothesis. In the case of rubber, the report states the following suggestive conclusion:

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<sup>264</sup>See Chapter 5, pp. 126-128.

"Rubber production and export volume have expanded continuously since the decline following the Korean war boom of the early 1950s. As the price of rubber has shown an irregular but persistent downward trend, it is clear that the output response has not been primarily to price change.... Rather the growth in physical output has been the result of the policy of the Government and the estate owners."<sup>265</sup>

The report goes on to cite impressive gains in yield, particularly in Malaysian estate rubber (75 per cent in a ten-year period). These gains are attributed to the rapid growth of modern inputs. Chief among these was the introduction of high yielding clones in an aggressive government-promoted replanting program. Increased fertilizer use and hormone stimulation, supported by continuous research, are also given emphasis.<sup>266</sup>

In tin mining for export, similar changes toward modernization of production have occurred. This has been associated with consistent increases in capital intensity of the industry, reflected in statistics of utilized horsepower.<sup>267</sup> Nevertheless, tin exports have responded to world price changes and intermittent export restrictions under international tin agreements.

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<sup>265</sup>United Nations, ECAFE, Economic Survey of Asia and the Far East, 1968 (New York: United Nations, 1968), pp. 47-48.

<sup>266</sup>Ibid., p. 48.

<sup>267</sup>Ibid., p. 50.

## Imports

The composition of imports is a crucial indicator of transition growth types. In particular, the performance of export promotion and import substitution growth types are clearly reflected in differences in the import account during the first generation of the transition. We have seen in Chapter 10, which examines Philippine transition experience, that as import substitution growth proceeded through time, it was accompanied (as predicted by our theory) by substitution of capital goods imports,  $M_i$ , for industrial consumer goods imports,  $M_y$ . In the case of export promotion growth of the modern export variety, our theory predicts moderate substitution of imports of industrial consumer goods by domestic production--as determined by free market forces. In the large enclave-type economy, such as Malaysia, we also expect a relatively large food component in imports. Finally, the operation of a modern export economy requires reliance upon imports of capital goods and intermediate goods to promote the growth of primary product exports.

We now consider empirical evidence from Malaysia's import accounts to examine the validity of our Malaysian typology and to test the accuracy of the predictions from our theory of Chapter 11 inre import structure. Fortunately, import data by commodities are available for all of Malaysia, and these data have been used to disaggregate imports into

the four components, agricultural consumer goods,  $M_x$ ; industrial consumer goods,  $M_y$ ; capital goods,  $M_i$ ; and intermediate goods,  $M_R$ . The methodology employed for classification of imports into the four groups is the same as we applied for import disaggregation in the cases of the Philippines (Chapter 10) and Thailand (Chapter 12).

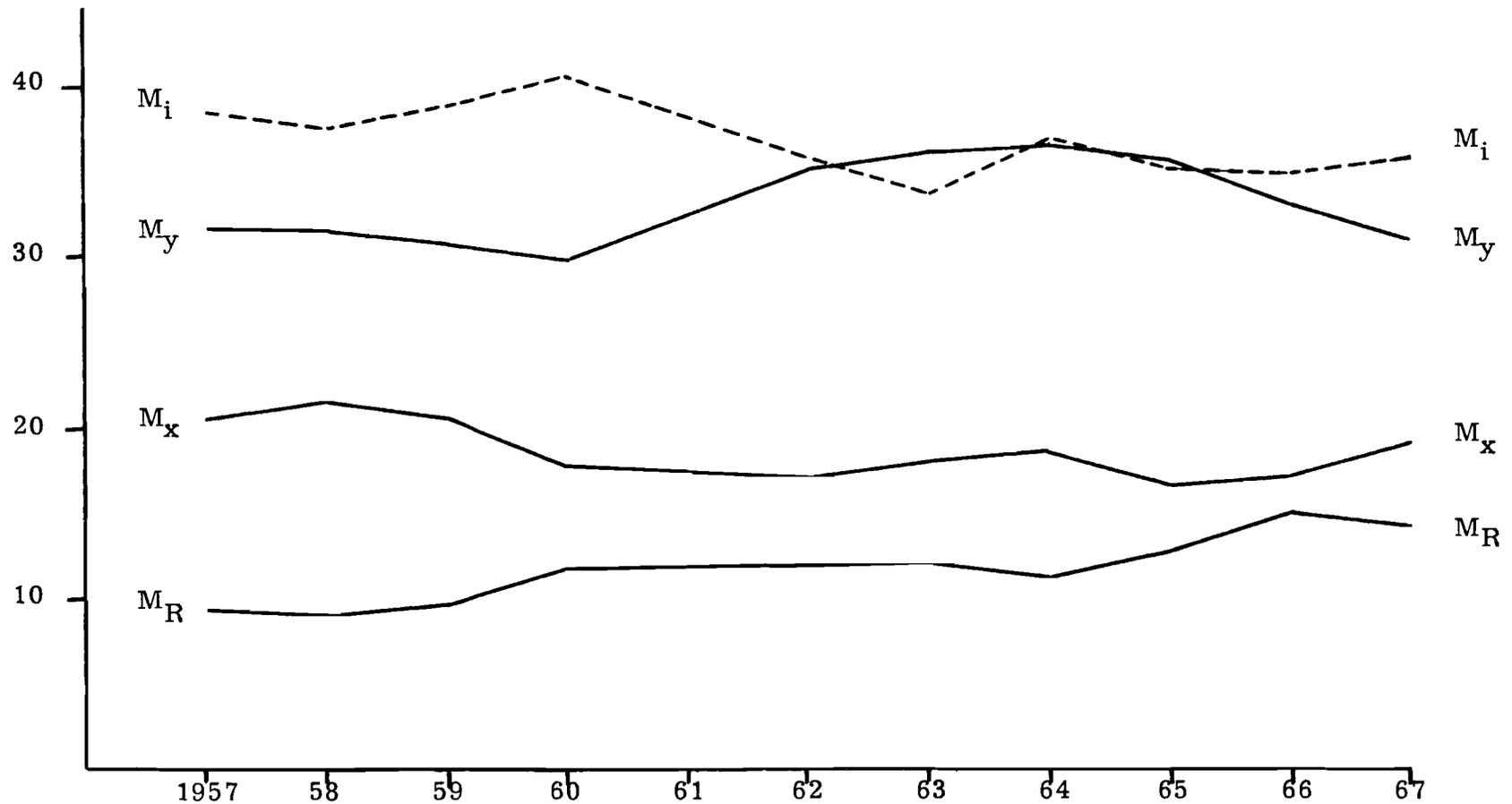
The results of disaggregating Malaysian imports into the four components for the first decade after Malaysian independence (1957-1967) are presented in Diagram 44.<sup>268</sup> The first conclusion from these results is the remarkable stability of the shares of the four components--precisely what we would expect for the continuation of an export promotion growth system. There is clearly no tendency toward reduction of the industrial consumer goods share, demonstrating the absence of a significant import substitution thrust in Malaysia's growth system.

A minor shift may be noted from capital goods imports toward intermediate goods imports; but, combined, these two components of producer goods imports,  $M_p$ , remained a relatively constant share, absorbing almost half of total imports. This is perfectly consistent with our view of the operation of a modern product export promotion economy.

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<sup>268</sup>The data cover a uniform geographic area; i. e., the present state of Malaysia (West Malaysia and the two components of East Malaysia, Sabah and Sarawak).

Diagram 44: East and West Malaysia:  
 Disaggregation of Total Merchandise Imports into Components, 1957-1967  
 (percent of total)



Note: Data not available for 1961

Source: Table A2 of Appendix

A slight, but erratic, downward trend is apparent in the share of total imports absorbed by agricultural consumer goods,  $M_x$ . Since this component represents food products, this trend appears to reflect Malaysia's progress toward greater self-sufficiency in food production. We have noted earlier that this result was to be expected as a by-product of government programs to modernize the traditional sector. This phenomenon is consistent with the operation of an export promotion economy since it represents an extension of nonagriculture's primary product orientation from primary product exports to domestic agriculture.

#### Food Imports and Domestic Production

While food self-sufficiency versus food deficits is not an essential part of our analysis of export promotion growth systems, we have alluded to Malaysia's post-independence stress on promoting productivity gains in the traditional sector. The major supply consequence of this program lies in the expansion of domestic food crops, the chief Malaysian consumption component being rice. Analytically, the significance of expansion of domestic rice production is found in the elongation of the import frontier, reinforcing the emphasis upon primary product export expansion. We have seen in Chapter 9 that elimination of food deficits has the same effect in raising import capacity as export promotion.

In Diagram 45 we present time series for domestic production and net imports of rice for West Malaysia, 1957-1967. (Rice deficits in East Malaysia are small compared to West Malaysia.) These data show a clear trend toward greater self-sufficiency in rice supply. The ratio of domestic production to total supply (in physical volume) rose from an average of .535 in the first three years of independence (1957-1959) to .697 in the period 1965-1967. This progress may be expected to continue in West Malaysia, serving as a fortuitous prop to the export promotion system.<sup>269</sup>

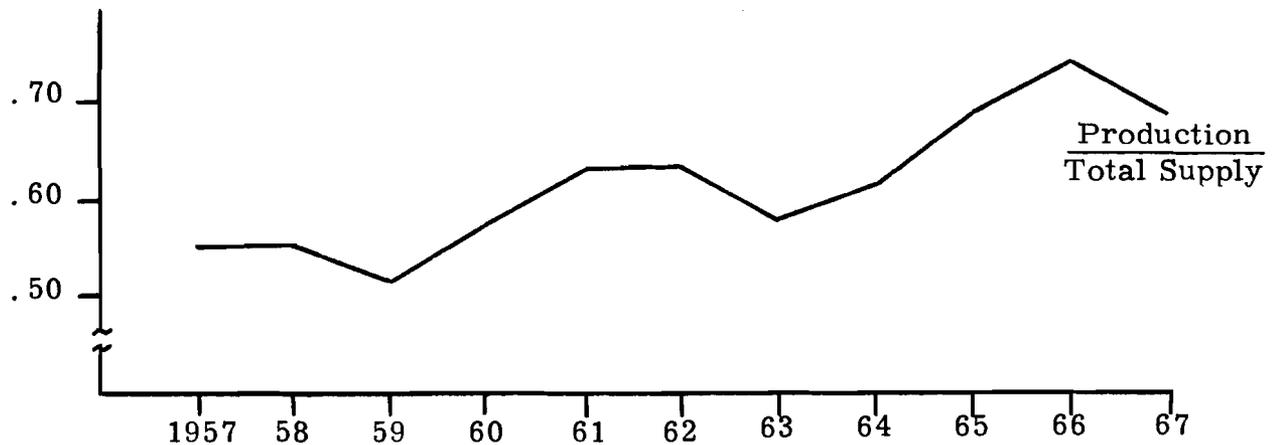
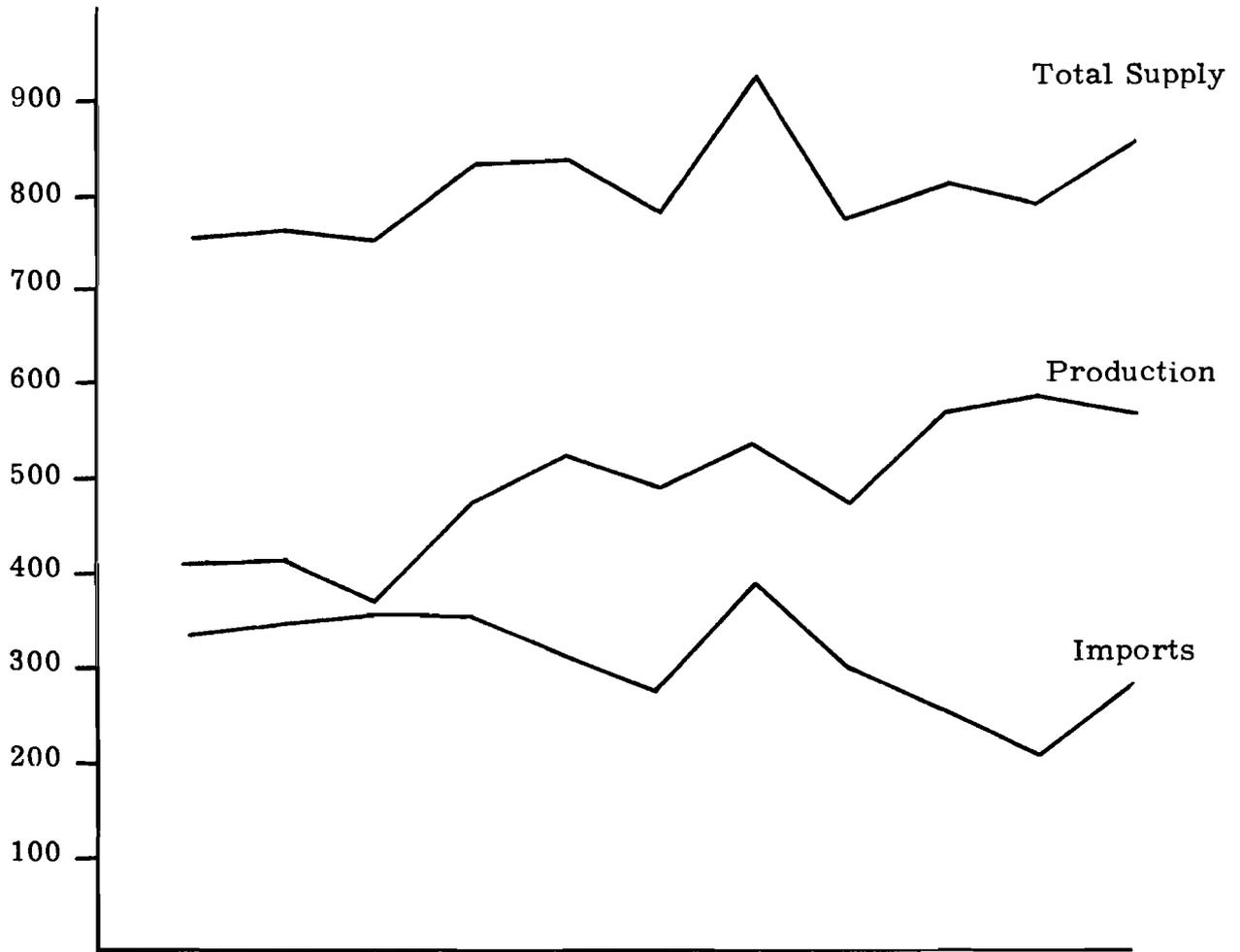
### 3.3 Aggregate and Sectoral Growth Indicators

Real output data are useful for further empirical verification of the model developed in Chapter 11 to analyze the growth of an economy of the Malaysian modern export product type. Satisfactory aggregate data extend back to 1955, just before independence was achieved by Malaysia. However, these data cover only West Malaysia, necessarily limiting our quantitative work in this section to that region (containing 85 per cent of Malaysia's population).

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<sup>269</sup> According to a recent report, Malaysia's rice imports in 1969 were 180,000 tons (substantially below 1967). This achievement is ascribed to a dramatic rise in rice yields. Malaysian Digest, Vol. 2, No. 5 (March 14, 1970), p. 2.

Diagram 45: West Malaysia: Production, Net Imports and Total Supply of Rice (thousand tons)

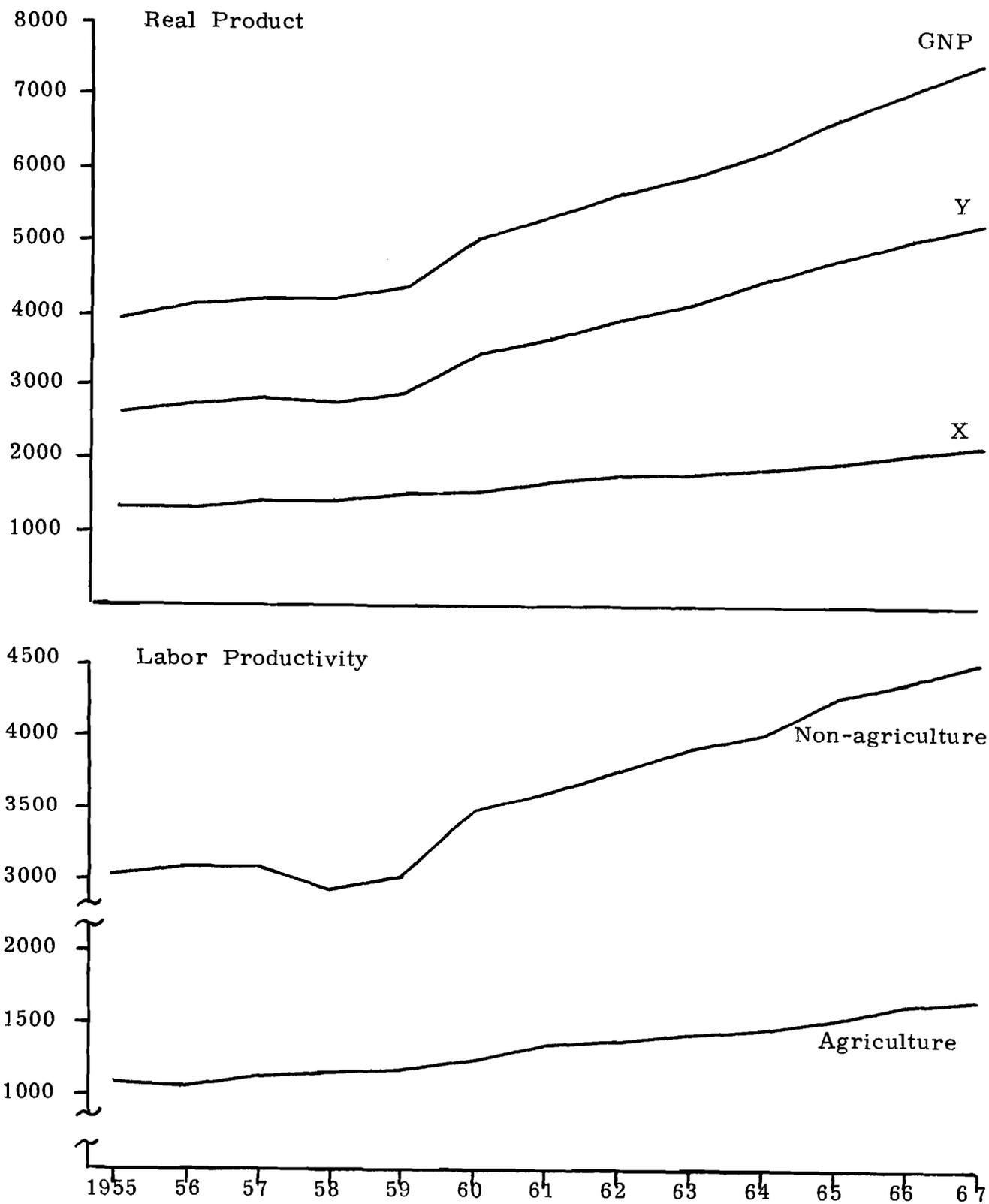


Source: Table A3 of Appendix

For present purposes, we are interested in aggregate real product, real product disaggregated between the agricultural and nonagricultural sectors, and labor productivities in the two sectors. These series for the period 1955-1967 are presented in Diagram 46. Aggregate real product grew at an average annual rate of 5.3 per cent, while the agricultural sector component grew at an average rate of 3.9 per cent, compared to 5.9 per cent for nonagriculture. Labor productivity grew slightly more rapidly in agriculture than in nonagriculture (3.7 per cent compared to 3.4 per cent), reflecting a more rapid increase in nonagricultural employment than in agricultural employment.

The modern export product model in Chapter 11 posits a very important series of relationships between agricultural and nonagricultural growth. A first relationship posited is based upon the agricultural orientation of nonagricultural growth, with the nonagricultural sector stimulating agricultural sector productivity by "injecting" a wide variety of modern inputs (including public sector infrastructure services) into agriculture. A second relationship emerges from the model's prediction of the growth behavior of the two sectors through time. This relationship was described in Chapter 11 as "dynamic equilibrium," essentially relatively balanced and modest growth in the two sectors, agriculture and nonagriculture. Given the centrality of these relationships to our analysis

Diagram 46: West Malaysia: Real product, Aggregate and by Sector, and per employed Laborer by Sector, 1955-1967 (at 1964 factor cost)



Source: Table A4 of Appendix

of the Malaysian-type economy, we pause to investigate the relationship between the growth of labor productivity in the agricultural and nonagricultural sectors through time.

For this purpose, time regressions of the growth of productivity, by the two sectors, were undertaken. The results are presented in Table 27. The regressions covered 13 observations, based on the time series for labor productivity.<sup>270</sup> The trend values,  $b$ , for both sectors are both positive and "highly significant." This result, however, should be qualified by the implicit serial correlation because of the "large" values which insure a high  $r^2$ .

The standardized coefficient  $\bar{b}$  was calculated for both sectors. As an indicator of the average trend of productivity growth over the period (1955-1967), this coefficient may be used to measure each sector's growth tendency and the balance of productivity gains between the two sectors. The  $\bar{b}$  coefficient shows remarkable similarity between the two sectors (.039 for both). Thus, gains in labor productivity were relatively high in both sectors and showed an unusual degree of balance between

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<sup>270</sup>See Appendix, Table A4.

TABLE 27

TIME REGRESSIONS OF LABOR PRODUCTIVITY  
IN AGRICULTURE AND NONAGRICULTURE

Year	AGRICULTURE			NONAGRICULTURE		
	Actual	Regression	Residual	Actual	Regression	Residual
1955	1094.3	1024.3	+ 70.1	3021.5	2784.1	+ 237.4
1956	1091.3	1076.1	+ 15.3	3094.6	2923.9	+ 170.7
1957	1116.5	1127.8	- 11.4	3089.1	3063.8	+ 25.3
1958	1152.7	1179.6	- 27.0	2928.1	3203.7	- 275.5
1959	1179.9	1231.4	- 51.5	3018.2	3343.5	- 325.3
1960	1249.1	1283.2	- 34.1	3478.7	3483.4	- 4.6
1961	1355.3	1335.0	+ 20.3	3606.7	3623.2	- 16.5
1962	1393.5	1386.8	+ 6.7	3763.4	3763.1	+ .3
1963	1422.5	1438.6	- 16.1	3910.6	3902.9	+ 7.7
1964	1458.1	1490.4	- 32.3	4036.5	4042.8	- 6.4
1965	1529.8	1542.2	- 12.4	4260.6	4182.7	+ 78.0
1966	1623.2	1594.0	+ 29.2	4386.9	4322.5	+ 64.4
1967	1688.9	1645.7	+ 43.1	4506.8	4462.4	+ 44.5
mean	1335.0			3623.2		
	a = 972.5			a = 2644.2		
	b = 51.8			b = 139.9		
	r <sup>2</sup> = .884			r <sup>2</sup> = .880		
	$\bar{a}$ = .728			$\bar{a}$ = .730		
	$\bar{b}$ = .039			$\bar{b}$ = .039		

agriculture and nonagriculture.<sup>271</sup> This result is in perfect accord with the dynamic equilibrium growth process predicted by our theory of transition growth in a modern export product economy.

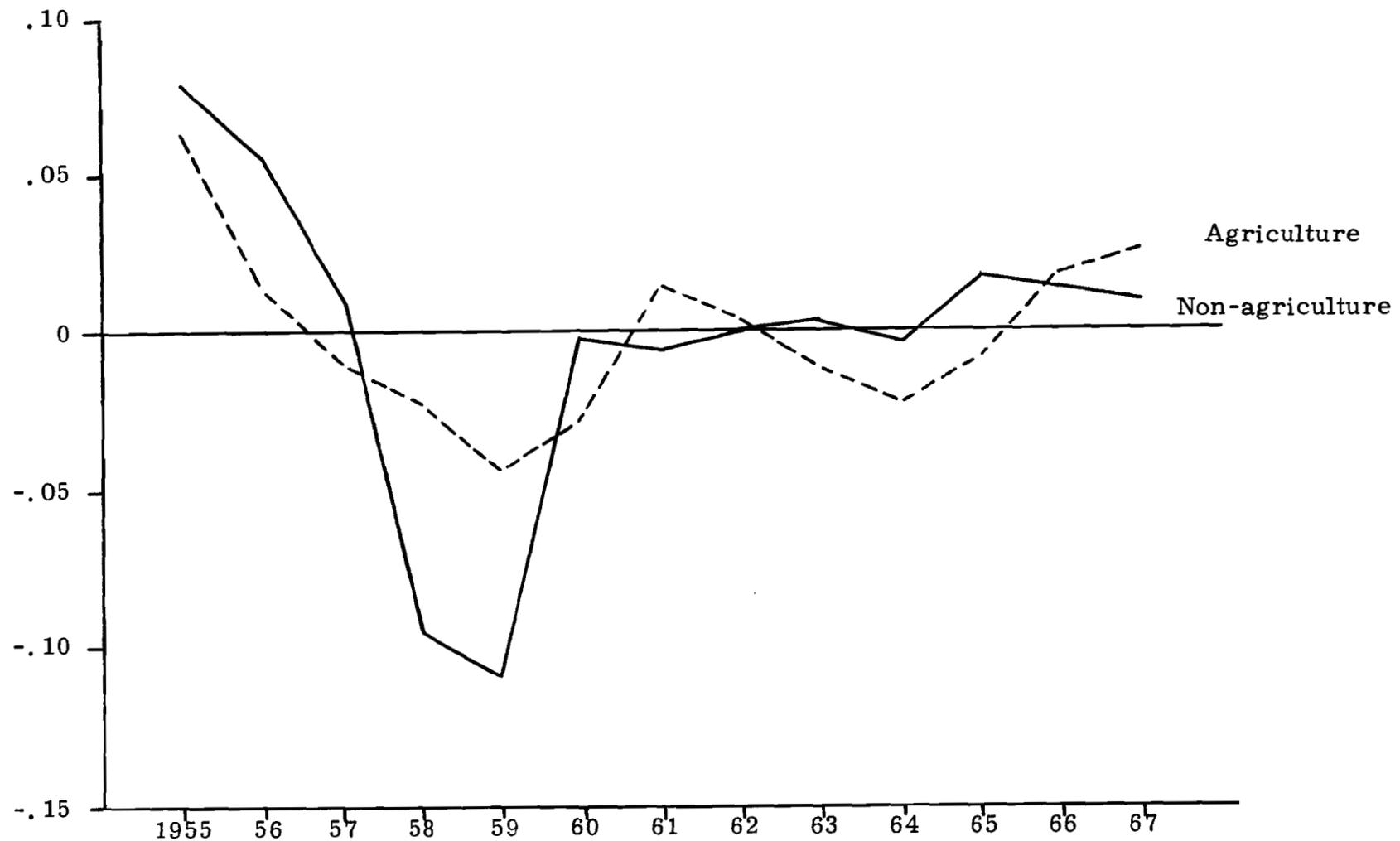
Analysis of the residuals (shown in Table 27) yields equally interesting results. If we assume that the  $\bar{b}$  coefficient indicates a "normal" growth path for each sector's productivity, the variation in the residuals of the time series regression indicates the stability of these growth paths. The residuals (as percentage of the total annual observations) are plotted in Diagram 47. We see from this diagram that the variability was rather high prior to 1959 but remarkably small after that year. This result confirms the model's prediction of the tendency in the modern export product growth economy toward constant, modest gains in productivity in both sectors.

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<sup>271</sup> Corresponding results for the other countries in our empirical applications show the remarkably good balance shown in the Malaysian case:

	Value of $\bar{b}$	
	Agriculture	Nonagriculture
Philippines	.002	.029
Taiwan	.045	.053
Thailand	.032	.023

Diagram 47: Percentage residuals from Productivity Regressions,  
Agriculture and Non-agriculture



Source: Table A5 of Appendix

Another aspect of the residuals is important as empirical verification of the model. Diagram 47 shows the parallel movement of the two series of residuals. Performance of both sectors above or below the "normal" growth path was remarkably similar in the two sectors on an annual basis. This visual impression is confirmed by the correlation coefficient between the two series of residuals; i.e.,  $\rho = .765$ . This high correlation confirms the assumption of close linkage between the two sectors, an assumption behind the modern export product model of Chapter 11. The linkage in that model reflects the basic fact of primary product export-led growth as well as the industrial sector's growth orientation toward producing modern inputs for agriculture.

#### 3.4 The Orientation of Manufacturing

In an economy which exports almost half of its gross domestic product, it is obvious that nonagricultural activities will be oriented toward exports. In the Malaysian case, exports continue to be land-based, dominated by primary products which receive considerable domestic processing by the industrial sector. Thus, the nonagricultural sector's contribution to exports consists not only of the services (e.g., transport, storage, finance, wholesale trade) needed to accommodate export trade

but also of a manufacturing component. Thus, historically manufacturing has been marked by a very definite orientation toward export processing.

It is this orientation, in fact, which distinguishes the modern product type of export promotion growth from the type based upon expansion of indigenous, unprocessed export products (the Thailand type). We investigate the manufacturing sector's orientation toward processing industrial products for export in Malaysia by introducing Table 28. Data in this table refer only to West Malaysia, which is the site of the dominant part of Malaysian manufacturing.

Table 28 summarizes inputs and allocations accounting for the gross value of West Malaysian manufacturing output for the two years, 1960 and 1965. The input side of the table shows a very close linkage between manufacturing and primary producing sectors (agriculture and industry), while the allocation side shows a marked emphasis upon exports. Of the total intermediate goods and services (non-factor payments) supplied to manufacturing, 85 per cent were domestic in origin in 1960 and 81 per cent in 1965. Of the domestic intermediate input component, 88 per cent was provided by the primary producing sectors of agriculture and mining in 1961 and 73 per cent in 1965. These data show a clear orientation toward processing domestic products, a very different orientation from the import substitution case where imported intermediate goods predominate over domestic.

TABLE 28

GROSS OUTPUT OF MANUFACTURING:  
 INPUTS AND ALLOCATION, 1960 AND 1965  
 (MILLION MALAYAN DOLLARS, PRODUCERS' PRICES)

	INPUTS		ALLOCATION OF OUTPUT		
	1960	1965		1960	1965
Agriculture	1533.4	1397.1	Domestic Producers	182.4	658.5
Mining	370.6	707.2	Domestic Consumers	561.6	1014.0
Other			Exports	2112.7	2368.2
Domestic Sectors	268.1	793.2	Miscellaneous	<u>155.3</u>	<u>245.1</u>
Imports	389.3	666.7			
Factor Payments	<u>450.6</u>	<u>721.6</u>			
Total	3012.0	4285.8	Total	3012.0	4285.8

Source: Department of Statistics, Interindustry Accounts, 1960, 1965.

The export orientation of manufacturing is apparent from the allocation side of Table 28. In 1960, 70 per cent of the manufacturing sector's gross output was exported, though by 1965 the exported share had fallen to 55 per cent, indicating a tendency toward a larger domestic orientation. Consumers (households) absorbed 19 per cent of gross manufacturing output in 1961 and 24 per cent in 1965. Thus, these data signify a creeping trend toward a larger import substitution component, but nevertheless the overwhelming export orientation of manufacturing remains clear.

#### 4. CONCLUSION

The geographical dichotomy between West and East Malaysia presents problems for statistical verification of the export promotion growth system which has characterized Malaysia's first generation of transition experience. The dichotomy also has profound implications for Malaysia's transition prognosis. While there is a tendency in much of the literature on Malaysia's development to neglect East Malaysia because of serious data problems, such an approach is unrealistic for an evaluation of Malaysia's major transition growth trends. Though East and West Malaysia are very different in resource endowments, they are component parts of a single political unit which is likely to weld the two parts

increasingly into a symbiotic economic system. In this concluding section we briefly consider the implications of this basic factor for Malaysia's future transition growth.

We have observed that West Malaysia contains the majority of Malaysia's population (about 85 per cent) but, nevertheless, still shows a relatively low density of population. A surplus of potentially cultivable land appears to exist. The experience of the first decade of independence suggests, however, that this land surplus will be taken up more to expand domestic food output than to expand primary product exports. The government's orientation toward raising the economic position of Malays in the traditional sector supports this prognostication. Moreover, the government's export expansion efforts in West Malaysia have not led to significant progress in diversifying West Malaysia's exports. As a result, West Malaysia has suffered from deteriorating terms of trade. In this situation, continued reduction of West Malaysia's food deficit by expansion of food output is likely to prove to be the emphasis in absorbing the region's land surplus.

Since the mid-1960s West Malaysia's deteriorating export fortunes have induced a clear tendency toward import substitution. Whether the free market character of this process will be eroded in the future by an aggressive program of controls to foster rapid import substitution is a major growth issue now confronting Malaysia.

The recent development of East Malaysia contrasts sharply with the transition experience in West Malaysia. The primary product export emphasis remains strong, and food deficits have continued to grow--in 1966 representing about one-fourth of Malaysia's total food deficit. Given the large and diversified, but sparsely populated, resource base, however, East Malaysia's future primary product export prospects look bright. In contrast to West Malaysia, considerable diversification of exports has occurred and conditions are favorable for rapid growth of a diversified pattern of primary product exports. In both Sabah and Sarawak, timber exports have grown rapidly and exports of other indigenous products have been successfully expanded during the past five years.<sup>272</sup>

These evolutionary transition forces, contrasting between East and West Malaysia, point to the possibility of a new phase of transition growth, based upon geographical specialization. The striking land-surplus condition in East Malaysia places that region in a natural position as the primary product export base for a new growth phase. As West Malaysia's export enclave eventually gives way to traditional sector growth and import

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<sup>272</sup>For example, pepper and sago flour and minerals from Sarawak; fish, copra, and hemp from Sabah.

substitution trends in that region, therefore, East Malaysia may serve as the export base for West Malaysia's industrialization.

The geographically specialized pattern of import substitution growth is one which Indonesia pursued without success during the first decade of Indonesian independence. A clear lesson from this experience is that the employment of one region's export surplus to promote industrialization of a second region evokes very serious political tensions. The basic reason for failure in the Indonesia case, however, was the absence of an entrepreneurial response by indigenous Indonesians. In the Malaysian case, where entrepreneurship is dominated by the Chinese minority, these political and entrepreneurial threats may be expected to be particularly volatile. Thus, although the economic basis may be judged to be relatively sound, there are serious questions about the political viability of the transition phase which is appearing to evolve in Malaysia.

## APPENDIX

TABLE 13-A1

COMPOSITION OF WEST MALAYSIAN EXPORTS, 1956-1966  
(BY TYPE, AS FRACTION OF TOTAL)

Year	Unprocessed Agricultural Products ( $E_x'$ )	Processed Agricultural Products ( $E_x''$ )	Mineral Products ( $E_m$ )	Manufactured Products ( $E_i$ )
1956	.044	.677	.256	.023
1957	.045	.671	.256	.028
1958	.048	.724	.200	.028
1959	.073	.726	.179	.022
1960	.080	.653	.239	.028
1961	.079	.583	.294	.044
1962	.045	.594	.315	.046
1963	.053	.575	.320	.052
1964	.061	.532	.349	.058
1965	.062	.514	.364	.060
1966	.068	.527	.339	.066

Source: Basic data from United Nations, Yearbook of International Trade Statistics, various issues.

TABLE 13-A2

DISAGGREGATION OF TOTAL MERCHANDISE  
IMPORTS INTO COMPONENTS, 1957-1967

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( P E R C E N T O F T O T A L )

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Year	Agricultural Consumer Goods ( $M_x$ )	Industrial Consumer Goods ( $M_y$ )	Capital Goods ( $M_i$ )	Intermediate Goods ( $M_R$ )
1957	20.3	31.9	38.5	9.3
1958	21.6	31.6	37.8	9.0
1959	20.5	30.9	38.8	9.8
1960	17.9	29.9	40.5	11.7
1961	n. a.	n. a.	n. a.	n. a.
1962	17.0	35.1	35.9	12.0
1963	18.0	36.1	33.8	12.1
1964	18.5	36.6	36.9	11.0
1965	16.6	35.7	35.1	12.6
1966	17.0	33.1	34.9	15.0
1967	19.0	31.0	35.8	14.2

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Source of basic data: United Nations, Yearbook of International Trade Statistics, various issues.

TABLE 13-A3

WEST MALAYSIA: PRODUCTION, NET IMPORTS AND  
TOTAL SUPPLY OF RICE, 1957-1967 (TONS)

Year	Production	Net Imports	Total Supply	Production
				Total Supply
1957	417,210	340,516	757,726	.551
1958	418,640	346,154	764,794	.547
1959	373,470	359,596	733,066	.509
1960	477,980	356,966	834,946	.572
1961	523,120	315,709	838,829	.624
1962	493,840	288,141	781,981	.632
1963	535,920	389,263	925,183	.579
1964	477,350	301,846	779,196	.613
1965	571,020	257,351	828,371	.689
1966	585,030	207,602	792,632	.738
1967	567,430	285,802	853,232	.665

Source: Monthly Statistical Bulletin of West Malaysia (August, 1968).

TABLE 13-A4

WEST MALAYSIA: REAL PRODUCT, AGGREGATE AND BY  
SECTOR, AND PER EMPLOYED LABORER BY SECTOR, 1955-1967  
(AT 1964 CONSTANT FACTOR COST)\*

Year	Real GDP	Agricultural Sector Real Product	Nonagricultural Sector Real Product	Labor Productivity	
				Agriculture	Nonagriculture
1955	3994	1355	2639	1094	3022
1956	4129	1355	2774	1091	3095
1957	4232	1390	2842	1116	3089
1958	4202	1439	2763	1153	2928
1959	4398	1477	2921	1180	3018
1960	5021	1568	3453	1249	3479
1961	5378	1706	3672	1355	3607
1962	5689	1760	3929	1394	3763
1963	5974	1799	4175	1422	3911
1964	6255	1848	4407	1458	4036
1965	6700	1943	4757	1530	4261
1966	7075	2066	5009	1623	4387
1967	7419	2155	5264	1689	4507
Average annual growth rate	5.3%	3.9%	5.9%	3.7%	3.4%

\*Real GDP and real product by sector in million Malayan dollars; labor productivity by sector in Malayan dollars.

Sources: Product data: United Nations, Yearbook of National Accounts Statistics and Monthly Statistical Bulletin of West Malaysia.

Employment: ILO, Yearbook of Labor Statistics and Malaysian data.

Note: Product estimates for years prior to 1960 were presented in 1960 constant prices; these were converted to the 1964 base.

TABLE 13-A5

## RESIDUALS FROM PRODUCTIVITY REGRESSIONS

Year	Agricultural Productivity		Industrial Productivity	
	Actual Residual	As % of Observation	Actual Residual	As % of Observation
1955	+ 70.066	+ .064	+ 237.433	+ .079
1956	+ 15.280	+ .014	+ 170.661	+ .055
1957	- 11.378	- .010	+ 25.332	+ .008
1958	- 26.959	- .023	- 275.508	- .094
1959	- 51.523	- .044	- 325.328	- .108
1960	- 34.110	- .027	- 4.629	- .001
1961	+ 20.255	+ .015	- 16.512	- .005
1962	+ 6.714	+ .005	+ 0.322	0
1963	- 16.112	- .011	+ 7.695	+ .002
1964	- 32.271	- .022	- 6.350	- .002
1965	- 12.363	- .008	+ 75.974	+ .018
1966	+ 29.239	+ .018	+ 64.413	+ .015
1967	+ 43.127	+ .026	+ 44.471	+ .010

$\rho$  (actual residuals) = .765.

## CHAPTER 14

### THE POSTWAR TRANSITION IN TAIWAN

#### INTRODUCTION

In this chapter we consider a type of transition growth experience which introduces a new growth phenomenon into our study of open dualistic economies--the phenomenon of growth phases. In our previous analysis of prolonged import substitution growth (Chapter 9) and export promotion growth (Chapter 11), we were concerned with growth regimes which served to launch transition growth but which remained in existence throughout the first generation of transition experience in the countries used as empirical examples of these growth types. We now investigate the case of Taiwan where the growth system used to provide a first departure from colonialism led to a period of rapid evolutionary change in the economy's structure and mode of operation so that more than one distinct phase of transition growth occurred during the first generation.

In a historical view of the transition process, the phenomenon of rapid succession of growth phases assumes very special significance. Two aspects deserve emphasis: (i) the rapidity of growth which accompanies this sequencing and (ii) progress in each phase in the sequence

toward inculcating in the society more advanced functional attributes of modern economic growth. From the experience of such growth accomplishments within the short time span of one generation of the transition, we may learn about the evolutionary process involved in successful transition growth experience.

The postwar transition records of open dualistic economies suggest that rapid evolution of the economy's mode of operation from the system launching transition growth is a rare phenomenon, requiring the presence of very special background conditions. Hence, only a few empirical examples of multiple transition phases exist during the first generation. Taiwan is used as our country example in this chapter, while South Korea and Israel may be cited as other cases.

Analysis of the sequencing of transition growth phases in these special success cases is our major focus in this chapter. The analyses will emphasize the evolutionary nature of successful transition growth. From a long-run historical perspective, transition growth is viewed as an interim growth process of perhaps several generations in duration (as emphasized in Chapter 1). During this period, the economy's colonial mode of operation, inherited from the colonial epoch, is progressively altered as the economy moves through a series of growth phases, each representing an advance toward the goal of achieving a modern economic system.

In applying an evolutionary approach to transitional growth in this chapter, we recognize that a completely deterministic theory of historical evolution is a dangerous oversimplification. An evolutionary emphasis must, by its very nature, focus upon the logic of growth controlled by endogenous forces. In the real world, however, this underlying logic will inevitably be distorted by the presence of exogenous factors which interfere with the "logical" unfolding of endogenous growth forces. Thus, actual transition growth experience, as viewed, for example, during the first generation may assume a variety of different patterns. This phenomenon of diversity, the subject of Chapter 3, is explained by differences in exogenous factors. We must recognize, therefore, that the value of an evolutionary thesis of transition growth lies in its capacity to disentangle the two types of forces--endogenous and exogenous--which determine the course of transition growth in the real world.

In employing Taiwan as our empirical counterpart of this case of transition growth phases, we take cognizance of the special set of exogenous conditions which contributed to Taiwan's rapid transition growth. Before investigating the phases which occurred in Taiwan, therefore, we briefly consider the uniquely favorable background from which the sequence of evolutionary phases arose.

## 1. BACKGROUND CONDITIONS

An unusually favorable supply of human resources is basic to understanding Taiwan's successful transition experience. The withdrawal of Japanese entrepreneurship during the decolonization process was offset by a wave of immigration of skilled manpower from Mainland China in the late 1940s. Prominent among the immigrants were Chinese with a long history of commercial and industrial experience in China's coastal provinces, and these immigrants assumed the entrepreneurial roles required for transition growth. This supply of industrial leaders was matched by an abundant and literate labor force, capable of quickly acquiring industrial labor skills. These human resource advantages enabled the society to terminate controls and protection after a brief period of import substitution, as entrepreneurs quickly learned to function in more competitive free markets.

The second special background factor stems from the preconditions for modernization of agriculture which were established during the half century of Japanese control (1895-1945) in Taiwan.<sup>273</sup> During this

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<sup>273</sup>See Samuel P. S. Ho, "Agricultural Transformation Under Colonialism: The Case of Taiwan," Journal of Economic History, Vol. XXVIII, No. 3 (September, 1968), pp. 313-340.

period, Taiwan was developed into an agricultural complement to Japan's industrializing economy. Taiwan became the beneficiary of Japan's own modernization as agricultural improvement was emphasized. Productivity gains in both the traditional and export subsectors were encouraged by investment in rural infrastructure, by an educational system which reached into traditional agriculture--improving literacy and adaptability to technical change--and by the formation of cooperatives for promoting both dissemination of improved methods and wider access to markets. Through these programs, technological dualism was gradually eliminated, providing the basis for rapid modernization of agriculture, as a whole, during the postwar transition period.

Taiwan's preconditioning for agricultural modernization was indeed unique. Japanese industrial growth required rapid expansion of food and raw materials from her colony, and Japanese experience was freely transferred to raise agricultural productivity. This background contrasts sharply with other Southeast Asian countries, where technical change and modernization were confined to small enclaves within the massive traditional agricultural sector and growth effects upon traditional agriculture were more accidental than intentional. Thus, Taiwan's task of agricultural modernization during the transition was facilitated by a long period of conditioning, an advantage rarely found in other countries embarking upon transition growth.

Special features in Taiwan's postwar situation enabled the society to turn its attention quickly to building upon these conditions for agricultural modernization. The Kuomintang government was amenable to institutional reform in agriculture because of its preceding history on the mainland. This orientation was reinforced by access to foreign assistance--both financial and technical--to pursue agricultural programs at an early stage of the postwar transition. This effort was epitomized in the Joint Commission for Rural Reconstruction which provided American assistance for creating institutional conditions (particularly "land reform") conducive to rapid agricultural modernization. The significance of this effective program is apparent by contrast with the Philippine case, where agricultural stagnation became the major barrier to smooth and rapid transition growth after the momentum of import substitution growth had been exhausted (see Chapters 9 and 10).

In summary, Taiwan's unique success is explained by particularly favorable background conditions affecting the two most crucial aspects of transition growth--entrepreneurship and agricultural development. These favorable conditions were a joint product of Japanese colonialism and the historical accident of the transfer of entrepreneurial and labor skills from the mainland. With the additional benefit of access to large-scale external assistance, Taiwan was strategically suited to launching

transition growth by a brief and effective import substitution phase, and followed by even more rapid growth under export substitution--all within a brief 15-year period.

## 2. TRANSITION GROWTH AS AN EVOLUTIONARY PROCESS

Much has been written about structural change in developing countries. In the commonly accepted sense, structural change is interpreted as the changes in relationships among the economy's major sectors over the long-run course of an economy's development.<sup>274</sup>

However, much of the received literature focuses upon structural change as a consequence of the growth process rather than upon structural change as a cause of growth.<sup>275</sup> In our evolutionary approach to transition growth

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<sup>274</sup>This acceptance of structural change is commonly found in statistical work which emphasizes the relative sizes of various production sectors, with size usually measured by output or employment. This emphasis is apparent, for example, in the work of Colin Clark (The Conditions of Economic Progress [Second Edition; London: Macmillan and Co., 1951]); Simon Kuznets (Modern Economic Growth [New Haven: Yale University Press, 1966]); and Hollis Chenery ("Patterns of Industrial Growth," American Economic Review, Vol. 50, No. 4 [September, 1960], pp. 624-654).

<sup>275</sup>This orientation derives from the theoretical interest in dynamic general equilibrium theory. This theory seeks to analyze the changing resource allocation (and attendant changes in size of production sectors) as primary growth forces (e.g., technological change) raise per capita income. Thus, emphasis is placed upon description of resource allocation changes among sectors, with growth causation taken for granted.

phases, however, emphasis is placed upon changes in the economy's structure associated with the assumption of new growth functions. These changes are accomplished through mutually reinforcing alterations in the economy's organizational system and its overall mode of operation.

Outstanding transition growth success in Taiwan has been accompanied by rapid modification of the original triangular structure of the colonial open dualistic economy. Progressive modification of the economy's structure paved the way for the eventual emergence of a mode of operation substantially different from colonialism within a generation of decolonization. This significant transformation occurred as the economy moved through two distinct phases in the first generation of the transition, an import substitution phase (IS phase), 1950-1959, and an export substitution phase (ES phase), commencing in approximately 1959.

## 2.1 The Import Substitution Phase

Taiwan's transition toward a modern economy was launched by an aggressive import substitution program.<sup>276</sup> This program reflected

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<sup>276</sup>In this section a brief heuristic description of the IS phase is given, to be followed by verification of the major properties of IS growth in Taiwan in Section 3.1.

the general characteristics we have described in earlier chapters.

Import substitution built directly upon the triangular pattern of resource utilization inherited from the colonial past. The primary product export base was employed as the means to modify the colonial economy by rapid development of a consumer goods manufacturing sector. The mechanism of import substitution growth, described in Chapter 4, was clearly visible; primary product export earnings were increasingly redirected from consumer goods to producer goods imports to foster the growth of domestic manufacturing capacity. A cumulative process ensued in which growth of domestic capacity released a growing share of foreign exchange earnings for producer goods imports. As our theory predicted, this process was manifested in rapid growth of domestic industrial capacity. The organizational aspects of the IS phase resembled the controlled economy milieu described in Chapter 7. Emphasis focussed upon foreign trade controls since primary product exports remained the basic source of both the foreign exchange and savings required for industrial sector growth. There was a clear protectionist strain in foreign trade policies, strengthening the inducements offered by profit transfers to industrial

entrepreneurs.<sup>277</sup> Behind this controlled organizational system lay the rationale of forced industrial growth from the surplus generated by primary product exports, as pointed out in Chapter 7.

This organizational milieu provided rapid industrial growth during the early years of the IS phase. However, deceleration of import substitution growth began to appear by the mid-1950s, conforming to the inherent exhaustion tendency predicted by our theory. When this termination effect appears, growth of the industrial sector will continue to lag unless a new market orientation is found.<sup>278</sup> Taiwan's outstanding success during the first generation of the transition was based upon the society's ability to adopt a new orientation for industrial sector growth when the inherent termination forces of the IS phase appeared.

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<sup>277</sup>For evidence of these organizational features in Taiwan during the period immediately after 1950, see Ken C. Y. Lin, "Industrial Development and Changes in the Structure of Foreign Trade: The Experience of the Republic of China in Taiwan, 1946-66," International Monetary Fund Staff Papers, Vol. XV, No. 2 (July, 1968), especially p. 297.

<sup>278</sup>When a new industrial orientation is not found, or mere prolongation occurs, symptoms of lagging import substitution growth will appear. These include the appearance of unutilized industrial capacity, capital flight, terms of trade shifting against the industrial sector, and a declining rate of return to industrial capital. These symptoms appeared in the Philippines and continued over a period of several years, in contrast to Taiwan, where they were quickly overcome.

During the second half of the 1950 decade, as these IS phase termination tendencies began to appear in Taiwan, the industrial sector responded by beginning to turn to the market offered by acceleration of modernization of agriculture. Encouraged by government agricultural infrastructure programs and an easing of the IS phase policies discriminatory to the agricultural sector, the industrial sector began to shift to production of modern inputs for agriculture.

In Chapter 9 we briefly noted that at the termination of import substitution growth, a part of industrial output may be diverted from consumer goods to intermediate inputs for agriculture. It was observed that these inputs may be directed to either agriculture's export enclave, (X), or the traditional sector, (T). Where the industrial sector merely concentrates upon stimulating the growth of primary product exports by expanding its servicing and input function, the phenomenon of prolongation of import substitution occurs, as shown in our analysis in Chapter 9. Where the industrial sector's reorientation consists of a major shift to modernize both the export and traditional subsectors, however, the basis for a new growth phase exists and the import substitution process fades into the background. Such a major shift in industry's orientation occurred

in Taiwan after the first wave of import substitution growth began to confront the built-in retardation effects associated with the process.<sup>279</sup>

Agricultural modernization is a natural consequence of the import substitution phase. When retardation of import substitution growth occurs, there is an inherent tendency for industrial entrepreneurs to seek new investment outlets in the domestic economy rather than venturing into the more uncertain and demanding arena of foreign markets. The organizational system accompanying import substitution, in discriminating against agriculture, tends to starve that sector in terms of investment, resulting in growing investment opportunities. The industrial know-how gained during the import substitution phase is relevant to producing modern inputs for agriculture as well as for diversifying agricultural exports through introduction of new products and greater domestic industrial processing.

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<sup>279</sup>A dramatic rise in modern inputs to agriculture in the period 1955-1960 is well documented. See, for example, Yhi-Min Ho, Agricultural Development of Taiwan, 1903-1960 (Nashville: Vanderbilt University Press, 1966), especially Chapter 8; and Teng-hui Lee, "Statistical Tables, Methodology, Data Sources and Conclusions Regarding Intersectoral Capital Flows in the Economic Development of Taiwan, 1895-1960," Occasional Paper No. 11, Department of Agricultural Economics, Cornell University, September, 1968, especially Table 6, (mimeographed).

The feasibility of exploiting new opportunities in the agricultural sector, however, depends upon several crucial preconditions. Perhaps most critical is a history of raising agricultural productivity through introduction of modern inputs during the preceding colonial history. The existence of nascent distributive channels for dissemination of modern inputs and the acceptability of new technology in the agricultural sector are important features of such a colonial heritage. A second prerequisite is the maintenance of domestic political stability to attract investment into raising agricultural productivity. Finally, reorientation of industrial sector output toward new markets is likely to be associated with positive public measures encouraging a shift to agricultural modernization.<sup>280</sup>

We have noted earlier Taiwan's favorable agricultural background inherited from Japanese colonialism, while the other essential conditions appeared in Taiwan during the mid-1950s.

The shift to agricultural modernization during the import substitution phase is crucial for understanding the evolutionary nature of successful transition growth. Reorientation of industry from the domestic

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<sup>280</sup> Institutional conditions in the agricultural sector, such as patterns of land utilization and ownership, may tend to obstruct modernization, and these obstacles can be removed only by government policies; e.g., "land reform."

market focus of the IS phase to foreign markets is the essence of moving on to an export substitution phase. To understand better the evolutionary nature of growth in Taiwan, we now briefly investigate the prerequisites for this reorientation.

## 2.2 Emergence of Export Substitution Growth

We have emphasized the uniqueness of a transition economy's entry into a phase of export substitution growth during the first generation of its transition experience after decolonization. The significance of this phase, as its name suggests, lies in the fact that the economy for the first time engages in export of manufactured goods, progressively substituting them for previous primary product exports (which had dominated both export structure and growth dynamics through colonial history). This new phase became established in Taiwan in approximately 1959, after a relatively brief (7-8 years) phase of import substitution growth.

The emergence of an export substitution phase after an initial period of transition growth in open dualistic economies is fundamentally a matter of supply and demand conditions affecting the rise of a disciplined industrial labor force. The underlying factors operating on the supply of labor are found in the traditional agricultural sector, where

modernization has been proceeding. On the demand side, the major factor is the quality of industrial entrepreneurship, which has been gradually oriented toward market criteria of efficiency, encouraged by easing of the control policies of the import substitution phase. Availability of a cheap and efficient labor force and its employment to provide a new export base to replace the traditional natural resource base are sine qua non for evolution of export substitution.

Under a labor-surplus condition (which characterizes societies opting for beginning the transition by an import substitution phase), the source of labor supply lies in the traditional agricultural sector. Given the initial condition of a large and stagnant traditional sector, migration from traditional agriculture tends to occur early in the transition.<sup>281</sup> Migration alone is not adequate, however, to assure a labor supply for export substitution growth. Modernization of traditional agriculture is needed to provide simultaneous release of labor and the food supply required for their maintenance. Thus, release of labor supply must be construed in a technical sense, encompassing both labor and food. In this

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<sup>281</sup>We have seen, in Chapter 9, that this force poses serious problems for prolonged import substitution growth.

sense, labor transfers are contingent upon expansion of agricultural productivity, providing the basis for delivery of growing quantities of food (and raw materials) from traditional agriculture to the industrial sector.

If this condition is met, an assured supply of "cheap" labor becomes available for utilization in manufacture of labor-intensive export goods. While domestic natural resources may still be required as inputs, the conspicuous and important aspect of the new export orientation is its reliance upon the comparative advantage of cheap labor services, rather than land services, as in the preceding history of the economy.

The growth of demand for labor services obviously depends upon the capacity of industrial entrepreneurs to sell their output in competitive world market conditions. For this reason the liberalization of IS phase controls is essential to emergence of the ES phase. Entrepreneurs must gradually learn to operate under market criteria, encouraging efficient use of the labor services made available by release from modernizing agriculture.

Successful export substitution requires diversification of outputs and markets. Industrial entrepreneurs must become increasingly sensitive to market changes and alert to innovation possibilities on the technological front. This very diversification thrust of export substitution will

eventually begin to free the open dualistic economy from its historical difficulties of fluctuating terms of trade and unstable foreign demand for a few primary product exports.

The assumption of these new growth functions associated with adopting an external orientation for industrial output is contingent upon the development of entrepreneurial capabilities. Entrepreneurial development is fundamentally a matter of gaining productive efficiency to enable exploitation of the economy's comparative advantage in competitive export markets. In the labor-surplus, open dualistic economy, this advantage lies in the cheapness of labor supply. An essential condition for utilization of this comparative advantage is entrepreneurial capacity to adopt labor-using techniques of production. In practice, this requires the ability to adapt imported capital goods (embodying capital-intensive technology) to the economy's labor-surplus condition. This involves a major change in entrepreneurial behavior from the IS phase, when the control system tended to discourage modification of capital-intensive imported technology.<sup>282</sup> Hence, organizational change must accompany

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<sup>282</sup>In the climate of controls and protection during the IS phase, entrepreneurs are assured high profits by merely importing producer goods embodying capital-intensive technology and employing these goods without modification.

the evolution of entrepreneurial capabilities to encourage the shift to effective competition in export markets.

To summarize, there are two major prerequisites for the emergence of successful export substitution: (i) modernization of agriculture must raise productivity to enable the traditional agricultural sector to release labor, food, and raw materials to the industrial sector; and (ii) indigenous entrepreneurs must be capable of penetrating new markets through growing competitiveness and must also learn to modify imported technology to produce industrial exports which fully exploit the advantage of a cheap labor supply. Society's capacity to meet these preconditions depends upon accomplishments during the IS phase. We now turn to an analysis of export substitution growth when these prerequisites are present.

### 2.3 The Export Substitution Phase

The export substitution phase of transition growth represents a relatively advanced growth type among open dualistic economies. The operation of the economy, in terms of our intersectoral framework, is more complex than the other growth types (import substitution and export promotion) discussed. Part of the complexity is explained by the persistence of vestiges of these earlier growth phases, reflecting the fact

that export substitution naturally evolves from both the operational and organizational features of import substitution (which, in turn, evolved from the triangularism of colonial export promotion growth).

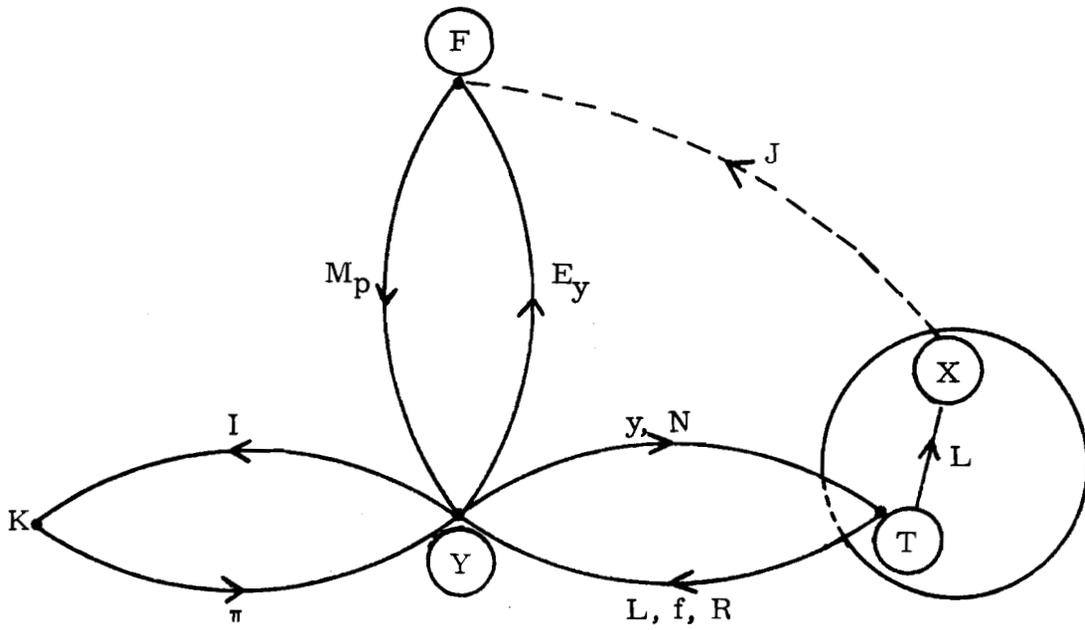
Diagram 48 shows the structural outline of the export substitution growth phase. The centrality of the industrial sector is apparent. The industrial sector, (Y), now has an external orientation toward the foreign sector, (F), for disposition of its output in the form of exports,  $E_y$ , which are exchanged for producer goods imports,  $M_p$ . Internal integration between the industrial sector and the traditional agricultural sector, (T), is reflected in flows of labor, L, food, f, and raw materials, R, to the industrial sector in return for industrial consumer goods, y, and intermediate inputs, N.<sup>283</sup> As a result of this pattern, industrial investment, I, is financed for the first time from industrial profits,  $\pi$ .<sup>284</sup>

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<sup>283</sup>The penetration of industry into foreign markets and backward into agriculture to substitute domestic for imported intermediate goods is verified for Japanese economic history and described as the "flying geese pattern" of industrial development in Kaname Akamatsu, "A Historical Pattern of Economic Growth in Developing Countries," The Journal of Developing Economies (May-August, 1962), pp. 3-25.

<sup>284</sup>While in the IS phase industrialists' profits are of a windfall nature, traced to profit transfers from agricultural (land-based) exports, industrialists' profits are traced in the ES phase to the export of labor services. The emergence of profits from labor services under the labor-surplus condition is emphasized in W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labor," The Manchester School, Vol. 22 (May, 1954), pp. 139-191.

Diagram 48: Structure of Export Substitution



This "three-leaf clover" structure of export substitution (emphasizing external orientation of industry, domestic integration, and self-finance of industrial investment) is superimposed upon and gradually replaces the triangularism of the previous IS phase. This is reflected, for example, in the continuation of primary product exports, J (shown by the dotted line), from export agriculture, (X), to the foreign sector and by the continued flow of labor from traditional agriculture to export agriculture.

The mode of operation of the ES phase hinges upon the intersectoral allocation of labor through which the abundant supply of surplus labor in the traditional agricultural sector becomes utilized for exporting labor-intensive goods to the foreign market. Thus, the ES phase is a phenomenon unique to the labor-surplus type of open dualistic economy. We have seen, however, that export substitution emerges from the natural termination of the IS phase only where the two positive preconditions of entrepreneurial development and agricultural modernization are fulfilled during the IS phase.<sup>285</sup>

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<sup>285</sup>The appearance of the ES phase during the first generation of the transition is rare since both conditions are seldom fulfilled. On the rarity of export substitution in contemporary less-developed countries, see Ken C. Y. Lin, "Industrial Development and Changes in the Structure of Foreign Trade: The Experience of the Republic of China in Taiwan, 1946-1966," loc. cit., p. 291.

The emergence of the ES phase signifies that the industrial entrepreneur has achieved maturity in respect to exploiting international trade opportunities by utilizing the economy's surplus-labor advantage. This is accomplished by rapid expansion of industrial sector labor employment, facilitated by both rapid growth of industrial capital and the introduction of labor-using innovations. For these reasons, the ES phase is characterized by an unusually high rate of growth of real gross domestic product (GDP).

The mode of operation of a closed labor-surplus dualistic economy has been a familiar topic in contemporary development theory.<sup>286</sup> The case of an open economy can be analyzed by a slight modification of the closed dualism model. The central phenomenon in the latter is reallocation of labor from (T) to (Y), focussing upon a labor-absorbing aspect by the industrial sector and a labor-releasing aspect by the agricultural sector.

Labor reallocation from (T) to (Y) begins during the IS phase, and a part of industrial output,  $y$ , constitutes real wage payments, exchanged for food from the traditional agricultural sector. Thus, the

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<sup>286</sup> This theory has been developed, inter alia, by W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labor," loc. cit.; John C. H. Fei and Gustav Ranis, Development of the Labor Surplus Economy: Theory and Policy (Homewood, Ill.: Richard D. Irwin, Inc., 1964); and Dale W. Jorgensen, "The Development of a Dual Economy," Economic Journal, Vol. 71 (June, 1961), pp. 309-334.

intersectoral integration emphasized as an important phenomenon in the ES phase is actually the acceleration of a trend begun during the IS phase. This interaction between industry and traditional agriculture is a basic factor contributing to modernization of traditional agriculture.<sup>287</sup> This is especially true as termination of IS growth appears, and industrial entrepreneurs turn to domestic market opportunities associated with agricultural inputs (e.g., fertilizer), a phenomenon which we observed occurring in Taiwan from 1955-1960.

For analysis of labor absorption by industry, in the theory of closed dualism, the real wage in terms of industrial goods,  $w_i$ , is assumed to be relatively constant because of the labor-surplus condition ("unlimited supply of labor"). Rapidity of labor absorption then depends upon the rate of increase of the marginal physical productivity of labor,  $MPP_L$ . Labor is

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<sup>287</sup>This idea conforms to the emphasis of the "contact school," which stresses that contact between industry and agriculture is essential for transmission of modernizing forces to agriculture. See Douglas C. North, "Agriculture in Regional Economic Growth," in Carl Eicher and Lawrence Witt (eds.), Agriculture in Economic Development (New York: McGraw-Hill Book Co., 1964), pp. 69-78; and Anthony Tang, Economic Development in the Southern Piedmont, 1860-1950; Its Impact on Agriculture (Chapel Hill, N. C.: The University of North Carolina Press, 1958).

absorbed rapidly when (i) labor-using innovations raise  $MPP_L$ , (ii) the real wage,  $w_i$ , remains at a relatively constant low level causing income distribution to favor industrial profits, leading to (iii) a high rate of industrial capital accumulation (again raising  $MPP_L$ ). The second condition is traced to agricultural modernization.

In the analysis of labor release from agriculture, expansion of agricultural productivity assures an increasing supply of labor as well as agricultural goods to the industrial sector. This, in turn, leads to internal terms of trade favorable to industry, and hence the relative "cheapness" of labor supply; i. e., a low real wage,  $w_i$ . This enhances industrial profits, promoting capital accumulation. In this sense the traditional agricultural sector, (T), replaces the agricultural export sector, (X), as the major source of intersectoral finance for industrial capital accumulation.

The closed dualism analysis, just summarized, is applicable to the ES growth phase since it is centered upon the labor reallocation process. The only major modification required is in respect to the way labor is utilized by the industrial sector. In the closed economy, the industrial sector must use labor to produce its own capital goods, while in the open economy during the ES phase the industrial sector may import capital goods by using labor to produce exports of labor-intensive goods.

While a rigorous model incorporating these conditions is not difficult to construct, this will not be undertaken since all the relevant observable characteristics for our empirical application to the ES phase in Taiwan may be readily deduced from the closed model.<sup>288</sup> This is done in the next section, which focusses upon verification of the evolutionary phasing of transition growth in Taiwan.

### 3. EMPIRICAL VERIFICATION OF TRANSITION GROWTH PHASES IN TAIWAN

The primary purpose of empirical verification of our theory of transition growth sequencing is to demonstrate, from statistical evidence, the existence of two distinct phases of transition growth in Taiwan: (i) the import substitution phase, 1951-1959, and (ii) the export substitution phase from 1959 on. A number of observable properties will be deduced from our foregoing theory of growth during the import substitution and export substitution phases. These properties represent characteristics of both an operational and organizational nature, and

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<sup>288</sup>It may be noted that the closed model has not been empirically tested. Our analysis suggests that the model is not applicable to the IS phase, a transition growth phase found in almost all less-developed countries during the postwar period.

verification of these properties will be based mainly upon time series for economic data from Taiwan's postwar experience. The IS phase and the ES phase are discussed in turn.

### 3.1 The IS Phase

Observable properties of the IS phase, relevant for empirical verification, are deduced from our theory of import substitution growth, as developed in Chapters 4 and 9. We proceed by stating each major property and introducing the evidence pertinent to its verification.

P 1: Import substitution builds upon the colonial economy heritage, while modifying that heritage to initiate a transition toward a new growth system. Although import substitution growth retains the basic triangularism of the colonial economy, it departs from the colonial system by adopting an internal orientation for growth by creating a domestic industrial sector producing consumer goods.

Full statistical verification of this property would involve extensive implementation of the colonial economy model (as presented, for example, in Chapter 2). This task is beyond the scope of this book.

Evidence that the import substitution phase in Taiwan both evolved from and modified the colonial economy, however, is readily available in other studies.<sup>289</sup>

P 2: Import substitution involves two basic substitution phenomena. On the one hand, there is substitution in the foreign exchange allocation sense as producer goods imports,  $M_p$ , displace industrial consumer goods imports,  $M_y$ . This may be seen from the movement of equilibrium points  $E_0, E_1, E_2 \dots$  in Diagram 5 of Chapter 4.<sup>290</sup> On the other hand, there is substitution in the domestic market sense as domestic output,  $y$ , replaces imported industrial consumer goods,  $M_y$ . The simultaneous occurrence of these two phenomena represents the major empirical criterion for identification of the IS phase.

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<sup>289</sup>See, for example, Ken C. Y. Lin, "Industrial Development and Changes in the Structure of Foreign Trade: The Experience of the Republic of China in Taiwan, 1946-66," loc. cit., and Neil H. Jacoby, U. S. Aid to Taiwan (New York: Frederick A. Praeger, 1966), especially Chapters 6 and 7.

<sup>290</sup>See page 99.

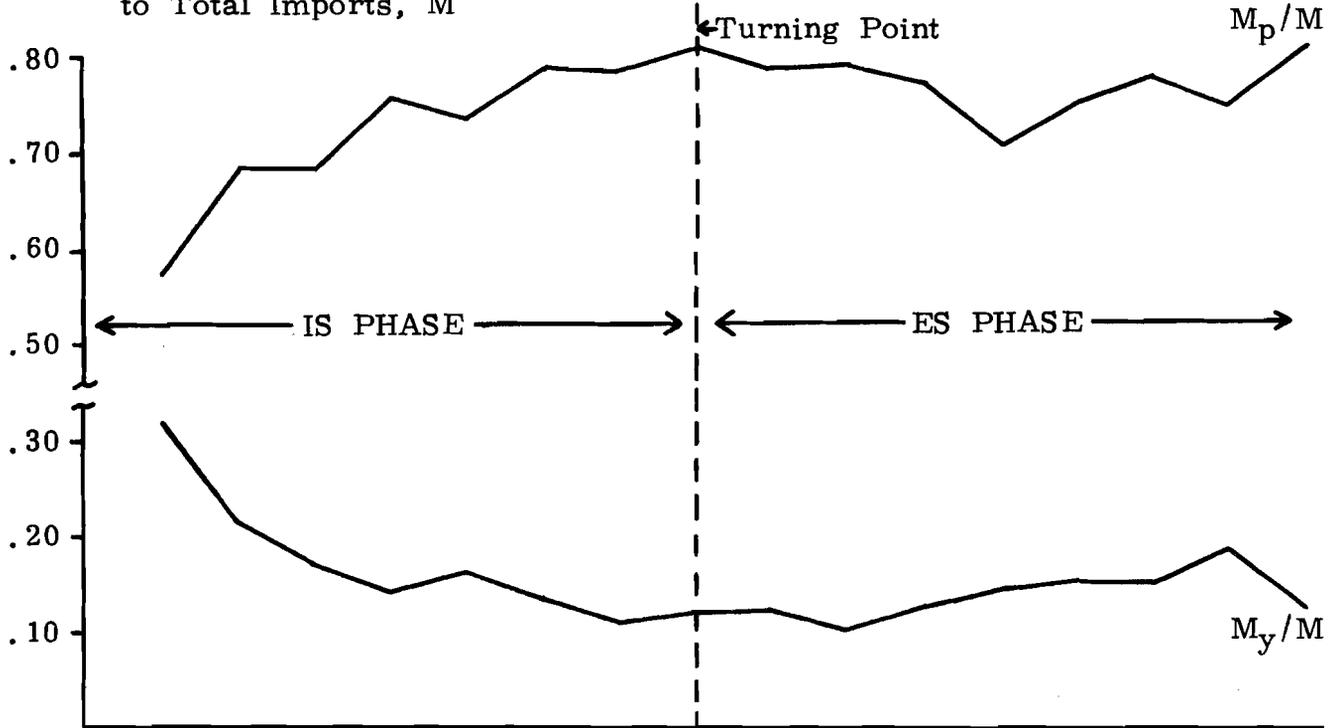
Substitution in the foreign exchange allocation sense is shown in Diagram 49. Total imports,  $M$ , are disaggregated into four components, industrial consumer goods,  $M_y$ , agricultural consumer goods,  $M_x$ , capital goods,  $M_i$ , and intermediate goods,  $M_R$  (i.e.,  $M = M_y + M_x + M_i + M_R$ ). Imports on producer account,  $M_p$ , equal  $M_i + M_R$ . Property P 2 emphasizes substitution of  $M_p$  for  $M_y$  during the IS phase, and the time series for these components are shown in Diagram 49 as percentages of total imports. The vertical line at the year 1959 marks the end of the IS phase (henceforth referred to as the "turning point").<sup>291</sup> As predicted by our theory,  $M_p/M$  shows a consistent increase during the IS phase from 57 per cent in 1952 to 81 per cent in 1959. This contrasts sharply with the  $M_p/M$  ratio during the ES phase when the ratio remains essentially constant. Foreign exchange allocation for industrial consumer goods imports,  $M_y/M$ , as predicted, fell consistently from 32 per cent in 1952 to 12 per cent in 1959 and then showed a slight upward tendency after the turning point.

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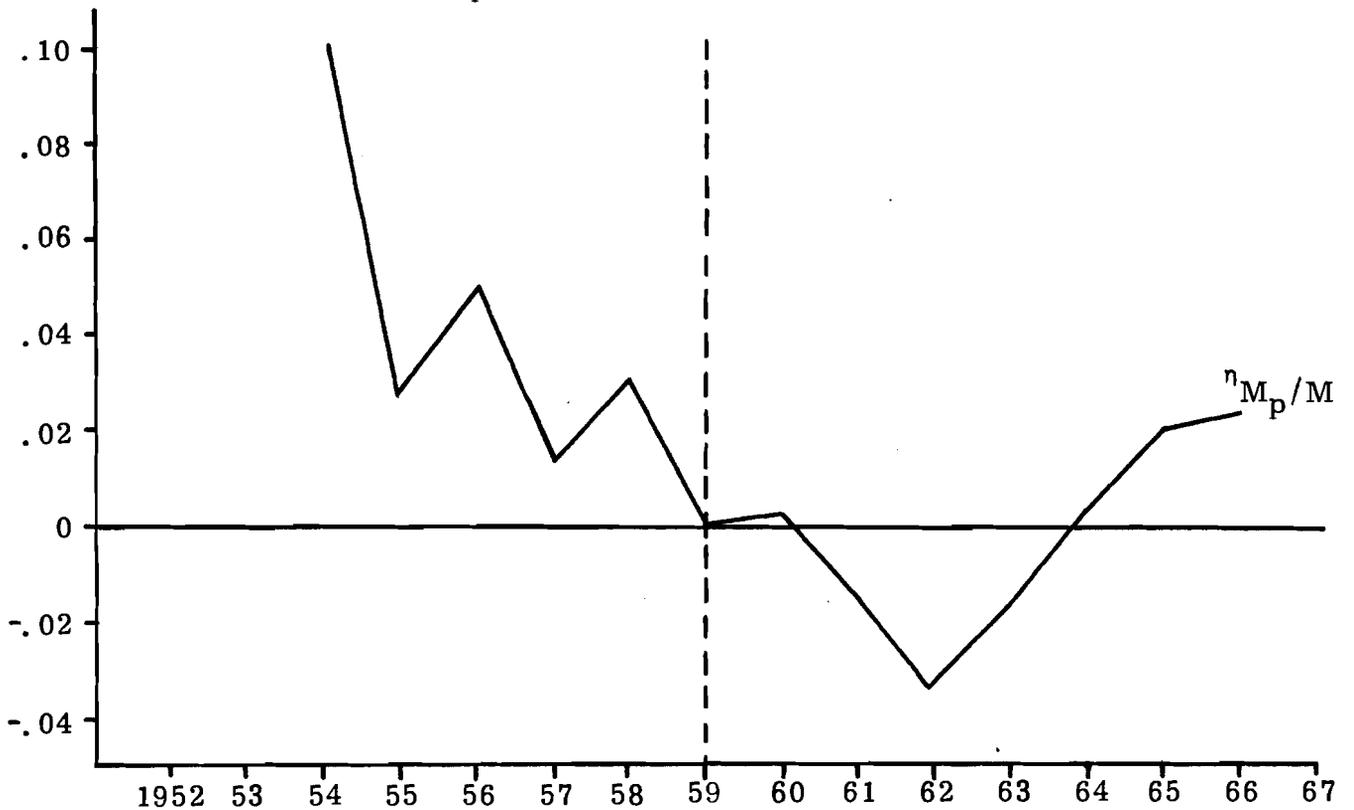
<sup>291</sup>In fact, as we note later, the economy shifted from the IS phase to an ES phase through a turning range, covering three to four years.

Diagram 49: Import Substitution, Foreign Exchange Allocation Sense

a. Ratio of Producer Goods,  $M_p$ , and Industrial Consumer Goods,  $M_y$  to Total Imports,  $M$



b. Rate of growth of  $M_p/M$



Source: Table A1 of Appendix

The rate of growth of  $M_p/M$ , i. e.,  $\eta_{M_p/M}$ , is shown in Diagram 49b.<sup>292</sup> During the IS phase it was positive, but it decelerated to zero precisely at the turning point, leading to the ES phase.

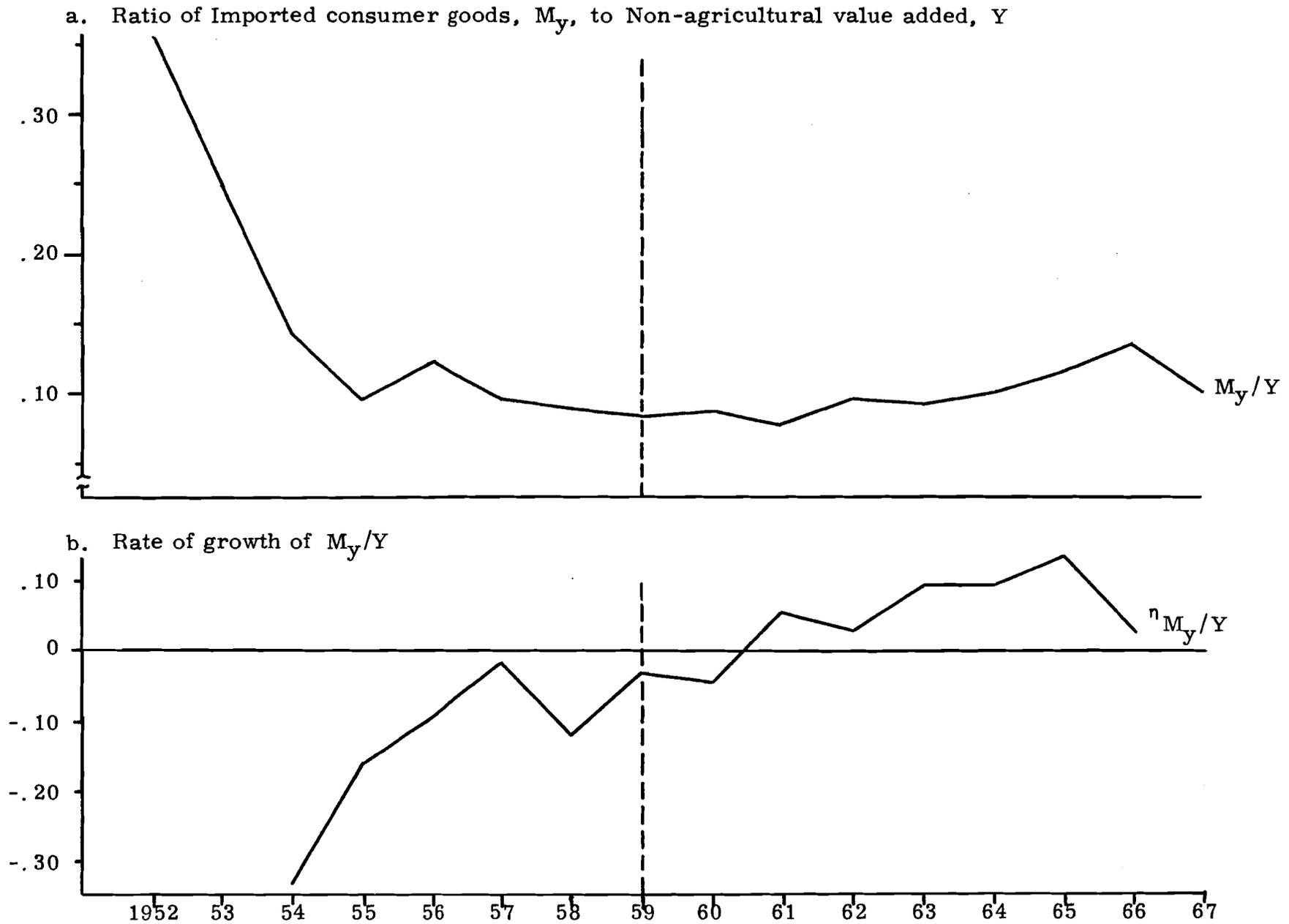
Import substitution in the domestic market sense is shown in Diagram 50; Diagram 50a shows the ratio of imported consumer goods,  $M_y$ , to GDP of the nonagricultural sector,  $Y$ . Import substitution in the market sense is clearly apparent from 1952 to the turning point as the  $M_y/Y$  ratio fell from 36 per cent to 8 per cent. After the turning point, the ratio showed a gradual upward tendency. The reversal from a domestic market orientation of industry in the import substitution phase to a foreign orientation is also clearly apparent from the rate of growth of the  $M_y/Y$  ratio in Diagram 50b. After remaining continuously negative prior to the turning point,  $\eta_{M_y/Y}$  became positive shortly after the turning point.

P 3: Import substitution represents an early transition growth phase, occurring when the country lacks domestic productive capacity for producer goods, causing reliance upon importation. For

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<sup>292</sup>This rate is shown as a three-year moving average.

Diagram 50: Import Substitution: Domestic Market Sense



Source: Table A2 of Appendix

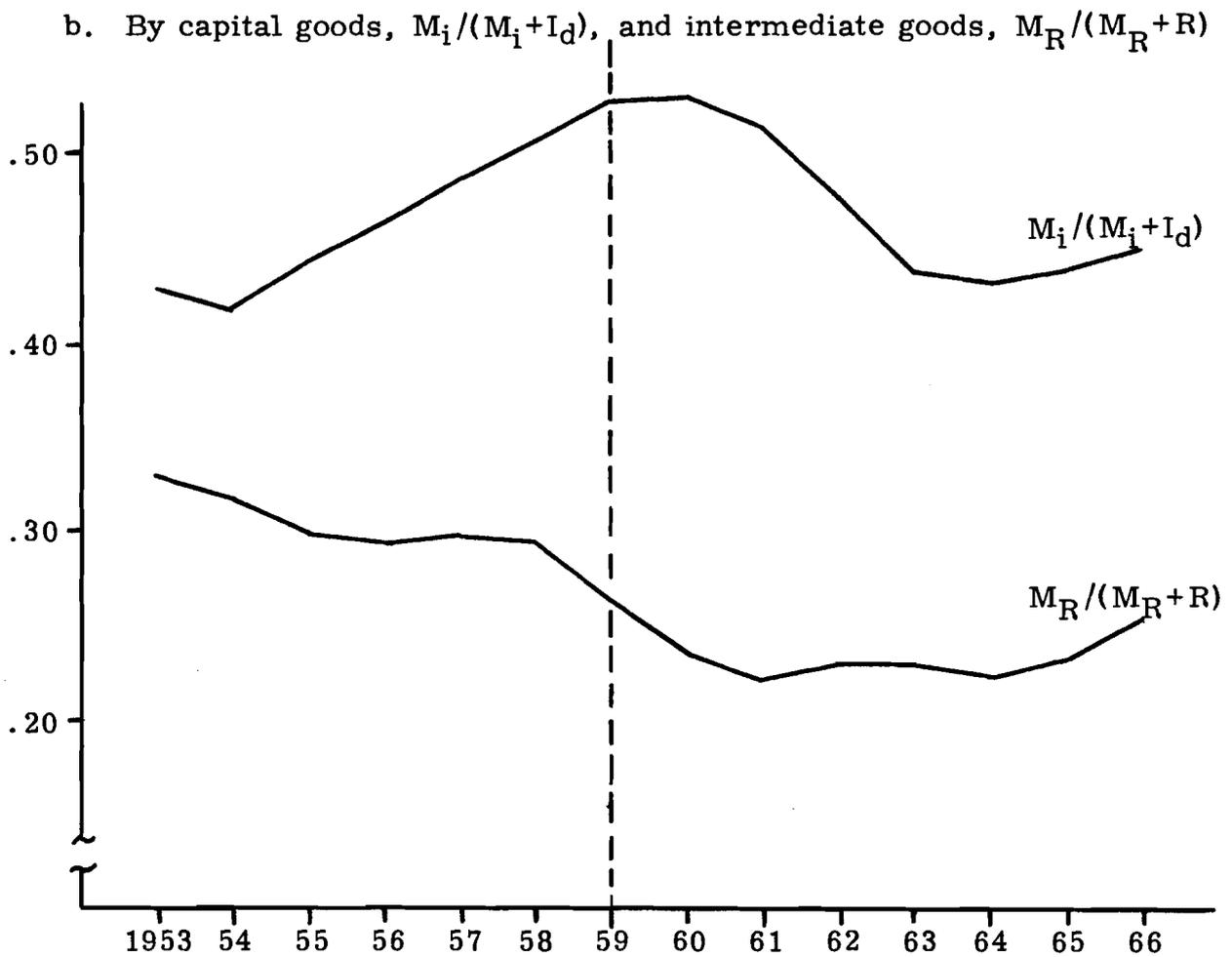
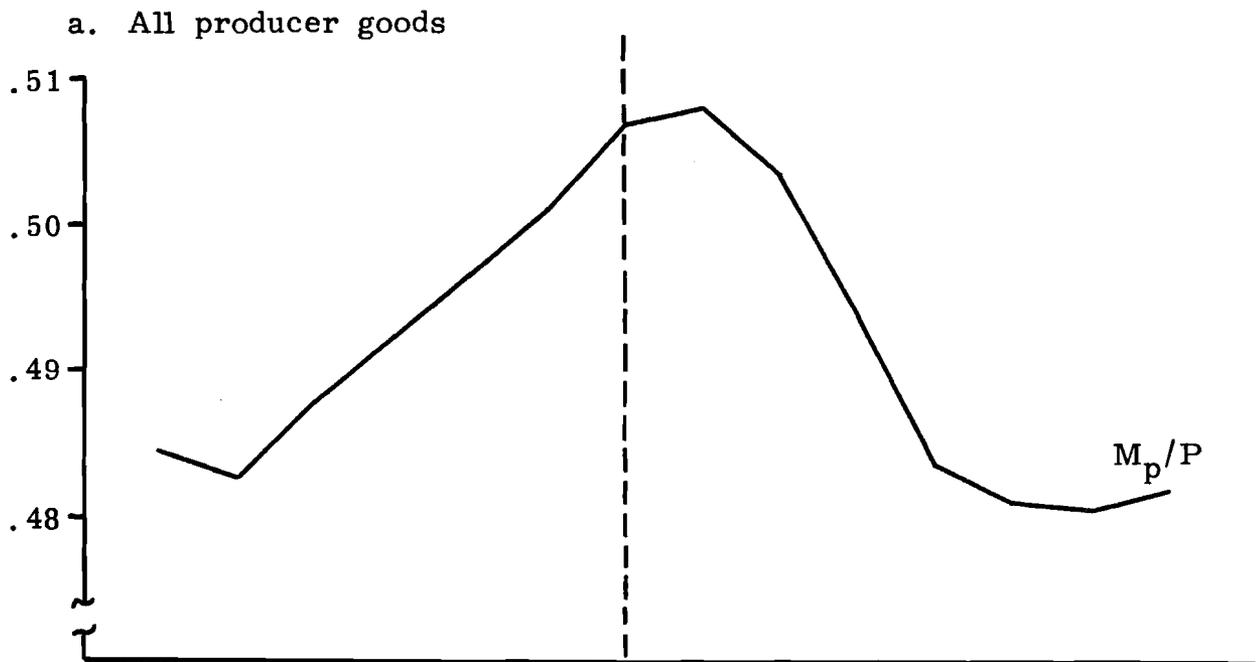
this reason, the phase consists only of consumer goods substitution, reserving "backward linkage import substitution" for a later stage.<sup>293</sup> There are two types of producer goods (capital goods and intermediate goods). The sequential order in which the two types of backward linkage occur is an issue of transition growth not specifically incorporated in our theory.

In Diagram 51, let  $M_i$  and  $I_d$  represent imported and domestically produced capital goods, respectively, and  $M_R$  and  $R$ , imported and domestically produced intermediate goods. The delayed effect of backward linkage import substitution is clearly apparent in Diagram 51a by the inverse U-shape of the  $M_p/P$  curve ( $P = M_i + I_d + M_R + R$ ), with a maximum occurring near the turning point. In Diagram 51b, this inverse U-shape character is shown to reflect mainly the behavior of capital goods. Import substitution begins to occur much earlier for intermediate goods

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<sup>293</sup> Thus, so-called "backward linkage" of industry is a later transition phenomenon which occurs when entrepreneurs have become adept at more sophisticated technological adaptation. For a discussion of this phenomenon see Albert O. Hirschman, "The Political Economy of Import Substituting Industrialization in Latin America," Quarterly Journal of Economics, Vol. LXXXII, No. 1 (February, 1968), pp. 1-32.

Diagram 51: Industrial Sector Producer Goods: Import Component



Source: Table A3 of Appendix

than for capital goods, as seen from the continuously declining trend of the  $M_R/(M_R + R)$  curve, even during the IS phase.

P 4: The agricultural export sector is the foundation of import substitution industrialization. Agricultural exports provide the means of expansion in terms of both savings and foreign exchange resources. Domestic income from these exports also creates the market outlet for industrial consumer goods and, hence, the incentive for industrial investment. The market condition carries special significance in regard to termination of import substitution growth (see P 6 and P 7).<sup>294</sup> These characteristics occur because total exports are dominated by agricultural exports during the IS phase, while industrial exports are of minor significance.

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<sup>294</sup>These considerations stress the importance of analyzing import substitution as a "general equilibrium" process, crucially involving the agricultural sector as well as industry.

The dominance of total exports by agricultural exports during the IS phase and the emergence of an ES phase (property P 9) are shown in Diagram 52. Let  $E_x$  and  $E_y$  denote, respectively, agricultural and industrial exports. Notice that during the IS phase, total exports,  $E (= E_x + E_y)$ , are dominated by agricultural exports. This characteristic began to be reversed at the turning point, with rapidly growing industrial exports eventually controlling the growth of total exports as the ES phase proceeded. Moreover, during the IS phase agricultural exports are seen to have remained essentially constant, supporting a major assumption of our import substitution model (see Chapter 4, pp. 97-101). The constancy of  $E_x$  was broken only after the economy had entered the export substitution phase, reflecting a shift from land-based to labor-based agricultural exports (e.g., mushroom, pineapple), as emphasized in our theory.

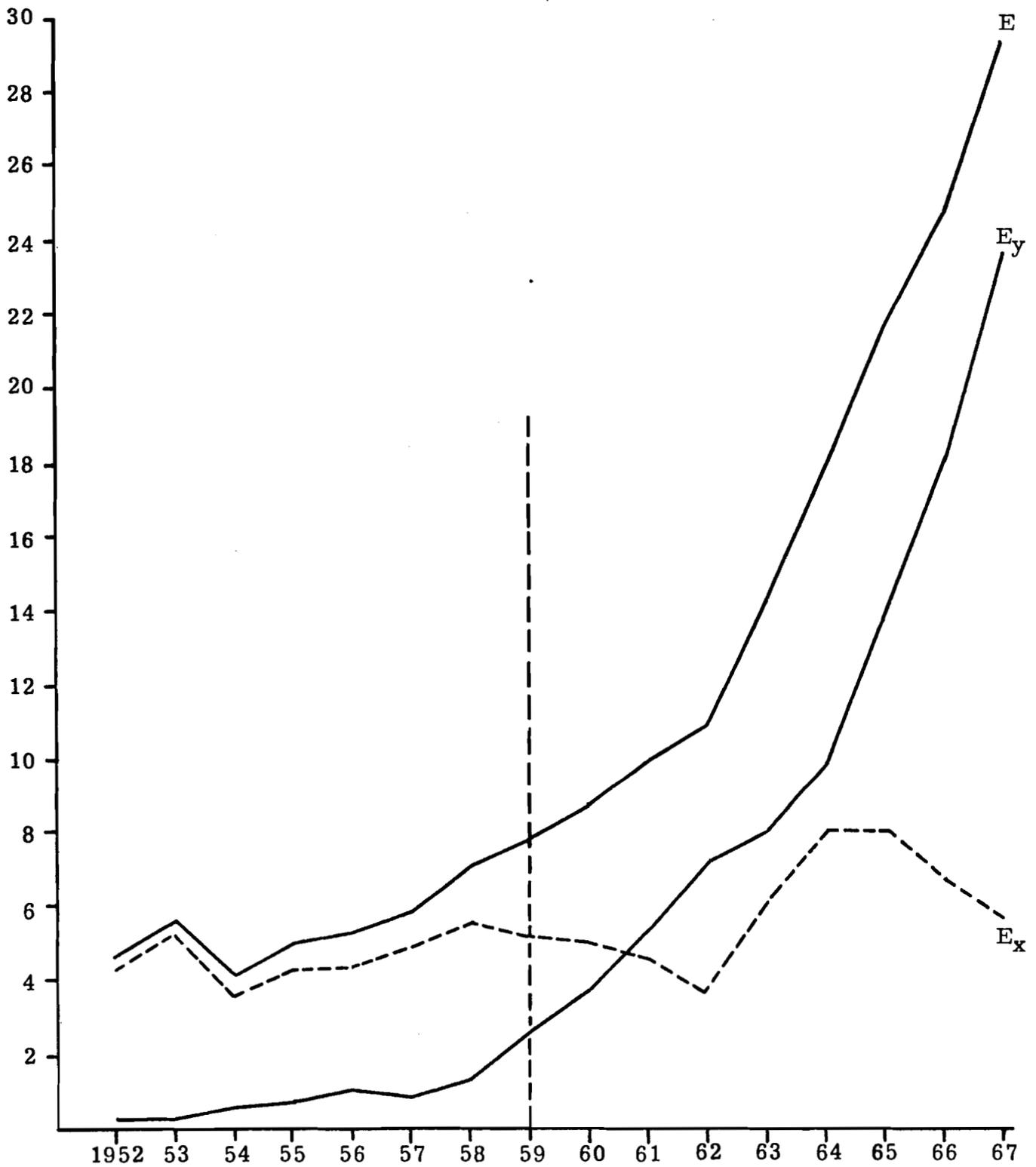
P 5: Import substitution is a cumulative and self-reinforcing growth mechanism.

Diagram 5<sup>295</sup> shows why an initially small beginning leads to larger amounts of import substitution in subsequent periods. These

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<sup>295</sup>Page 99.

Diagram 52: Total Exports,  $E$ , Agricultural Exports,  $E_x$ ,  
 and Non-agricultural Exports,  $E_y$   
 (billion N. T. \$, constant 1964 prices)



Source: Table A4 of Appendix

cumulative tendencies produce a high rate of industrial expansion, even when primary product exports and traditional agriculture remain stagnant.<sup>296</sup>

P 6: There is a logical necessity for termination of the IS phase. This occurs when all imports are absorbed by capital goods or, equivalently, when the entire domestic market is supplied by domestic output.<sup>297</sup> The inevitability of termination of the IS phase is the basic cause of a multiple phase transition in countries where the transition is begun with an IS phase.

P 7: Deceleration in the rate of industrial sector expansion is an observable symptom of the approach of termination of the IS phase.<sup>298</sup>

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<sup>296</sup>See Chapter 4, pp. 108-109.

<sup>297</sup>The duration of the IS phase to termination is given by Equation (4.6b), p. 109.

<sup>298</sup>See pp. 279-286.

Deceleration of growth may be accompanied by underutilization of productive capacity because stagnant primary product exports lend to exhaustion of the domestic market. Insufficiency of domestic demand may cause capital flight unless the industrial sector finds a new outlet for its output.

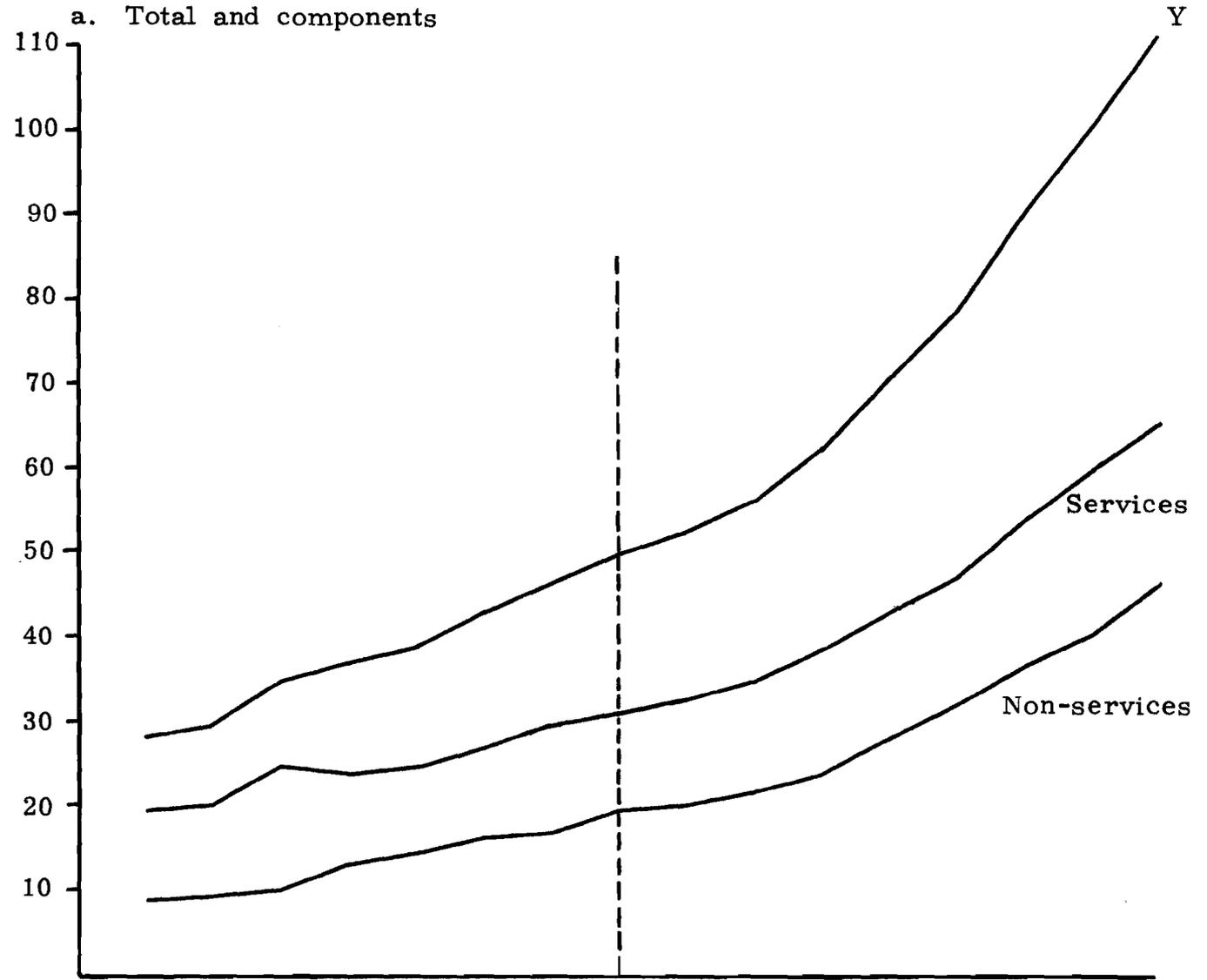
To verify properties P 5 and P 7, we introduce Diagram 53, in which Y represents the real (constant 1964 price) value added of the industrial sector. In Diagram 53a Y is disaggregated into its service and non-service components, but no conspicuous difference is shown in the behavior of these components. The rate of growth of Y,  $n_Y$ , on a three-year moving average basis, is shown in Diagram 53b as a U-shaped curve, with a minimum near the turning point. Notice that during the IS phase,  $n_Y$  is sustained at a high value (between 7 and 10 per cent per year), but there is a noticeable deceleration effect.

Property P 6 is verified for Taiwan by the emergence of an ES phase. This provided a new industrial orientation so a serious problem of unutilized capacity (property P 7) did not arise. In the Philippines, however, the appearance of unutilized capacity resulted in prolongation of the IS phase through primary product export promotion, partially absorbing unutilized capacity, while capital flight also occurred.<sup>299</sup>

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<sup>299</sup>See Chapter 10, pp. 341 and 406-407.

Diagram 53: Non-agricultural Sector GDP  
(billion N. T. \$, constant 1964 prices)



Source: Table A5 of Appendix

### 3.2 The ES Phase

Tendencies toward termination of the IS phase in Taiwan led to the emergence of a new growth phase, the export substitution phase, in which industrial capacity became increasingly oriented toward the external market. The term, "export substitution," is used to emphasize that for the first time in the country's history, industrial exports became a significant source of import capacity, eventually overshadowing exports of primary products (as shown in Diagram 52). This shift was accompanied by changes in the organizational milieu and the operation of the economy as portrayed in the following properties.

P 8: The shift from a primary product to an industrial export base produces two effects. The first effect is a reversal of the domestic orientation of the IS phase as the economy as a whole becomes externally oriented, reflected in a rising ratio of trade to GDP.

P 9: The second effect of the shift to an industrial export base is rapid expansion of the country's own import capacity, reducing reliance upon capital inflow (particularly foreign aid).

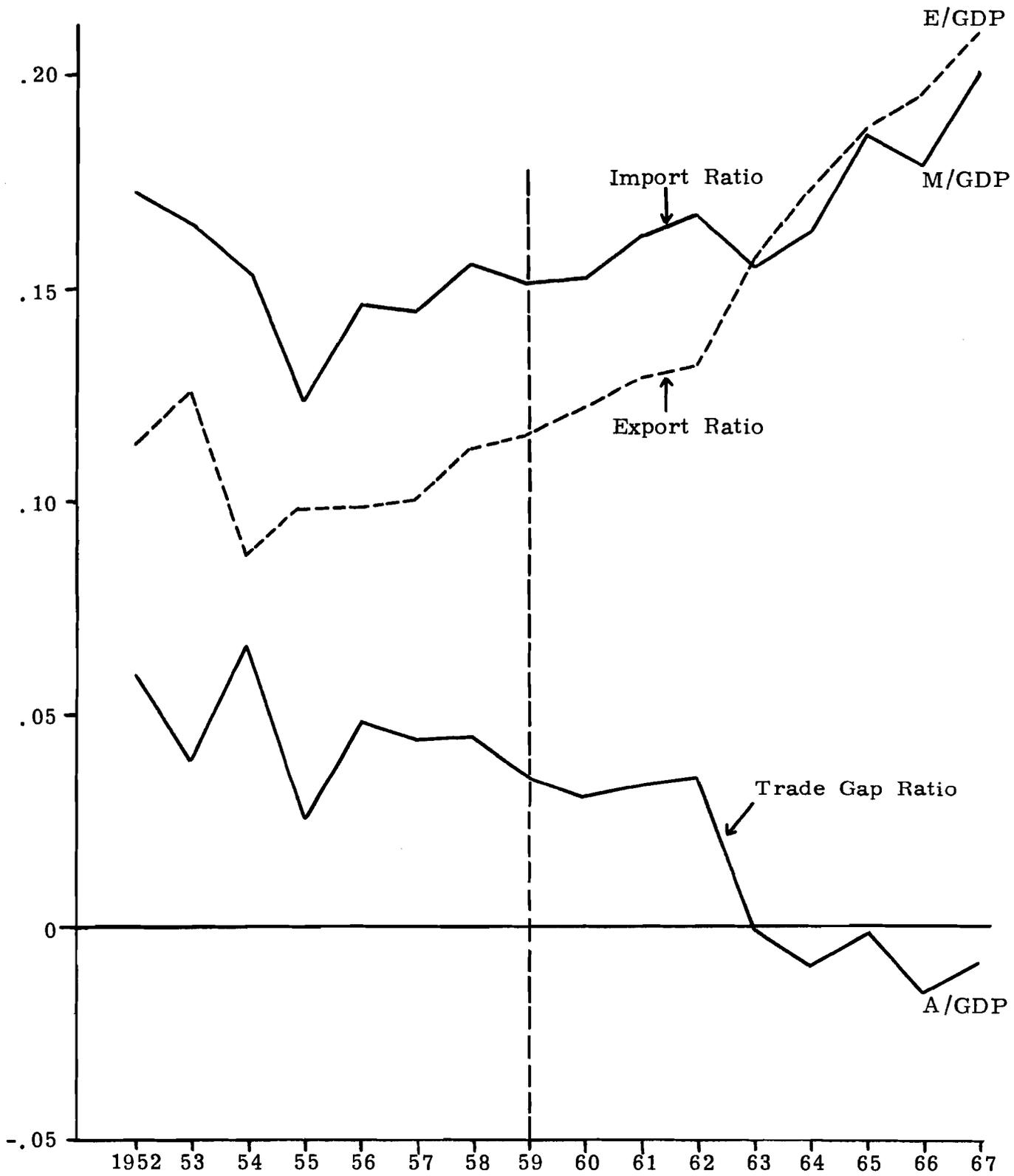
The economy's shifting orientation from domestic to external markets can be measured by trade as a fraction of GDP, shown in Diagram 54. Let  $M$ ,  $E$ , and  $A (= M - E)$  be total imports, total exports, and the import surplus, respectively. Their ratios to GDP ( $M/GDP$ ,  $E/GDP$ , and  $A/GDP$ ) are given in Diagram 54. Notice that during the IS phase both the import ratio and the export ratio were nearly constant. This contrasts sharply with behavior during the ES phase, when both ratios increased consistently, testifying to the growing external orientation of the economy as a whole.

A realistic model for Taiwan's postwar transition growth must recognize that import capacity was partially determined by foreign capital inflow, of which assistance was a significant component.<sup>300</sup> Under import substitution growth, a country's import capacity from primary product exports tends to grow slowly, and foreign capital inflow accommodates the rapid growth of demand for producer goods imports. During the ES phase, by contrast, foreign aid can be soon terminated because the country's own import capacity is bolstered by rapid expansion of industrial exports.

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<sup>300</sup>We have shown in Chapter 7, pp. 217-221, that foreign aid may be incorporated into our analysis as an upward shift in the import frontier by an amount equivalent to the magnitude of the additional import capacity provided by foreign aid.

Diagram 54: Exports, Imports and Capital Inflow



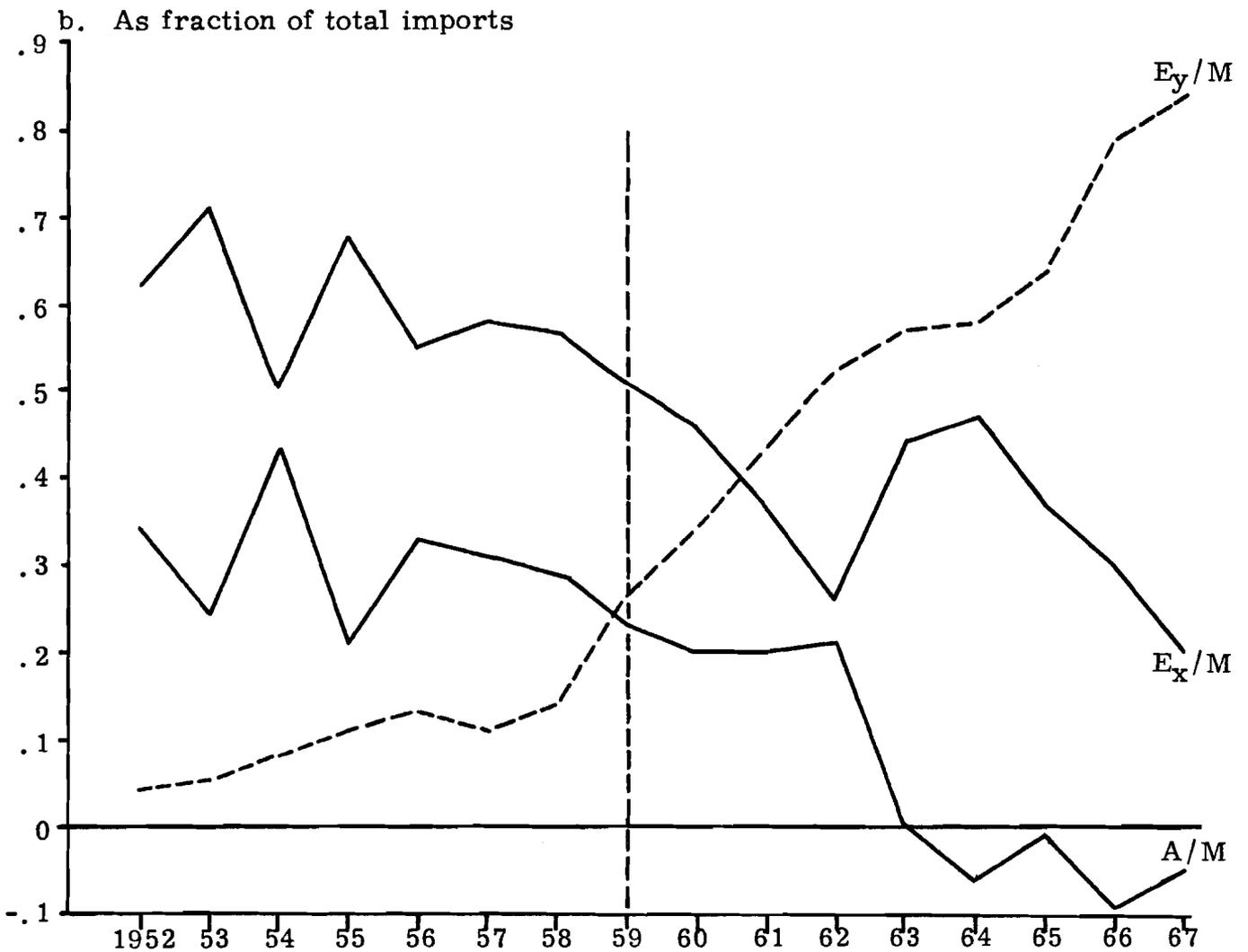
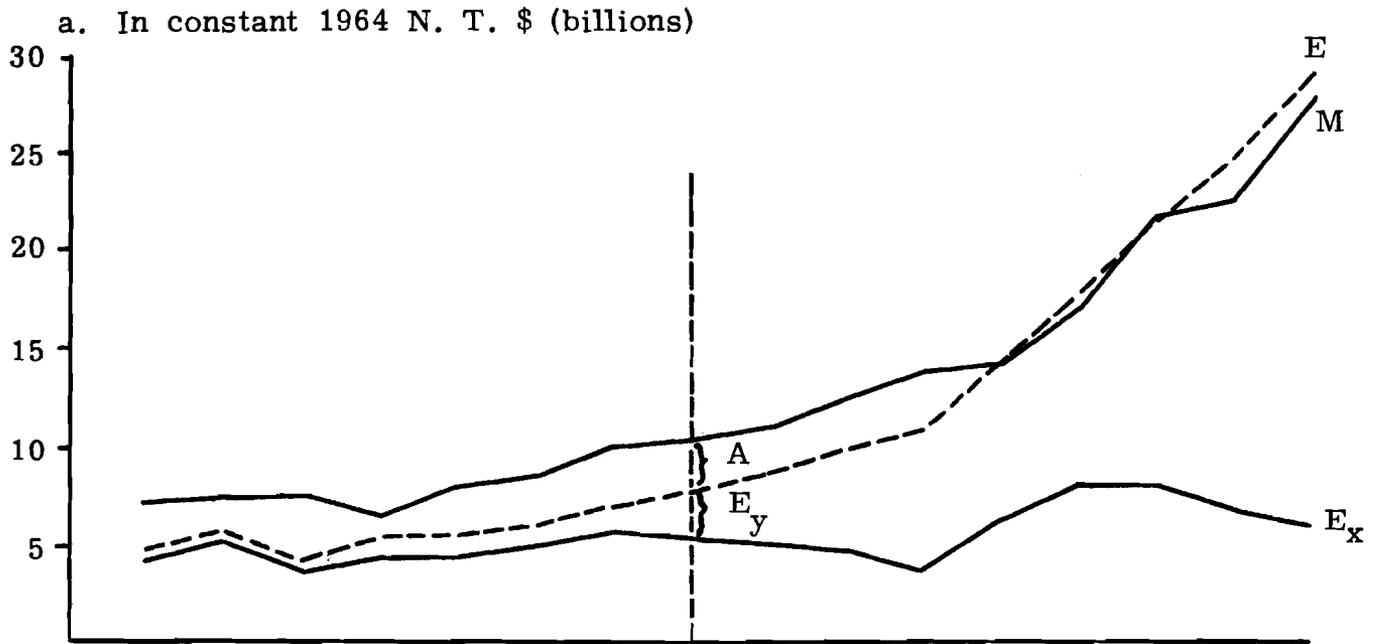
Source: Table A6 of Appendix

To verify property P 9 concerning import capacity, we introduce Diagram 55. Taiwan's total export capacity is described by the E curve in Diagram 55a, which includes agricultural exports (the  $E_x$  curve) and industrial exports,  $E_y$  (the vertical gap between the E and  $E_x$  curves). Total imports are shown by the M curve; the vertical gap between M and E represents foreign capital inflow, A. The sources of Taiwan's import capacity as fractions of the total are shown in Diagram 55b. The  $E_y/M$  curve shows a dramatic increase in the contribution from industrial exports,  $E_y$ , beginning near the turning point. The declining significance of primary product exports is shown by the  $E_x/M$  curve. The A/M curve shows reduced reliance upon foreign capital inflow (foreign aid), which was phased out in 1963, four years after the turning point.

P 10: The termination of the IS phase and the emergence of the ES phase is accompanied by organizational change, relaxing the foreign trade-oriented controls of the ES phase and emphasizing the initiation of free market criteria.

Verification of the evolution of the organizational system from the control policies of import substitution to a free market system conducive to export substitution necessarily relies partly upon a chronology

Diagram 55: Sources of Financing Import Capacity



Source: Table A7 of Appendix

of events and partly upon data. The essential characteristics are the major policy changes associated with abandoning controls and establishing free market conditions. These major organizational changes near the turning point (1959) are well documented.<sup>301</sup> A multiple exchange rate had been employed throughout the import substitution period; and this system was, in effect, converted first into a dual exchange rate system in late 1958 and into a unitary exchange rate in 1959. Foreign exchange rationing was gradually abandoned, and tariff protection for favored industries was progressively reduced.<sup>302</sup>

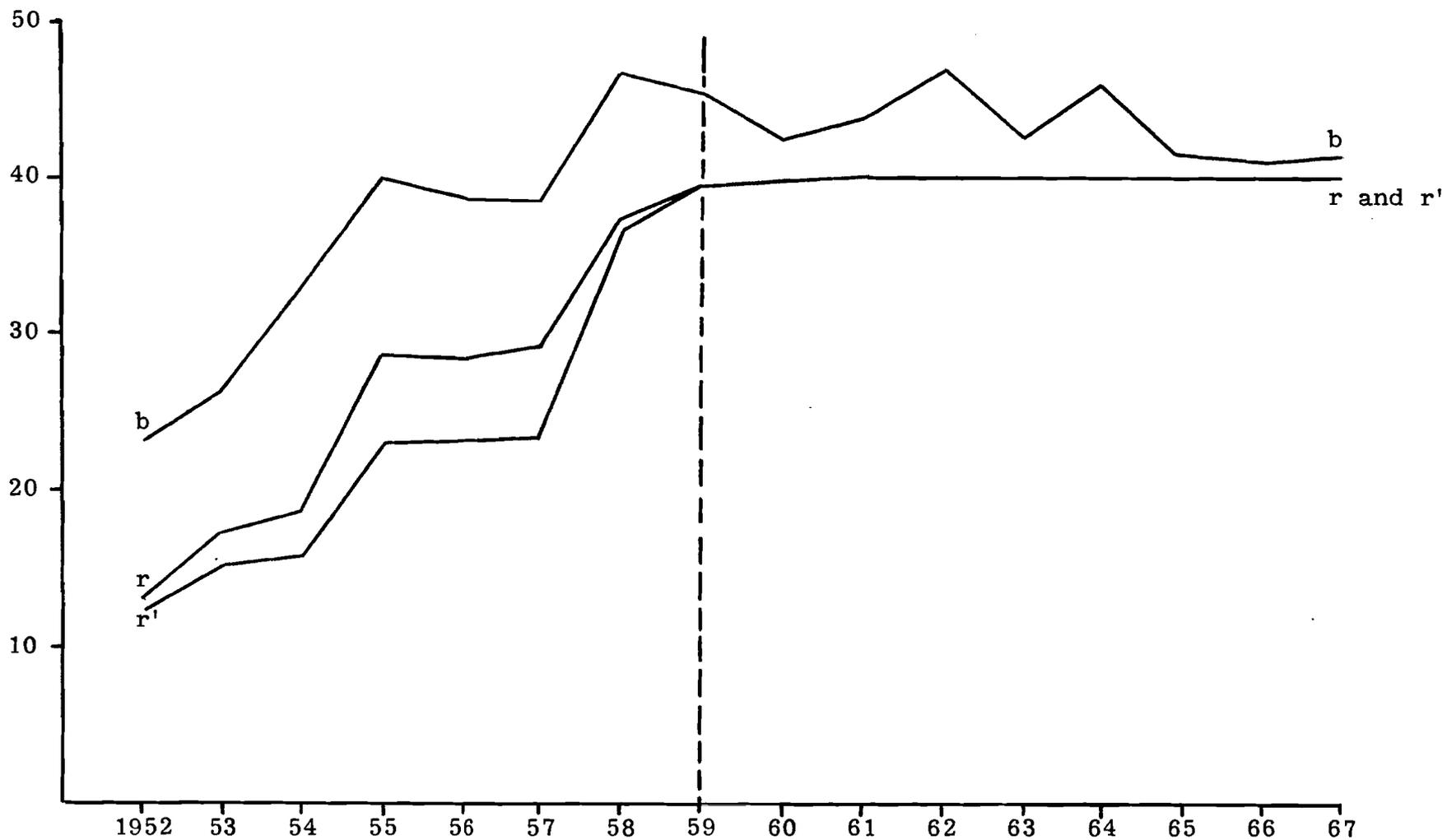
In Diagram 56 the time series for key foreign exchange rates are shown, where  $b$  represents the free market rate;  $r$ , the official rate for imports; and  $r'$ , the official rate for exports. The variation of these rates through time and their interrelationship reveal the gradual diminution of this major profit transfer device. While divergence between the free market rate,  $b$ , and the import rate,  $r$ , was as great as 44 per

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<sup>301</sup> See, for example, the following accounts: Neil H. Jacoby, op. cit., Chapter 10; Ken C. Y. Lin, "Industrial Development and Changes in the Structure of Foreign Trade: The Experience of the Republic of China in Taiwan, 1946-66," loc. cit.; and Chien-sheng Shih, "Economic Development in Taiwan after the Second World War," Zeitschrift des Instituts fur Weltwirtschaft, Band 100, Heft 1, 1968, pp. 113-134.

<sup>302</sup> Neil H. Jacoby, op. cit., pp. 135-149.

Diagram 56: Exchange Rates  
(N. T. \$ per U.S. \$1.00)



Source: Table A9 of appendix

cent in 1952 and averaged 31 per cent from 1952-1958, this divergence was reduced to 12 per cent by the 1959 reform and to 6 per cent in 1960. Similarly, the divergence between the free market rate,  $b$ , and the export rate,  $r'$ , was reduced from an average of 40 per cent prior to decontrol to 12 per cent in 1959 and to 6 per cent in 1960. Almost complete equivalence was not achieved, however, until 1965. These changes testify to the concentration of the decontrol effect near the turning point, even though the full impact was stretched out into the early years of the export substitution phase.

The organizational change undertaken to accommodate the emergence of export substitution growth was closely tied up with U. S. foreign assistance strategy to ease the difficulties of decontrol and liberalization policies.<sup>303</sup> In Diagram 55 we see that foreign aid continued to sustain an import surplus for several years after the turning point. It is also significant to note, however, that the export substitution phase led to a favorable reversal in the balance of payments by 1963, when major foreign assistance was no longer required. The achievement of independence from foreign assistance is a major consequence of export substitution growth, suggesting that foreign assistance strategy should be

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<sup>303</sup>See Neil H. Jacoby, op. cit., especially Chapter 10.

aimed at promoting the evolution of this transition growth phase in open dualistic economies.

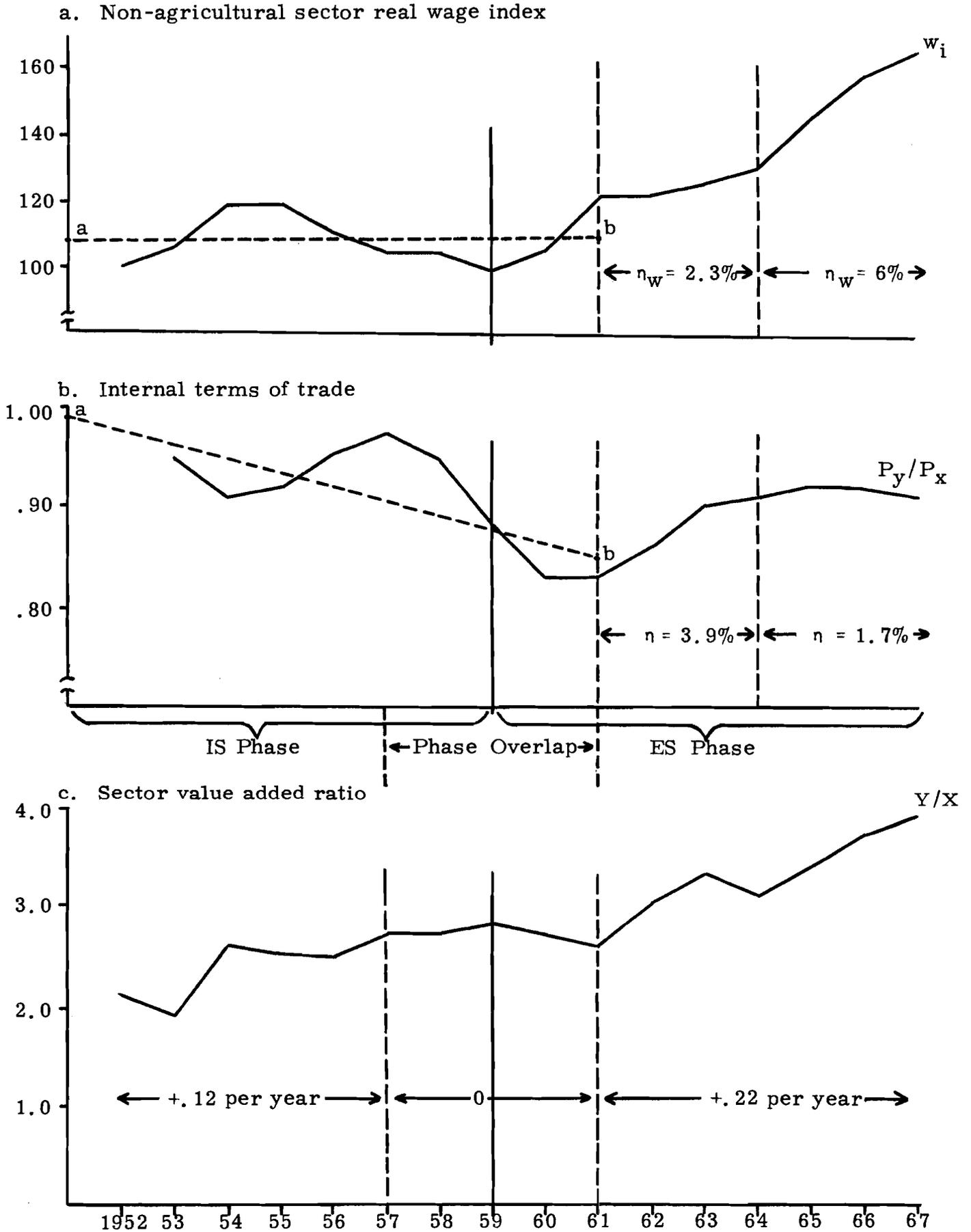
While properties P 8-P 10 largely concern conditions leading to the emergence of the ES phase, we now turn to properties of export substitution growth involving the economy's mode of operation during this phase. These properties are deduced from application of the closed dualism analysis to the open economy case.

P 11: During the ES phase, the real wage of industrial labor,  $w_i$ , and the internal terms of trade between industry and agriculture,  $P_y/P_x$ , become growth relevant phenomena for the first time.

Erratic behavior of these variables is replaced by more regular behavior.

The time series for  $w_i$  is given in Diagram 57a and the time series for internal terms of trade,  $P_y/P_x$ , in Diagram 57b. During the IS phase  $w_i$  is seen to show erratic fluctuations around a virtually constant trend line, i. e., the dotted line, ab, while during the ES phase (after 1961)  $w_i$  shows a sustained pattern of increase. Similarly, the internal terms of

Diagram 57: Intersectoral Relationships



Source: Table A9 of Appendix

trade are seen to fluctuate around a decreasing trend line, the dotted line, ab, until 1961, after which they show a steady increase.<sup>304</sup>

P 12: During the ES phase, internal terms of trade will become favorable to industry, reflecting the fact that traditional agriculture, (T), becomes the major source of intersectoral finance for industrial investment.

In Diagram 57b the intersectoral terms of trade,  $P_y/P_x$ , are seen to move consistently in favor of the industrial sector during the ES phase (after 1960). This reverses the trend (the dotted line, ab) during the IS phase when the terms of trade tended to move consistently in favor of agriculture. Terms of trade favorable to agriculture during the IS phase promote the modernization of traditional agriculture, preparing it for its crucial role during the ES phase, as emphasized in Section 2.2.

P 13: During the IS phase real wages,  $w_i$ , remain constant, while they rise during the ES phase, reflecting gradual exhaustion of the economy's

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<sup>304</sup>The brief two-year period, 1959-1961, during which behavior of both series appears to continue their IS phase pattern requires a more detailed short-run analysis of the process describing the movement from the IS to the ES phase. This is beyond the scope of the present study.

labor surplus during the first generation of the transition.

In Diagram 57a the trend behavior of real wages,  $w_i$ , is clearly seen from comparing the dotted trend line, ab, for the IS phase with the rise in real wages during the ES phase.

P 14: During the ES phase, an initial period of modest and steady increase of the industrial real wage,  $w_i$ , will eventually give way to more rapid rises, signifying a gradual termination of the surplus labor condition. This eventual acceleration of the real wage is accompanied by deceleration of the terms of trade,  $P_y/P_x$ , confirming a relationship between the behavior of internal terms of trade and the real wage.

In Diagram 57, the year 1964 is identified as a bench-mark year in the ES phase. Diagram 57a shows that prior to 1964 the real wage grows at a rate of 2.3 per cent, but it accelerates to 6 per cent after 1964. In Diagram 57b, the terms of trade,  $P_y/P_x$ , rise in favor of industry at the rate of 3.9 per cent prior to 1964, while slowing down to a rate of 1.7 per cent after 1964.

P 15: The economy's center of gravity will shift more rapidly toward the industrial sector in the ES phase than in the IS phase, as industrial value added shifts increasingly to a labor utilization basis. This can be measured by the relative value added contributions of industry (Y) and agriculture (X).

In Diagram 57c the time series for  $Y/X$  is plotted. During the entire transition period 1952-1967, the ratio of industrial to agricultural value added approximately doubled (from 2.1 to 3.9). A third of this gain occurred during the IS phase, averaging .12 per year from 1952-1957. In the inter-phase period 1957-1961, no gain occurred. In the ES phase years from 1961-1967, two-thirds of the gain for the entire period occurred, averaging .22 per year.

P 16: The ES phase is characterized by unusually rapid growth of per capita GDP. This is the result of (i) higher gains in labor productivity in the industrial sector than in agriculture and (ii) rapid reallocation of labor from agriculture to industry.

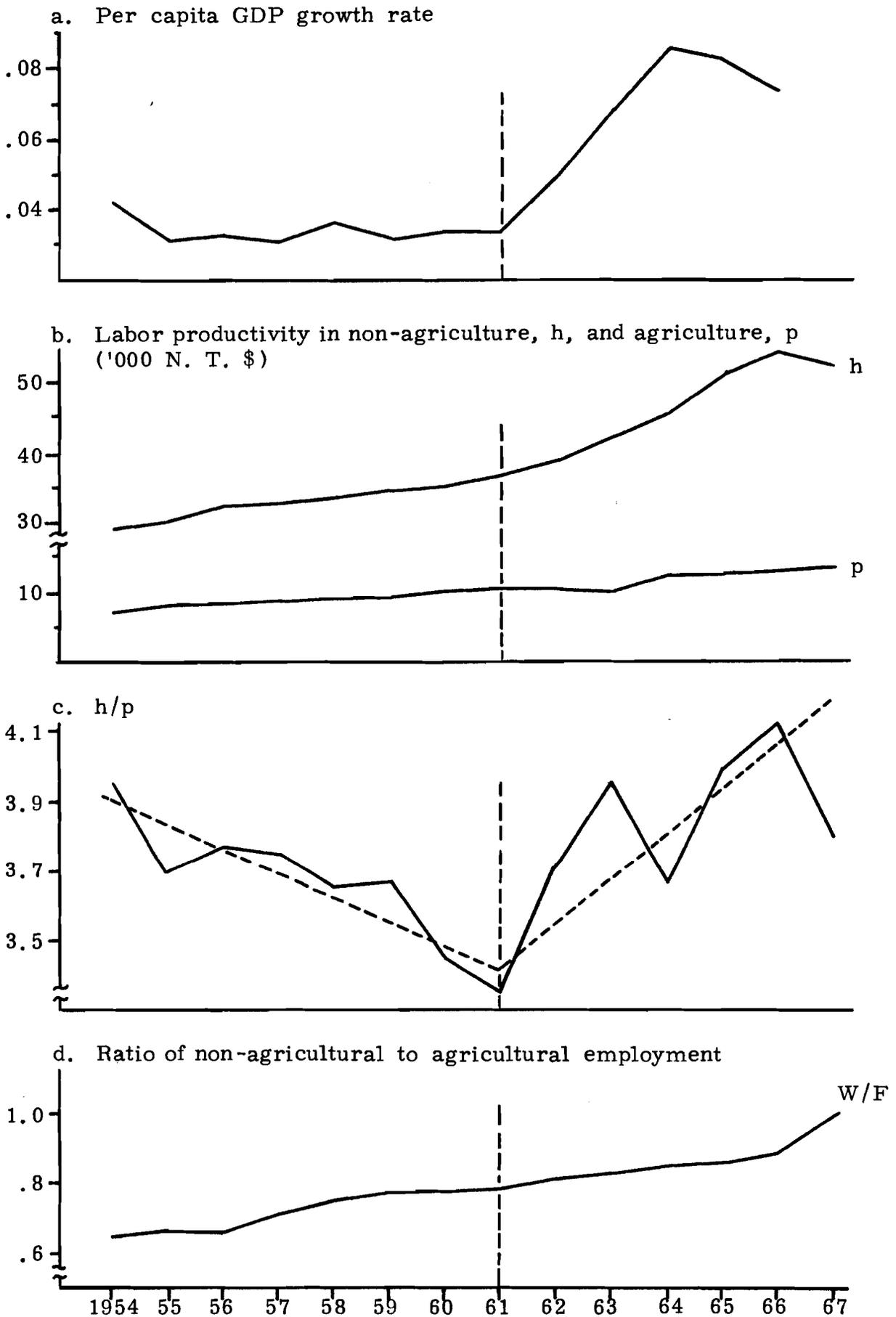
In Diagram 58a the rate of growth of per capita (real) GDP,  $n_q$ <sup>305</sup> is shown, revealing a marked acceleration of growth during the ES phase, beginning in 1961. In Diagram 58b, the time series for labor productivity in the industrial and agricultural sectors,  $h$  and  $p$ , respectively, are shown. Their ratio,  $h/p$ , is exhibited in Diagram 58c. The fact that labor productivity in industry is three to four times that in agriculture is a major cause of the increase in real GDP when labor reallocation occurs.

Accelerating reallocation of labor is shown by the increasing trend of the  $W/F$  curve in Diagram 58d, where  $W$  is employment in the industrial sector and  $F$ , in agriculture. The increase of GDP is also explained by the gains in  $h$  and  $p$ . Although both increase consistently throughout the postwar transition (Diagram 58b), the growth of labor productivity in industry,  $h$ , is especially noticeable during the ES phase, reflected in the U-shaped  $h/p$  curve of Diagram 58c. Thus, rapid growth is based upon maturity of industrial entrepreneurship, which accounts for both the rapid gains of industrial labor productivity and accelerating reallocation of labor from agriculture to industry.

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<sup>305</sup>  $q = \text{GDP}/Q$  where  $Q$  is total population.

Diagram 58: Performance Variables



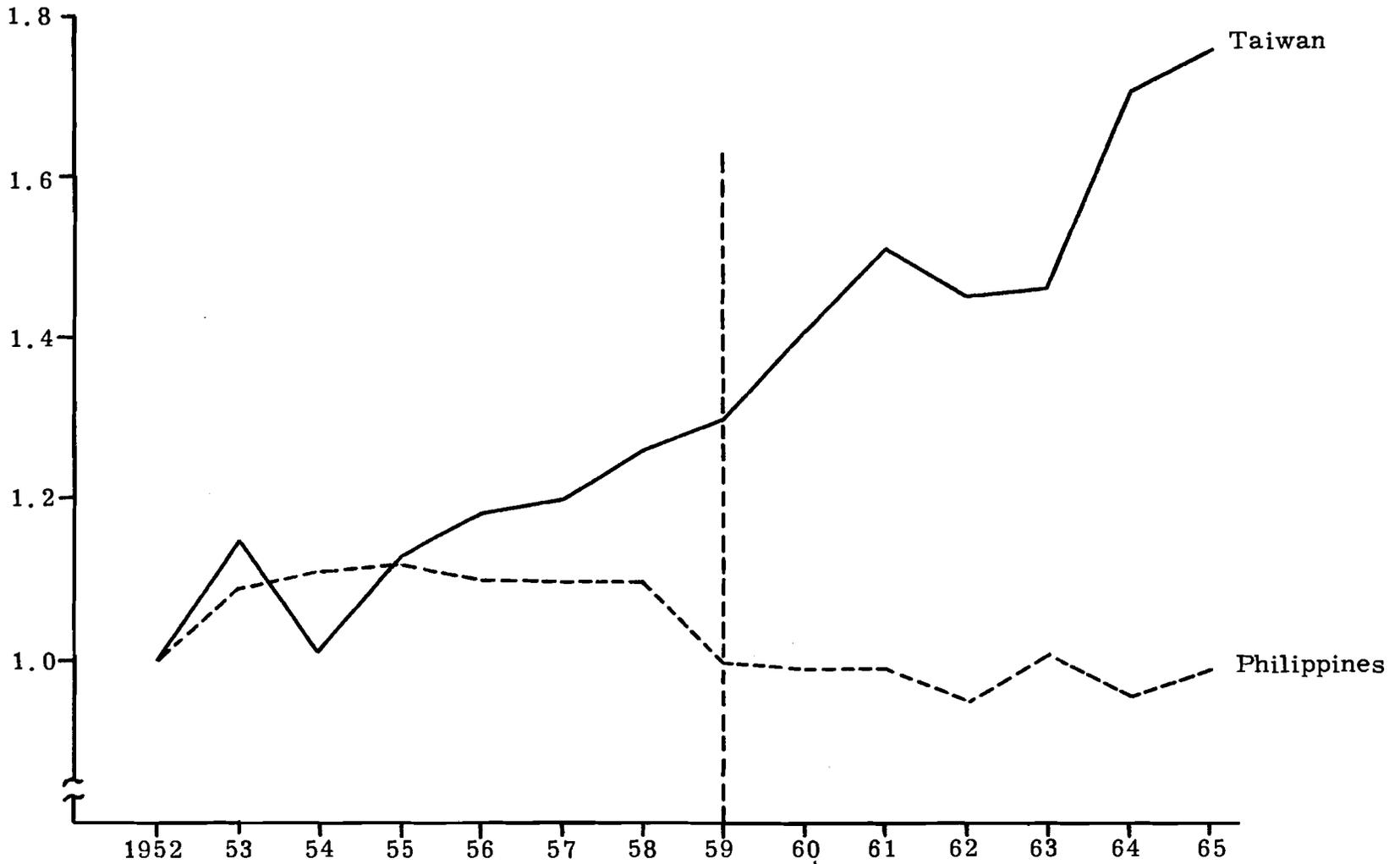
Source: Table A10 of Appendix

Diagram 59 shows agricultural labor productivity series,  $p$ , for both Taiwan and the Philippines to contrast the case of export substitution with prolonged import substitution. While productivity gains in Taiwan were erratic during the early years of the IS phase, a clear trend toward improving productivity emerged in 1954. This trend accelerated in the years around the turning point. In the Philippines, by contrast, modest gains during the first decade of the IS phase were followed by stagnant agricultural productivity after 1958 (the period of prolonged IS phase). These contrasts further confirm the crucial importance of rising labor productivity in agriculture during the IS phase to emergence of the ES phase.

## CONCLUSION

This chapter has analyzed and verified the phenomenon of sequencing of two distinct transition phases in Taiwan during the postwar generation. After less than a decade of successful growth under import substitution, a very different system of growth--export substitution--emerged. Under export substitution, the dependence upon primary export products inherited from colonialism was finally eliminated as modern industrial exports became the driving force in the economy's rapid growth after 1959.

Diagram 59: Labor Productivity in Agriculture, Taiwan and Philippines  
(1952 = 1.00)



Source: Table A11 of Appendix

We have emphasized the uniqueness of Taiwan's successful transition experience. Rapid development of entrepreneurial capabilities and agricultural modernization accompanied the import substitution phase. These conditions permitted the society to replace the IS phase policies of foreign trade controls and protection of domestic industrial entrepreneurs by an efficiency-oriented free market system. The society's capacity to achieve these crucial transition accomplishments in a mere decade of transition growth is explained by a favorable set of initial background conditions and access to timely foreign assistance. These favorable conditions enabled the government to adopt policies consistent with the underlying evolutionary forces in the economy's growth.

During the first decade of export substitution growth (1959-1969), rapid expansion of industrial exports was largely a product of utilizing the economy's surplus labor to produce an increasingly diversified group of consumer goods for export. This underlying force led to rapid gains in industrial employment, accelerating the pace of labor reallocation from agriculture to industry. This led to upward pressures on the real wage, despite impressive productivity gains in agriculture and improving internal terms of trade for the industrial sector. Nevertheless, Taiwan's comparative advantage of cheap and efficient labor remains, borne out by the continued growth of labor-intensive industrial exports.

Prognostication about Taiwan's future transition growth is somewhat hazardous because contemporary empirical examples of post export substitution growth are lacking. Some tendencies, however, are apparent, and these point toward future patterns of the economy's evolution. On the one hand, increasing backward linkage toward domestic sources of intermediate goods has appeared, strengthening domestic integration between industry and agriculture. Increasingly, export substitution has involved the agricultural sector, as industry has evoked supplies of new agricultural raw materials for processing and export. On the other hand, nascent tendencies toward backward linkage of capital goods import substitution have also appeared, suggesting that domestic production and export of capital goods may offer opportunities for a new growth phase. This pattern of evolution is consistent with Japanese transition growth, the one historical example of an open dualistic economy which evolved to a modern economy in the twentieth century.<sup>306</sup>

Taiwan's successful transition growth has important implications for transition growth generally in contemporary open dualistic economies.

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<sup>306</sup>See Kaname Akamatsu, "A Historical Pattern of Economic Growth in Developing Countries," loc. cit., especially pp. 11-12.

We have concluded in earlier chapters that the two growth phases from which the transition has begun in these economies, import substitution and export promotion, must eventually terminate. Though the order and duration of transition phases may be expected to vary, successful transition must eventually lead through an export substitution phase. Taiwan's experience offers guidance about the growth accomplishments (entrepreneurial development and agricultural modernization) and the organizational preconditions essential for the emergence of an ES phase.

## APPENDIX

TABLE 14-A1

IMPORT SUBSTITUTION,  
FOREIGN EXCHANGE ALLOCATION SENSE

Year	$M_p/M$	$M_y/M$	$\eta_{M_p}/M$	$\eta_{M_p}/M$ (Three-year moving average)
1952	.573	.318		
1953	.683	.217	.194	
1954	.684	.175	.001	.101
1955	.758	.147	.108	.028
1956	.738	.164	-.027	.050
1957	.789	.138	.069	.014
1958	.788	.115	-.001	.031
1959	.809	.123	.027	.000
1960	.788	.123	-.026	.003
1961	.794	.104	.007	-.015
1962	.774	.129	-.026	-.033
1963	.710	.149	-.082	-.016
1964	.753	.156	.060	.004
1965	.777	.152	.033	.020
1966	.752	.182	-.032	.024
1967	.807	.128	.073	

Source: Chinese Maritime Customs, Statistical Department, Inspectorate General of Customs, The Trade of China, Statistical Series No. 1.

TABLE 14-A2

## IMPORT SUBSTITUTION, DOMESTIC MARKET SENSE

Year	$M_y/Y$	$\bar{M}_y/Y$	$\bar{M}_y/Y$ (Three-year moving average)
1952	.356		
1953	.249	- .301	
1954	.143	- .427	- .346
1955	.099	- .309	- .162
1956	.123	.250	- .090
1957	.097	- .210	- .015
1958	.089	- .084	- .120
1959	.083	- .065	- .032
1960	.088	.054	- .042
1961	.078	- .115	.055
1962	.095	.225	.030
1963	.093	- .021	.093
1964	.100	.076	.096
1965	.120	.192	.136
1966	.136	.140	.030
1967	.103	- .243	

Sources: (1) Import data from Table 14-A1.  
 (2) Nonagricultural sector GDP, Y, from Directorate-General of Budgets, Accounts and Statistics, Executive Yuan (DGBAS), National Income of the Republic of China, various issues.

TABLE 14-A3

INDUSTRIAL SECTOR PRODUCER GOODS: IMPORT COMPONENT  
(CONSTANT PRICES, 1964 N. T. \$)

Year	$M_i / (M_i + I_d)$	$M_R / (M_R + R)$	$M_p / P$
	(Three-year moving average)	(Three-year moving average)	(Three-year moving average)
1952			
1953	.429	.327	.485
1954	.419	.317	.483
1955	.444	.298	.488
1956	.465	.293	.492
1957	.486	.298	.496
1958	.505	.293	.501
1959	.527	.264	.507
1960	.530	.235	.508
1961	.513	.222	.504
1962	.477	.229	.494
1963	.436	.228	.483
1964	.431	.224	.481
1965	.437	.231	.481
1966	.449	.246	.482
1967			

- Sources: (1) Input-Output Table for 1955, compiled by T. H. Lee, S. C. Shieh, and Y. C. Wang, 1961; and Input-Output Tables for 1964 and 1966, compiled by Council for International Economic Cooperation and Development, Taipei, Taiwan.  
(2) Directorate-General of Budgets, Accounts and Statistics (DGBAS), National Income of the Republic of China, various issues.

TABLE 14-A4

**COMPOSITION OF EXPORTS**  
 (CONSTANT PRICES, BILLION 1964 N. T. \$)

Year	$E_y$	$E_x$	E
1952	286	4354	4,640
1953	367	5251	5,618
1954	597	3610	4,207
1955	727	4358	5,085
1956	1,020	4364	5,384
1957	935	4950	5,885
1958	1,421	5636	7,057
1959	2,596	5212	7,808
1960	3,717	5052	8,769
1961	5,344	4589	9,933
1962	7,270	3645	10,915
1963	7,992	6176	14,168
1964	9,896	7983	17,879
1965	13,646	7987	21,633
1966	17,914	6758	24,672
1967	23,549	5722	29,271

Source: Chinese Maritime Customs, Statistical Department, Inspectorate  
 General of Customs, The Trade of China, Statistical Series No. 1.

TABLE 14-A5

**GDP BY SECTOR COMPONENTS**  
**(CONSTANT PRICES, BILLION 1964 N. T. \$)**

Year	GDP	X	Y			ny (Three-year moving average)
			Total	Nonservices	Services	
1952	41,117	13,118	27,999	8,730	19,269	
1953	44,426	15,307	29,319	9,032	20,287	
1954	48,116	13,380	34,736	10,053	24,683	.098
1955	51,828	14,932	36,896	13,055	23,841	.101
1956	54,488	15,553	38,935	14,286	24,649	.072
1957	58,574	15,849	42,725	15,775	26,950	.077
1958	62,798	16,761	46,037	16,866	29,171	.085
1959	67,375	17,677	49,698	19,118	30,580	.069
1960	71,576	19,383	52,193	19,719	32,474	.067
1961	77,073	21,116	55,957	21,192	34,765	.075
1962	82,237	20,555	61,682	23,531	38,151	.103
1963	91,092	21,112	69,970	27,341	42,629	.118
1964	103,288	25,182	78,106	31,478	46,628	.132
1965	115,541	26,007	89,534	36,248	53,286	.124
1966	126,358	27,132	99,226	40,112	59,114	.123
1967	138,911	28,464	110,447	45,708	64,739	

Source: Directorate-General of Budgets, Accounts and Statistics,  
 Executive Yuan (DGBAS), National Income of the Republic of China,  
 various issues.

TABLE 14-A6

RATIOS OF EXPORTS, IMPORTS,  
AND CAPITAL INFLOW TO GDP

Year	M/GDP	E/GDP	A/GDP
1952	.172	.113	.059
1953	.166	.126	.040
1954	.154	.087	.066
1955	.124	.098	.026
1956	.147	.099	.048
1957	.145	.101	.044
1958	.157	.112	.044
1959	.151	.116	.035
1960	.153	.123	.030
1961	.162	.129	.033
1962	.168	.133	.035
1963	.155	.156	- .001
1964	.164	.173	- .009
1965	.185	.187	- .002
1966	.179	.195	- .017
1967	.201	.211	- .010

- Sources: (1) Export and import data from Chinese Maritime Customs, Statistical Department, Inspectorate General of Customs, The Trade of China, Statistical Series No. 1.
- (2) GDP data from Directorate-General of Budgets, Accounts and Statistics (DGBAS), National Income of the Republic of China, various issues.

TABLE 14-A7

IMPORT CAPACITY: SOURCES OF FINANCING  
(CONSTANT PRICES, BILLION 1964 N. T. \$)

Year	M	$E_y/M$	$E_x/M$	A/M
1952	7,077	.04	.62	.34
1953	7,358	.05	.71	.24
1954	7,397	.08	.49	.43
1955	6,427	.11	.68	.21
1956	8,002	.13	.55	.33
1957	8,478	.11	.58	.31
1958	9,836	.14	.57	.28
1959	10,164	.26	.51	.23
1960	10,940	.34	.46	.20
1961	12,453	.43	.37	.20
1962	13,794	.53	.26	.21
1963	14,106	.57	.44	.00
1964	16,936	.58	.47	-.06
1965	21,452	.64	.37	-.01
1966	22,559	.79	.30	-.09
1967	27,924	.84	.20	-.05

Source: Chinese Maritime Customs, Statistical Department,  
Inspectorate General of Customs, The Trade of China,  
Statistical Series No. 1.

TABLE 14-A8

EXCHANGE RATES  
(N. T. \$ PER U.S. \$1.00)

Year, Dec.	Official		Free Market
	Export, r'	Import, r	b
1952	12.30	12.98	23.11
1953	15.02	17.22	26.49
1954	15.55	18.78	30.31
1955	23.35	28.53	39.84
1956	23.35	28.53	38.53
1957	23.35	29.03	38.40
1958	36.83	37.08	46.58
1959	39.70	39.70	45.26
1960	39.85	39.85	42.26
1961	40.03	40.03	43.89
1962	40.03	40.03	47.00
1963	40.03	40.03	42.50
1964	40.03	40.03	45.80
1965	40.03	40.03	41.63
1966	40.03	40.03	41.00
1967	40.03	40.03	41.50

Sources: (1) b, from the Central Bank of China.

(2) r and r' are average rates from International Monetary Fund, International Financial Statistics, various issues.

TABLE 14-A9

NONAGRICULTURAL SECTOR REAL WAGE INDEX,  
INTERNAL TERMS OF TRADE,  
AND SECTOR VALUE ADDED (GDP) RATIO

Year	$w_i$ (1952 = 100)	$P_x$ (1952 = 100)	$P_y$	$P_y/P_x$ (Three-year moving average)	Y/X
1952	100.0	100.0	100.0		2.1
1953	106.3	117.4	109.2	.95	1.9
1954	118.6	123.4	113.2	.91	2.6
1955	119.0	147.1	130.2	.92	2.5
1956	111.3	165.7	155.5	.95	2.5
1957	105.5	172.6	176.3	.97	2.7
1958	105.2	183.3	173.5	.95	2.7
1959	99.6	211.0	184.2	.88	2.8
1960	106.4	241.7	198.1	.83	2.7
1961	122.8	239.0	194.3	.83	2.6
1962	123.4	239.3	208.6	.86	3.0
1963	126.7	254.8	228.8	.90	3.3
1964	131.7	268.1	247.9	.91	3.1
1965	146.6	270.5	245.7	.92	3.4
1966	158.7	280.1	258.1	.92	3.7
1967	166.2	282.6	266.8	.91	3.9

- Sources: (1)  $w_i$ : DGBAS, Statistical Abstract of the Republic of China and Department of Reconstruction, Taiwan Provincial Government, Report of Taiwan Labour Statistics.
- (2)  $P_x$ : Department of Agriculture and Forestry, Provincial Government of Taiwan, Republic of China, Taiwan Agricultural Prices Monthly, various issues.
- $P_y$ : T. K. Tsui, ed., Industry of Free China, various issues.
- (3) X and Y: DGBAS, National Income of the Republic of China, various issues.

TABLE 14-A10

## PER CAPITA REAL GDP; EMPLOYMENT AND LABOR PRODUCTIVITY BY SECTOR

Year	q = GDP/Q (constant 1964 N. T. \$)	<sup>n</sup> q (Three-year moving average)	F ( '000)	W ( '000)	W/F	p (1964 N. T. \$)	h (1964 N. T. \$)	h/p
1952	5,059		1792	1144	.638	7,320	24,475	3.34
1953	5,289		1812	1133	.625	8,448	25,877	3.06
1954	5,500	.041	1811	1189	.657	7,388	29,214	3.95
1955	5,709	.032	1812	1214	.670	8,241	30,392	3.69
1956	5,803	.032	1806	1199	.664	8,612	32,473	3.77
1957	6,045	.031	1810	1300	.718	8,756	32,865	3.75
1958	6,255	.036	1813	1365	.753	9,245	33,727	3.65
1959	6,459	.031	1853	1419	.766	9,540	35,023	3.67
1960	6,632	.034	1877	1467	.782	10,327	35,578	3.45
1961	6,913	.034	1912	1517	.793	11,044	36,887	3.34
1962	7,144	.050	1936	1568	.810	10,617	39,338	3.71
1963	7,665	.069	1972	1645	.834	10,706	42,535	3.97
1964	8,427	.086	2010	1700	.846	12,528	45,945	3.67
1965	9,150	.083	2017	1738	.862	12,894	51,516	4.00
1966	9,725	.074	2050	1820	.888	13,235	54,520	4.12
1967	10,447		2043	2087	1.022	13,932	52,921	3.80

Sources: (1) X, Y, and GDP: DGBAS, National Income of the Republic of China, various years.

(2) W, F, and total population, Q: Department of Civil Affairs, Taiwan Provincial Government, Household Registration Statistics of Taiwan, Republic of China.

TABLE 14-A11

LABOR PRODUCTIVITY IN AGRICULTURE:  
TAIWAN AND PHILIPPINES, 1952-1965  
(INDEX: 1952 = 100)

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Year	Taiwan	Philippines
1952	1.00	1.00
1953	1.15	1.09
1954	1.01	1.11
1955	1.13	1.12
1956	1.18	1.10
1957	1.20	1.10
1958	1.26	1.10
1959	1.30	1.00
1960	1.41	.99
1961	1.51	.99
1962	1.45	.95
1963	1.46	1.01
1964	1.71	.96
1965	1.76	.99

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Sources: (1) Taiwan: Table 14-A10.  
(2) Philippines: Table 10-A3, p. 412.

**PART V**

**IMPLICATIONS FOR DEVELOPMENT POLICY**

## CHAPTER 15

### DEVELOPMENT STRATEGY AND POLICY CONCLUSIONS

In this chapter we consider the strategy and policy conclusions from our typological approach to transition growth. By strategy and policy we mean the arsenal of long- and short-run measures available to national governments for promotion of economic growth and development. To emphasize the special policy contributions deriving from our approach, it is important to understand the nature of policy implications associated with "traditional economic knowledge."

Development of less-developed countries is a complex phenomenon, involving many facets of social, economic, and cultural change. For this reason, social scientists of many different persuasions may offer relevant policy advice. Even in economics, development policy advice is frequently proffered by economists whose primary professional interest lies outside the specialization of growth and development. In concentrating upon strategy and policy with an economic content, therefore, it is helpful to distinguish two areas, non-growth and growth, as follows:

## 1. Non-growth Area

- 1.1 Microeconomics (general equilibrium, partial equilibrium, individual firm, and household analysis)
- 1.2 Macroeconomics (national income analysis, money and banking, business cycles)
- 1.3 International economics
- 1.4 Industrial organization and labor economics
- 1.5 Public finance

## 2. Growth Area

- 2.1 Historical approach
- 2.2 Institutional approach
- 2.3 Planning approach
- 2.4 Theoretical approach

We begin with a survey of these two areas of knowledge to evaluate their relevance for development policy. In particular, we examine the transferability of this received knowledge to problems of less-developed countries. Against this background the policy implications of our own approach will be brought into clear focus.

## 1. CONTENT AND POLICY IMPLICATIONS OF THE NON-GROWTH AREA

### 1.1 Microeconomics

The purpose of microeconomics is the study of the efficiency of resource allocation and utilization under ideal conditions. Typically, the analysis is based upon the postulation of fundamental economic data, including resource endowments, production technology, and consumer preferences. Given these initial data, an optimal pattern of resource allocation is deduced whereby the welfare of any consumer cannot be improved without worsening that of another. The ideal conditions refer to certain organizational features of the market economy, all subsumed in the concept of perfect competition. The analysis has a definite normative aspect, demonstrating the efficiency of the market system in achieving the ideal pattern of resource allocation.

Microeconomic analysis can be readily generalized to time or space. When time is taken into consideration, the problem involves the intertemporal efficiency of resource allocation. This leads to the heart of Classical capital and interest theory. When space is taken into account, the problem is generalized to include the efficiency of resource allocation under international trade. This is the focus of Classical trade theory. Thus, in its various manifestations, microeconomics is concerned

with the efficiency of resource allocation in terms of consumer welfare as the ultimate objective.

The policy implications of microeconomics follow directly from its normative aspects. The policy focus is upon approximation of perfect competition in order to achieve efficiency in resource allocation. In practice this focus leads to an emphasis upon relative prices (e.g., factor prices, commodity prices, interest rates, and exchange rates) because under perfect competition prices provide major guidance for individual decisions. While measures to effect income distribution may be tolerated, there is a strong aversion to interference with relative prices as determined by free market forces in order to avoid distorting the efficiency of resource allocation.

Confidence in the market price system is based upon the assumption of efficiency of profit mechanisms in achieving reallocation of resources when basic economic data change. For example, a change in productive technology will ordinarily call for a reallocation of resources. Under the market price system, such a change will be accomplished by emergence of profits in the industry requiring expansion and the appearance of losses in the industry which has been rendered obsolete.

The transferability of this policy orientation toward relative prices to less-developed countries in transition may be considered from

two viewpoints. There is, first, the prime question of whether allocative efficiency is the crucial social problem. Second, even where allocation is the crucial issue, there is a question of effectiveness of the relative price mechanism in achieving efficient allocation of resources.

Let us begin by addressing the second issue. Three conditions must be fulfilled if the price-profit mechanism is to be effective in allocating resources. First, there must be a class of profit-maximizing entrepreneurs who respond to market stimuli. Second, there must be perfect mobility of factors of production (capital, labor) among industries. Third, and most fundamentally, calculation and pursuit of economic gains (and avoidance of losses) must be a basic motivational force throughout the society. While these conditions are generally approximated in advanced industrial countries, this is not true in less-developed countries.

In all less-developed countries profit-maximizing entrepreneurs are in scarce supply, and in many countries this scarcity constitutes the chief bottleneck to transition growth. These countries also confront numerous barriers to factor mobility of a religious, ethnic, or cultural nature. Traditional values predominate over economic achievement. For all these reasons, the price-profit mechanism is not significant in resource allocation decisions.

The conditions, just mentioned, point to the conclusion that the crucial social issue is not the allocative efficiency of a fixed productive capacity but rather the expansion of productive capacity through capital accumulation and technological change. The appearance of these growth forces, in turn, is traced to three growth functions: (i) the creation and development of entrepreneurs, (ii) improvement in the quality of labor, and (iii) the growth of savings capacity.

The significance of relative prices in less-developed countries lies in their bearing upon these crucial growth forces rather than in their role of allocative efficiency. In the import substitution phase, for example, a policy of distorted foreign exchange rates may be deliberately pursued to encourage the growth of private entrepreneurship through offering learning-by-doing experience. As a second example, education and training services may be subsidized to promote improvement in the quality of labor. Third, profit transfer policies may be employed to encourage the growth of savings by transferring income to the class with a high savings propensity. Thus, we see that in less-developed countries the market price system is frequently distorted to achieve growth objectives; and, hence, the major allocation implications of microeconomics are not directly transferable.

## 1.2 Macroeconomics

The purpose of macroeconomics is the study of instability in the economic system. Ordinarily the analysis is based upon the postulation of an aggregate national income accounting system in which aggregate monetary demand plays a central role. Fluctuations in the level of aggregate demand are the main cause of instability; i. e., changes in prices, output, and employment. Aggregate demand changes are attributed to fluctuations in investment expenditures which reflect, on the one hand, the erratic nature of economic growth under private enterprise and, on the other hand, the profit-sensitivity of entrepreneurs in holding capital assets.

The policy implications of macroeconomics follow directly from the normative focus on stability. Stabilization of aggregate demand can be accomplished through compensatory fiscal policy and/or monetary policy aimed at affecting the investment behavior of private entrepreneurs. Stabilization is designed to reinforce the conditions required for the smooth functioning of the relative price system.

Two questions may be raised about the transferability of the policy emphasis of macroeconomics to less-developed countries in transition. The first concerns the source of instability; i. e., whether

causation of economic instability in less-developed countries is the same as in advanced countries. Second, there is a question of whether the same stabilization policies can be employed regardless of the causation of instability.

With respect to the first question, the basic cause of fluctuations of aggregate demand in advanced countries is the society's affluence; productive capacity is so large that full employment output may not be fully absorbed. This is obviously not true in less-developed countries where productive capacity is small. Rather, instability is typically caused by changes in foreign demand for exports, the impact of weather variations on agricultural production, or fiscal extravagance on the part of the government.

With respect to the second question, monetary policy is likely to be even less effective than in advanced countries since less-developed countries are not highly monetized and their banking and financial institutions are undeveloped. The use of fiscal policies to compensate for fluctuations in private aggregate demand is a highly complicated task. Given the immobility of productive factors in less-developed countries, it is unlikely that public expenditures can successfully offset demand reductions resulting from foreign spending or crop failures.

The art of stabilization as developed in Western macroeconomics is thus largely irrelevant for less-developed countries. However, maintenance of aggregate stability through prudent public expenditure policy is a prerequisite for transition growth. Price stability is essential since fluctuating prices impose severe additional risk burdens upon inexperienced entrepreneurs.

### 1.3 International Economics

International economics must be singled out as the one branch of general non-growth economics which is most relevant from our present viewpoint. This branch is properly regarded as an extension of macro- and microeconomics, just summarized. From a practical standpoint, moreover, international economics is germane to development of less-developed countries since their transition growth has evolved from a background of open, foreign trade-oriented colonialism. Foreign trade-related policies are thus frequently regarded as central to their development.

The content of traditional international economics may be classified into three major areas of inquiry: (i) the real theory of trade, (ii) international monetary theory, and (iii) the theory of long-run capital movements. We briefly examine the nature of each of these areas of inquiry, with special emphasis upon their development policy implications.

## Real Trade Theory

The heart of Classical international trade consists of the theory of comparative costs, an extension of microeconomics to the space dimension. The purpose of this theory is to explain the causes and consequences of international trade. On the one hand, basic economic conditions, such as factor endowments, production technology, and consumer preferences, are identified as the causes giving rise to trade. On the other hand, consequences of trade are analyzed in terms of such basic economic concepts as resource allocation, output, imports, exports, consumption, prices, and income distribution.<sup>307</sup>

The normative aspect of this real theory emphasizes efficiency of resource utilization. Under the ideal conditions of unrestricted trade and perfect competition, the theory proceeds to demonstrate the advantages of free trade in terms of optimum resource allocation and consumer welfare. The policy import of the comparative cost theory, therefore, results in the advocacy of this free trade pattern implied by the normative analysis. Modifications of free trade are accepted in

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<sup>307</sup> For a survey of relevant literature on Classical trade theory, see Richard E. Caves and Harry G. Johnson (eds.), Readings in International Economics (Homewood, Illinois: Richard D. Irwin, Inc., 1968), Part I.

neo-Classical analysis if they are minor and appropriate to improving the functioning of the entire system.<sup>308</sup>

There are three criticisms of the Classical real theory which weaken its policy relevance for transition growth in contemporary less-developed countries. The first stresses the unrealism of the perfect competition assumption, as pointed out in our survey of microeconomics.<sup>309</sup> This criticism is essentially directed at the fact that this assumption does not apply to less-developed countries because the very establishment of an efficient market system is a major task to be accomplished by successful transition growth.

The second criticism points to a basic lack of symmetry between advanced and less-developed countries in respect to the causal factors of resource endowments, production technology, and consumer preferences. The "vent for surplus" concept was evolved to overcome the unbalance on the score of resource endowments. Where a country's resources are dominated by a single primary production factor of little domestic use, it

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<sup>308</sup>Ibid., Part II.

<sup>309</sup>For elaboration on this criticism see, for example, Gunnar Myrdal, An International Economy (New York: Harper and Brothers, 1956), especially Appendix pp. 336-341.

has been argued that general comparative cost analysis may be replaced by a more direct and simplified version.<sup>310</sup> However, this modification does not extend the policy emphasis much beyond the Classical emphasis on free trade.<sup>311</sup>

The third criticism refers to the static (or, at best, comparative statics) nature of the comparative cost analysis. The analysis is designed to show the impact of changes in the primary causative factors (resource endowments, technology) upon such economic magnitudes as production, trade, and consumption. However, the analysis ignores completely the causation of change in the primary factors. The latter causation-type problem constitutes the heart of transition growth analysis, which is addressed to the issues of why and how entrepreneurship, capital accumulation, and technology change. By ignoring these crucial issues of transition growth, comparative cost analysis is essentially devoid of policy implications for growth in contemporary less-developed countries.

To summarize, Classical comparative cost analysis focusses upon efficiency of resource allocation under assumed conditions which are

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<sup>310</sup>Hla Myint, 'The 'Classical Theory' of International Trade and the Underdeveloped Countries,' in Caves and Johnson, op. cit., pp. 318-338.

<sup>311</sup>Ibid., pp. 333-338.

not found in less-developed countries. The theory has little relevance for the crucial problems of entrepreneurship and technological change which overshadow the problem of resource allocation. Analysis of change in these basic ingredients of growth is the focal point in the study of transition growth. Little in Classical comparative cost theory is relevant to these problems, and the policy contributions of some significance are mere offshoots of the Classical analytical framework.<sup>312</sup>

### International Monetary Theory

International monetary economics is an extension of macroeconomics to investigate causes of and corrections for economic instability arising from international trade. Traditional Western international monetary analysis emphasizes establishment of consistency between internal and external equilibrium. Internal equilibrium is construed as maintenance of full employment and relative price stability

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<sup>312</sup>We may mention two ideas of this kind which have some relevance to transition growth. The first is the "infant industry argument" which tolerates interference in the free trade system in order to promote indigenous entrepreneurship and market development. The second is the "productivity argument" which recognizes the growth-stimulation effects which may be transmitted through trade. Though these are dynamic strains in the Classical framework, they have not been fully developed in terms of their significance for less-developed countries.

while external equilibrium refers to balance of payments equilibrium.<sup>313</sup>

The normative purpose of this theory is to seek criteria to guide exchange rate, international reserve, and other policies to compensate for domestic price changes in order to achieve simultaneously three social objectives: (i) domestic full employment, (ii) balance of payments equilibrium, and (iii) full advantages from participation in international trade. Thus, the purpose is to identify the policy measures needed to assure the ideal of efficient resource allocation envisioned by the real theory of comparative cost.

This normative emphasis, based on Western international monetary experience, is not relevant to transition growth in less-developed countries. The effectiveness of the policy measures depends upon certain special structural conditions; i. e. , (i) factor mobility and price-sensitive entrepreneurship must be present and (ii) unemployment and inflation must be explainable in terms of fluctuations in aggregate monetary demand. As we have seen earlier, these conditions are approximated in Western advanced countries where productive capacity is so large that monetary demand may be deficient in absorbing full employment output, but they are not present in less-developed countries.

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<sup>313</sup> Aided, if necessary, by short-run capital movements of the equilibrating variety.

Short-run monetary policies related to foreign trade (e.g., exchange rates, trade and capital controls, and export promotion policies) are nevertheless among the most frequently discussed policies in less-developed countries. It is important to understand, however, that their role is very different from that in advanced countries. Domestic price and foreign exchange rate stability are desirable (and even crucial) for transition growth in less-developed countries because risks associated with internal and external fluctuations must be minimized for entrepreneurial development. Similarly, though less-developed countries typically have serious unemployment problems, exchange rate adjustments are ineffective in alleviating unemployment because the problem is not traced to an abundance of supply as in affluent countries.

To summarize, Western international monetary policy is aimed at improving a country's position on an "efficiency frontier" in terms of full employment, resource allocation, and restoring balance of payments equilibrium after an initial disturbance. Disturbances are traced to instability of growth (e.g., cyclical fluctuations in aggregate demand). Here growth is taken for granted; in fact, instability is traced to growth itself and policy measures are considered remedial. In less-developed countries, the problem is posed in very different terms; the absence of growth is the basic social phenomenon. For this reason, Western

international monetary measures can be transferred only with considerable modification.

### Long-run Capital Movements

As mentioned in our review of microeconomics, the theory of long-run international capital movements is a direct extension of the theory of capital and growth which, in the Classical tradition, deals with the problem of the efficiency of intertemporal resource allocation. Formally, therefore, the theory of long-run capital movements should be addressed to the efficiency of international resource allocation through time and space. As developed in the Western tradition, however, long-run capital movement theory has emphasized the problem of the transfer mechanism rather than intertemporal efficiency.<sup>314</sup> The analysis focusses upon adjustments in exchange rates, prices, and income levels required to compensate for sustained balance of payments disequilibrium caused by the unilateral transfers under free market conditions.<sup>315</sup>

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<sup>314</sup>Kindleberger's elementary scheme for explaining "balance of payments stages" is an initial attempt to attack the problem of intertemporal efficiency in the international transfer of resources. See Charles P. Kindleberger, International Economics (Revised edition; Homewood, Illinois: Richard D. Irwin, Inc., 1958), pp. 417-420.

<sup>315</sup>For a modern version, see Harry G. Johnson, "The Transfer Problem and Exchange Stability," in Caves and Johnson, op. cit., pp. 148-171.

In the post-World War II generation, for the first time in history, a large-scale transfer of resources from advanced to less-developed countries has occurred. The lessons from Western-oriented theory relevant to this experience, however, have been meager. This is true for two reasons. First, the transfer of resources has been largely of a concessional nature (aid rather than loans) so that the postwar inflows have been divorced from the cost-price calculus appropriate for the profit-seeking variety of capital movements. Second, the mechanism of transfer has not crucially involved the international monetary system since foreign exchange rate, price, and income adjustments have not normally occurred in the foreign aid absorption process.

The postwar foreign aid experience has produced only fragmentary and unsystematic knowledge appropriate to transition growth in less-developed countries.<sup>316</sup> The basic difficulty is the absence of a theory of transition growth to enlighten the relationship between capital inflows and transition growth processes. A rational theory of foreign assistance must necessarily focus upon the demand or allocation side of the

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<sup>316</sup>See, for example, J. H. Adler and S. W. Kuznets (eds.), Capital Movements and Economic Development (New York: St. Martin's Press, 1967).

relationship.<sup>317</sup> Such a theory must take into account the changing nature of foreign assistance requirements as the transition economy moves through short-run growth phases.

#### 1.4 Industrial Organization and Labor Economics

For solving the resource allocation problem, microeconomics stresses that the ideal method of market organization is atomistic competition. This means that decision-making units are small so that their behavior is regulated by the relative price system, while the price system is beyond individual firm control. In the real conditions of an advanced economy, however, decision-making units may be large (e.g., corporations and labor unions), rendering atomistic competition impossible. The two branches of economics, discussed here, are concerned with the necessity for government interference, specifically in relation to the determination of relative prices, in order to approximate competitive conditions.

The policy objectives of these branches of economic knowledge concern efficiency of allocation and equity of income distribution-- objectives consistent with those enunciated by microeconomics. Under

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<sup>317</sup>Since the supply side must be assumed to be politically determined.

dynamic conditions in the real world, where basic economic data change, regulatory policies are needed to facilitate resource reallocation and income redistribution.

The direct transferability of this type of knowledge to less-developed countries is somewhat vague. Since this knowledge is of an applied nature, policy advice takes on an artistic quality, making it difficult to distill the abstract principles. Moreover, the very problem of largeness of decision-making units in advanced countries is symptomatic of the efficiency orientation in mature economies, an orientation lacking in less-developed countries. During early phases of transition growth, the major problem concerns creation of decision-making units rather than their regulation, and an efficiency orientation becomes relevant only after an initial period of transition growth.

### 1.5 Public Finance

The resource allocation problem involves not only the private sector (emphasized by microeconomics) but also a public sector role. The public resource allocation role embraces (i) internal and external security, including contract enforcement, (ii) regulatory functions, (iii) economic activities of large-scale and external economy nature,<sup>318</sup>

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<sup>318</sup>For example, transportation, health and education, resource conservation, research.

and (iv) transfer payments to improve income distribution. To support these functions, the government must gain access to adequate resources through taxation. Public finance is concerned with the distribution of government expenditures among these objectives and the economic impact and equity of the tax burden imposed for their financing.

For evaluating the transferability of public finance to less-developed countries, it is essential to adopt a historical perspective. In Western advanced countries, the public sector has assumed increasing roles based on (i) the expansion of tax capacity and (ii) demands for government services. In general, security expenditures are the first to appear historically while transfer payments come last, with the other two (infrastructure and regulation) in between. Less-developed countries may be well advised to take cognizance of this historical sequence.

Furthermore, tax structures have undergone significant changes as the value added composition of national income has shifted through time. Thus, there are also lessons on the revenue side from Western historical experience.

## 1.6 Conclusion

We have surveyed the content and the policy import of the five major areas of traditional non-growth economics. This body of

knowledge leads to control of the economy through four general policy instruments: (i) relative prices (e.g., interest rates, exchange rates), (ii) aggregate demand, (iii) regulatory devices for decision-making units, and (iv) direct government disposition of resources through taxation and expenditure. These instruments are utilized to promote efficient and stable allocation of resources and equitable distribution of income in the context of dynamic change through capital accumulation and innovation.

In evaluating the transferability of this body of knowledge to less-developed countries, we must bear in mind that these countries must rely upon the same set of basic policy instruments (relative prices, aggregate demand, regulatory devices, and government fiscal policies) emphasized by non-growth economics. For this reason, certain technical aspects of these general policy instruments can be directly transferred. Examples of transferable knowledge are the relationships between a balanced public budget and price stability, exchange rate revision and correction of balance of payments disequilibrium, and regulation of the volume of imports through trade controls. Transferability is at least partially valid since these relationships reflect behavioral regularities which are common to both advanced and less-developed countries.

Our survey points out, however, that much of traditional non-growth knowledge cannot be transferred to less-developed countries.

From a historical perspective, the major problems of transition growth differ from those treated in Western economics. During the transition, problems of stable and efficient resource allocation and equitable distribution of income are not particularly moot. Rather, the problems which lie at the heart of the transition concern growth, in particular, expansion of human and capital resources, and improvement of the society's organizational capacity. These are matters dealt with in the growth-related area of received knowledge, to which we now turn.

## 2. GROWTH AREA

### 2.1 The Historical Approach

There is a long and distinguished tradition to approaching the study of economic growth from a long-run historical perspective.<sup>319</sup> An outstanding feature of this tradition is the conception of economic growth as an integral part of a much larger system of human experience, including political, social, and cultural facets. This integrative approach is demonstrated through identification of a sequence of long-run growth

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<sup>319</sup> Among twentieth century economists, Joseph Schumpeter may be mentioned. Classical economists, almost without exception, adopted a historical view of growth.

epochs.<sup>320</sup> This traditional historical emphasis is given a strong quantitative dimension by modern growth analysts, and an epoch is explicitly defined as "a relatively long period (extending well over a century) possessing distinctive characteristics that give it unity and differentiate it from epochs that precede or follow it."<sup>321</sup>

The main policy contribution of the historical approach is the reminder that growth in contemporary less-developed countries is a transition phenomenon. To be more precise, this transition growth process lies between the colonial epoch of the prewar era and the modern economic growth epoch of the future. This outlook implies the specification of a particular time horizon, which we construe to be the postwar generation of 20-30 years. The implication is that development strategy and policy must focus concretely upon this time-specific interval.

Although the historical approach assists in identifying the concept of transition growth, traditionally it has little to offer on the content of the transition growth process. The notion of epochal change, however,

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<sup>320</sup> In the case of Western Europe, involving the following sequence which the society traversed through time: agrarianism (prior to 1500), mercantile agrarianism (1500-1750), industrial capitalism (1750-1900), and technocratic capitalism (from 1900 on).

<sup>321</sup> Simon Kuznets, Modern Economic Growth: Rate, Structure and Spread (New Haven: Yale University Press, 1966), p. 2.

suggests that there are three important facets of transition growth:

(i) change in economic agents and the economy's method of organization, (ii) change in the economy's resource base, and (iii) change in the economy's mode of operation. Although all have been treated in a loosely integrated fashion by the historical approach, they are treated more intensively, respectively, by the institutional approach, the planning approach, and the theoretical approach.

## 2.2 The Institutional Approach

The transition from the colonial to the modern epoch involves the emergence of new classes of economic agents to assume newly evolved growth functions. Effectiveness in performing these functions is directly related to the capabilities of these economic agents in reaching and executing growth-related decisions. The focal point of the analysis of the institutional approach is the formation and development of these growth agents.

In analyzing human resource development, the institutional approach places major emphasis upon the formation of subjective psychological attitudes as they relate to objective environmental conditions. This leads to a subjective stress upon the total learning experience, including childhood, as it affects the agent's capacity for transition growth

tasks.<sup>322</sup> On the objective, environmental score, the approach emphasizes the formation of functionally-specific groups (e.g., schools, unions, political organizations) to discharge growth tasks.<sup>323</sup> These, in turn, affect the psychological outlook of individuals.

The policy significance of the institutional approach lies in its recognition that attitudinal change is a crucial aspect of transition growth and that this change is essential to a society's assuming new growth functions. The strength of the approach consists of its interdisciplinary nature, emphasizing the relevance of many disciplines (e.g., sociology, anthropology, psychology, political science) to the overall transition process. This understanding refocusses development policy squarely upon the necessity for improving the quality of human resources (entrepreneurs, labor, government officials). These changes are perhaps the most basic cultural accomplishment of transition growth from a long-run viewpoint.

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<sup>322</sup>See, for example, Everett E. Hagen, On the Theory of Social Change (Homewood, Illinois: The Dorsey Press, Inc., 1962).

<sup>323</sup>See, for example, Max F. Millikan and Donald L. M. Blackmer (eds.), The Emerging Nations (Boston: Little, Brown and Co., 1961), especially Chapters 3 and 4.

### 2.3 The Planning Approach

The planning approach emphasizes forward projection of a consistent pattern of resource utilization among various production sectors of the economy. This approach is characterized by a liberal use of mathematical and programming models to give intensive treatment to the measureable aspects of the economy (e.g., inputs, outputs, imports, exports, savings, consumption, and investment). This characteristic leads naturally to empiricism in the sense of reliance upon masses of statistical data. Compared to the other approaches to growth, the planning approach thus gives great emphasis to methodological formalism.<sup>324</sup>

The policy implications of the planning school stem from its normative content; namely, offering forward-planning advice on a consistent pattern of future resource allocation. The "plan" is normally formulated in the context of a general equilibrium system covering the entire economy. Future plans of this type are typically summarized in a national income accounting framework, permitting

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<sup>324</sup>These features are apparent in the works of Jan Tinbergen and Hollis B. Chenery, two chief advocates of the planning approach.

recommendations to be cast in quantitative and numerical terms. The contribution of the approach lies mainly in the experimental nature of its methodology and its development of a framework for organizing large masses of statistical data.

The major shortcoming of the planning approach is its mechanical outlook upon growth, in which the economy is viewed as involving the simultaneous operation of many interrelated parts. This growth philosophy places undue faith in the universality and immutability of the mechanical principles explaining the operation of the system. Although this approach is relevant as a first guide to resource allocation, it ignores the more critical growth phenomena of human resources, innovation, and organizational change.

#### 2.4 The Theoretical Approach

Classical growth theory (as formulated, for example, by Ricardo and Mill) introduced certain methodological features which have stood the test of time. The basic properties of this approach are: (i) its holistic view of the economy; (ii) its operational (or functional) orientation, inclusive of both resource and organizational aspects; and

its deductive method in reaching conclusions in respect to long-run growth prospects.<sup>325</sup>

The essence of this traditional theoretical approach is an investigation of the functioning of the economy as a whole in order to deduce long-run growth consequences. This functional orientation is synoptic in including both the problems of overall resource utilization and the economy's organizational principles within one analytical framework. The approach holds promise for understanding transition growth in less-developed countries since it can be adapted to investigating interaction between resource utilization patterns and organizational systems, as both evolve during the transition process.

The received theoretical growth knowledge from the Classical and neo-Classical schools has little policy relevance to contemporary less-developed countries. The analysis has focussed largely upon organizational milieux associated with growth epochs that have occurred historically in Western advanced countries. Moreover, their time perspective has typically been an indefinite long-run period within a particular growth epoch. For both reasons, the received theories have little bearing upon the transition which less-developed countries have entered during the postwar generation.

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<sup>325</sup>These properties were discussed in Chapter 1, pp. 15-18.

## 2.5 Conclusion

We have briefly surveyed the four major areas of growth economics from the viewpoint of their policy significance for the transition in contemporary less-developed countries. Each branch of growth knowledge contributes to our understanding of the transition growth process. The historical approach calls our attention to the very idea of transition growth and reminds us that this process must be imbedded in a historical perspective. The institutional school emphasizes the significance of basic cultural accomplishments in terms of human resource development and identifies attitudinal change as a crucial facet of these accomplishments. The empiricism of the planning approach offers an inductive framework of a general equilibrium nature for the study of transition growth, while its normative focus gives policy recommendations a quantitative format. The theoretical approach gives us a framework for analyzing the economy's mode of operation, incorporating both functional and organizational phenomena.

Each individual approach taken by itself is inadequate to analyze transition growth because of the fragmentation of knowledge. In the next section we shall show how the unique contributions of each of these approaches may be combined to evolve new perspectives on development strategy and policy.

### 3. DEVELOPMENT STRATEGY FOR TRANSITION GROWTH

In this final section we address ourselves to the methodology appropriate for formulation of development strategy and policy for transition growth in open dualistic economies. There are three essential guidelines we wish to emphasize: (i) the selection of a relevant focal view of the economy, (ii) the necessity for a typological emphasis, and (iii) the adoption of a transition orientation. Synthesis of these guidelines leads to construction of a transition strategy matrix which conveys the basic policy content resulting from our study.

#### 3.1 A National Income Framework for Policy

All development policy advice must be based upon inductive evidence, especially statistical data. Empirical evidence must be collected and organized within a framework designed for its relevance to a particular viewpoint of policy. For development strategy concerned with the transition in open dualistic economies, the appropriate framework is a national income accounting system emphasizing intersectoral flows. Such a framework outlines the relationships on production and income disposition account involving industry, agriculture, government, and the foreign sector (with finance as a balancing sector).

Diagram 60 shows the national income accounting system for open dualistic economies. The magnitudes of the accounting concepts are represented by the directed monetary flows in the pipes. These flows form a connected pattern through the vertices representing the economic sectors. There are ten vertices, (a) . . . . . (j), representing the production and income disposition relationships among the economic sectors--as shown in Table 29. The table shows the various components of the total monetary inflows for each vertex. The accounting system is a consistent framework in that, at each vertex, the total inflows equal total outflows.<sup>326</sup> This is illustrated by the actual numerical data for the Philippine economy for the year 1965.

For the production relationship, the demand for total industrial output ( $Y = 10465$ ) at (a) is the sum of exports ( $E_y = 976$ ), domestic consumption demand ( $Y_d = 7942$ ), government demand ( $Y_g = 59$ ), and agricultural sector intermediate goods demand ( $N = 1488$ ). The demand for total output of agricultural goods ( $X = 5604$ ) at (b) is the sum of exports ( $E_x = 1748$ ), demand for intermediate goods by the industrial sector ( $R = 559$ ), and domestic consumption demand ( $X_d = 3297$ ). The

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<sup>326</sup>There are thus ten accounting equations linking 26 national income accounting concepts. However, one accounting equation can be deduced from the rest so that there are nine independent accounting equations.

Diagram 60:

# NATIONAL INCOME FRAMEWORK OPEN, DUALISTIC ECONOMY

Philippine data; 1965,  
in million pesos, constant 1955 prices

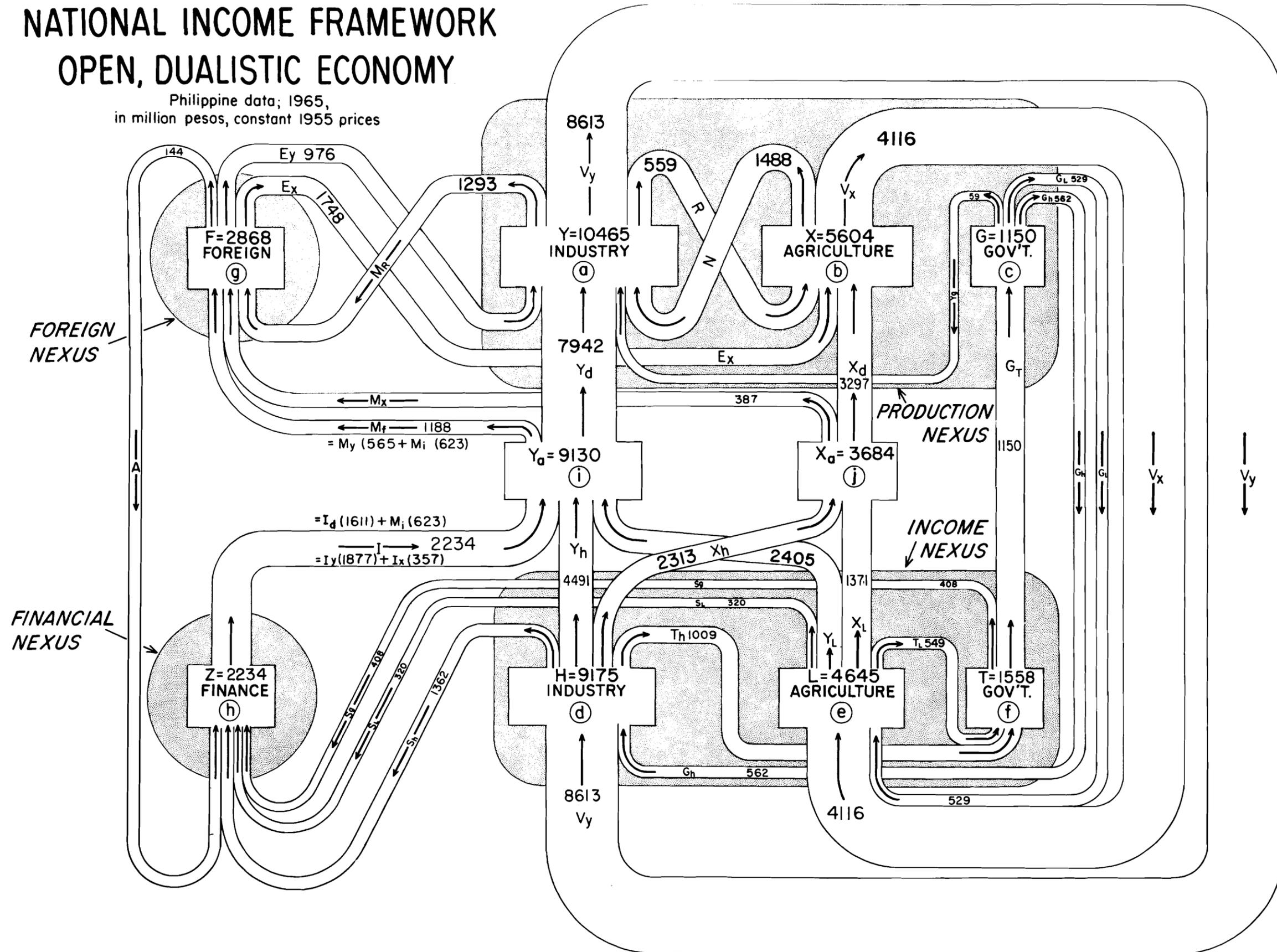


TABLE 29

MONETARY INFLOWS AT VERTICES IN NATIONAL INCOME ACCOUNTING FRAMEWORK

Sector	Production	Income Disposition	Availability
Industry	(a) $(E_y + Y_d + Y_g + N)$	(d) $(V_y + G_h)$	(i) $(I + Y_h + Y_L)$
Agriculture	(b) $(R + E_x + X_d)$	(e) $(V_x + G_L)$	(j) $(X_h + X_L)$
Government	(c) $(G_T)$	(f) $(T_h + T_L)$	-
Foreign	(g) $(M_R + M_x + M_f)$	-	-
Finance	-	(h) $(A + S_h + S_L + S_g)$	-

demand for government output ( $G_T = 1150$ ) at (c) is simply total government expenditures ( $G = 1150$ ). In addition to these domestic production relations, the demand for total imports ( $F = 2868$ ) from the foreign sector at (g) is the sum of imports of raw materials by the industrial sector ( $M_R = 1293$ ), imported agricultural goods for consumption ( $M_X = 387$ ), and imported finished industrial goods on current and capital account ( $M_f = 1188$ ).<sup>327</sup> The total availability of industrial goods for domestic final demand ( $Y_a = 9130$ ) is shown at vertex (i), while that for agricultural goods ( $X_a = 3684$ ) is shown at (j).

For income disposition relationships, total industrial income ( $H = 9175$ ) at vertex (d) is the sum of factor payments to the industrial sector ( $V_y = 8613$ ) and government transfer payments to industry ( $G_h = 562$ ). Total agricultural income ( $L = 4645$ ) at vertex (e) is the sum of factor payments to agriculture ( $V_x = 4116$ ) and government transfer payments ( $G_L = 529$ ). Total government income ( $T = 1558$ ) at vertex (f) is the sum of tax payments by industrial households ( $T_h = 1009$ ) and tax payments by agricultural households ( $T_L = 549$ ). Total final demand for industrial goods ( $Y_a = 9130$ ) at vertex (i) is the sum of investment demand

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<sup>327</sup> Imported finished industrial goods,  $M_f$ , include consumer goods ( $M_y = 565$ ) and capital goods ( $M_i = 623$ ).

( $I = 2234$ ) and consumption demand by industrial households ( $Y_h = 4491$ ) and agricultural households ( $Y_L = 2405$ ). Total final demand for agricultural goods ( $X_a = 3684$ ) at vertex  $(j)$  is the sum of consumption demand of industrial households ( $X_h = 2313$ ) and agricultural households ( $X_L = 1371$ ). The economy's total savings fund ( $Z = 2234$ ) at vertex  $(h)$  is the sum of industrial household saving ( $S_h = 1362$ ), agricultural household saving ( $S_L = 320$ ), government savings ( $S_g = 408$ ), and foreign capital inflow or import surplus ( $A = 144$ ). This completes the description of the national income accounting framework.

A first and basic purpose of this national income accounting system is that it provides a consistent framework for data collection, as emphasized by planning school methodology. Second, the framework can be used to depict the mode of operation of the economy, as a whole, at a particular level of aggregation. This operational viewpoint conforms to the methodological orientation of the theoretical school, emphasizing the various economic functions (output, input, export, import, consumption, saving, investment, taxation, and government expenditure) performed at the intersectoral level during the transition growth process.<sup>328</sup>

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<sup>328</sup> Note that of all the branches of economic knowledge surveyed in this chapter, a national income accounting framework at this level of aggregation is accepted only by the planning and theoretical schools of growth economics. In microeconomics the general equilibrium framework is much more detailed, while macroeconomics employs a more aggregated framework.

Development strategy and planning for transition growth are most appropriately formulated at this level of aggregation. At this level, crucial structural and functional changes involving the entire economy can be analyzed. Theoretical and inductive knowledge of the intersectoral aspects of growth at this level are thus essential for understanding the transition growth process. The analysis in this study has been conducted in this frame of reference in order to shed light on transition growth strategy and policy.

### 3.2 The Transition and Typology Features of Development Strategy

Having adopted a framework as the focal point for our strategy and policy conclusions, two other guidelines--transition growth and typology--require elaboration. It is these substantive components in our study that point the way for advice of relevance to contemporary less-developed countries.

The transition is viewed as a period of evolutionary change between two growth epochs, involving progress toward a modern growth economy from the heritage of a colonial (open agrarian) economy. To facilitate the analysis of the transition process 3 or 4 phases each of 5-10 years' duration may be identified within a time span of 20-30 years. These transition growth phases are employed analytically to assist in

understanding the changing nature of the economy as it progresses toward maturity. The central content of this process is the augmentation of resources and, most importantly, the improvement of human agents in employing these resources effectively.

The transition orientation in designing development strategy is a direct outgrowth of the historical approach. This approach conveys a sense of evolutionary growth which means, in the transition context, the natural sequencing of successively advanced growth phases as human agents learn to assume new growth functions. The implication is that development strategy must be based on a firm understanding of this natural sequence. Development policy and planning decisions can then be designed to conform to and to facilitate this underlying growth process.

The notion of transition growth phases provides criteria for classifying development strategy and policy. The notion leads to a distinction between regulatory policies germane to a particular growth phase and promotional policies to encourage evolution from one phase to the next. While the former refers to administration of a given set of rules of growth within a particular phase, the latter refers to formulation of a new set of rules of growth to launch a more advanced growth phase. We can also distinguish between current and long-gestation policies. Current policies affect the performance of the economy within a phase, while long-gestation policies have a more enduring effect over several phases.

The typological orientation in development strategy and policy recognizes that different countries may pass through different sequences in respect to both the order of growth phases and their duration. These differences stem from variations in inherited background conditions, including economic geography, the quality of human resources, and the relative development of the two dualistic sectors, agriculture and industry. Identification of the open dualistic economy represents a first effort to isolate a specific type of developing economy. However, we have shown that even within this general growth type several variants of transition growth patterns may be further identified.

The implication of this typological orientation for transition policy represents a compromise between those who regard development advice as a science and those who consider it an art. The very notion of a typology approach suggests that development policy must be finely tuned to the individual characteristics of each particular country, giving policy advice an artistic flavor. However, to the extent that policy advice can be deduced from knowledge of a specific pattern of natural transition growth sequences, it has a scientific component which is transferable among countries of similar type.

### 3.3 A Matrix for Transition Strategy

The focus upon intersectoral relationships within an aggregate framework (Section 3.1) and our historical perspective (Section 3.2) lead to the formulation of a matrix for transition strategy. For a particular type of economy there is a natural evolutionary sequence definable in terms of intersectoral relations at the aggregate level. The transition strategy matrix outlines the evolution of development strategy needed to facilitate the natural evolution in the transition growth process. For an open dualistic economy we may prescribe a typical transition strategy matrix as follows:

1. Genesis Phase (2-5 years)
  - A. Development of Political Infrastructure
  - B. Control of Agrarian and Export Instability
2. Import Substitution (8-12 years)
  - A. Promotion of Industrial Entrepreneurship
  - B. Stabilization and Liberalization (Promotional Policy)
  - C. Agricultural Modernization (Gestation Policy)

3. Export Substitution (10-20 years)
  - A. Labor Employment
  - B. Export Encouragement
  - C. Education and Skill Development (Gestation Policy)
  - D. Tax Reform (Gestation Policy)
  - E. Modern Financial Institutions (Promotional Policy)
4. Consolidation and Modernization (20-40 years)
  - A. Internal Integration
  - B. Efficiency of Industrial Organization

#### Genesis Phase

Frequently the transition is launched as a reaction to colonialism. The creation of viable political institutions constitutes the first transition task. Indigenous government officials must learn to make and execute decisions in regard to internal and external security, unified national currency, communications and transportation, and revenue collection. The effective assumption of these functions requires that the society learn to resolve political conflicts. Thus, during the initial phase of the transition, development of human resources in the political sense is the first major task to be accomplished.

In open dualistic economies newly emerged from their colonial background, the dominant economic problem is instability originating from two sources. The external cause of instability lies in fluctuations of demand for primary product exports, while internally natural conditions cause variations in agricultural production. Thus, the basic issue relating to development strategy is economic stabilization.

Causes of instability of this type essentially lie in the very conditions of the economy's underdevelopment. Hence, the basic solution is a matter of long-run development which the new and inexperienced government is typically not in a position to launch. For this reason, policy must be addressed to lessening the impact of instability rather than trying to cure it. Hence, policy in this initial phase is necessarily of an ad hoc nature, dealing with individual crises as they occur (e. g., reduction of government expenditure when revenue falls and measures to distribute food during crop failures). Although many ad hoc policies may be attempted for short-run stabilization, success is usually contingent upon foreign assistance. In this initial phase of the transition, therefore, foreign aid is needed to achieve stability rather than to promote growth.

The most important task to be accomplished during the genesis phase is development of human resources in the public sector. From the transition strategy viewpoint, the cardinal principle is cultivation of fiscal

responsibility. Public officials must recognize that the limited resources at their command confine their task to initial stabilization, an essential precondition for later transition growth. Ambitious development expenditures must be avoided since, in the absence of indigenous entrepreneurs (whose development is the main task of the next phase), these expenditures will be self-defeating and even obstructive to the natural sequence in transition growth.

The duration of the genesis phase is traced to two factors. On the one hand, there are variations among less-developed countries in the extent and severity of economic instability as caused by political upheavals from independence, reliance upon specialized primary product exports, the backwardness of traditional agriculture, and the degree of population pressure on land. On the other hand, there are variations in the quality of human resources to discharge the tasks in the public sector--as determined by the specific heritage of colonial education and civil service experience. When both sets of conditions are favorable, the genesis phase may be terminated in two or three years; if not, the genesis phase will continue indefinitely.<sup>329</sup>

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<sup>329</sup>Taiwan may be cited as an empirical example of favorable conditions and Indonesia, of unfavorable conditions.

## Import Substitution Phase

After public entrepreneurship has been developed during the genesis phase, the next crucial transition task is the promotion of industrial entrepreneurship in the private sector. The fundamental principle of strategy in this connection is that such entrepreneurship can only be created through a learning-by-doing process; i. e., through participation in market decisions. This participation can be induced by government policies which reduce entrepreneurial risks, specifically by increasing profit-making opportunities and by providing protection from foreign competition. In the context of open dualistic economies, a whole set of policies is available for consistent pursuit of these promotional objectives.

The strategy of entrepreneurial promotion in this phase must rely upon the basic triangularism of intersectoral relationships. The chief aspects of the strategy are the transfer of primary product export profits to industrialists in order to increase their profits artificially and the exclusion of competition from foreign sources. Many policy instruments (e. g., protective tariffs, exchange rates, domestic price inflation, interest rate subsidies, and price controls) can be employed in a consistent manner to further the promotional objectives of this strategy.<sup>330</sup>

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<sup>330</sup>The policies appropriate to this strategy are discussed in Chapter 7.

Justifications for employing this strategy are similar to the infant industry argument. The crucial factor in the success of the strategy is the promptness with which the promotional policies are removed once their creational task has been accomplished. As the import substitution phase nears its inevitable end, the government must shift to stabilization and liberalization policies to facilitate emergence of a new phase. The crux of these latter policies is the establishment of a new organizational system in which competitive relative prices prevail. The intent of this shift is to induce entrepreneurs to change from an internal to an external orientation, accompanied by a greater domestic emphasis upon productive efficiency.

In addition to promotion of private entrepreneurship, development strategy during the import substitution phase must begin to emphasize the task of agricultural modernization. This is gestation strategy since it is an essential preparatory step for the emergence of the next transition growth phase.<sup>331</sup> Depending upon the particular inherited conditions in the traditional agricultural sector, the government may choose to engage in

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<sup>331</sup>The modernization of agriculture is essential to the reallocation of labor from agriculture which is a central feature of the subsequent export substitution phase. See Chapter 14.

a variety of long-gestation projects such as organizational reform (e.g., land reform and agricultural cooperatives), infrastructure investment (e.g., roads, irrigation), or investment in modern agricultural inputs (e.g., fertilizer, insecticides, new technology).<sup>332</sup>

During the import substitution phase the basic development strategy focusses upon promotion of the growth of private, industrial entrepreneurship while initiating gestation policies to encourage entrepreneurial development in the agricultural sector. Industrial entrepreneurs are needed to build the first wave of consumer goods industries, and agricultural entrepreneurship must eventually provide the basis for the economy's shifting from land-based to labor-based exports in the next transition phase. Progress in developing human resources in both sectors is essential to engendering an efficiency orientation throughout the economy.

The duration of the import substitution phase hinges upon two inherited conditions. The first condition is the quality of entrepreneurial capabilities as determined by colonial conditioning of entrepreneurs and

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<sup>332</sup>For a detailed listing of all the policies potentially relevant to agricultural development see Max F. Millikan and David Haggood, No Easy Harvest: The Dilemma of Agriculture in Underdeveloped Countries (Boston: Little, Brown and Co., 1967), especially Chapter 2.

previous immigration policy. The second condition is the relative backwardness of the traditional agricultural sector, involving such crucial factors as population pressure on land, extent of commercialization and monetization, and exposure to modernization during the colonial epoch. When the two basic conditions are favorable, a brief import substitution phase of 5 to 10 years will give rise to a new growth phase (e.g., Taiwan). When a country is deficient in entrepreneurial capacity (Indonesia) or when the public sector neglects agricultural modernization (Philippines), the phase will be prolonged and little progress will be made toward eliminating the inherent inefficiency of import substitution growth.

#### Export Substitution Phase

While creation of entrepreneurs dominates the import substitution phase, the export substitution phase is characterized by the strengthening of entrepreneurial efficiency, as entrepreneurs become subjected to the rigors and discipline of competition in international markets. In both the industrial and agricultural sectors, growth in this phase is based upon growing capacity of entrepreneurs to take advantage of the country's labor surplus through exporting labor-intensive commodities. Development strategy must conform to this dominant growth orientation by (i) encouraging intersectoral labor mobility,

(ii) assuring real wage stability and avoiding premature welfare programs, and (iii) promoting the adoption of labor-intensive technology through tax and similar concessions.

Development policy in the foreign trade area must focus upon assisting entrepreneurs to overcome the initial difficulties associated with penetrating foreign markets. Relevant policies in this area include, for example: (i) creation of free export zones, (ii) marketing cooperatives for new agricultural exports, (iii) negotiations with foreign countries to obtain quotas for labor-intensive manufactured exports (e. g. , textiles), and (iv) simplification of a variety of customs and other regulations governing exports and importation of intermediate goods.

Human resource development during the export substitution phase focusses upon labor. In fact, the development of labor skills through growing functional specificity is essential to the emergence of the next transition growth phase. Thus, gestation policy in this phase must emphasize promotion of acquisition of labor skills through (i) extension and upgrading of compulsory education, (ii) vocational and technical education and employment guidance, and (iii) encouraging on-the-job training in private industry through public incentives.

As the economy moves from the import substitution to the export substitution phase, the economy's sources of income generation and value

added composition shift from the traditional land base to a human resource base (labor and entrepreneurship). Thus, profits and wages increasingly constitute the new tax base for public revenue to support an expanded scope of public activities in the future phases of the economy's growth. Issues of tax reform become moot in the export substitution phase to enable the country eventually to rely upon direct income and value added taxation rather than indirect foreign trade and commodity duties.

The government must initiate measures to strengthen financial institutions, internally and externally, to increase flexibility in the disposition of the economy's growing savings. Internally, the commercial banking system must be developed to allocate short-run credit more efficiently, while capital markets must be created to allocate long-run credit. Externally, mechanisms for private international capital movements must be built up to accommodate growth during the next phase.

The duration of the export substitution phase is determined by the extent of the economy's inherited labor surplus and its augmentation by population growth. Gradual absorption of surplus labor occurs through capital accumulation and labor-intensive innovations. Lacking empirical guidance, we may conjecture that, under favorable conditions, the export substitution phase will provide rapid growth with relative wage stability for a period of one or two decades. However, the phase may be prolonged,

and growth retarded, if the forces of labor absorption are sluggish and/or the agricultural sector fails to expand adequately.

### Consolidation and Modernization Phase

As the economy traverses successive transition phases of genesis, import substitution and export substitution, human resource development continuously occurs in regard to public entrepreneurship, private entrepreneurship, and labor skills. These important growth achievements are consolidated in the final phase of the transition to modern growth. While human resources continue to be expanded and improved in this last phase, the significant new growth phenomenon is an emphasis upon their collective efficiency at both the macroscopic and microscopic levels.

At the macro level, development consists of greater intersectoral interaction and integration. The industrial sector seeks to extend the import substitution process to intermediate goods and raw materials, leading to integration both within industry and between industry and agriculture. Flexibility in responding to dynamic changes results from growing functional specificity within the labor force, market-sensitive entrepreneurship, diversified financial institutions, and experienced public sector officials. Under these conditions, government development

policy will increasingly rely upon relative price mechanisms to achieve efficient resource allocation and equitable income distribution as in advanced economies (see microeconomics in Section 1.1).

At the micro level, growth in the scale of productive enterprise and the units of labor organization lead to greater efficiency in the use of resources. This progress, however, brings with it the problems of large-scale organization referred to in our survey of industrial organization and labor economics. From this viewpoint, development policy will become oriented toward the regulatory controls needed to cope with the distortions to the market price system associated with large-scale organizations.

While recognizing the complexity of this phase, we may conjecture that its duration will be 20-40 years,<sup>333</sup> providing a last link in the transition process between underdevelopment and modern economic growth. During this final phase, transition-oriented development strategy gradually yields to the efficiency and stability policy emphases prevalent in modern advanced countries. Thus, during this phase the traditional policy focusses of Western economic analysis become increasingly relevant.

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<sup>333</sup> This phase roughly corresponds, in the Japanese case, to the interwar period.

#### 4. CONCLUSION

This chapter has demonstrated that effective development strategy during the transition must be based upon a matrix of transition strategy to emphasize the changing nature of the policy focus in the context of a specific time perspective. This dynamic approach to development strategy follows from an evolutionary view of transition growth, centered on the development of human resources. Our stress upon transition typology reminds us that no one particular transition sequence will be relevant to all countries. However, we believe that sound development advice must be derived from some particular sequence based upon a careful analysis of the historical facts of each situation.

Our analysis points to the importance of distinction between development strategy and development policy instruments. By its very nature transition strategy has an evolutionary dimension, necessitated by the underlying natural sequence in the learning process. Development policy instruments, by contrast, refer to the conventional devices (relative prices, aggregate expenditures, government regulatory measures, and government expenditures) which can be employed to promote particular strategy objectives during a given transition phase. The transition

strategy matrix allows selection of the appropriate policy instruments.

The purpose of growth theory is to provide guidance for the construction of such a strategy matrix, while conventional economic and planning methodology supply the technical knowledge for effective execution of development strategy.